

Amy Miller, Project Manager
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, Minnesota 55155
651-757-2569

10th April 2012
TPT # 12e-206

re: Contaminated Soil Removal -- Public Works Project
Intersection of US Highways 53 and 194
Hermantown, Minnesota

Dear Ms. Miller:

The city of Hermantown is planning to extend a municipal water line through an area of remnant petroleum contamination located near the intersection of State Highways 53 and 194 this 2012 construction season (Figures 1 and 2). The petroleum contamination is associated with the Junction Food-N-Fuel site, owned by the Curtis Oil Company. Site specifics and parties concerned are as follows:

Petroleum Contamination Site:

Junction Food-N-Fuel Site
5493 Miller Trunk Highway
Hermantown, Minnesota
MPCA Leak # 3534

Responsible Party:

Curtis Oil Company
4985 Miller Trunk Highway
Hermantown, Minnesota 55811
contact: Jack Curtis 218-729-5500

Parties Involved in the Public Works Project:

- City of Hermantown **Project Sponsor**
5105 Maple Grove Road
Hermantown, Minnesota 55811
contact: John Mulder, City Administrator 218-729-3600
- Salo Engineering **Construction Project Design Manager**
4560 Norway Pines Place
Duluth, Minnesota 55811
contact: David Salo, P.E. 218-727-8796

- Twin Ports Testing **Environmental Consultant**
1301 North 3rd Street
Superior, Wisconsin 54880
contact: Jon Hinkel, P.G. 715-392-7114

Environmental Background of the Junction Food-N-Fuel Site:

The Junction Food-N-Fuel property formerly contained a gasoline filling station. In 1991, the station's tanks were removed, with petroleum impacts revealed in the site's soils and groundwater. Follow-up investigations of the site have followed since 1992, involving the placement of 16 soil borings and the installation of eight groundwater monitoring wells. Results of the investigation indicated the site's soil and groundwater contaminant plumes extended somewhat south of the Junction F-N-F property boundaries beneath the Highway 53 right-of-way (Figures 3 and 4). Various remediation efforts have been undertaken since the initial investigation, however periodic monitoring of the site's groundwater has suggested that few changes have occurred with the site's contaminant plumes since they were documented in 1992.

Public Works Project Plan:

The project plan is to extend the city's main water line northwestward along the south side of Highway 53 to the intersection with Highway 194; the main line will cross beneath the intersection to the north side of Hwy 53 and continue northwestward, with a branch line to be extended approximately 100 feet southeastward. The branch line will include three spur lines for private service connections (Figure 5). Two of the spur lines (labeled Spur 2 and Spur 3) will extend into the mapped contaminant plume areas; the excavations for these spurs are thus likely to intercept remnant soil and groundwater contamination associated with the site. The project's excavation and installation work will be directed by the Construction Project Design Manager, with the work conducted by a General Contractor yet to be chosen through the bidding process.

Soil impacts recorded in the general area of proposed Spurs 2 and 3 have ranged from 10 to 200 parts per million (ppm) petroleum-related organic vapors (based on field screening readings from soil samples collected from borings SB-3, SB-11, and monitoring well MW-3 -- 1992 data; Figure 6). The MPCA has indicated that any soils excavated from the site exceeding 10 ppm petroleum-related organic vapors shall be considered as contaminated and should not be returned to the excavation, but should be disposed of off-site at a permitted facility. Soils registering less than 10 ppm may be returned to the excavation as unregulated backfill (Andy Eddie, MPCA project manager: 3/5/12).

Due to limitations of available data as well as the time passage since the data's collection, an accurate and reliable projection of the volume of soil which will require off-site disposal is difficult to predict. A maximum volume figure, based on planned excavation dimensions (assuming the use of trench boxes) superimposed over a trace of site's historic contaminant plume is calculated as follows:

Spur 2 Excavation:

15' long x 5' wide x 10' deep = 750 cu. ft. or 28 cubic yards

Spur 3 Excavation:

15' long x 5' wide x 9' deep = 675 cu. ft. or 25 cubic yards

Total: 53 cubic yards (unexcavated)
x 1.4 = 74 cubic yards (excavated)

Arrangements for contaminated soil's loading, transport and disposal will be made prior to the project's commencement. Choices for disposal include either soil composting or landfilling. New piping lines laid in the vicinity of the site's remnant contaminant plume shall be of ductal iron composition, and will be joined with petroleum-resistant nitrile gaskets.

