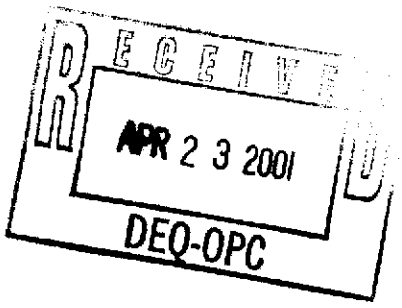
SOIL REMOVAL PLAN

AKT Gravel Pit
Crystal Springs, Mississippi



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1.0 Introduction

This work plan describes the activities proposed to remove soil containing polychlorinated biphenyls (PCBs) placed at the AKT gravel pit in Crystal Springs, Mississippi. The soil came from the nearby Kuhlman Electric Company (KEC) facility and was placed in the AKT gravel pit before it was learned that the soil may contain PCBs.

This plan is being submitted consistent with the Self-implementing On-site Cleanup and Disposal of PCB Remediation Waste regulations under 40 CFR 761.61(a). This plan presents the nature of the contamination; a summary of the investigation procedures; the location and extent of the soil containing PCBs; the cleanup plan; and certification of the characterization information. To achieve a complete cleanup, KEC has elected to remove soil with PCB concentrations greater than 1 milligram per kilogram (mg/kg) for off-site disposal at appropriate facilities. With this submittal, written approval to implement this plan is requested from the Mississippi Department of Environmental Quality (MDEQ) and the United States Environmental Protection Agency (EPA).

2.0 Site Background

During building-expansion construction at KEC, excess soil was transported to the AKT gravel pit in Crystal Springs, Mississippi for fill material. After transporting and placing the fill, it was determined that the soil may contain PCBs. **Figure 1** presents the location of the AKT gravel pit and **Figure 2** shows the approximate dimensions of the filled excavation. Specific information on the gravel pit's dimensions and the volume of fill material placed in the gravel pit are as follows:

- The open excavation at the AKT gravel pit, prior to being filled, has been described as being up to 12 feet deep and measuring about 315 feet long and 70 feet wide. This excavation volume equals 9,769 cubic yards (cy).

- Limited information suggests that 33 dump truck loads of fill soil may have been deposited at AKT from the KEC facility. At an assumed volume of 18 yards per truck, the quantity of soil brought from KEC would equal 594 cy.

Currently, the ground surface at the AKT gravel pit is level and vegetated with grass. A safety fence has been erected around the fill area. Further information concerning the project site can be found in the Site Assessment Report.

KEC contracted with IT Corporation to conduct a site assessment of the AKT gravel pit. This report was submitted to MDEQ and the EPA on March 6, 2001. The Site Assessment Report presented specific information and results compiled from field sampling and analysis activities conducted at the AKT gravel pit.

3.0 Investigation Procedures

A revised Site Assessment Work Plan was submitted to MDEQ and the EPA on December 1, 2000 for the investigation of the AKT gravel pit. The revised Site Assessment Work Plan presented detailed procedures for drilling, soil sample collection, analytical methods, and data analysis methods. Provided below is a summary of the assessment work plan.

3.1 Soil Sampling

The soil sampling conducted at the AKT gravel pit included the collection of surface and subsurface soil samples for chemical analysis from 76 soil borings. The soil boring locations were determined by constructing 25-foot-by-25-foot grids over the former gravel pit. Additional boring locations were selected after receiving initial soil results. The gridlines trending northwest southeast were assigned designations alphabetically, while the northeast-southwest trending gridlines were designated numerically. Soil boring locations were then placed at the gridline intersections and given an alphanumeric designation. Grid points were measured relative to site benchmarks. Soil boring locations are shown on **Figure 3**.

Surface and subsurface soil samples were collected from the locations identified on **Figure 3**. IT contracted with a direct-push technology subcontractor to assist in the collection of the soil samples. The soil borings were advanced to 20 feet below ground surface (bgs) and soil samples were collected using direct-push sampling procedures. Push refusal occurred at some locations prior to reaching a depth of 20 feet bgs. More than 1,500 samples were collected. Surface soil samples were collected by first removing the surface debris such as rocks and vegetation from the immediate sample area. After the samples were collected from the surface, a sample was collected for each foot of soil below the ground's surface. These samples were collected by homogenizing a 1-foot interval of soil, then collecting a portion of the soil for analysis. Samples identified as a specific foot interval represent the soil at that depth and the 12 inches above the identified depth.

