

GIS REGISTRY INFORMATION

SITE NAME: SUN CHEMICAL

BRRTS #: 02-71-188336 **FID # (if appropriate):** _____

COMMERCE # (if appropriate): _____

CLOSURE DATE: _____

STREET ADDRESS: 450 S MILWAUKEE ST

CITY: MENASHA

SOURCE PROPERTY GPS COORDINATES (meters in WTM91 projection): X= 643822 Y= 415980

CONTAMINATED MEDIA: Groundwater Soil Both

OFF-SOURCE GW CONTAMINATION >ES: Yes No

IF YES, STREET ADDRESS 1: _____

GPS COORDINATES (meters in WTM91 projection): X= _____ Y= _____

OFF-SOURCE SOIL CONTAMINATION >Generic or Site-Specific RCL (SSRCL): Yes No

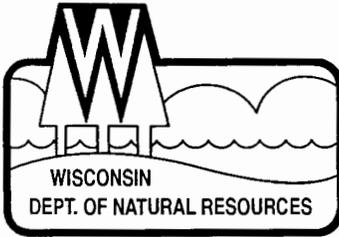
IF YES, STREET ADDRESS 1: _____

GPS COORDINATES (meters in WTM91 projection): X= _____ Y= _____

CONTAMINATION IN RIGHT OF WAY: Yes No

DOCUMENTS NEEDED:

- Closure Letter, and any conditional closure letter or denial letter issued x
- Copy of any maintenance plan referenced in the final closure letter. X
- Copy of (soil or land use) deed notice *if any required as a condition of closure* NA
- Copy of most recent deed, including legal description, for all affected properties X
- Certified survey map or relevant portion of the recorded plat map *(if referenced in the legal description)* for all affected properties X
- County Parcel ID number, *if used for county*, for all affected properties #
- Location Map which outlines all properties within contaminated site boundaries on USGS topographic map or plat map in sufficient detail to permit the parcels to be located easily (8.5x14" if paper copy). If groundwater standards are exceeded, the map must also include the location of all municipal and potable wells within 1200' of the site. X
- Detailed Site Map(s) for all affected properties, showing buildings, roads, property boundaries, contaminant sources, utility lines, monitoring wells and potable wells. (8.5x14", if paper copy) This map shall also show the location of all contaminated public streets, highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding ch. NR 140 ESs and soil contamination exceeding ch. NR 720 generic or SSRCLs. x
- Tables of Latest Groundwater Analytical Results (no shading or cross-hatching) x
- Tables of Latest Soil Analytical Results (no shading or cross-hatching) X
- Isoconcentration map(s), *if required for site investigation (SI)* (8.5x14" if paper copy). The isoconcentration map should have flow direction and extent of groundwater contamination defined. If not available, include the latest extent of contaminant plume map. X
- GW: Table of water level elevations, with sampling dates, and free product noted if present X
- GW: Latest groundwater flow direction/monitoring well location map (should be 2 maps if maximum variation in flow direction is greater than 20 degrees) X
- SOIL: Latest horizontal extent of contamination exceeding generic or SSRCLs, with one contour x
- Geologic cross-sections, *if required for SI.* (8.5x14" if paper copy) X
- RP certified statement that legal descriptions are complete and accurate X
- Copies of off-source notification letters (if applicable) NA
- Letter informing ROW owner of residual contamination (if applicable)(public, highway or railroad ROW) NA



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
Ronald W. Kazmierczak, Regional Director

Oshkosh Service Center
625 E. CTY Y, Suite 700
Oshkosh, Wisconsin 54901-9731
Telephone 920-424-3050
FAX 920-424-4404

March 21, 2007

Arnold Beringer
Sun Chemical Corp
135 W. Lake St.
Northlake, IL 60104

SUBJECT: Final Case Closure with Land Use Limitations or Conditions
Sun Chemical—Menasha Facility, 450 S. Milwaukee Street, Menasha, WI
BRRTS # 02-71-188336

Dear Mr. Beringer:

On February 15, 2005, the Northeast Regional Closure Committee reviewed the above referenced case for closure. This committee reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases. On February 16, 2005, you were notified that the Closure Committee had denied closure until a deed restriction was filed. On June 3, 2006 legislation was passed that eliminates the deed restriction requirement. Since you have not filed the deed restriction this site will be closed under the new legislation for land use controls.

On March 19, 2007, the Department received the final requirement for closure, so it appears that your case meets the requirements of ch. NR 726, Wisconsin Administrative Code. The Department considers this case closed and no further investigation or remediation is required at this time.

Please be aware that pursuant to s. 292.12 Wisconsin Statutes, compliance with the requirements of this letter is a responsibility to which you and any subsequent property owners must adhere. If these requirements are not followed or if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, welfare, or the environment, the Department may take enforcement action under s. 292.11 Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property or this case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code. It is the Department's intent to conduct inspections in the future to ensure that the conditions included in this letter including compliance with referenced maintenance plans are met.

Pursuant to s. 292.12(2)(a), Wis. Stats., the pavement cap that currently exists in the truck loading dock location shown in Figure 1 shall be maintained in compliance with the attached "Engineered Cover System Maintenance Plan," dated August 2005, in order to minimize the infiltration of water and prevent additional groundwater contamination that would violate the groundwater quality standards in ch. NR 140, Wis. Adm. Code, and to prevent direct contact with residual soil contamination that might otherwise pose a threat to human health. If soil in the specific locations described above is excavated in the future, the property owner at the time of

excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner at the time of excavation will need to determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules. In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken during excavation activities to prevent a health threat to humans.

The following activities are prohibited on any portion of the property where pavement is required as shown on Figure 1 (former UST area), unless prior written approval has been obtained from the Wisconsin Department of Natural Resources: 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped or paved areas; 5) plowing for agricultural cultivation; or 6) construction or placement of a building or other structure.

Your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites. Information that was submitted with your closure request application will be included on the GIS Registry. To review the sites on the GIS Registry web page, visit <http://dnr.wi.gov/org/aw/rr/gis/index.htm>. If your property is listed on the GIS Registry because of remaining contamination and you intend to construct or reconstruct a well, you will need prior Department approval in accordance with s. NR 812.09(4)(w), Wis. Adm. Code. To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line <http://www.dnr.state.wi.us/org/water/dwg/3300254.pdf> or at the web address listed above for the GIS Registry.

The Department appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Casey Jones at 920-303-5424.

Sincerely,



Bruce G. Urben
Northeast Region Remediation & Redevelopment Team Supervisor

Enclosure: Cap maintenance plan

Electronic copy: John Roberts, ERM Consultants

**Engineered Cover System Maintenance Plan
Sun Chemical Company
450 Milwaukee Street
Menasha, Wisconsin 54952
BRRTS# 02-71-188336**

Environmental Resources Management (ERM), under the direction of Sun Chemical Company, Menasha, Wisconsin, has prepared this Engineered Cover System Maintenance Plan (the "Plan") in compliance with the standards set forth in Chapter NR 724.13 of the Wisconsin Administrative Code. An engineered cover, namely concrete and an adjacent manufacturing building, is currently in-place over existing soil that contains volatile organic compounds (VOCs) at the above referenced facility. This cover will be maintained as a soil performance standard to protect (1) the direct contact exposure pathway, and (2) the soil-to-groundwater pathway. The design goal for this performance standard is to prevent these pathways for at least a period of 30 years or as long as the in-place soil contains concentrations exceeding a residual contaminant level (RCL).

Site Remediation History

The facility, whose layout is shown in Figure 1, had historic discharges from a former underground storage tank farm. Tanks and contaminated soils were removed from the area and twelve confirmatory samples were collected from the excavation. Locations of these samples are shown on Figure 2, and results of post remedial analytical testing is shown on Table 1. Eleven of these results indicated levels of constituents below the generic or calculated site-specific residual contaminant levels (RCLs). One sample, designated "E2E2R2" exceeded the generic RCL for xylenes. Additional soil could not be removed from this area due to the proximity of the nearby building foundation. The excavation was backfilled with clean material and a recessed truck dock was constructed in its place.

The truck dock was constructed of reinforced concrete pavement, consisting of approximately 12 inches of reinforced concrete during October 1998. The concrete was poured in slabs, with expansion joints between the slabs. Because of the sloped nature of the concrete surface, a storm water catchment located at the low end of the truck dock collects and routes storm water to the City's storm water conveyance system.

Due to the tight nature of the clay soils at the truck dock, there is little risk of contaminant migration. Historic groundwater sampling efforts indicated that ground water related constituents were stable or decreasing in concentration.

Decision making criteria

The existing building and concrete pavement covering the in-place soil that exceeds the generic RCLs prevents direct contact exposure, accounting for the current and future expected land uses, access restrictions, institutional controls and planned maintenance. In addition, the existing cover should provide enough infiltration reduction to act in concert with other mechanisms, that when viewed as a whole remedial concept for the site, provide for natural attenuation of the soil contaminants so the soil and ground water standards will be met in a reasonable period of time. This cover system and associated fine-grained nature of site soils should also minimize vapor migration.

Design

The existing building slab is in good condition and there is sufficient clean soil below the concrete to separate the contamination from the surface. The building and the concrete truck dock (as currently constructed and properly maintained) will prevent contaminants exposure to on-site workers thereby providing adequate protection against direct contact exposure. The existing cover also provides sufficient reduction in infiltration to reduce leaching of contaminants to the groundwater from the contaminated soil.

Maintenance Plan

This maintenance plan consists of annual inspections of the concrete loading dock with recommendations for regular maintenance and any necessary slab repairs. The property owner will continue to maintain the existing building adjacent to the loading dock in good repair. The building is not included in the annual inspections described below.

Inspections of the truck loading dock will generally occur in the spring. Inspections will focus on observing and documenting the integrity of each poured concrete slab within the area of contaminated soil and note any unplanned cracking, offsets, spalling, etc. An inspection form is included in Appendix A.

Records of the annual inspections will be kept on file at the Sun Chemical facility in Menasha, WI and will be made available for review by the Wisconsin Department of Natural Resources (WDNR) upon their request.

A deed instrument will be filed at the County Register of Deeds for the area with contaminated soil. The deed instrument provides notification of the presence of soil contaminants and the required engineered cover, and restricts activities that would disturb the cover or contaminated soil.

Finally, as part of the case closure submittal, a copy of this maintenance plan will be submitted to the WDNR.

Plan Revisions

When warranted by changes in the design or maintenance of this remedial measure, or when requested by the WDNR, Sun Chemical will revise this maintenance plan. Plan revisions will be submitted to the WDNR and will include a revision date, and document any changes in the design or maintenance of this remedial action.

INFORMATION SHEET

SUN CHEMICAL CORPORATION, MENASHA, WISCONSIN

Project title: Sun Chemical Corporation- Cover Maintenance Plan

Department-issued identification number for the site or facility: 02-71-188336

Purpose: Maintenance Plan for cover that will be maintained as a soil performance standard to protect (1) the direct contact exposure pathway, and (2) the soil-to-groundwater pathway.

