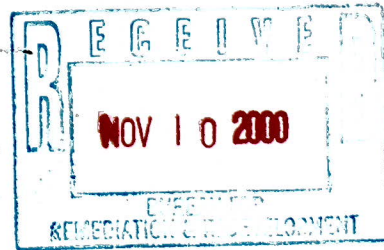




Roy F. Weston, Inc.
Suite 500
750 East Bunker Court
Vernon Hills, IL 60061-1450
847-918-4000 • Fax 847-918-4055
www.rfweston.com



9 November 2000

→ *Binyoti Felix - SER/RR*

Mr. Russell D. Hart
Remedial Project Manager (HSRW-6J)
U.S. Environmental Protection Agency
Region V
77 West Jackson Boulevard
Chicago, IL 60604

RFW Work Order No. 02687.007.003
KMC Work Order No. 40-50-01-AKW-A

Re: Soil Management Plan
Moss-American Site, Milwaukee, WI

Dear Mr. Hart:

At the request of Keith Watson (KMC), I am forwarding to you a copy of the Soil Management Plan for the Moss-American Site. While this document is not a required deliverable under the Consent Decree, KMC is providing a copy so that U.S. EPA may examine the planning and scheduling issues that are contained therein. This material should address the issues raised in your 1 November 2000 letter.

Should you have any questions regarding this transmittal, please contact me at 847-918-4142 or Keith Watson at (405) 270-3747.

Very truly yours,

ROY F. WESTON, INC.

Thomas P. Graan

Thomas P. Graan, Ph.D.
Principal Project Manager

cc: G. Edelstein, WDNR
K. Watson, KMC





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9 November 2000

A. Keith Watson
Kerr-McGee Chemical LLC
Kerr-McGee Center
123 Robert S. Kerr Avenue
Oklahoma City, OK 73102

RFW Work Order No. 02687.007.003
KMC Work Order No. 40-50-01-AKW-A

Re: Soil Management Plan
Moss-American Site, Milwaukee, Wisconsin

Dear Keith:

Roy F. Weston, Inc. (WESTON®) has prepared this Soil Management Plan (SMP) for the Moss-American Superfund Site. This plan describes the management of soil during future soil remediation activities to be conducted in Years 2001, 2002, and 2003.

The major topics addressed in this document include:

- Soil types and quantities;
- Subsurface investigation of Areas T-4 – T11;
- Soil excavation and staging;
- Soil treatment;
- Treated soil management;
- Installation of the soil cover system;
- Site restoration; and
- Schedule of activities.

SOIL TYPES AND QUANTITIES

Soil Quantity

Approximately 25,000 CY of soil was excavated during the installation of the groundwater treatment system and is currently stockpiled on-site. Using the actual soil volume excavated during the installation of the groundwater treatment system in conjunction with the anticipated soil volume to be excavated from Areas T-1 through T-3, it was estimated that approximately 41,000 CY of soil would require excavation from Area T-4 through T-11 (Table 1). Areas T-4 through T-11 are shown in Figure 1. The total soil volume anticipated to be excavated is approximately 66,000 CY, including the 25,000 CY of stockpiled soil. This information was provided to the agencies in our letter dated 15 February 2000.



Soil Types

The soil was divided into three “types” (Type I, II, and III) identified in the low-temperature thermal desorption (LTTD) vendor bid request. These soil types were derived to determine the relative quantities of soil that may undergo bioremediation in lieu of low temperature thermal desorption. Type I soils would undergo treatment by LTTD, and Type II and III soil would be treated by bioremediation, if determined possible by the pilot scale bioremediation study. These types were developed based on contaminant concentrations as follows:

- **Type I** – Soil containing one of the following: visible free product, greater than 100 mg/kg naphthalene and/or fluorene, and/or greater than 10 mg/kg total carcinogenic polycyclic aromatic hydrocarbons (CPAHs).
- **Type II** – Soil containing between 0.4 – 100 mg/kg naphthalene, less than 100 mg/kg fluorene, and between 3.1 – 10 mg/kg total CPAHs.
- **Type III** – Soil containing between 0.4 – 100 mg/kg naphthalene, less than 100 mg/kg fluorene, and less than 3.1 mg/kg total CPAHs.

Our research, which includes literature review and communications with vendors of bioremediation technologies, indicates that existing bioremediation technology would typically reduce the levels of CPAHs in soil by approximately 50 percent; however, this process would require an extended period of time (i.e., one growing season). In light of the limited effectiveness of the existing bioremediation technology in treating soil that contains CPAHs, a revision of the soil type definitions is necessary. Please note that the net effect of this revision results in a greater quantity of soil that would be treated by LTTD in 2000-2001. Type I soil will now be defined as any soil containing greater than twice the direct contact residual contamination level (RCL) for total CPAHs, or 6.2 mg/kg. In addition, any soil containing greater than 100 mg/kg naphthalene and/or fluorene or exhibiting the presence of free product is classified as Type I.

The following text presents revised definitions as well as volume estimates for Types I, II, and III soils. A summary of the revision of Type I, II, and III soils is also presented in Table 2.

- **Type I** – Based on the revised definition, these soils now contain one or more of the following attributes: visible free product, greater than 100 mg/kg naphthalene and/or fluorene, and/or greater than 6.2 mg/kg total CPAHs. These soils will be treated using the LTTD system.