As the excavation work approaches the documented area of remnant contamination, soils excavated from these areas will be judged as suspect; stockpiling will continue as before, but with soils placed on plastic sheeting. Soil samples will be collected from the suspect portions of the stockpiles, documented, sealed in plastic Zip-Lock bags, and set aside for ten minute periods for head-space vapor development. Field screening will then be conducted on the samples using a portable photoionization detector equipped with a 10.6 eV lamp and calibrated to an isobutylene standard prior to field activities. One to two representative analytical soil samples will be collected from the contaminated portions of the stockpiles, preserved as necessary, sealed in glass jars provided by the chosen laboratory, and packed on ice for transport to the laboratory according to standard chain-of custody procedures. The number of analytical samples collected will depend upon on the final volume of excavated soil determined for off-site disposal (<50 yards = 1 sample; >50 yards = 2 samples). Sample analyses will include gasoline and diesel range organics (GRO & DRO); benzene, ethylbenzene, toluene and xylenes (BTEX compounds); and lead. The analyses results will be forwarded to the disposal facility as a part of the material's documentation.

All excavated soils assumed to be uncontaminated by virtue of location or documented as registering less than 10 ppm petroleum-related organic vapors during field screening shall be returned to the excavation as back-fill or shall receive off-site disposal as unregulated fill material. Make-up material for contaminated soils to be removed from the site shall be uncontaminated granular fill imported from off-site.

Contaminated stockpile material shall be covered in plastic sheeting for a temporary storage period (two to three weeks anticipated) pending receipt of authorization for the material's removal and disposal.

Upon the disposal facility's notification acceptance, the General Contractor shall load and transport the site's contaminated soil to the disposal facility.

Should groundwater accumulate within excavated areas located in the vicinity of the site's remnant contaminant plumes such that dewatering becomes necessary to continue operations, a water sample shall be collected and analyzed for GRO, DRO and BTEX compounds and lead. Pending the analysis results, the waste water may be discharged directly to the WLSSD sanitary sewer system or may be disposed of with a private firm using a pump truck.

Reporting

At the conclusion of the project, a written excavation report will be compiled by the project's Environmental Consultant summarizing the project's field work, containing figures and supplying supporting documentation and data. The excavation report will be suitable for review by the MPCA.

In addition to the project's reporting, an application for reimbursement will be completed by the Environmental Consultant on behalf of the Project Sponsor for all eligible costs associated with the project.

Qualifications of Site Personnel

The General Contractor performing the excavation work in the area of the site's remnant contaminant plume shall be registered with the Minnesota Petrofund.

The Environmental Consultant shall be registered with the Minnesota Petrofund.

All site personnel shall have received and be currently certified in the OSHA 40-Hour Hazardous Waste Operations and Emergency Response training course prior to commencing in the project's field work.

If you have any questions, please feel free to call us at any time at 715-392-7114.

Thank you,



Jon Hinkel, P.G.
Senior Project Manager
Environmental Department
Twin Ports Testing, Inc.

- attachments:
- Figure 1: Project Location -- USGS 7½' Quadrangle
 - Figure 2: Project Location -- Engineering Area Plan Map
 - Figure 3: Site Map Showing Proposed Water Line Route
 - Figure 4: Site Map Showing Detailed Plan and Elevation Views
 - Figure 5: Site Map Showing Branch and Spur Lines
and Cross Section Traces
 - Figure 6: Cross Section Elevations Showing Spur Line Locations and
Available Soil Impact Data