Name of Property Owner: Sun Chemical Corporation

Contact Name: Carl Raycroft

Address: 135 West Lake St. Northlake, IL 60104

Telephone Number: (708) 562-0550 ext. 3832

Facility Address: 450 South Milwaukee Street, Menasha, WI 54952

Contact Name:

Telephone Number: (920) 722-0590

Environmental Consultant: Environmental Resources Management

Address: 700 W. Virginia Street, Suite 601, Milwaukee, Wisconsin 53204

Telephone Number: (414) 289-9505

County: Winnebago

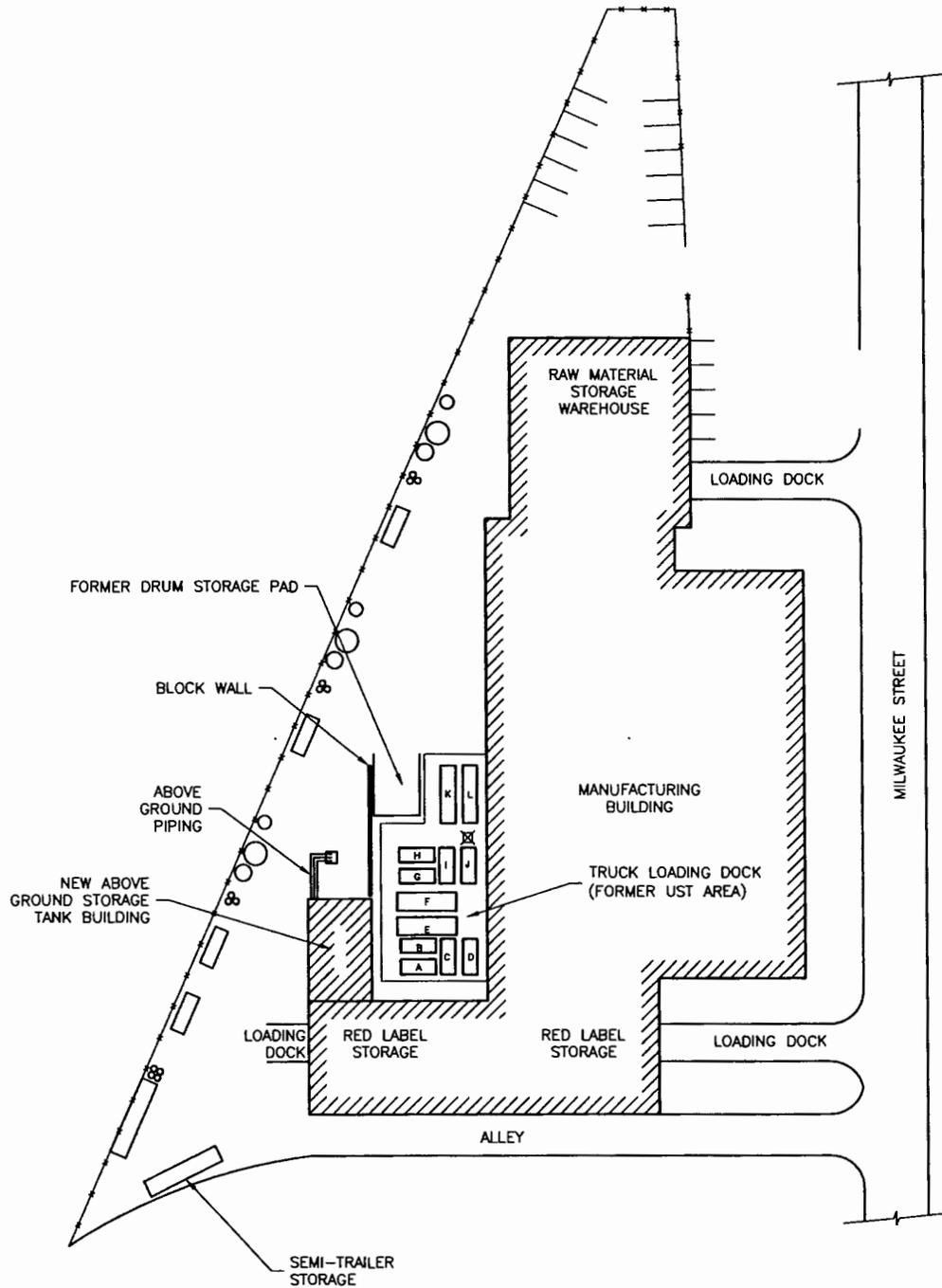
Township: 20N Range: 17E Section: 15 Quarter-quarter section: NESE

WTM Coordinates: 643875, 416008

Site location map: Attached

Month, day and year of the submittal: Closure documentation submitted Jan. 10, 2005

Summary of the nature and extent of contamination at the site or facility: See Closure Documentation for detail. A former UST pit was excavated and the USTs were removed. The excavation was backfilled with clean soil, compacted, and a concrete truck dock was constructed over the former excavation. Contaminated soil on the east side of the excavation was removed to the extent practicable adjacent to the existing manufacturing building. In-place soil concentrations exceeded the generic residual contaminant level (RCL) for xylenes by approximately 200 mg/kg. Thus, the need exists for an engineered cover to prevent potential human exposure to the soil, and to prevent migration of contaminants to the ground water table.



APPROX. SCALE (FT.)
0 50

SYMBOL LEGEND	
	FENCE LINE
	EXCAVATION
	FORMER DRY WELL LOCATION
	FORMER LOCATION OF UST

KEY:
UST = UNDERGROUND STORAGE TANK

FIGURE 1
SITE LAYOUT MAP
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN



**TABLE 1
POST-REMEDIAL SOIL ANALYTICAL RESULTS FOR VOCs AND PAHS
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN**

Sample Number	NR 720 Residual Contaminant Levels	E2N1	E2S1R2	E2S2	E2E1	E2E2R2	E2E3	E2W1	E2W2	E2W3	E2B1R	E2B2	E2B3
Sample Location		North Wall	South Wall	South Wall	East Wall	East Wall	East Wall	West Wall	West Wall	West Wall	Bottom	Bottom	Bottom
Sample Date		8/21/1998	8/27/1998	8/18/1998	8/27/1998	8/28/1998	8/19/1998	8/18/1998	8/20/1998	8/21/1998	8/25/1998	8/20/1998	8/21/1998
Soil Type		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	CSG	CSG
Sample Depth (feet)		8	8	8	8	8	8	8	8	8	13.5	12	12
Photoionization Detection (Vppm)		21	21	2.7	21.8	18	23	5.6	47	12.9	15	56	28
Parameter ¹	Generic ²	Site-Specific											
SW-8260 VOCs (ug/kg):													
Benzene	5.5		25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
n-Butylbenzene		244	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
sec-Butylbenzene		244	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
cis-1,2-Dichloroethene		140	25 U	25 U	25 U	25 U	25 U	28	25 U	25 U	88	25 U	25 U
Ethyl Benzene	2,900		37	25 U	25 U	25 U	25 U	620	200	25 U	25 U	25 U	25 U
Methylene Chloride		10	25 U	25 U	25 U	25 U	25 U	25 U	25 U	170 A	25 U	25 U	25 U
Naphthalene	700		25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Toluene	1,500		25 U	54	25 U	25 U	25 U	25 U	63	25 U	25 U	25 U	1,100
1,2,4-Trimethylbenzene		48	25 U	25	25 U								
Total Xylenes	4,100		1,000	25 U	25 U	25 U	25 U	4,300	460	25 U	75 U	75 U	75 U
SW-8270 PAHs (mg/kg):													
Acenaphthalene	38		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.021 U
Fluorene	100		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.047 U
1-Methylnaphthalene	23		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.05 J
2-Methylnaphthalene	20		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.076 NS
Phenanthrene	1.8		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.082 J

Notes:

- ¹ Only those compounds detected are shown.
- ² RCLs for PAHs based on Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance, WDNR, April 1997 (Revised).
- ³ Ground water located 19.4 to 25.4 feet below ground surface.
- ⁴ Area where soil sample was obtained subsequently was over excavated due to the RCL exceedances.

Key:

- CSG = Clayey silt with gravel.
- VOC = Volatile organic compounds.
- PAH = Polycyclic aromatic hydrocarbon.
- Boxed values exceed the generic residual contaminant levels or calculated site-specific residual contaminant levels.
- U = Indicates the analyte was analyzed for but not detected above the practical quantitation limit.
- A = Laboratory artifact - concentrations found of this analyte are characteristic of laboratory artifact.
- J = Estimated concentration; detected between the limit of detection and the limit of quantification.
- NS = Not sampled.

APPENDIX A

REMEDIATION COVER CONDITION SURVEY INSTRUCTIONS SUN CHEMICAL CORPORATION MENASHA, WISCONSIN

The enclosed form is used to document annual inspections of the reinforced concrete overlying in-place soil contamination that exceeds generic residual contaminant levels set forth in the Wisconsin Administrative Code, chapter NR 720. This inspection is required under chapter NR 724.13 in connection with a soil performance standard that is protective of the direct contact and the groundwater migration pathways.

Condition Survey

This condition survey involves visual examination of exposed concrete to identify and define areas of distress that may jeopardize its effectiveness as a protective cover for underlying contaminated soils.

The condition survey will include mapping observed concrete deficiencies such as cracking, surface problems (disintegration and spalling), and joint deterioration. Cracks will be mapped on sketches of the surfaces. Mapping will also include inspection and delineating of culverts, and other similar openings. The conditions observed will be described in unambiguous terms that can later be understood by others who have not inspected the concrete. Terms typically used during the visual inspection and their definitions are listed later in this document.

Surface Mapping is a survey in which deterioration of the surface concrete is located and described. Surface mapping may be accomplished by use of detailed drawings, photographs, or video tapes. Items most often identified and mapped include: cracking, spalling, scaling, popouts, honeycombing, exudation, distortion, unusual discoloration, erosion, seepage, conditions of joints and joint materials, corrosion of reinforcement (if exposed), and soundness of surface concrete. A list of items recommended for use in a surface mapping by hand includes:

- (a) Structure drawings, if available
- (b) Clipboard and paper or field book
- (c) Tape measure
- (d) Ruler graduated in 1/16 in. or 1 mm
- (e) Feeler gauge

- (f) Knife
- (g) Hammer, 1 kg (2 lb)
- (h) Fine wire (not too flexible)
- (i) Camera

Mapping should begin at one end of the structure and proceed in a systematic manner until all surfaces are mapped. Areas of significant distress should be photographed for later reference. A familiar object or scale should be placed in the area to show the relative size and orientation of the feature being photographed. It is important to describe each condition mapped in clear, concise detail and to avoid generalizations unless reference is being made to conditions previously detailed in other areas.

Joint Survey. A joint survey is a visual inspection of the joints in a structure to determine their condition. Expansion, contraction, and construction joints should be located and described and their existing condition noted. Opened or displaced joints (surface offsets) should be checked for movement if appropriate; various loading conditions (presence of truck/trailers) should be considered when measurements of joints are taken. All joints should be checked for defects; for example, spalling or D-cracking, chemical attack, evidence of seepage, emission of solids, etc. Conditions of joint filler, if present, should also be examined.

Crack Survey. A crack survey is an examination of a concrete structure for the purpose of locating, marking, and identifying cracks and determining the relationship of the cracks with other destructive phenomena. In most cases, cracking is the first symptom of concrete distress. Hence, a cracking survey is significant in evaluating the future serviceability of the structure. The first step in making a crack survey is to locate and mark the cracking and define it by type. The terms for and descriptions of cracks given later in this document should be used to describe any cracking that is found.

If possible, the crack depth should be determined by observation of edges or insertion of a fine wire or feeler gauge.

Conditions which may be associated with cracking over portions or for the entire length should be noted. These conditions may include seepage through the cracks, deposits from leaching or other sources, spalling of edges, differential movement (offsets), etc.

It may be worthwhile to repeat the survey under various loading conditions when change in crack width is suspected. Furthermore, tapping of surfaces with a hammer may detect shallow cracking beneath and parallel to the surface. A

hollow sound generally indicates that such cracking is likely even though it cannot be seen.

Summary

The accompanying inspection forms are for use in determining the condition of the concrete cover. Locations of unusual features should be carefully mapped out, and photographs should be taken to document these features. Joint offsets (vertical displacement) should be measured using a ruler if possible. Cracks should be noted and their overall length measured.

Should the concrete cover show significant signs of deterioration from year-to-year, a concrete restoration company should be consulted for repairs.

References

American Concrete Institute (Annual) American Concrete Institute, Annual. *Manual of Concrete Practice*, Five Parts, Detroit, MI.

United States Army Corps of Engineers, Department of Army, *Evaluation and Repair of Concrete Structures*, Engineer Manual 1110-2-2002, June 30, 1995.

Definitions

Bug holes

Small regular or irregular cavities, usually not exceeding 15 mm in diameter, resulting from entrapment of air bubbles in the surface of formed concrete during placement and compaction.

Cold-joint lines

Visible lines on the surfaces of formed concrete indicating the presence of joints where one layer of concrete had hardened before subsequent concrete was placed.

Corrosion

Destruction of metal by chemical, electrochemical, or electrolytic reaction with its environment.

Cracks, active

Those cracks for which the mechanism causing the cracking is still at work. Any crack that is still moving.

Cracks, dormant

Those cracks not currently moving or which the movement is of such magnitude that the repair material will not be affected.