Approximately 13,500 CY of Type I soils were excavated during the implementation of the groundwater treatment system. The majority of this type of soil is currently staged on the existing asphalt storage pad. An additional 22,000

CY of Type I soils are likely to be excavated from Areas T-4 through T-11 in Year 2001.

- **Type II** – These soils contain naphthalene concentrations between 0.4 and 100 mg/kg, total CPAH concentrations between 3.1 and 6.2 mg/kg, and a fluorene concentration of less than 100 mg/kg. Type II soil would undergo treatment via ex-situ bioremediation in Years 2002 and 2003.

Our estimates based on the revised definition indicate that approximately 3,500 CY of Type II soils were excavated during the implementation of the groundwater treatment system. Currently, this type of soil is staged in Stockpile Area No. 2. An additional 6,000 CY of Type II soils are likely to be excavated from Areas T-4 through T-11 in Year 2001.

- **Type III** – Type III soils contain naphthalene concentration between 0.4 and 100 mg/kg, total CPAH concentrations less than 3.1 mg/kg, and a fluorene concentration less than 100 mg/kg. Type III soil would undergo treatment via ex-situ bioremediation.

Approximately 8,000 CY of Type III soils were excavated during the implementation of the groundwater treatment system. Currently, this type of soil is staged in the Stockpile Area No. 2. An additional 13,000 CY of Type III soil would be excavated from Areas T-4 through T-11 in Year 2001. This type of soil would undergo bioremediation in Years 2002 and 2003.

Please note that due to limited soil data, the above quantities for Types I, II, and III soils are estimated, and exact volume and contaminant levels associated with the unexcavated soil are uncertain. Due to this uncertainty and to better delineate the lateral and vertical extent of contamination associated with Areas T-4 through T-11, WESTON proposes to conduct a GeoProbe® investigation of the contaminated soil zones.

GEOPROBE INVESTIGATION

The GeoProbe Investigation will focus on Areas T-4 through T-11, shown in Figure 2. The purpose of this investigation is to further delineate and refine the spatial limits of these areas and thus minimize excavation of soils that do not require excavation and/or treatment. A 25-foot sampling- and boring-grid will be used to locate the GeoProbe borings in all soil excavation areas. The sampling grid for each area is shown in Figure 2.

The Amended ROD and the available analytical data indicate that areas from where soils will undergo treatment for reasons other than the presence of free-product will be excavated to a depth of four feet. All other areas will be excavated to a depth where free-product is no longer present and where the soil meets the excavation and treatment criteria. Thus, the depth of borings and the sampling frequency will vary in each area. Table 3 shows the depth and sampling frequency of each area.

Prior to sampling, discrete sections of each GeoProbe boring will be screened for indications of contamination using the following parameters:

- Elevated instrument (PID, OVM etc.) readings.
- Visual staining or presence of free product.

Screening of the GeoProbe samples will be conducted for the screening intervals shown in Table 3. A grab soil sample will be collected from 6-inches above to 6-inches below the center of the zone exhibiting the highest degree of apparent contamination. An exception to this protocol would be the case where a specific zone within the screening interval is grossly contaminated. In that case, the grab sample will be collected from the top 1-foot of the section. A soil sample will be collected from the top 1-foot when the screening indicates no contamination within the screening interval. No sample will be collected if the entire screening interval is grossly contaminated.

All soil samples will be grab samples. Samples collected will be analyzed for polynuclear hydrocarbons (PAHs) and benzene, toluene, ethylbenzene, and xylene (BTEX collectively). All sampling and analytical methods will be in accordance with the Quality Assurance Project Plan (QAPP) that was approved for the groundwater remedy installation.

Analytical results and visual observations will be used to define the limits of all areas and to characterize the soil within the relevant areas. If all analytical results from a single boring are below the cleanup levels for the site, then the area represented by that boring would not require excavation. The areas of contamination would be revised to reflect such occurrence. If the analytical results demonstrate that contamination above clean-up levels extends beyond the existing limits of previously defined areas, the GeoProbe will be relocated to a sampling location 25 feet beyond the outer contaminated sample. Analytical results collected during the task will not be used as a substitute for analytical results of post-excavation verification samples.

SOIL EXCAVATION AND STAGING

Data generated during the GeoProbe investigation will be used to reassess the areal and vertical extent of contamination in Areas T-4 through T-11. Results of the reassessment will be used to

develop an excavation plan. The excavation plan will contain excavation techniques that will optimize excavation of Type I soils.

Soil excavation from Areas T-4 through T-11 will commence once one-half to three-quarters of the stockpiled Type I soils have undergone thermal treatment. Type I soil will be excavated and directly transported to the feed stock preparation area (FSPA). If excavation proceeds more rapidly than thermal treatment, Type I soils will be staged on the Asphalt Pad. Characterization of soil upon excavation will not be necessary, as sampling performed during the GeoProbe investigation will identify the soil classification prior to excavation. Type II and III soil excavated will be stockpiled for future treatment via solid-phase bioremediation. A small portion of the Type II soil will be used for conducting pilot-scale bioremediation testing. Stockpile #2 will be expanded east to facilitate storage of Type II and III soil. The expanded Stockpile #2 will have the capacity to store approximately 18,500 CY. The remainder of Type II and III soils will be staged on the unused Asphalt Pad upon completion of LTTD treatment of Type I soil.

SOIL TREATMENT

Low-Temperature Thermal Desorption

LTTD will be used to treat Type I soil. Solid-phase bioremediation will be used to treat Type II and III soils. WESTON proposes that all Type I soils, approximately 35,500 CY, be treated in 2000-2001.