To identify the general location of the soil containing PCBs, an analysis of the samples was performed from each boring at the surface and at 4-foot, 8-foot, and 12-foot sample intervals. Additional sample intervals were analyzed for borings where PCBs were detected until the concentration of PCBs was less that 1 mg/kg.

3.2 Data Quality

Data quality objectives (DQOs) were established in the Site Assessment Work Plan at DQO Level 3 for collection and analysis. The Laboratory Assurance/Quality Control Report is included in **Appendix C** of the Site Assessment Report.

Select soil samples from each boring were analyzed for PCBs using Method 8082. A total of 388 soil samples were submitted for PCB analyses, and 12 additional soil samples were selected for analyses for the following parameters:

- Polynuclear aromatic hydrocarbons (PAHs) according to Method 8270C
- Silver according to Method 6010B
- Total Cyanide according to Method 9012A

4.0 Soil Containing PCBs

The results of the chemical analyses of samples collected at the AKT gravel pit indicated that PCBs were detected in elevated levels. Figure 4 presents the findings at each boring location.

Where **Figure 4** established 25-foot-by-25-foot grids with each intersecting line as a sample point, Figure 5 identifies each of those sample locations as the center of the 25-foot-by-25-foot grids. Each grid is further divided into 10 sections. Each section is 25 feet by 25 feet by 1-foot deep and represents about 23.2 cy of soil. Figure 5 also identifies the PCB concentrations in the soil by color. PCB concentrations are identified according to two levels:

- PCB concentrations greater than 50 mg/kg, and
- PCB concentrations less than 50 mg/kg, but greater than 1 mg/kg.

Soil containing concentrations of PCBs less than 1 mg/kg will not be a part of this remedial action. No significant results for the above parameters were encountered in the 12 samples analyzed for PAHs, silver, or total cyanide.

5.0 Removal and Disposal Plan

The soil containing PCBs will be excavated from the AKT gravel pit and transported off-site for disposal. The excavation will be performed based on the lines and grades determined during the site assessment. Soil disposal will be based on the PCB concentration of the excavated soil. Soil with PCB concentrations above 50 mg/kg will go to a Subtitle C facility approved by the Toxic Substances Control Act (TSCA). Soil with PCB concentrations below 50 mg/kg and above 1 mg/kg will go to a TSCA-approved Subtitle D facility. Presented below are the details of the removal and disposal plan.

5.1 Excavation

The excavation will begin at the northeast end of the project site and progress southwest. Each grid will be excavated individually to the depths indicated on Figure 5. Soil will be excavated in a minimum of 1-foot lifts from each grid with a track excavator. The soil will then be loaded into a dump truck for transportation to a stockpile located on the project site. Temporary stockpiling of the soil will be dependent upon PCB concentrations. Figure 5 also indicates the final disposition of each soil layer, which is the basis for having three soil stockpiles.

The excavator bucket will be decontaminated before and after handling soils of different disposal classification. Decontamination water will be collected and added to the soil being transported to a Subtitle C facility.

To facilitate the removal of material from the site, a temporary roadway may need to be constructed to provide transport trucks with access to the work zone. This material may be composed of on-site soil or clean backfill, depending on the location of the excavation. IT will establish site traffic patterns to minimize any adverse impact to the surrounding area, while also providing the most efficient transport vehicles with access to the stockpiling/loading operation.

5.2 Confirmation Sampling

An extensive amount of PCB distribution information was developed during the site assessment. Within each grid location, the depth of the excavation has been determined in 1-foot intervals. Because the site assessment has identified the horizontal and vertical extent of the soil containing PCBs, no confirmation sampling of the grids is planned.

5.3 Stockpiling

Three stockpile locations will be developed on the site. Of the three stockpiles, two will be lined with 8-mil-polyethylene sheeting for off-site disposal soil. The unlined stockpile will be composed of any

material that needs to be removed to allow access to the soil containing PCBs (less than 1 mg/kg PCB). The two stockpiles mentioned above will be lined and bermed to control/prevent run-on and run-off from storm water events. The stockpiles will be covered with the same material and secured nightly and/or during inclement weather. The size and height of each stockpile will be dependent upon conditions at the site and the quantity of the excavated soil. Upon completion of the project, each liner will be disposed of in the same manner as the soil with which it was associated.