D-cracking

A series of cracks in concrete near and roughly parallel to joints, edges, and structural cracks.

Delamination

A separation along a plane parallel to a surface as in the separation of a coating from a substrate or the layers of a coating from each other, or in the case of a concrete slab, a horizontal splitting, cracking, or separation of a slab in a plane roughly parallel to, and generally near, the upper surface; found most frequently in bridge decks and caused by the corrosion of reinforcing steel or freezing and thawing; similar to spalling, scaling, or peeling except that delamination affects large areas and can often be detected only by tapping.

Deterioration

Decomposition of material during testing or exposure to service. (See also Disintegration.)

Diagonal crack

In a flexural member, an inclined crack caused by shear stress, usually at about 45 deg to the neutral axis of a concrete member; a crack in a slab, not parallel to the lateral or longitudinal directions.

Discoloration

Departure of color from that which is normal or desired.

Disintegration

Reduction into small fragments and subsequently into particles.

Erosion

Progressive disintegration of a solid by the abrasive or cavitation action of gases, fluids, or solids in motion.

Groove joint

A joint created by forming a groove in the surface of a pavement, floor slab, or wall to control random cracking.

Hairline cracks

Cracks in an exposed concrete surface having widths so small as to be barely perceptible.

Honeycomb

Voids left in concrete due to failure of the mortar to effectively fill the spaces among coarse aggregate particles.

Joint filler

Compressible material used to fill a joint to prevent the infiltration of debris and to provide support for sealants.

Joint sealant

Compressible material used to exclude water and solid foreign material from joints.

Pattern cracking

Intersecting cracks that extend below the surface of hardened concrete; caused by shrinkage of the drying surface which is restrained by concrete at greater depth where little or no shrinkage occurs; vary in width and depth from fine and barely visible to open and well defined.

Peeling

A process in which thin flakes of mortar are broken away from a concrete surface, such as by deterioration or by adherence of surface mortar to forms as forms are removed.

Pitting

Development of relatively small cavities in a surface caused by phenomena such as corrosion or cavitation, or in concrete localized disintegration such as a popout.

Popout

The breaking away of small portions of concrete surface due to internal pressure, which leaves a shallow, typically conical, depression.

Rock pocket

A porous, mortar-deficient portion of hardened concrete consisting primarily of coarse aggregate and open voids, caused by leakage of mortar from form, separation (segregation) during placement, or insufficient consolidation. (See also Honeycombing.)

Scaling

Local flaking or peeling away of the near-surface portion of hardened concrete or mortar; also of a layer from metal. (See also Peeling and Spalling.) (Note: Light scaling of concrete does not expose coarse aggregate; medium scaling involves loss of surface mortar to 5 to 10 mm in depth and exposure of coarse aggregate; severe scaling involves loss of surface mortar to 5 to 10 mm in depth with some loss of mortar surrounding aggregate particles 10 to 20 mm in depth; very severe scaling involves loss of coarse-aggregate particles as well as mortar generally to a depth greater than 20 mm.)

Shrinkage crack

Crack due to restraint of shrinkage.

Shrinkage cracking

Cracking of a structure or member from failure in tension caused by external or internal restraints as reduction in moisture content develops or as carbonation occurs, or both.

Spall

A fragment, usually in the shape of a flake, detached from a larger mass by a blow, action of weather, pressure, or expansion within the larger mass; a small spall involves a roughly circular depression not greater than 20 mm in depth nor 150 mm in any dimension; a large spall may be roughly circular or oval or, in some cases, elongated more than 20 mm in depth and 150 mm in greatest dimension.

Spalling

The development of spalls.

Temperature cracking

Cracking as a result of tensile failure caused by temperature drop in members subjected to external restraints or temperature differential in members subjected to internal restraints.

Transverse cracks

Cracks that develop at right angles to the long direction of a member.

Weathering

Changes in color, texture, strength, chemical composition, or other properties of a natural or artificial material caused by the action of the weather.

**Concrete Truck Loading Platform Inspection Record
Sun Chemical, Menasha, Wisconsin**

Date of Inspection: _____

Inspector's Name: _____

1. Surface Mapping (Note surface conditions such as flaking, spalling, etc.):

**2. Condition of Joints (note locations where joints have separated or offset.
Review previous year's inspection record for comparison.):**

3. Condition of Cracks (Indicate whether cracks are separated, offset, or lengthened. Review previous year's inspection records for comparison):

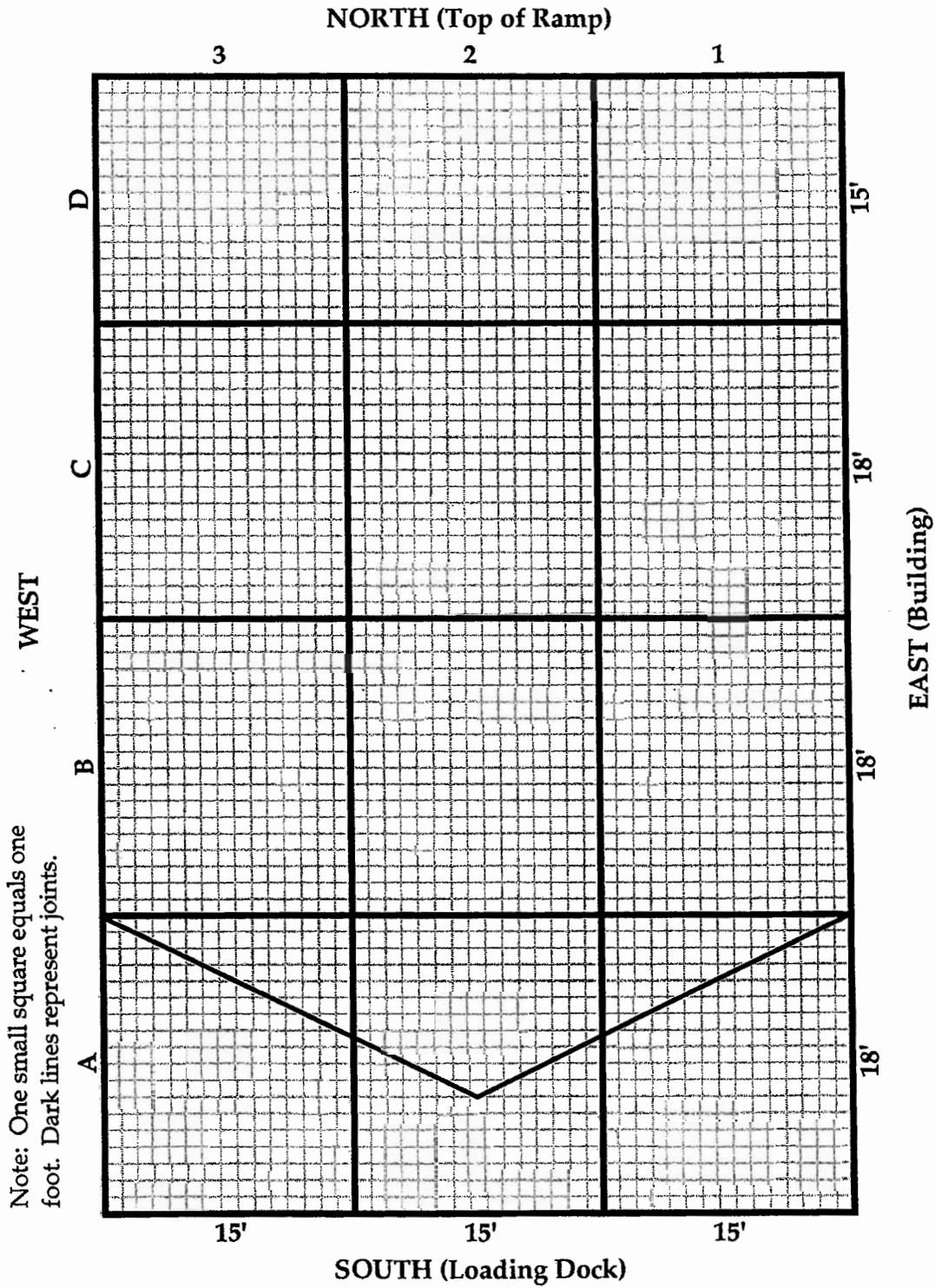
4. Other Observations:

5. Are there any conditions of the concrete that, in your opinion, require an assessment by a concrete restoration professional?

Y N

Signature of Inspector: _____

Concrete Truck Loading Platform Inspection Record
Sun Chemical, Inc., Menasha, Wisconsin



Note: Map the location of cracks and other unusual features such as spalling, settling, heaving, etc. Place circled numbers representing location and number of photograph. Small arrow on circle denotes approximate direction photograph was taken.