Solid-Phase Bioremediation

Bioremediation of Types II and III soil will be performed during 2001, 2002, and 2003. Initially, a pilot-scale solid-phase bioremediation testing will be conducted during Year 2001 construction season to evaluate the effectiveness solid-phase bioremediation. Subsequent to the treatability study, the operations will be scaled up to treat the stockpiled Type II and III soils during 2002 and 2003. Approximately 30,500 CY of contaminated soil would undergo solid-phase bioremediation. If bioremediation is not feasible, as determined by the pilot-scale study, Types II and III soils would be treated using LTTD. Bioremediation of approximately 15,000 CY per year in 2002 and 2003 will require approximately 6 acres of treatment area to accomplish. Figure 3 shows the conceptual site layout for site during soil remediation activities.

Pilot-Scale Solid-Phase Bioremediation Study

A pilot-scale solid-phase bioremediation study will be conducted throughout the spring, summer, and fall seasons of 2001. Initially, the pilot-scale study was scheduled for late 2000; however, our research indicates that the short time frame allotted by the remaining warm weather months in 2000 would not be sufficient to allow for an adequate evaluation of the bioremediation treatment technology. Our research has indicated that bioremediation of CPAHs would require a

relatively longer period of time to biodegrade the CPAHs due to their complex molecular structure. In addition, an extended biodegradation period would also likely be necessary to achieve the relatively low disposal standard of 0.4 mg/kg for naphthalene. Therefore, the pilot-scale bioremediation study will be performed during April to October 2001. The pilot scale study will be performed in accordance with the approved workplan, with minor revision to account for the extended treatment period.

Full-Scale Solid-Phase Bioremediation

Upon completion of the pilot-scale study, the bioremediation treatment activities will be scaled up to complete bioremediation of the Types II and III soil in 2002 and 2003. Prior to implementation of the full-scale bioremediation remedy, a workplan providing the details of the full-scale bioremediation operation will be prepared and submitted to the agencies for approval.

TREATED SOIL MANAGEMENT

All soil that undergoes treatment, via LTTD or solid-phase bioremediation, is anticipated to meet all migration to groundwater and direct contact RCLs; therefore, all treated soils will be covered with a 6-inch layer of vegetated topsoil.

Soil treated by LTTD will be used to backfill excavations at Areas T-4 through T-11. Soil treated by LTTD prior to excavation of Areas T-4 through T-11 will be staged north of the LTTD system location until used as backfill.

Soil treated via solid-phase bioremediation will be used in the fill layer of the cover system that will be installed for areas of the site where soils exceed the 3.1 mg/kg direct contact RCL for CPAHs. Soil treated by solid-phase bioremediation will be staged until used in the cover system.

SOIL COVER SYSTEM

Areas of the site with soil containing total CPAHs greater than the direct contact RCL for industrial receptors will require installation of a soil cover system. Areas exceeding the direct contact RCL for total CPAHs are indicated on Figure 1 as Areas C-1 through C-18. The cover system required for these areas would consist of a 2-foot fill layer overlaid with a 6-inch layer of vegetated topsoil. Soil treated via solid-phase bioremediation will be used as fill material. To prevent vehicular traffic and other site activities performed during the river remedy work from damaging the cover system, the cover system will be installed after implementation of the river remedy is complete. Detailed design of the cover system will be prepared and submitted to the agencies for approval prior to placement.



A. Keith Watson
Kerr-McGee Chemical LLC

-7-

9 November 2000

SITE RESTORATION

All excavations in Areas T-4 through T-11 will be backfilled to the extent possible with soil that is treated via the thermal desorption system. The remaining volume of soil would consist of imported soil. Since only 30,500 CY of soil will be available for backfilling purposes after LTTD activities are completed, compared to 41,000 CY that is likely to be excavated from Areas T-4 through T-11 in the future, approximately 10,500 of imported material may be required to complete backfilling of excavations at Areas T-4 through T-11. Upon completion of the backfilling, the former excavations at Areas T-4 through T-11 will be surveyed and seeded. The clay pads constructed for solid-phase bioremediation of Types II and III soils will be left in place until material is used in implementation of the river remedy.

SCHEDULE

Figure 4 shows the anticipated schedule of soil remediation activities at the Moss-American Site.

Should further clarification be required, please contact me at (847) 918-4142.

Very truly yours,

ROY F. WESTON, INC.

Thomas P. Graan, Ph.D.

Principal Project Manager

TPG/slr

Table 1
Revised Estimate of Soil Volume Requiring Treatment
Kerr McGee Chemical, LLC
Moss American Site
Milwaukee, Wisconsin

Excavation Area	1999 Estimated Soil Volume Requiring Treatment (During Agency Discussions)	1999-2000 - Soil Volume Requiring Treatment (Excavated During Implementation of GW Remedy)	Factored Increase in Soil Volume		Revised Estimate of Soil Requiring Treatment
			Actual (1998 vs. 1999)	Expected	
<i>Phase I</i>					
Area T-1	3,454	6,762	2	N/A	6,762
Area T-2	6,334	12,500	1.8	N/A	12,500
Area T-3	509	400	1	N/A	400
Gates	-	4,900	N/A	N/A	4,900
Subtotal	10,296	24,562	2.4	--	24,562
<i>Phase II</i>					
Area T-4	180	N/A	N/A	2.4	432
Area T-5	1,481	N/A	N/A	2.4	3,555
Area T-6	2,314	N/A	N/A	2.4	5,553
Area T-7	6,321	N/A	N/A	2.4	15,171
Area T-8	1,160	N/A	N/A	2.4	2,784
Area T-9	759	N/A	N/A	2.4	1,821
Area T-10	3,611	N/A	N/A	2.4	8,667
Area T-11	1,289	N/A	N/A	2.4	3,093
Subtotal	17,115	--	--	--	41,076
Total	27,411	--	--	--	66,000

Notes:

1). Unless noted, all volumes are reported in units of cubic yards.