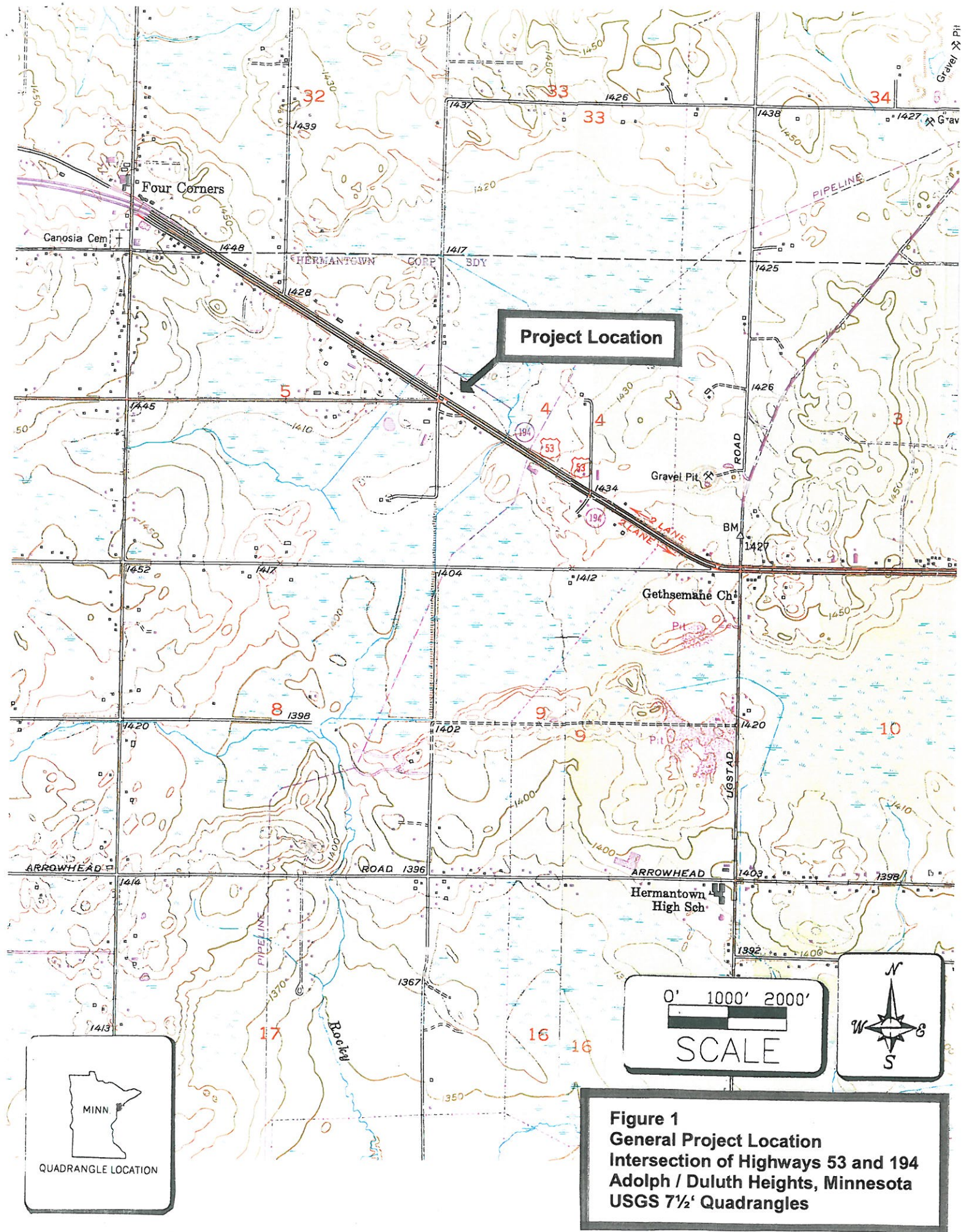
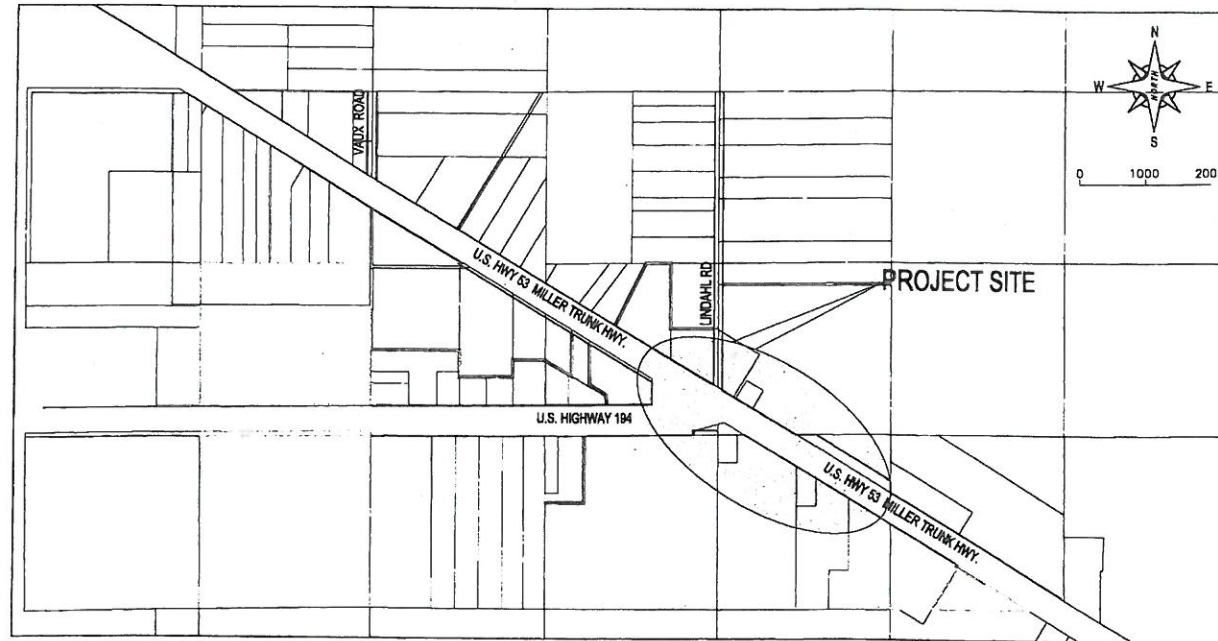