Date of Inspection: _____

Name of Inspector: _____

F:\CPF\033\03315\00\WP\REPORTS\CLOSURE REPORT\WTM8391.DWG

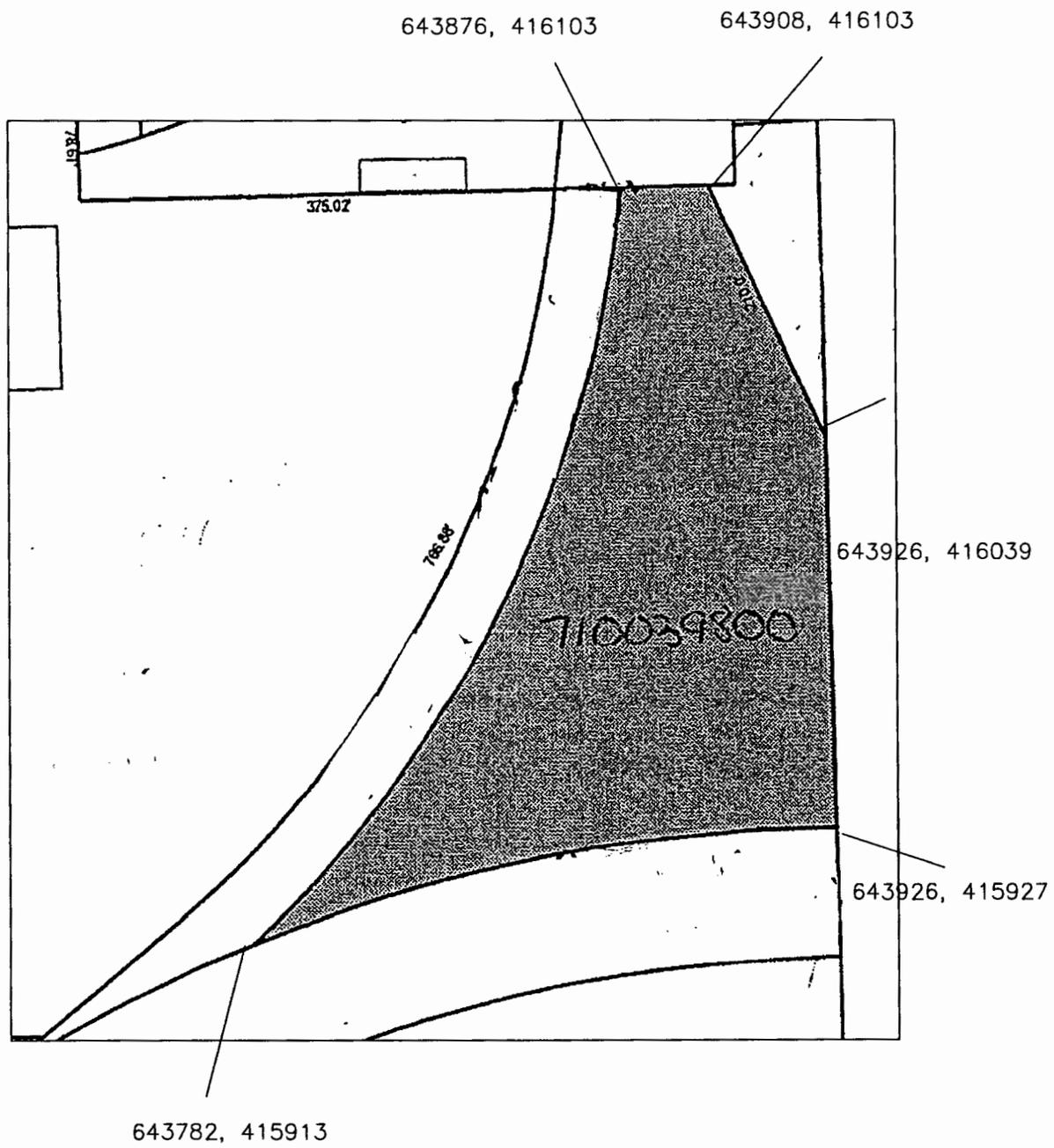


FIGURE 6

WTM83/91 COORDINATES
SUN CHEMICAL CORP.
MENASHA, WISCONSIN



NEENAH QUADRANGLE
 WISCONSIN
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 1955
 PHOTOREVISED 1984

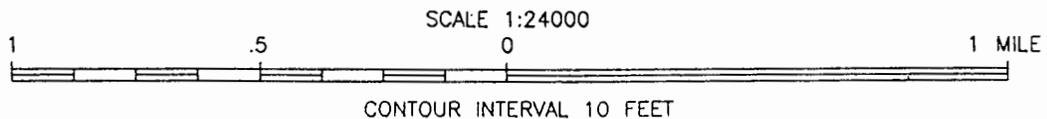
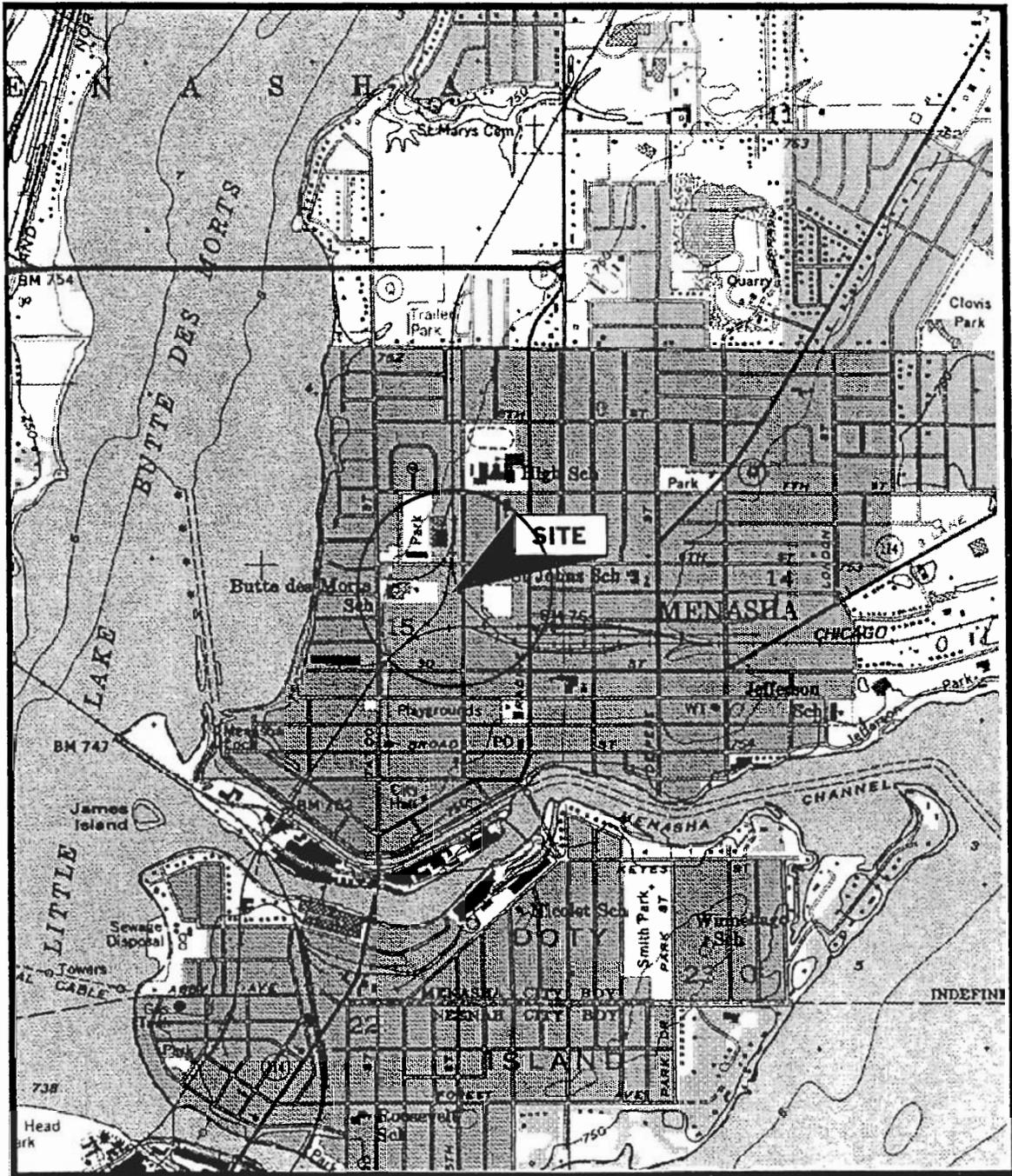
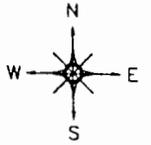


FIGURE 1

**SITE LOCATION MAP
 SUN CHEMICAL CORPORATION
 MENASHA, WISCONSIN**

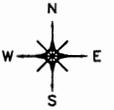
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 FK



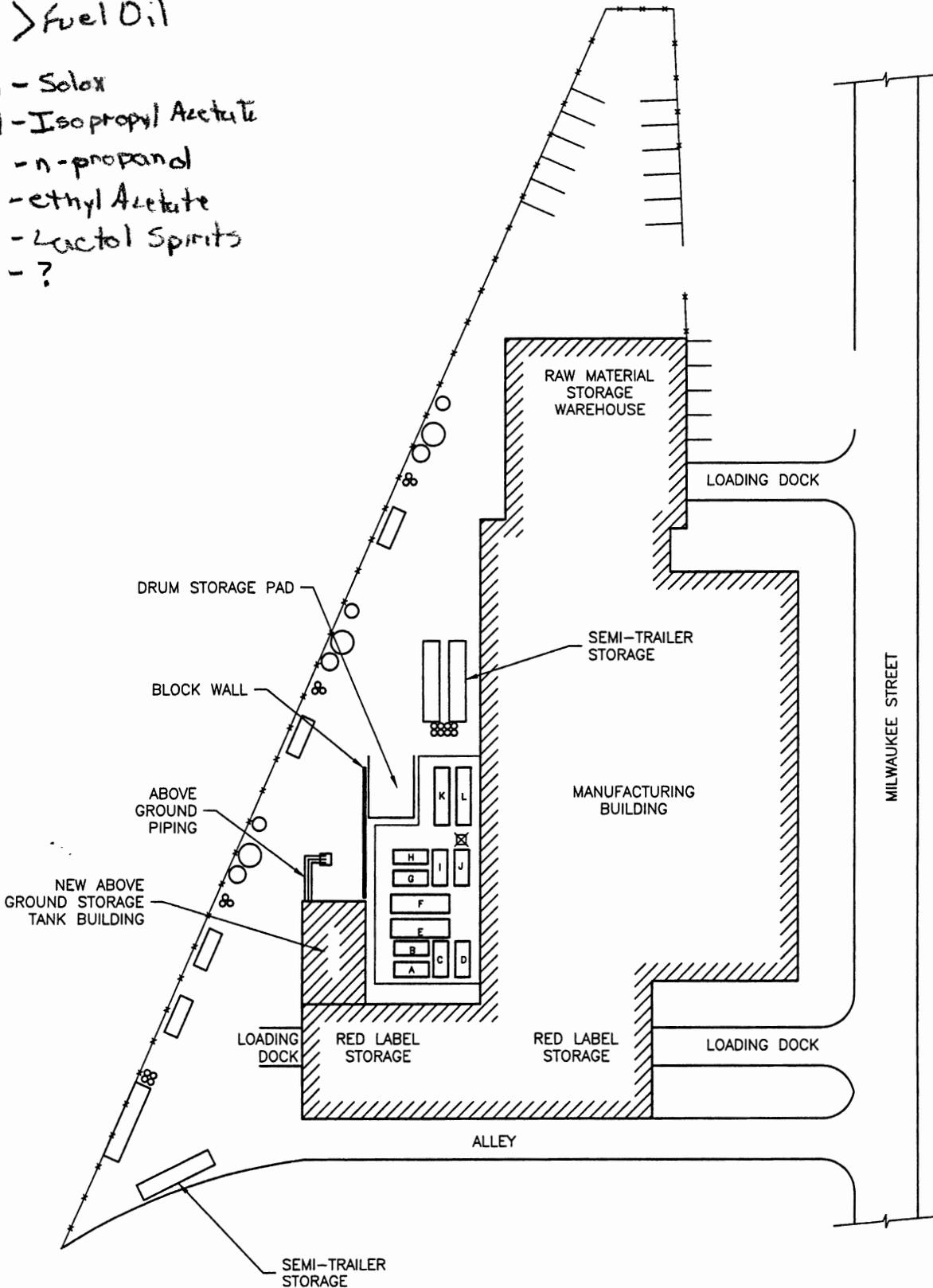
QUADRANGLE LOCATION

TOWNSHIP T20N
 RANGE R17E
 SECTION 15





- A - Toluene
- B - n-propyl acetate
- C - Wash mix
- D - Isopropyl Alcohol
- E - Fuel Oil
- F - Solox
- G - Isopropyl Acetate
- H - n-propanol
- I - ethyl Acetate
- J - Lactol Spirits
- L - ?



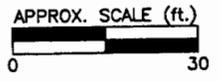
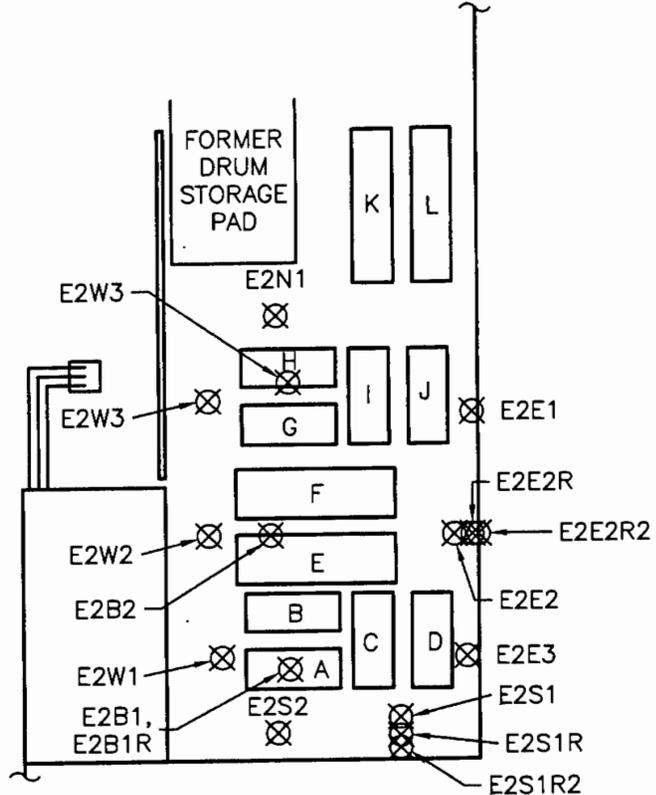
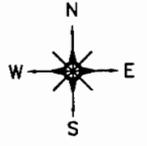
APPROX. SCALE (ft.)
 0 50

SYMBOL LEGEND	
— x — x — x —	FENCE LINE
—	EXCAVATION
⊗	FORMER DRY WELL LOCATION
⊠	FORMER LOCATION OF UST

KEY:
 UST = UNDERGROUND STORAGE TANK

FIGURE 2
SITE LAYOUT MAP
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN





SYMBOL LEGEND	
x	FORMER LOCATION OF UST

FIGURE 2
 TRUCK LOADING DOCK EXCAVATION AREAS AND
 POST-REMEDIAL SAMPLE LOCATIONS
 (5-12' BGS)
 SUN CHEMICAL CORPORATION
 MENASHA, WISCONSIN



TABLE 1
 POST SOIL REMEDIATION GROUNDWATER ANALYTICAL RESULTS
 SUN CHEMICAL CORPORATION
 MENASHA, WISCONSIN

Parameter ⁽¹⁾	Preventive Action Limit	Enforcement Standard	MW-1		MW-2 ⁽³⁾	MW-3	MW-3P	MW-6
			6/18/2002	6/18/2002 ⁽²⁾	6/18/2002	6/18/2002	6/18/2002	6/18/2002
VOCs (ug/l)								
Benzene	0.5	5.0	85 J	70 J	0.08 U	2.7	0.08 U	0.08 U
1,1-Dichloroethane	85	850	75 U	75 U	0.15 U	0.72	0.15 U	0.15 U
cis-1,2-Dichloroethene	7	70	55 U	55 U	1.2	57	0.11 U	0.11 U
trans-1,2-Dichloroethene	20	100	55 U	55 U	0.11 U	5.7	0.11 U	0.11 U
Di-isopropyl ether	NE	NE	30 U	30 U	0.06 U	0.29	0.06 U	0.06 U
Ethyl Benzene	140	700	60 J	50 J	0.08 U	0.08 U	0.08 U	0.08 U
Toluene	200	1,000	20000	19000	0.08 U	0.08 U	0.08 U	0.08 U
1,1,1-Trichloroethane	40	200	70 U	70 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl Chloride	0.02	0.20	80 U	80 U	0.16 U	140	0.16 U	0.16 U
Total Xylenes	1000	10,000	205 J	175 J	0.34 U	0.34 U	0.34 U	0.34 U

Key:

U = Analyte not detected above the limit of detection.