Table 2
Summary of Contaminant Concentration Ranges in Types I, II, and III Soil
Moss-American Site
Milwaukee, Wisconsin

Contaminant	Soil "Type" Definitions as Presented in LTTD Vendor Request For Bid			Revised Soil "Type" Definitions		
	Type I	Type II	Type III	Type I	Type II	Type III
Total CPAHs	>10 mg/kg	3.1 – 10 mg/kg	< 3.1 mg/kg	>6.2 mg/kg	3.1 – 6.2 mg/kg	NC
Benzo(a)pyrene^a	>10 mg/kg	3.1 – 10 mg/kg	< 3.1 mg/kg	>6.2 mg/kg	3.1 – 6.2 mg/kg	NC
Naphthalene	>100 mg/kg	0.4 – 100 mg/kg	0.4 – 100 mg/kg	NC	NC	NC
Fluorene	>100 mg/kg	<100 mg/kg	<100 mg/kg	NC	NC	NC
BTEX	Any	Any	Any	NC	NC	NC
Free Product	Evident	Not Evident	Not Evident	NC	NC	NC

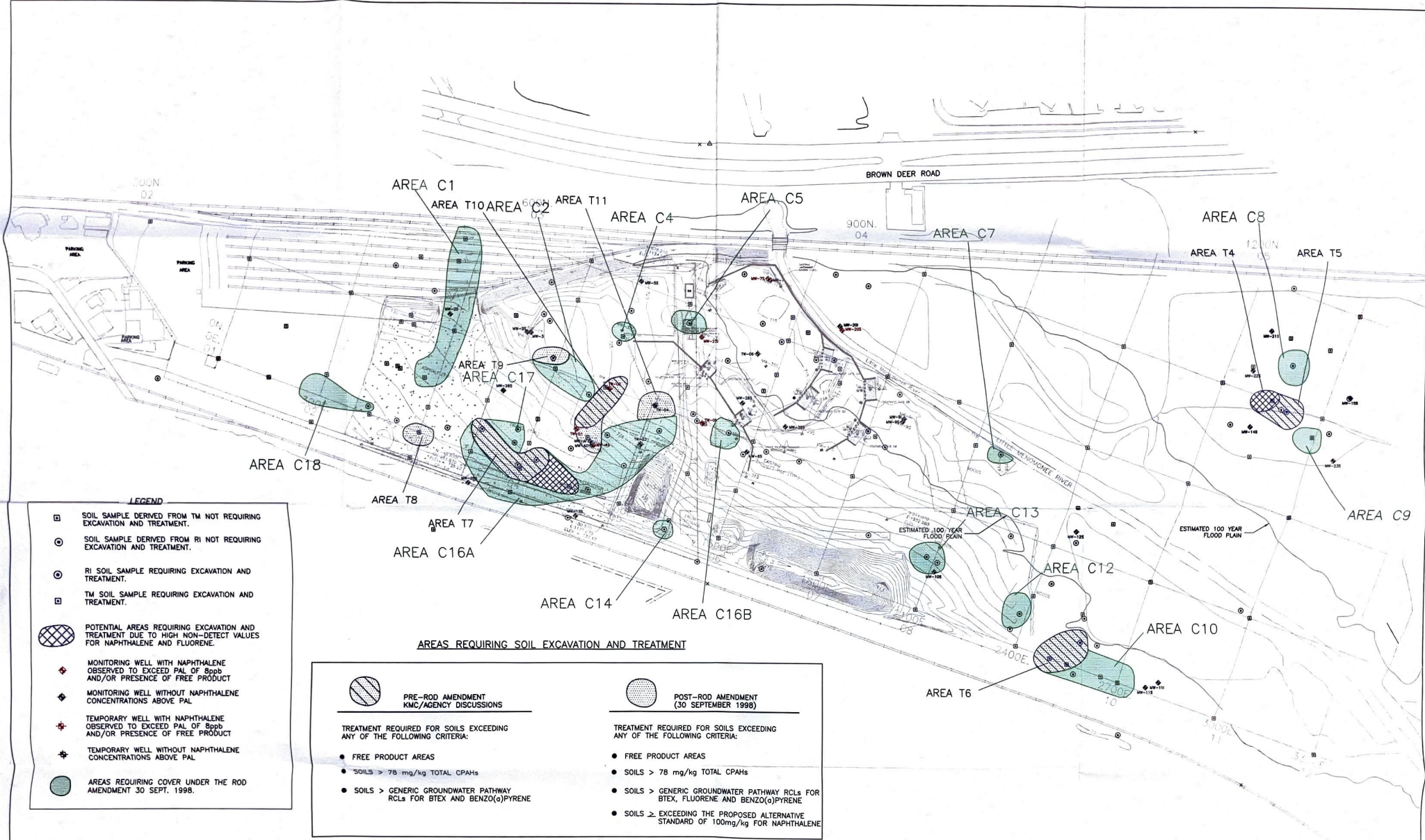
a – Since benzo(a)pyrene is a CPAH, the benzo(a)pyrene concentration cannot exceed the total CPAH concentration.