5.4 Transportation and Disposal

IT has identified the following waste streams:

- TSCA-regulated soil with PCB concentrations greater than 50 mg/kg will be transported to a Subtitle C landfill.
- Soil with PCB concentrations between 50 mg/kg and 1 mg/kg will be transported to a Subtitle D landfill.
- Decontamination water and used site personnel protective equipment, including liners and trash will be transported to a Subtitle C landfill.

IT will ensure that the project waste streams are properly classified for proper transportation and disposal of soil under applicable state and federal regulations.

Loading the transport vehicles will also occur using the track excavator after completing the excavation of all designated grids. Trailers will be positioned as close to the stockpiles as practical to reduce the movement of equipment and the potential for migration of contaminated soil.

All exit and entry onto the site will be through established gates. All soil transporters leaving the site will exit at site controlled rights-of-way. IT will maintain a traffic pattern around the site that will minimize any adverse impact to the area. Traffic speeds will be in accordance with county, local, state and federal regulations and will generally be at least 5 miles per hour (mph) below posted speed limits on public roads located within a 1-mile radius of the site. To minimize the generation of dust, speeds will not exceed 15 mph on all site access roads, haul routes, and exposed surfaces.

Dust control measures will be employed throughout the work site, if needed, to minimize the creation of dust during the work, and prevent the formation of fugitive particulate emissions at the property line, especially during excavation, stockpiling, and load-out activities.

Only qualified transporters will be selected to remove soil from the site based on the project waste types and the transporters past performance. Compliance will be maintained with regulations issued by the state, the EPA, the Resource Conservation and Recovery Act (RCRA), and the United States

Department of Transportation (USDOT), including verification of the transporters' insurance and permits for the waste type.

All necessary documentation required for the shipment of waste off-site will have client approval and appropriate signatures. The above-referenced documentation may include bills of lading, hazardous and non-hazardous waste manifests, and land disposal restrictions (LDR).

5.5 Backfill

Backfill material will be placed in the appropriate excavated areas after soil containing PCBs has been removed as described above. Other portions of the AKT gravel pit will serve as the source of the backfill material. The source of the backfill material will be tested for PCBs. If no PCBs are found, the backfill material will be excavated, loaded onto trucks and transported to the site. Backfill will be placed in each excavation area using a small dozer. The backfill will be worked into the deepest excavation in 12-inch lifts where it will also be compacted. Compaction will be accomplished using heavy equipment located on-site. No density requirements or testing is anticipated. Backfilling will continue throughout the site until final site grades have been achieved. Final site grades will ensure the proper drainage from the project site. After final grading, the project site and disturbed areas will be seeded with rye grass.

6.0 Certification

KEC and the remediation contractor hereby certify that all sampling plans, sample collection procedures, sample preparation procedures and instrumental/chemical analyses procedures used to assess or characterize PCB contamination at this project site are on file at KEC in Crystal Springs, Mississippi, and are available for EPA inspection.