J = Estimated concentration; analyte detected between the limit of detection and the limit of quantification.

NE = No standard provided in Chapter NR 140.10 of the Wisconsin Administrative Code.

Bolded values indicate an exceedance of the preventive action limit established in Chapter NR 140.10 of the WAC, April 2001.

Box indicates exceedance of both the preventive action limit and enforcement standard established in Chapter NR 140.10 of the WAC, April 2001

Notes:

¹ Only monitoring wells MW-1, MW-2, MW-3, MW-3P and MW-6 sampled during the 1st and 2nd quarter 2002 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999 and Quarterly Progress Report dated March 4, 2002.

² Duplicate sample.

³ Based on 4th quarter 1999 groundwater sampling results, only monitoring wells MW-1 and MW-3 were sampled during the 1st, 2nd, and 3rd quarter 2000 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999.

TABLE 3
(Page 1 of 3)
POST SOIL REMEDIATION GROUNDWATER ANALYTICAL RESULTS
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN

Parameter ⁽¹⁾	Preventive Action Limit	Enforcement Standard	MW-1											
			3/10/1999	8/31/1999	8/31/99 ⁽²⁾	11/18/1999	11/18/99 ⁽²⁾	2/7/2000	2/7/00 ⁽²⁾	5/4/2000	5/4/00 ⁽²⁾	8/2/2000	8/2/00 ⁽²⁾	11/27/2000
VOCs (ug/l)														
Benzene	0.5	5.0	230	120	130	240	240	130	130	315	320	110	110	110
1,1-Dichloroethane	85	850	34 U	32 U	32 U	NA	NA	NA	NA	NA	NA	NA	NA	17U
cis-1,2-Dichloroethene	7	70	32 U	34 U	34 U	NA	NA	NA	NA	NA	NA	NA	NA	50 U
trans-1,2-Dichloroethene	20	100	38 U	46 U	46 U	NA	NA	NA	NA	NA	NA	NA	NA	11.5 U
Di-isopropyl ether	NE	NE	32 U	21 U	21 U	NA	NA	NA	NA	NA	NA	NA	NA	13 U
Ethyl Benzene	140	700	91 J	50 J	64 J	150	160	53	55	220	220	72	67	84
Toluene	200	1,000	35,000	25,000	24,000	13,000	13,000	1,700	2,000	67,000	68,000	15,000	14,000	19,000
1,1,1-Trichloroethane	40	200	45 U	35 U	35 U	NA	NA	NA	NA	NA	NA	NA	NA	14.5 U
Vinyl Chloride	0.02	0.20	15 U	32 U	32 U	NA	NA	NA	NA	NA	NA	NA	NA	11.5 U
Total Xylenes	1000	10,000	740	193 J	295 J	420	760	69	69	950	930	210 J	200 J	262

Parameter ⁽¹⁾	Preventive Action Limit	Enforcement Standard	MW-1 (cont)											
			11/27/00 ⁽²⁾	3/2/2001	3/2/01 ⁽²⁾	5/22/2001	5/22/01 ⁽²⁾	9/28/2001	9/28/01 ⁽²⁾	12/18/2001	12/18/01 ⁽²⁾	3/19/2002	3/19/02 ⁽²⁾	
VOCs (ug/l)														
Benzene	0.5	5.0	340	140	140	48 J	44 J	250 U	250 U	250 U	250 U	58	7.5 U	7.5 U
1,1-Dichloroethane	85	850	17 U	34 U	34 U	34 U	34 U	340 U	340 U	340 U	340 U	340 U	5.5 U	5.5 U
cis-1,2-Dichloroethene	7	70	50 U	100 U	100 U	100 U	100 U	1000 U	1000 U	1000 U	1000 U	1000 U	5.5 U	5.5 U
trans-1,2-Dichloroethene	20	100	11.5 U	23 U	23 U	23 U	23 U	230 U	230 U	230 U	230 U	230 U	3 U	3 U
Di-isopropyl ether	NE	NE	13 U	26 U	26 U	26 U	26 U	260 U	260 U	260 U	260 U	260 U	3 U	3 U
Ethyl Benzene	140	700	250	120	120	25 J	28 J	120 U	120 U	120 U	120 U	78	83	83
Toluene	200	1,000	34,000	22,000	26,000	11,000	10,000	27,000	29,000	45,000	66,000	18,000	7 U	7 U
1,1,1-Trichloroethane	40	200	14.5 U	29 U	29 U	29 U	29 U	290 U	290 U	290 U	290 U	290 U	8 U	8 U
Vinyl Chloride	0.02	0.20	11.5 U	23 U	23 U	23 U	23 U	230 U	230 U	230 U	230 U	230 U	8 U	8 U
Total Xylenes	1000	10,000	740	460	410	87 J	84 J	740 U	740 U	740 U	740 U	319	324	324

Benzene
Toluene

63
19000

Key:

U = Analyte not detected above the limit of detection.
J = Estimated concentration; analyte detected between the limit of detection and the limit of quantification.
NA = Not analyzed.

NE = No standard provided in Chapter NR 140.10 of the Wisconsin Administrative Code.

Box = Bolded values indicate an exceedance of the preventive action limit established in Chapter NR 140.10 of the WAC, April 2001.
Box = Box indicates exceedance of both the preventive action limit and enforcement standard established in Chapter NR 140.10 of the WAC, April 2001.

Notes:

- Only those parameters detected are shown.
- Duplicate sample.
- Based on 4th quarter 1999 groundwater sampling results, only monitoring wells MW-1 and MW-3 were sampled during the 1st, 2nd, and 3rd quarter 2000 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999.
- Based on 4th quarter 2000 groundwater sampling results, only monitoring wells MW-1, MW-2, MW-3, MW-3P, and MW-5 were sampled during the 1st, 2nd and 3rd quarter 2001 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999 and 4th Quarter Progress Report dated February 5, 2001.
- Sample diluted by laboratory to compensate for matrix interference caused by the presence of QUIK-FOAM in the sample.
- Only monitoring wells MW-1, MW-2, MW-3, MW-3P and MW-6 sampled during the 1st and 2nd quarter 2002 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999 and Quarterly Progress Report dated March 4, 2002.

TABLE 3
(Page 2 of 3)
POST SOIL REMEDIATION GROUNDWATER ANALYTICAL RESULTS
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN

Parameter ⁽¹⁾	Preventive Action Limit	Enforcement Standard	MW-2 ⁽³⁾											
			6/10/1999	6/10/99 ⁽²⁾	11/18/1999	11/27/2000	3/2/2001	5/22/2001	9/28/2001	12/18/2001	3/19/2002	6/18/2002		
VOCs (ug/l)														
Benzene	0.5	5.0	0.25 U	0.25 U	0.32 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.08 U	0.08 U	0.08 U
1,1-Dichloroethane	85	850	0.32 U	0.32 U	NA	0.34 U	0.34 U	0.36 U	0.34 U	0.34 U	0.34 U	0.15 U	0.15 U	0.15 U
cis-1,2-Dichloroethene	7	70	0.34 U	0.34 U	NA	2.5 J	2 J	3.5	1.1 J	1.4 J		0.76	1.2	
trans-1,2-Dichloroethene	20	100	0.46 U	0.46 U	NA	0.23 J	0.23 U	0.28 J	0.23 U	0.23 U	0.11 U	0.11 U	0.11 U	0.11 U
Di-isopropyl ether	NE	NE	0.21 U	0.21 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.06 U	0.06 U	0.06 U	0.06 U
Ethyl Benzene	140	700	0.32 U	0.32 U	0.34 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.08 U	0.08 U	0.08 U	0.08 U
Toluene	200	1,000	0.38 U	0.38 U	0.35 U	0.35 U	0.22 U	0.22 U	0.22 U	0.22 U	0.08 U	0.08 U	0.08 U	0.08 U
1,1,1-Trichloroethane	40	200	0.35 U	0.35 U	NA	0.35 J	0.29 U	0.29 U	0.22 U	0.36 J	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl Chloride	0.02	0.20	0.32 U	0.32 U	NA	3.7	3.2	6.6	1.9	2.4	1.4		0.16 U	
Total Xylenes	1000	10,000	1.04 U	1.04 U	1 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.34 U	0.34 U	0.34 U	0.34 U

Parameter ⁽¹⁾	Preventive Action Limit	Enforcement Standard	MW-3											
			6/10/1999	11/18/1999	2/7/2000	5/4/2000	8/2/2000	11/27/2000	3/2/2001	5/22/2001	9/28/2001	12/18/2001	3/19/2002	6/18/2002
VOCs (ug/l)														
Benzene	0.5	5.0	2.5	3.9	2	2.4	1.7	2.7	2.1	3.8	2.9	2.8	4	2.7
1,1-Dichloroethane	85	850	0.52 J	0.61 J	0.58 J	0.48 J	0.65 J	0.58 J	0.37 J	0.49 J	0.57 J	0.45 J	0.42 J	0.72
cis-1,2-Dichloroethene	7	70	18	75	34	18	38	36	17	32	58	35	34	57
trans-1,2-Dichloroethene	20	100	2.5	8.4	3.7	2.7	4.1	5	2.1	3.9	5.3	3.5	2.8	5.7
Di-isopropyl ether	NE	NE	0.21 U	0.32 U	0.21 U	0.27 J	0.31 J	0.43 J	0.43 J	0.52 J	0.27 J	0.26 U	0.87	0.29
Ethyl Benzene	140	700	0.32 U	0.34 U	0.32 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.08 U	0.08 U
Toluene	200	1,000	0.38 U	0.35 U	0.38 U	0.4 J	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.08 U	0.08 U
1,1,1-Trichloroethane	40	200	0.35 U	0.45 U	0.35 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.14 U	0.14 U
Vinyl Chloride	0.02	0.20	74	170	110	79	70	110	50	140	120	81	69	140
Total Xylenes	1000	10,000	1.04 U	1 U	1 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.34 U	0.34 U	0.34 U

Vinyl Chloride

Key:

- U = Analyte not detected above the limit of detection.
- J = Estimated concentration; analyte detected between the limit of detection and the limit of quantification.
- NA = Not analyzed.

NE = No standard provided in Chapter NR 140.10 of the Wisconsin Administrative Code.

Bolded values indicate an exceedance of the preventive action limit established in Chapter NR 140.10 of the WAC, April 2001.

Box indicates exceedance of both the preventive action limit and enforcement standard established in Chapter NR 140.10 of the WAC, April 2001.