NC – No change to soil type definition for this parameter.

Table 3
Depth of Boring and Screening Lengths
GeoProbe Investigation
Moss-American Site
Milwaukee, Wisconsin

Area	Boring Depth (feet)	Screening Length^a (feet)
T-4	9	3
T-5	9	3
T-6	4	2
T-7	9	3
T-8	9	3
T-9	4	2
T-10	12	4
T-11	9	3



^aOne grab sample per screening interval

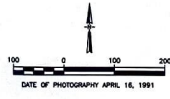


LEGEND

- ☐ SOIL SAMPLE DERIVED FROM TM NOT REQUIRING EXCAVATION AND TREATMENT.
- SOIL SAMPLE DERIVED FROM RI NOT REQUIRING EXCAVATION AND TREATMENT.
- ⊙ RI SOIL SAMPLE REQUIRING EXCAVATION AND TREATMENT.
- ⊠ TM SOIL SAMPLE REQUIRING EXCAVATION AND TREATMENT.
- ▨ POTENTIAL AREAS REQUIRING EXCAVATION AND TREATMENT DUE TO HIGH NON-DETECT VALUES FOR NAPHTHALENE AND FLUORENE.
- ◆ MONITORING WELL WITH NAPHTHALENE OBSERVED TO EXCEED PAL OF 8ppb AND/OR PRESENCE OF FREE PRODUCT
- ◆ MONITORING WELL WITHOUT NAPHTHALENE CONCENTRATIONS ABOVE PAL
- ◆ TEMPORARY WELL WITH NAPHTHALENE OBSERVED TO EXCEED PAL OF 8ppb AND/OR PRESENCE OF FREE PRODUCT
- ◆ TEMPORARY WELL WITHOUT NAPHTHALENE CONCENTRATIONS ABOVE PAL
- AREAS REQUIRING COVER UNDER THE ROD AMENDMENT 30 SEPT. 1998.

AREAS REQUIRING SOIL EXCAVATION AND TREATMENT

 PRE-ROD AMENDMENT KMC/AGENCY DISCUSSIONS	 POST-ROD AMENDMENT (30 SEPTEMBER 1998)
TREATMENT REQUIRED FOR SOILS EXCEEDING ANY OF THE FOLLOWING CRITERIA: <ul style="list-style-type: none"> ● FREE PRODUCT AREAS ● SOILS > 78 mg/kg TOTAL CPAHs ● SOILS > GENERIC GROUNDWATER PATHWAY RCLs FOR BTEX AND BENZO(a)PYRENE 	TREATMENT REQUIRED FOR SOILS EXCEEDING ANY OF THE FOLLOWING CRITERIA: <ul style="list-style-type: none"> ● FREE PRODUCT AREAS ● SOILS > 78 mg/kg TOTAL CPAHs ● SOILS > GENERIC GROUNDWATER PATHWAY RCLs FOR BTEX, FLUORENE AND BENZO(a)PYRENE ● SOILS ≥ EXCEEDING THE PROPOSED ALTERNATIVE STANDARD OF 100mg/kg FOR NAPHTHALENE



TOPOGRAPHIC MAP
 OF
 MOSS-AMERICAN SUPERFUND SITE
 MILWAUKEE COUNTY, WISCONSIN
 PREPARED FOR
 KAPUR AND ASSOCIATES, INC.
 MILWAUKEE, WISCONSIN
 SHEET 11