Figure 1
General Project Location
Intersection of Highways 53 and 194
Adolph / Duluth Heights, Minnesota
USGS 7½' Quadrangles

MINNESOTA DEPARTMENT OF TRANSPORTATION
CITY OF HERMANTOWN
 DEPARTMENT OF PUBLIC WORKS & UTILITIES
 CONSTRUCTION PLANS FOR: WATERMAIN EXTENSION

GROSS LENGTH	2331.40 FEET	0.442 MILES
BRIDGE LENGTH	0.00 FEET	0.000 MILES
EXCEPTION LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	2331.40 FEET	0.442 MILES

LOCATED ON : U.S. HIGHWAY 53 614 FT NORTH & 1717 FT SOUTH OF U.S. HIGHWAY 194



INDEX MAP

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL "D". THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF C/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"

BENCHMARKS

NORTH SIDE OF HWY 53
 S.E. SIDE OF LINDAHL RD. ON THE
 S.W. CORNER OF A LIGHT POLE BASE
 ELEVATION 1418.69



PROJECT LOCATION

ST. LOUIS COUNTY
 CITY OF HERMANTOWN
 SE 1/4 SEC. 4
 T50N R15W



**GOPHER STATE
 ONE CALL**

TWIN CITY AREA 454-0002
 MULTISTATE TOLL FREE 1-800-252-1166

Figure 2
Project Location -- Engineering Area Plan Map
Intersection of Highways 53 and 194
Hermantown, Minnesota
Salo Engineering files

LEGEND
 - - - - - FILTER LOG TYPE STRAW LOG
 [Hatched Box] EROSION BLANKET
 PELTO PROPERTIES LLC
 395-0035-00050

APPROXIMATE SOIL CONTAMINATION AREA

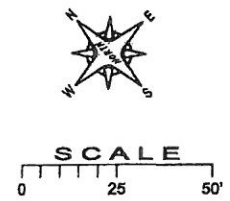
USAN ARTHUR M ETUX
 395-0010-00701

CURTIS FAMILY LIMITED PARTNERSHIP
 395-0010-00702

LINDAHL RD

U.S. HWY 53 MILLER TRUNK HWY.