Kuhlman Electric Corporation

IT Corporation

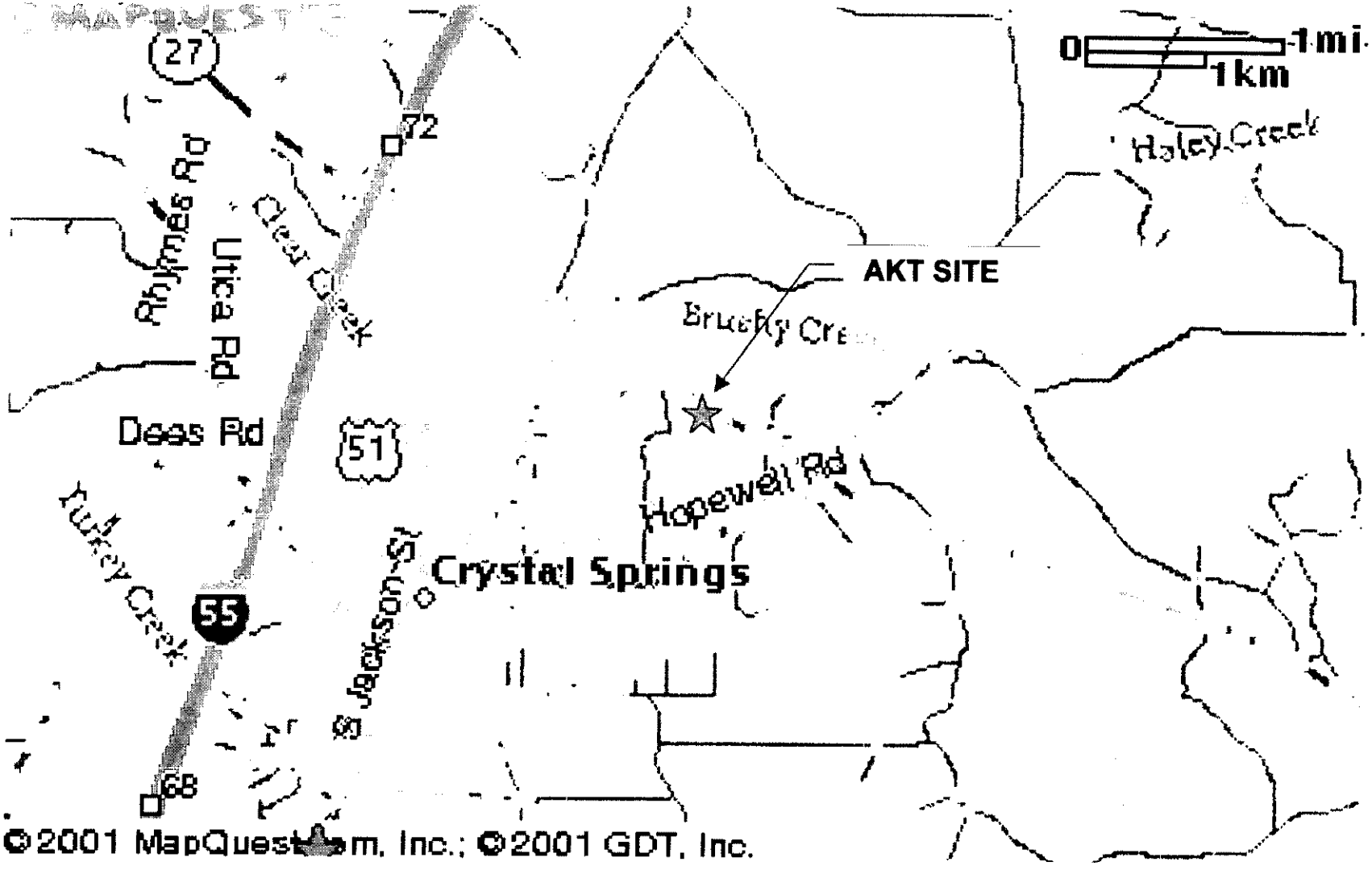

Figure 1 AKT Gravel Pit, Crystal Springs, Mississippi

PLOT DATE: ?/?/99
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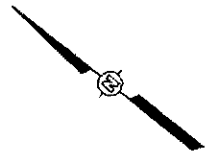
IMAGE	X-REF	OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
---	---	*Atlanta, GA*	*J. Lange*	*11/17/00*					820327-FIG1