FIGURE 1

KERNAND-17/09/00-14.24-1 (A003) 0001/0700

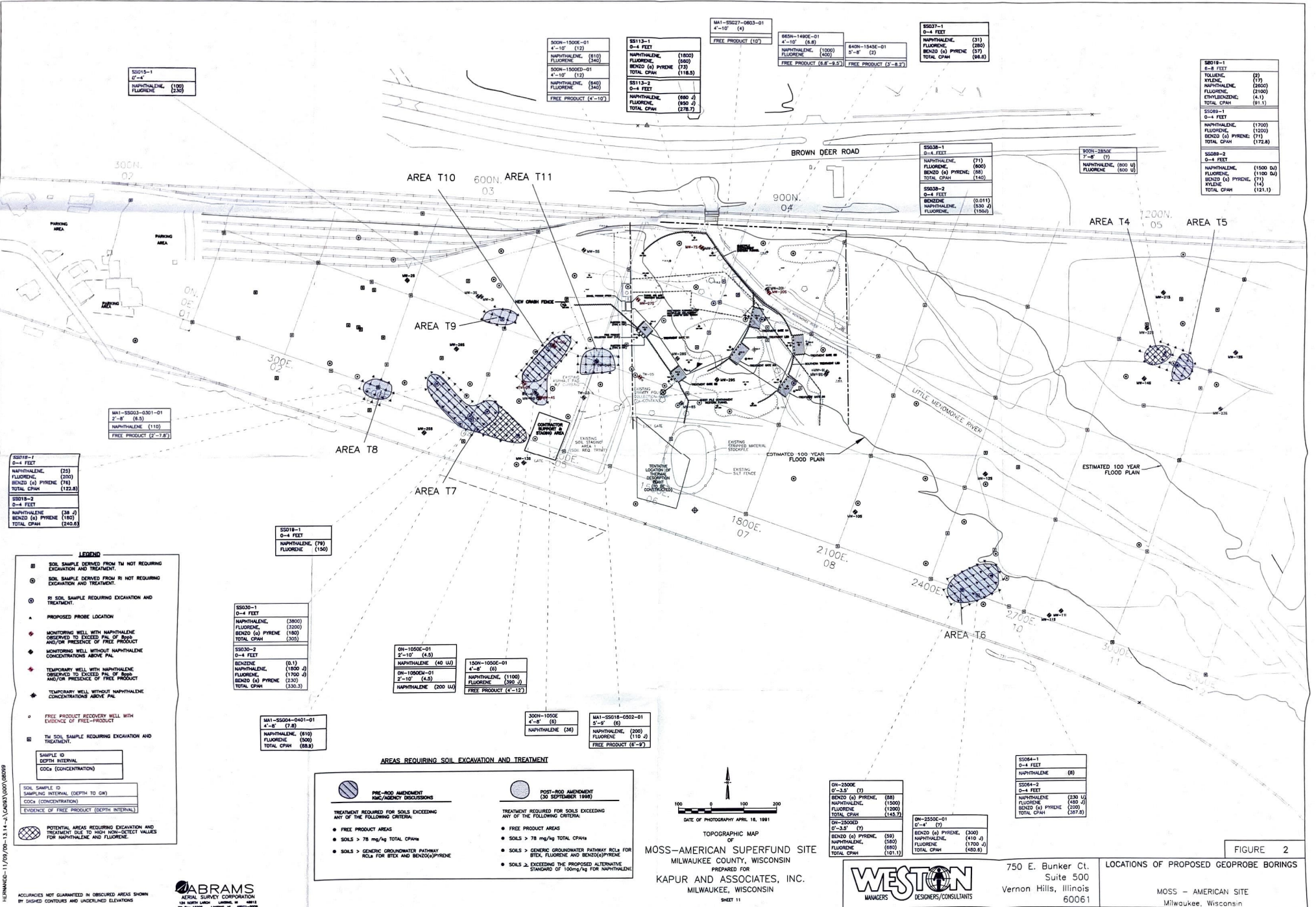
ACCURACIES NOT GUARANTEED IN OBSERVED AREAS SHOWN BY DASHED CONTOURS AND UNDERLINED ELEVATIONS

ABRAMS
 AERIAL SURVEY CORPORATION
 114 NORTH WISCONSIN - LAKEVIEW, IL 60058
 PO Box 13028 - LAKEVIEW, IL 60058-0288

WESTON
 MANAGERS DESIGNERS/CONSULTANTS

750 E. Bunker Ct.
 Suite 500
 Vernon Hills, Illinois
 60061

SOIL REMEDIATION AREAS
 MOSS - AMERICAN SITE
 Milwaukee, Wisconsin



MA1-SS027-0803-01 4'-10" (4)	SS113-1 0-4 FEET	MA1-SS027-0803-01 4'-10" (4)	SS037-1 0-4 FEET
NAPHTHALENE (510)	NAPHTHALENE (1800)	NAPHTHALENE (1000)	NAPHTHALENE (31)
FLUORENE (340)	FLUORENE (900)	FLUORENE (400)	FLUORENE (290)
	BENZO(a) PYRENE (73)	FLUORENE (37)	BENZO(a) PYRENE (57)
	TOTAL CPAN (118.5)		TOTAL CPAN (86.8)

SS019-1 0'-4"	SS019-1 6'-8" FEET
NAPHTHALENE (100)	TOLUENE (0)
FLUORENE (20)	XYLENE (0)
	NAPHTHALENE (2600)
	FLUORENE (2100)
	ETHYLENEDIAMINE (41)
	TOTAL CPAN (61.1)

SS039-1 0-4 FEET	SS039-2 0-4 FEET
NAPHTHALENE (71)	NAPHTHALENE (0.013)
FLUORENE (600)	FLUORENE (150.0)
BENZO(a) PYRENE (58)	
TOTAL CPAN (140)	

SS039-1 0-4 FEET	SS039-2 0-4 FEET
NAPHTHALENE (71)	NAPHTHALENE (0.013)
FLUORENE (600)	FLUORENE (150.0)
BENZO(a) PYRENE (58)	
TOTAL CPAN (140)	

MA1-SS023-0301-01 2'-8" (6.5)
NAPHTHALENE (110)
FREE PRODUCT (2'-7.8)

SS019-1 0-4 FEET
NAPHTHALENE (25)
FLUORENE (200)
BENZO(a) PYRENE (71)
TOTAL CPAN (122.8)

- LEGEND**
- SIL SOIL SAMPLE DERIVED FROM TM NOT REQUIRING EXCAVATION AND TREATMENT.
 - SOIL SAMPLE DERIVED FROM RI NOT REQUIRING EXCAVATION AND TREATMENT.
 - RI SOIL SAMPLE REQUIRING EXCAVATION AND TREATMENT.
 - PROPOSED PROBE LOCATION
 - MONITORING WELL WITH NAPHTHALENE OBSERVED TO EXCEED PAL OF BOD AND/OR PRESENCE OF FREE PRODUCT
 - MONITORING WELL WITHOUT NAPHTHALENE CONCENTRATIONS ABOVE PAL
 - TEMPORARY WELL WITH NAPHTHALENE OBSERVED TO EXCEED PAL OF BOD AND/OR PRESENCE OF FREE PRODUCT
 - TEMPORARY WELL WITHOUT NAPHTHALENE CONCENTRATIONS ABOVE PAL
 - FREE PRODUCT RECOVERY WELL WITH EVIDENCE OF FREE-PRODUCT
 - TM SOIL SAMPLE REQUIRING EXCAVATION AND TREATMENT.