Notes:

- ¹ Only those parameters detected are shown.
- ² Duplicate sample.
- ³ Based on 4th quarter 1999 groundwater sampling results, only monitoring wells MW-1 and MW-3 were sampled during the 1st, 2nd, and 3rd quarter 2000 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999.
- ⁴ Based on 4th quarter 2000 groundwater sampling results, only monitoring wells MW-1, MW-2, MW-3, MW-3P, and MW-5 were sampled during the 1st, 2nd and 3rd quarter 2001 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999 and 4th Quarter Progress Report dated February 5, 2001.
- ⁵ Sample diluted by laboratory to compensate for matrix interference caused by the presence of QUIK-FOAM in the sample.
- ⁶ Only monitoring wells MW-1, MW-2, MW-3, MW-3P and MW-6 sampled during the 1st and 2nd quarter 2002 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999 and Quarterly Progress Report dated March 4, 2002.

TABLE 3
(Page 3 of 3)
POST SOIL REMEDIATION GROUNDWATER ANALYTICAL RESULTS
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN

Parameter ⁽¹⁾	Preventive Action Limit	Enforcement Standard	MW-3P						
			3/2/01 ⁽⁵⁾	5/22/01 ⁽⁵⁾	9/28/2001	12/18/2001	3/19/2002	6/18/2002	
VOCs (ug/l)									
Benzene	0.5	5.0	250 U	250 U	0.25 U	0.25 U	0.08 U	0.08 U	
1,1-Dichloroethane	85	850	340 U	340 U	0.34 U	0.34 U	0.15 U	0.15 U	
cis-1,2-Dichloroethene	7	70	1000 U	1000 U	1 U	1 U	0.11 U	0.11 U	
trans-1,2-Dichloroethene	20	100	230 U	230 U	0.23 U	0.23 U	0.11 U	0.11 U	
Di-isopropyl ether	NE	NE	260 U	260 U	0.26 U	0.26 U	0.06 U	0.06 U	
Ethyl Benzene	140	700	120 U	120 U	0.12 U	0.12 U	0.08 U	0.08 U	
Toluene	200	1,000	220 U	220 U	0.22 U	0.22 U	0.08 U	0.08 U	
1,1,1-Trichloroethane	40	200	290 U	290 U	0.29 U	0.29 U	0.14 U	0.14 U	
Vinyl Chloride	0.02	0.20	230 U	230 U	0.23 U	0.23 U	0.16 U	0.16 U	
Total Xylenes	1000	10,000	740 U	740 U	0.74 U	0.74 U	0.34 U	0.34 U	

Parameter ⁽¹⁾	Preventive Action Limit	Enforcement Standard	MW-4 ⁽⁶⁾				MW-5 ⁽⁶⁾				MW-6	
			6/10/1999	11/18/1999	11/27/2000	12/18/2001	3/2/2001	5/22/2001	9/28/2001	12/18/2001	3/19/2002	6/18/2002
VOCs (ug/l)												
Benzene	0.5	5.0	0.25 U	0.32 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.08 U	0.08 U
1,1-Dichloroethane	85	850	0.32 U	NA	0.34 U	0.34 U	0.34 U	NA	NA	0.34 U	0.15 U	0.15 U
cis-1,2-Dichloroethene	7	70	0.34 U	NA	1 U	1 U	1 U	NA	NA	1 U	0.11 U	0.11 U
trans-1,2-Dichloroethene	20	100	0.46 U	NA	0.23 U	0.23 U	0.23 U	NA	NA	0.23 U	0.11 U	0.11 U
Di-isopropyl ether	NE	NE	0.21 U	NA	0.26 U	0.26 U	0.26 U	NA	NA	0.26 U	0.06 U	0.06 U
Ethyl Benzene	140	700	0.32 U	0.34 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.08 U	0.08 U
Toluene	200	1,000	0.38 U	0.35 U	0.22 U	0.22 U	0.37 J	0.22 U	0.12 U	0.22 U	0.08 U	0.08 U
1,1,1-Trichloroethane	40	200	0.35 U	NA	0.29 U	0.29 U	0.29 U	NA	NA	0.29 U	0.14 U	0.14 U
Vinyl Chloride	0.02	0.20	0.32 U	NA	0.23 U	0.23 U	0.23 U	NA	NA	0.23 U	0.16 U	0.16 U
Total Xylenes	1000	10,000	1.04 U	1 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.34 U	0.34 U

Key:

U = Analyte not detected above the limit of detection.

J = Estimated concentration; analyte detected between the limit of detection and the limit of quantification.

NA = Not analyzed.

NE = No standard provided in Chapter NR 140.10 of the Wisconsin Administrative Code.

Bolded values indicate an exceedance of the preventive action limit established in Chapter NR 140.10 of the WAC, April 2001.

☐ Box indicates exceedance of both the preventive action limit and enforcement standard established in Chapter NR 140.10 of the WAC, April 2001.

Notes:

¹ Only those parameters detected are shown.

² Duplicate sample.

³ Based on 4th quarter 1999 groundwater sampling results, only monitoring wells MW-1 and MW-3 were sampled during the 1st, 2nd, and 3rd quarter 2000 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999.

⁴ Based on 4th quarter 2000 groundwater sampling results, only monitoring wells MW-1, MW-2, MW-3, MW-3P, and MW-5 were sampled during the 1st, 2nd and 3rd quarter 2001 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999 and 4th Quarter Progress Report dated February 5, 2001.

⁵ Sample diluted by laboratory to compensate for matrix interference caused by the presence of QUIK-FOAM in the sample.

⁶ Only monitoring wells MW-1, MW-2, MW-3, MW-3P and MW-6 sampled during the 1st and 2nd quarter 2002 monitoring events per the WDNR-approved Work Plan Addendum No. 5 dated October 1, 1999 and Quarterly Progress Report dated March 4, 2002.

TABLE 5
 POST-REMEDIAL SOIL ANALYTICAL RESULTS FOR VOCs AND PAHS
 SUN CHEMICAL CORPORATION
 MENASHA, WISCONSIN
 (Page 1 of 2)

Sample Number	Sample Location	Sample Date	Soil Type	Sample Depth (feet)	Photoionization Detection (Vppm)	E2N1	E2S1R2	E2S2	E2E1	E2E2R2	E2E3	E2W1	E2W2	E2W3	E2B1R	E2B2	E2B3					
						North Wall	South Wall	South Wall	East Wall	East Wall	East Wall	West Wall	West Wall	West Wall	Bottom	Bottom	Bottom					
						8/21/1998	8/27/1998	8/18/1998	8/27/1998	8/28/1998	8/19/1998	8/18/1998	8/20/1998	8/21/1998	8/25/1998	8/20/1998	8/21/1998					
						Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	CSG	CSG	CSG					
						8	8	8	8	8	8	8	8	8	13.5	12	12					
						21	21	2.7	21.8	18	23	5.6	47	12.9	15	56	28					
Parameter ¹	Generic ²	Site-Specific																				
SW-8260 VOCs (ug/kg):																						
Benzene	5.5		25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U				
n-Butylbenzene		244	25	U	25	U	25	U	25	U	25	U	25	U	25	U	41	25	U			
sec-Butylbenzene		244	25	U	25	U	25	U	25	U	25	U	25	U	25	U	30	25	U			
cis-1,2-Dichloroethene		140	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	30			
Ethyl Benzene	2,900		37	U	25	U	25	U	25	U	620	200	25	U	25	U	25	U	26			
Methylene Chloride		10	25	U	25	U	25	U	25	U	25	U	170	A	25	U	25	U	25	U		
Naphthalene	700		25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	84	25	U	
Toluene	1,500		25	U	54	U	25	U	25	U	25	U	63	U	25	U	25	U	1,100	270	27	
1,2,4-Trimethylbenzene		48	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Total Xylenes	4,100		1,000	U	25	U	25	U	25	U	4,300	460	25	U	75	U	75	U	75	U	62	
SW-8270 PAHs (mg/kg):																						
Acenaphthalene	38		NS		NS		NS		NS		NS		NS		NS		0.021	U	NS			
Fluorene	100		NS		NS		NS		NS		NS		NS		NS		0.047	U	NS			
1-Methylnaphthalene	23		NS		NS		NS		NS		NS		NS		NS		0.05	J	NS			
2-Methylnaphthalene	20		NS		NS		NS		NS		NS		NS		NS		0.076	J	NS			
Phenanthrene	1.8		NS		NS		NS		NS		NS		NS		NS		0.082	J	NS			

Notes:

- ¹ Only those compounds detected are shown.
- ² RCLs for PAHs based on Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance, WDNR, April 1997 (Revised).
- ³ Ground water located 19.4 to 25.4 feet below ground surface.
- ⁴ Area where soil sample was obtained subsequently was over excavated due to the RCL exceedances.

Key:

- CSG = Clayey silt with gravel.
- VOC = Volatile organic compounds.
- PAH = Polycyclic aromatic hydrocarbon.
- Boxed values exceed the generic residual contaminant levels or calculated site-specific residual contaminant levels.
- U = Indicates the analyte was analyzed for but not detected above the practical quantitation limit.
- A = Laboratory artifact - concentrations found of this analyte are characteristic of laboratory artifact.
- J = Estimated concentration; detected between the limit of detection and the limit of quantification.
- NS = Not sampled.

TABLE 5
 POST-REMEDIATION SOIL ANALYTICAL RESULTS FOR VOCs AND PAHs
 SUN CHEMICAL CORPORATION
 MENASHA, WISCONSIN
 (Page 2 of 2)

Sample Number Sample Location Sample Date Soil Type Sample Depth (feet) Photoionization Detection (Vppm)	NR 720 Residual Contaminant Levels	E3N1	E3S1	E3E1	E3E2	E3E3R	E3E4	E3W1	E3W2	E3W2R	E3W3	E3W4	E3B1R
		North Wall 8/27/1998	South Wall 8/19/1998	East Wall 8/27/1998	East Wall 8/27/1998	East Wall 8/28/1998	East Wall 8/19/1998	West Wall 8/19/1998	West Wall 8/26/1998	West Wall 8/2/1998	West Wall 8/27/1998	West Wall 8/27/1998	West Wall 8/27/1998
Parameter ¹	Generic ²	Site-Specific	CSG	CSG	CSG	CSG	CSG	CSG	CSG	CSG	CSG	CSG	CSG
SW-8260 VOCs (ug/kg):													
Benzene	5.5		25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
n-Butylbenzene		244	25 U	25 U	25 U	25 U	25 U	25 U	25 U	29 U	25 U	25 U	25 U
sec-Butylbenzene		244	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
cis-1,2-Dichloroethene		140	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Ethyl Benzene	2,900		25 U	160 U	25 U	25 U	25 U	420 U	25 U	26 U	25 U	25 U	25 U
Methylene Chloride		10	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Naphthalene	700		25 U	25 U	25 U	25 U	25 U	25 U	25 U	88 U	25 U	25 U	25 U
Toluene	1,500		110	140	40	100	47	80	1,400	180	38	180	78
1,2,4-Trimethylbenzene		48	25 U	25 U	25 U	25 U	25 U	25 U	25 U	36 U	25 U	25 U	25 U
Total Xylenes	4,100		25 U	370	25 U	25 U	25 U	1,430	25 U	80	140	25 U	75 U
SW-8270 PAHs (mg/kg):													
Acenaphthalene	38		NS	NS	NS	NS	NS	NS	NS	0.035 J	NS	NS	NS
Fluorene	100		NS	NS	NS	NS	NS	NS	NS	0.13 J	NS	NS	NS
1-Methylnaphthalene	23		NS	NS	NS	NS	NS	NS	NS	0.21	NS	NS	NS
2-Methylnaphthalene	20		NS	NS	NS	NS	NS	NS	NS	0.16	NS	NS	NS
Phenanthrene	1.8		NS	NS	NS	NS	NS	NS	NS	0.25	NS	NS	NS

Notes:

- ¹ Only those compounds detected are shown.
- ² RCLs for PAHs based on Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance, WDNR, April 1997 (Revised).
- ³ Ground water located 19.4 to 25.4 feet below ground surface.
- ⁴ Area where soil sample was obtained subsequently was over excavated due to the RCL exceedances.

Key:

- CSG = Clayey silt with gravel.
- VOC = Volatile organic compounds.
- PAH = Polycyclic aromatic hydrocarbon.
- Shaded values exceed the generic residual contaminant levels or calculated site-specific residual contaminant levels.
- U = Indicates the analyte was analyzed for but not detected above the practical quantitation limit.
- A = Laboratory artifact - concentrations found of this analyte are characteristic of laboratory artifact.
- J = Estimated concentration; detected between the limit of detection and the limit of quantification.
- NS = Not sampled.