SITE ROAD

SITE ROAD

SCRAP METAL STORAGE

LEGEND

- SOIL BORING LOCATION
- FILL AREA
- APPROXIMATE FILL LOCATION
- SITE ROADS

SCALE

0 40 80 FEET

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FIGURE 2

AKT FILL AREA

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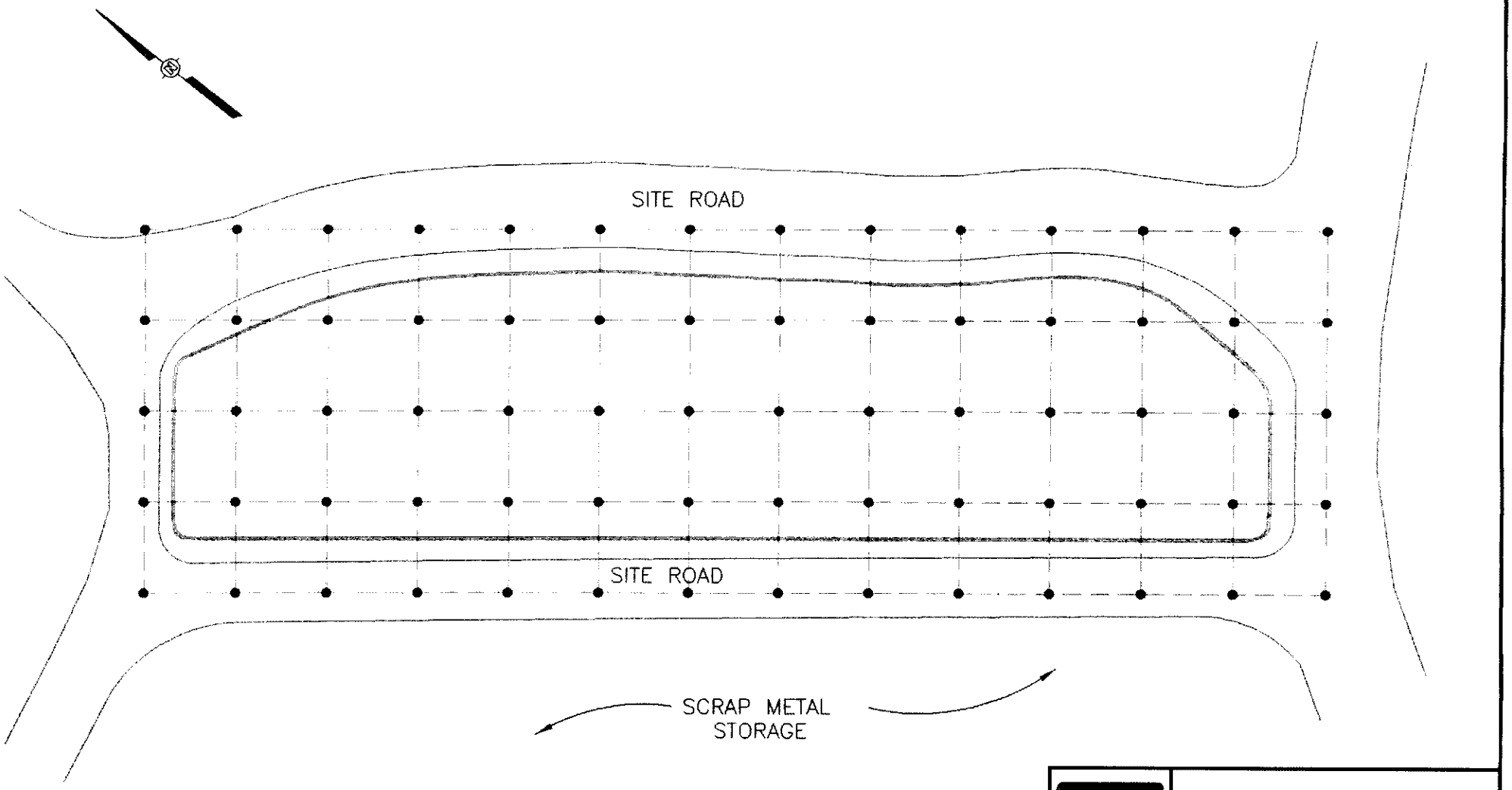
IMAGE	X-REF	OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
---	---	*Atlanta, GA*	*J. Lange*	*11/17/00*					820327-FIG3