MA1-SS024-0401-01 4'-8" (7.8)	MA1-SS018-0502-01 5'-9" (6)
NAPHTHALENE (610)	NAPHTHALENE (200)
FLUORENE (500)	FLUORENE (110.0)
TOTAL CPAN (88.8)	FREE PRODUCT (6'-9")

ACCURACIES NOT GUARANTEED IN DISCREPANCY AREAS SHOWN BY DASHED CONTOURS AND UNDERLINED ELEVATIONS

ABRAMS
AERIAL SURVEY CORPORATION
300 NORTH 10TH ST., SUITE 100
MILWAUKEE, WISCONSIN 53233

AREAS REQUIRING SOIL EXCAVATION AND TREATMENT

PRE-ROD AMENDMENT RAC/AGENCY DISCUSSIONS	POST-ROD AMENDMENT (30 SEPTEMBER 1998)
--	--

TREATMENT REQUIRED FOR SOILS EXCEEDING ANY OF THE FOLLOWING CRITERIA:

- FREE PRODUCT AREAS
- SOILS > 78 mg/kg TOTAL CPANs
- SOILS > GENERIC GROUNDWATER PATHWAY RCLs FOR BTX, FLUORENE AND BENZO(a)PYRENE
- SOILS > EXCEEDING THE PROPOSED ALTERNATIVE STANDARD OF 100mg/kg FOR NAPHTHALENE

DATE OF PHOTOGRAPHY APRIL 16, 1991

TOPOGRAPHIC MAP OF
MOSS-AMERICAN SUPERFUND SITE
MILWAUKEE COUNTY, WISCONSIN
PREPARED FOR
KAPUR AND ASSOCIATES, INC.
MILWAUKEE, WISCONSIN