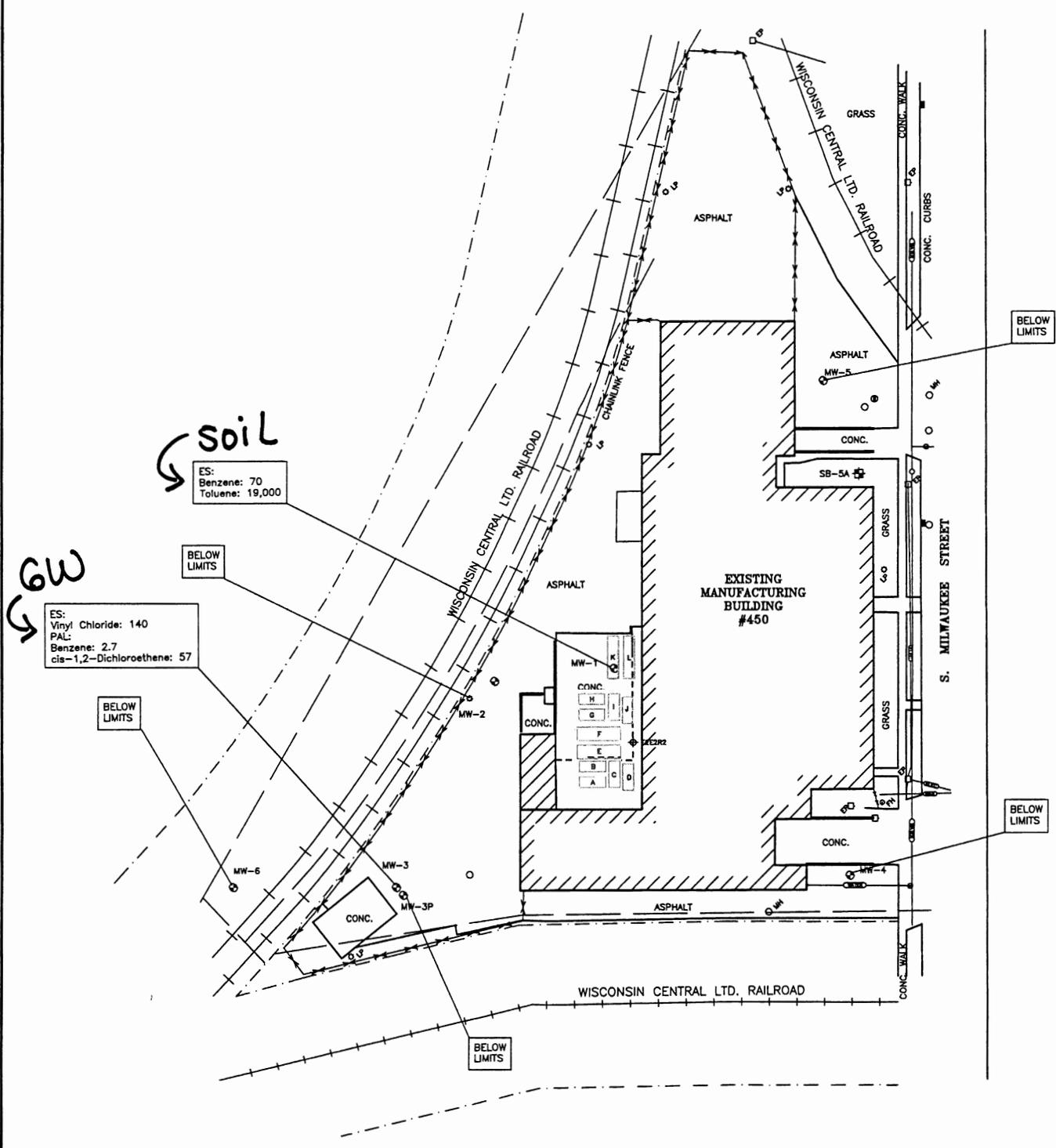
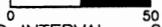


FIGURE 13

**GROUNDWATER AND SOIL RESIDUAL SITE CONTAMINATION
VALUES BASED ON MARCH 19 & JUNE 18, 2002 SAMPLING
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN**

APPROX. SCALE (ft.)



CONTOUR INTERVAL = 0.50 FEET

SYMBOL LEGEND

	MONITORING WELL		FORMER LOCATION OF UST
	ABANDONED BORING		OVERHEAD ELECTRIC
	SOIL SAMPLE EXCEEDING RCL FOR XYLENES		RAILROAD
			RAILROAD RIGHT OF WAY

NOTE:

ALL CONCENTRATIONS IN ug/L



TABLE 4

GROUND WATER ELEVATIONS
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN

Well	Elevations (amsl)				March 2, 2001		May 22, 2001		September 28, 2001		December 18, 2001		March 19, 2002	
	Ground Surface	Top of Casing	Top of Screen	Bottom of Screen	Depth to Water (feet)	Ground Water Elevation (amsl)	Depth to Water (feet)	Ground Water Elevation (amsl)	Depth to Water (feet)	Ground Water Elevation (amsl)	Depth to Water (feet)	Ground Water Elevation (amsl)	Depth to Water (feet)	Ground Water Elevation (amsl)
MW-1	761.91	761.28	742.91	732.91	20.28	741.00	18.21	743.07	20.19	741.09	20.40	740.88	19.68	741.60
MW-2	762.41	761.80	741.41	731.41	25.78	736.02	23.95	737.85	25.91	735.89	26.02	735.78	25.27	736.53
MW-3	762.11	761.37	741.21	731.21	25.69	735.68	24.73	736.64	25.66	735.71	25.59	735.78	25.45	735.92
MW-3P ⁽¹⁾	762.43	761.91	712.41	707.41	30.10	731.81	26.38	735.53	33.08	728.83	32.25	729.66	29.60	732.31
MW-4	763.25	762.58	742.75	732.75	23.52	739.06	23.14	739.44	23.70	738.88	23.85	738.73	23.57	739.01
MW-5 ⁽¹⁾	762.93	762.48	742.48	732.48	20.52	741.96	18.06	744.42	20.26	742.22	20.58	741.90	19.49	742.99
MW-6 ⁽²⁾	760.76	760.06	740.06	730.06	NA	NA	NA	NA	NA	NA	NA	NA	24.01	736.05

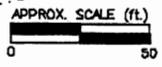
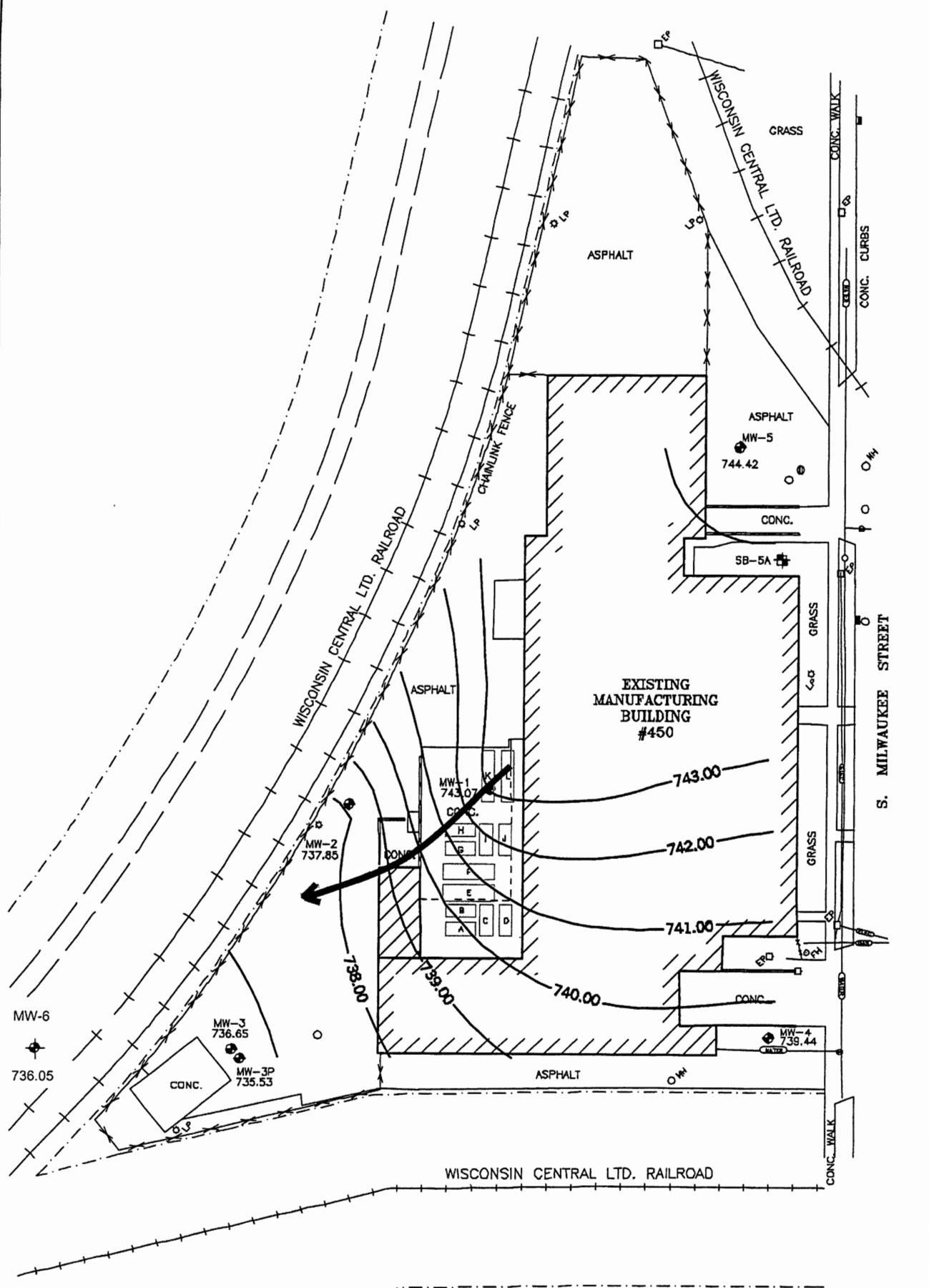
Key:

amsl = above mean sea level in feet

NA = not available

Notes:

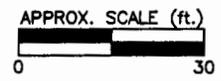
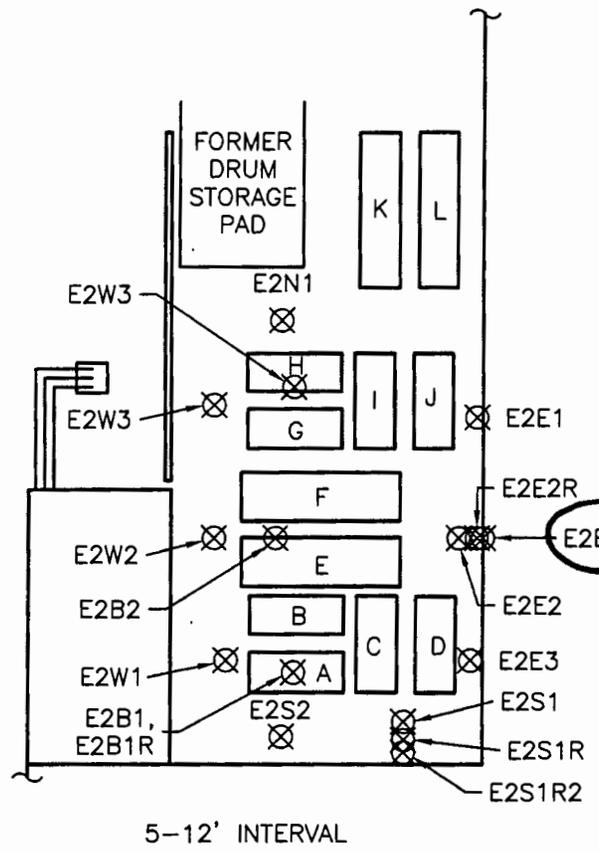
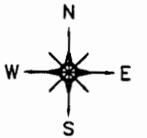
⁽¹⁾ Piezometer MW-3P and monitoring well MW-5 were constructed on February 28, 2001⁽²⁾ Monitoring well MW-6 was constructed on March 12, 2002.