LEGEND

- SOIL BORING LOCATION
- 25 ft. GRID
- APPROXIMATE FILL LOCATION
- SITE ROADS

SCALE
0 40 80 FEET

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FIGURE 3

AKT FILL AREA GRID MAP

DRAWING NUMBER 820327-FIG8

APPROVED BY

CHECKED BY

DRAWN BY L. SHULMAN 4/3/01

OFFICE Alpharetta, GA

X-REF ---

IMAGE ---

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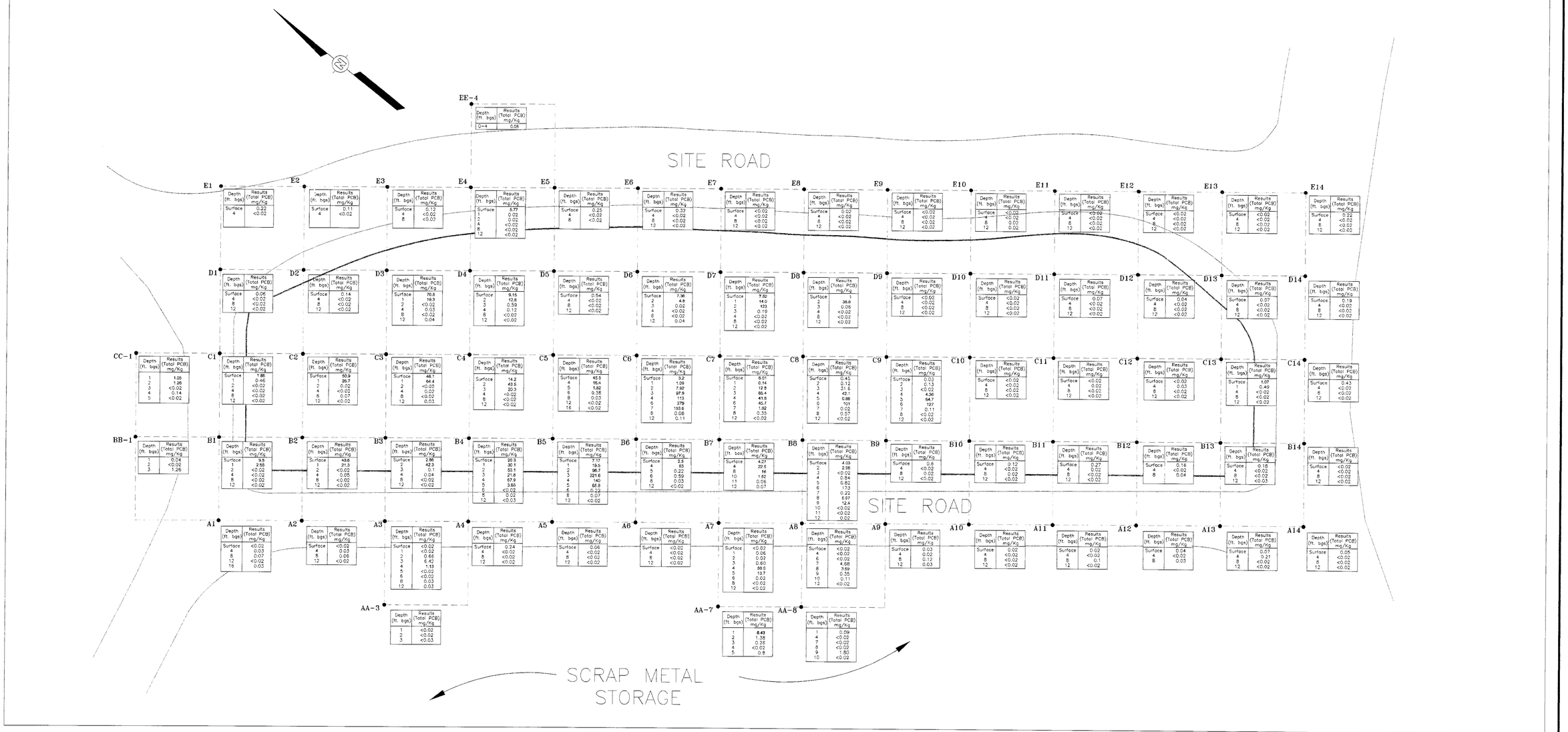

LEGEND

A1 •	SOIL BORING LOCATION
- - - - - - - - - -	25 ft. GRID
———	APPROXIMATE FILL LOCATION
———	SITE ROADS
mg/Kg	MILLIGRAMS PER KILOGRAMS
ft. bgs	FEET BELOW GROUND SURFACE
PCB	POLYCHLORINATED BIPHENYLS