SHEET 11

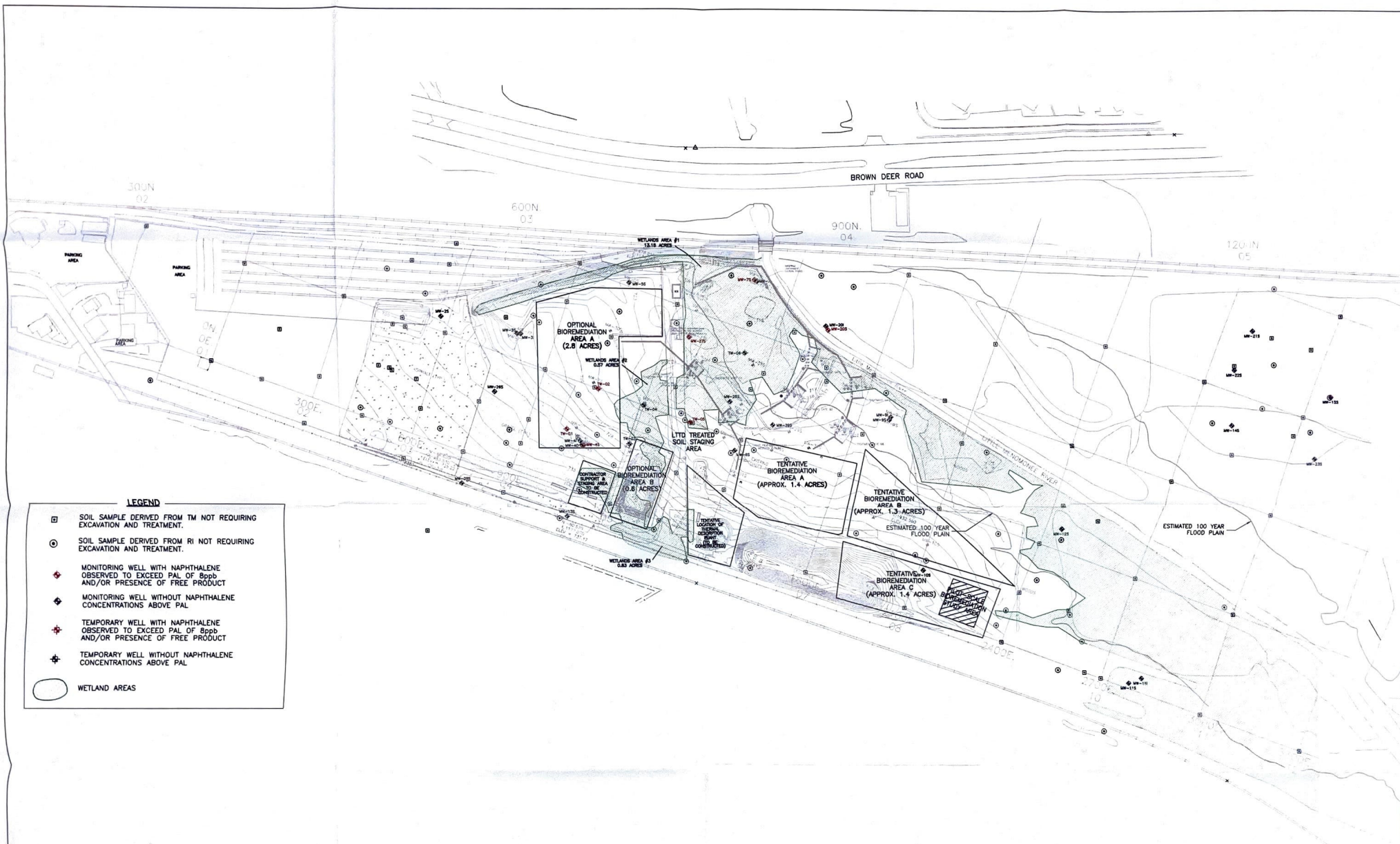
WESTON
MANAGERS DESIGNERS/CONSULTANTS

750 E. Bunker Ct.
Suite 500
Vernon Hills, Illinois
60061

LOCATIONS OF PROPOSED GEOPROBE BORINGS

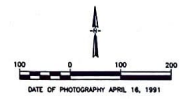
MOSS - AMERICAN SITE
Milwaukee, Wisconsin

FIGURE 2



LEGEND

- SOIL SAMPLE DERIVED FROM TM NOT REQUIRING EXCAVATION AND TREATMENT.
- SOIL SAMPLE DERIVED FROM RI NOT REQUIRING EXCAVATION AND TREATMENT.
- ◆ MONITORING WELL WITH NAPHTHALENE OBSERVED TO EXCEED PAL OF 8ppb AND/OR PRESENCE OF FREE PRODUCT
- ◇ MONITORING WELL WITHOUT NAPHTHALENE CONCENTRATIONS ABOVE PAL
- ◆ TEMPORARY WELL WITH NAPHTHALENE OBSERVED TO EXCEED PAL OF 8ppb AND/OR PRESENCE OF FREE PRODUCT
- ◇ TEMPORARY WELL WITHOUT NAPHTHALENE CONCENTRATIONS ABOVE PAL
- WETLAND AREAS



TOPOGRAPHIC MAP
OF
MOSS-AMERICAN SUPERFUND SITE
MILWAUKEE COUNTY, WISCONSIN
PREPARED FOR
KAPUR AND ASSOCIATES, INC.
MILWAUKEE, WISCONSIN
SHEET 11

FIGURE 3

MILWAUKEE-11/09/00-14.24--1/06053/001/20700

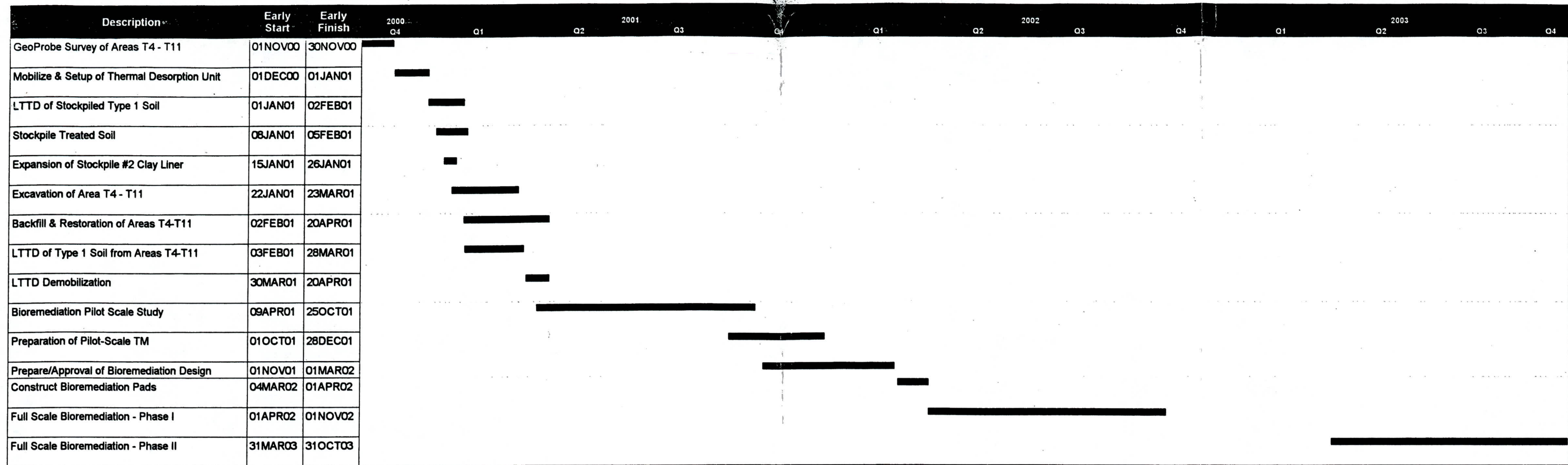
ACCURACIES NOT GUARANTEED IN OBSCURED AREAS SHOWN BY DASHED CONTOURS AND UNDERLINED ELEVATIONS

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AERIAL SURVEY CORPORATION
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LOCATIONS OF TREATMENT AREAS AND/OR PADS FOR PILOT AND FULL SCALE REMEDIATION
MOSS - AMERICAN SITE
Milwaukee, Wisconsin



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Finish date	01SEP00
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Figure 4
Soil Remedy Schedule

█	Early bar
█	Progress bar
█	Critical bar
—	Summary bar
◆	Start milestone point
◆	Finish milestone point