SYMBOL LEGEND	
	MONITORING WELL
	PROPOSED MONITORING WELL
	ABANDONED BORING
	GROUNDWATER CONTOURS
	FORMER LOCATION OF UST
	OVERHEAD ELECTRIC
	RAILROAD
	RAILROAD RIGHT OF WAY

FIGURE 12
GROUNDWATER SAMPLING LOCATION AND CONTOUR MAP
MAY 22, 2001
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN





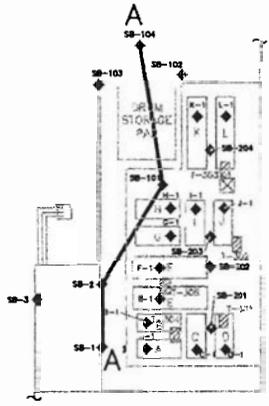
SYMBOL LEGEND	
X	FORMER LOCATION OF UST

FIGURE 2

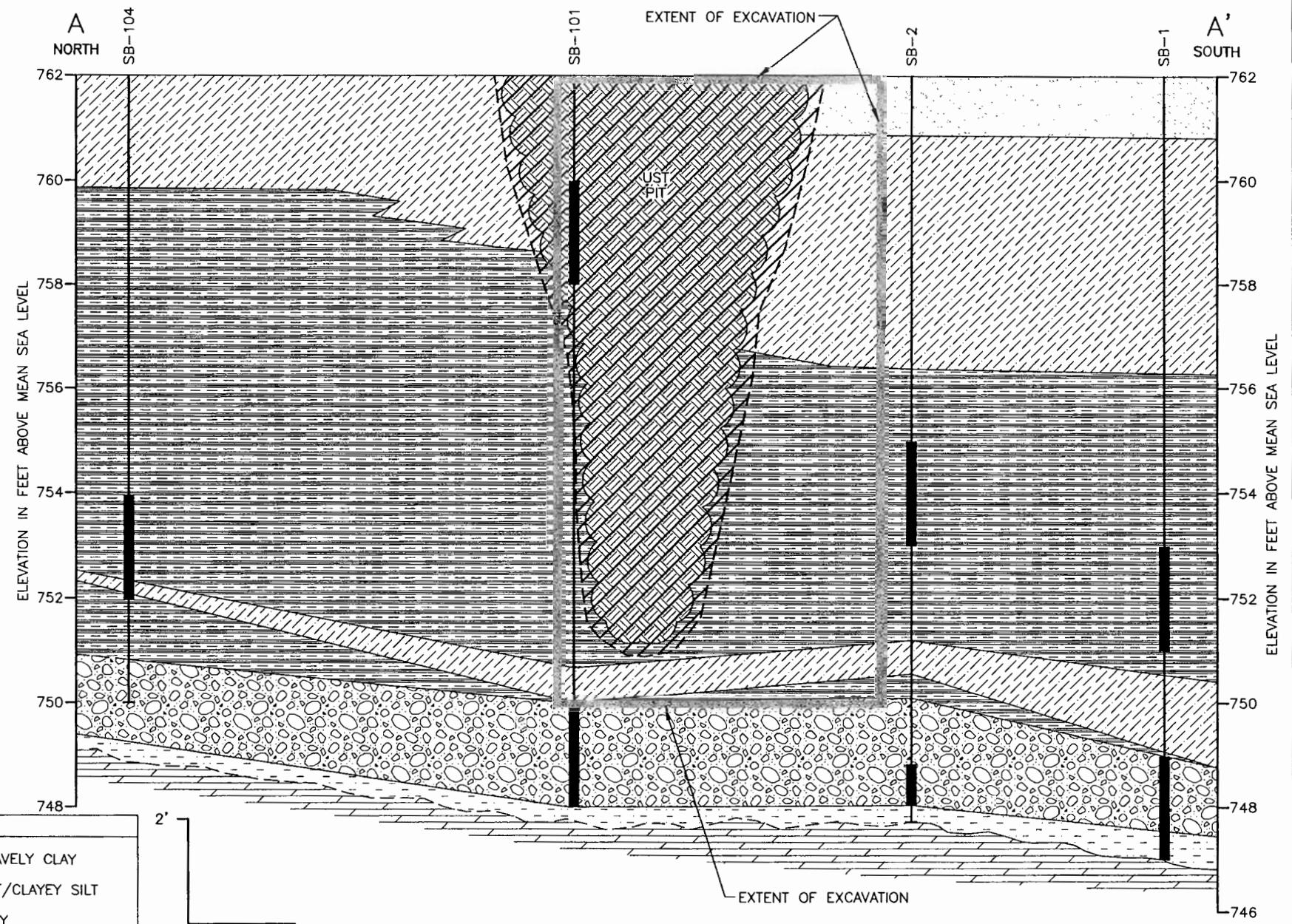
TRUCK LOADING DOCK EXCAVATION AREAS AND
 POST-REMEDIATION SAMPLE LOCATIONS
 (5-12' BGS)
 SUN CHEMICAL CORPORATION
 MENASHA, WISCONSIN



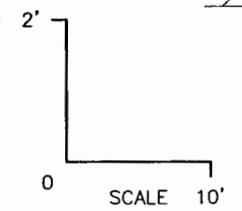
FILE: S:\SunChemical\0004548\02\acad\Fig9A.dwg \Layout1 Wed, 01 Dec 1999 - 8:07am



CROSS SECTION LOCATION MAP



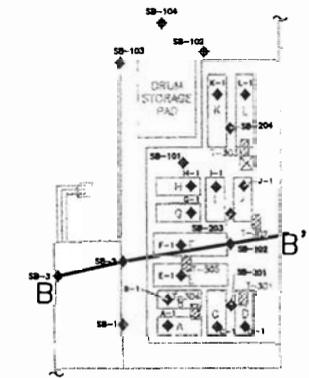
SYMBOL LEGEND			
—	CONTACT		GRAVELLY CLAY
- - -	INFERRED CONTACT		SILT/CLAYEY SILT
SB-1	BORING NAME		CLAY
	BORING		SILTY GRAVELLY CLAY
	SAMPLE INTERVAL		DOLOMITE
	BOTTOM OF BORING		EXCEEDS CLEAN-UP OBJECTIVES
	FILL		SAND



KEY: UST = UNDERGROUND STORAGE TANK
NOTES: 1. GROUND WATER LOCATED 19.4 TO 25.4 FEET BGS

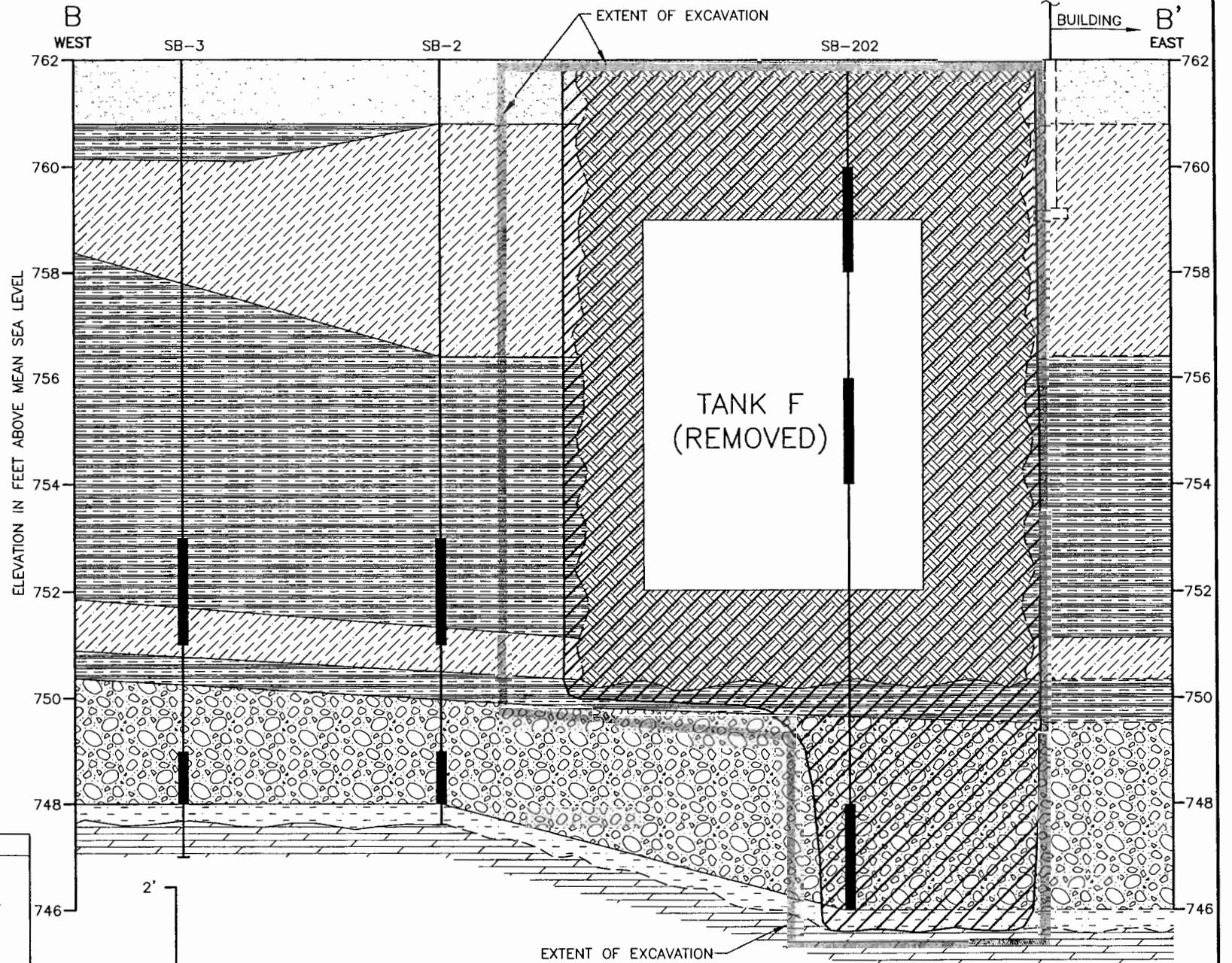
FIGURE 10
POST-REMEDIATION NORTH-SOUTH GEOLOGIC CROSS SECTION A-A'
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN





CROSS SECTION LOCATION MAP

SYMBOL LEGEND	
—	CONTACT
- - -	INFERRED CONTACT
SB-1	BORING NAME
⊥	BORING
▬	SAMPLE INTERVAL
⊥	BOTTOM OF BORING
▨	FILL
□	SAND
▨	GRAVELLY CLAY
▧	SILT/CLAYEY SILT
▩	CLAY
▪	SILTY GRAVELLY CLAY
▬	DOLOMITE
▨	EXCEEDS CLEAN-UP OBJECTIVES



NOTES:
1. GROUND WATER LOCATED 19.4 TO 25.4 FEET BGS

FIGURE 11
POST-REMEDIATION WEST-EAST GEOLOGIC CROSS SECTION B-B'
SUN CHEMICAL CORPORATION
MENASHA, WISCONSIN



SunChemical

SunCare[™]

Compliance Assurance
5020 Spring Grove Avenue
Cincinnati, OH 45232
Phone: (513) 681-5950
Fax: (513) 681-4797

Sent via email and DHL 9124043143

March 19, 2007

Casey Jones
Wisconsin Department of Natural Resources
625 County Road Y
Suite 700
Oshkosh, WI 54901

Dear Ms. Jones:

Per our conversation, and your subsequent email, please see the attached Legal Description Statement.

As required by Wisconsin Department of Natural Resources (WDNR) case summary and close out form, the legal descriptions are accurate and complete for the property located at 450 Milwaukee Street Menasha, WI 54952. The legal description was obtained from the most recent deed which is attached.

If you have any questions regarding this, please contact me at (513) 681-5950 ext. 655.

Sincerely,



Arnie T. Beringer, CHMM
Compliance Assurance Manager
North American Operations