SCALE
0 15 30 FEET

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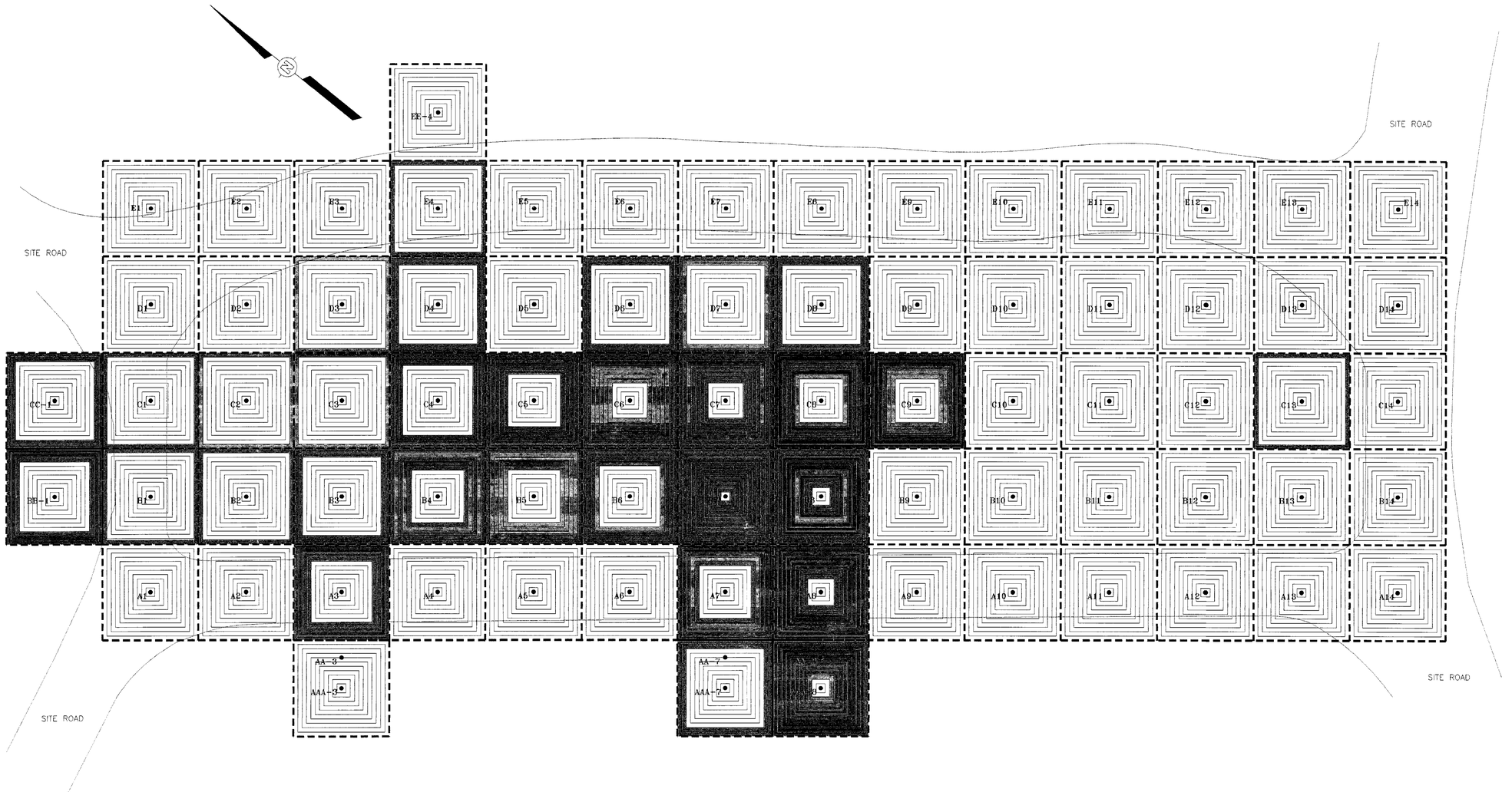
FIGURE 4

SITE ASSESSMENT
AKT GRAVEL PIT
TOTAL PCB CONCENTRATIONS

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
---	---	Alpharetta, GA	L. SHULMAN			820327-FIG9
			4/16/01			



LEGEND

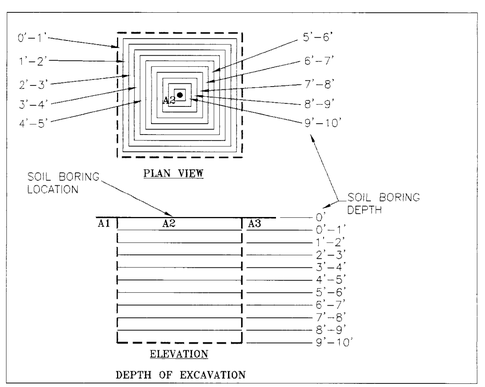
A1 •	SOIL BORING LOCATION
– – – – – – – – – –	25 ft. GRID
	APPROXIMATE FILL LOCATION
————————	SITE ROADS
mg/Kg	MILLIGRAMS PER KILOGRAMS
ft. bgs	FEET BELOW GROUND SURFACE
PCB	POLYCHLORINATED BIPHENYLS

DISPOSITION OF SOIL

>50 ppm PCB – SUBTITLE "C" LANDFILL

1–50 ppm PCB – SUBTITLE "D" LANDFILL

<1 ppm PCB – EXCAVATED AND REUSED AS BACKFILL



SCALE
0 15 30 FEET

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FIGURE 5

AKT GRAVEL PIT
TOTAL PCB CONCENTRATIONS
EXCAVATION DEPTH AND DISPOSITION

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