U.S. HIGHWAY 194



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

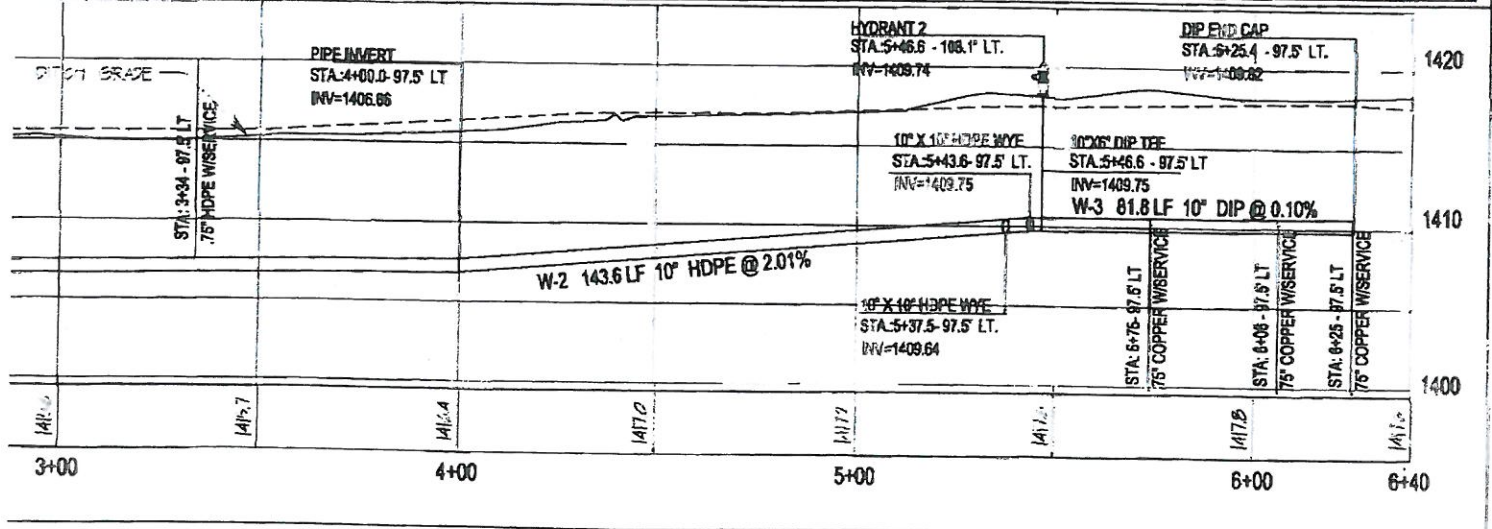
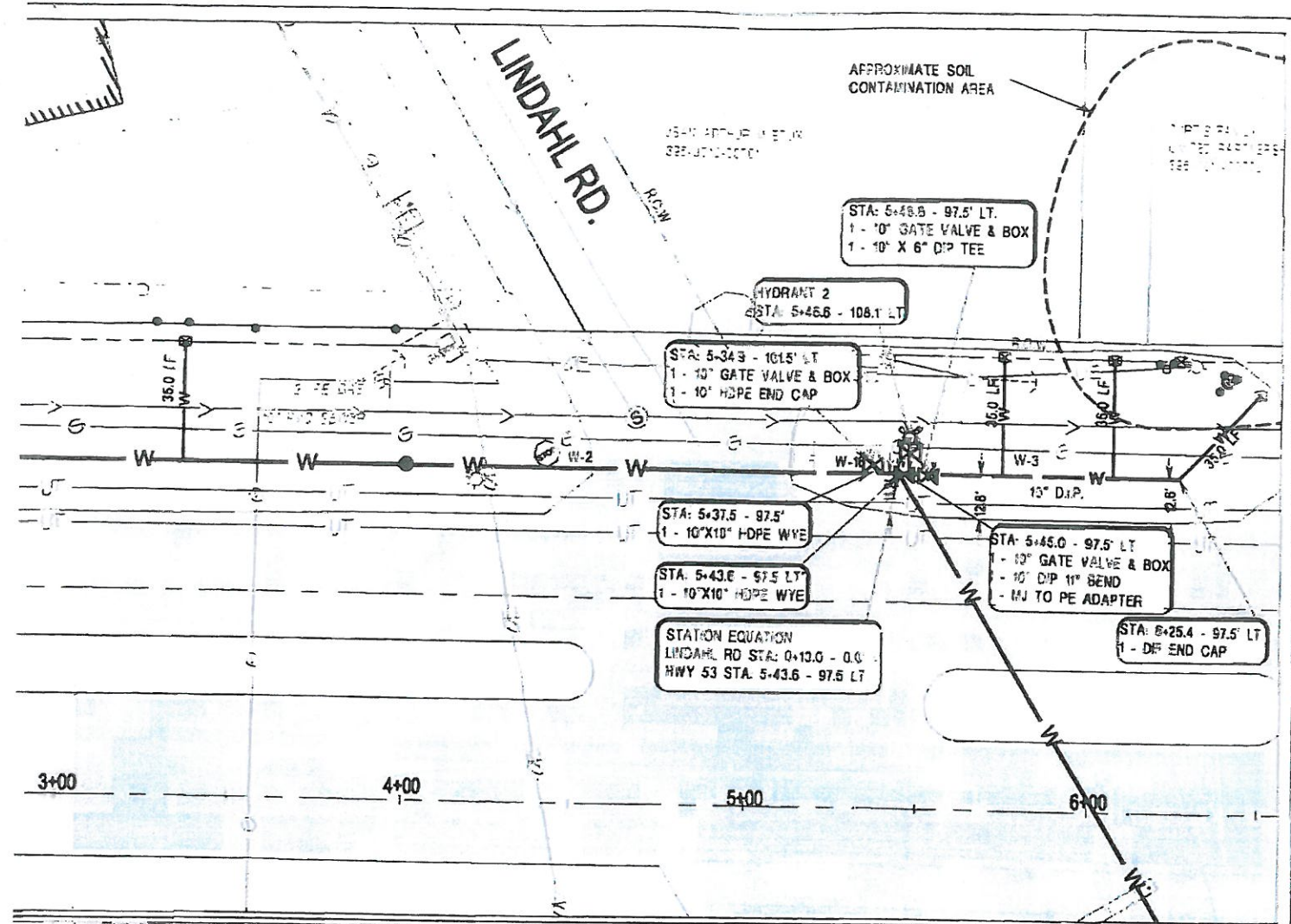
DAVID SALO
 PRINTED NAME

DATE	1				
18553	2				
REG. NO.	NO	DATE	REVISION	BY	

EROSION CONTROL
 WATER DISTRICT 314R - U.S. HIGHWAY 53

NO	DATE	REVISION	BY	JOB NO.
4				
5				
6				

Figure 3
 Site Map Showing Proposed Water Line Route
 Intersection of Highways 53 and 194
 Hermantown, Minnesota
 Salo Engineering files



PLAN & PROFILE
DISTRICT 314R- U.S. HIGHWAY 53

4			
3			
2			
1			
0			

SHEET NO. 16 OF 20

ENGINEERS • SURVEYORS • PLANNERS
SALO ENGINEERING, INC.

DATE FEB. 2012

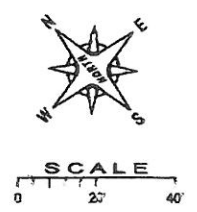
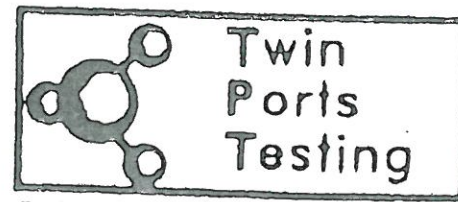
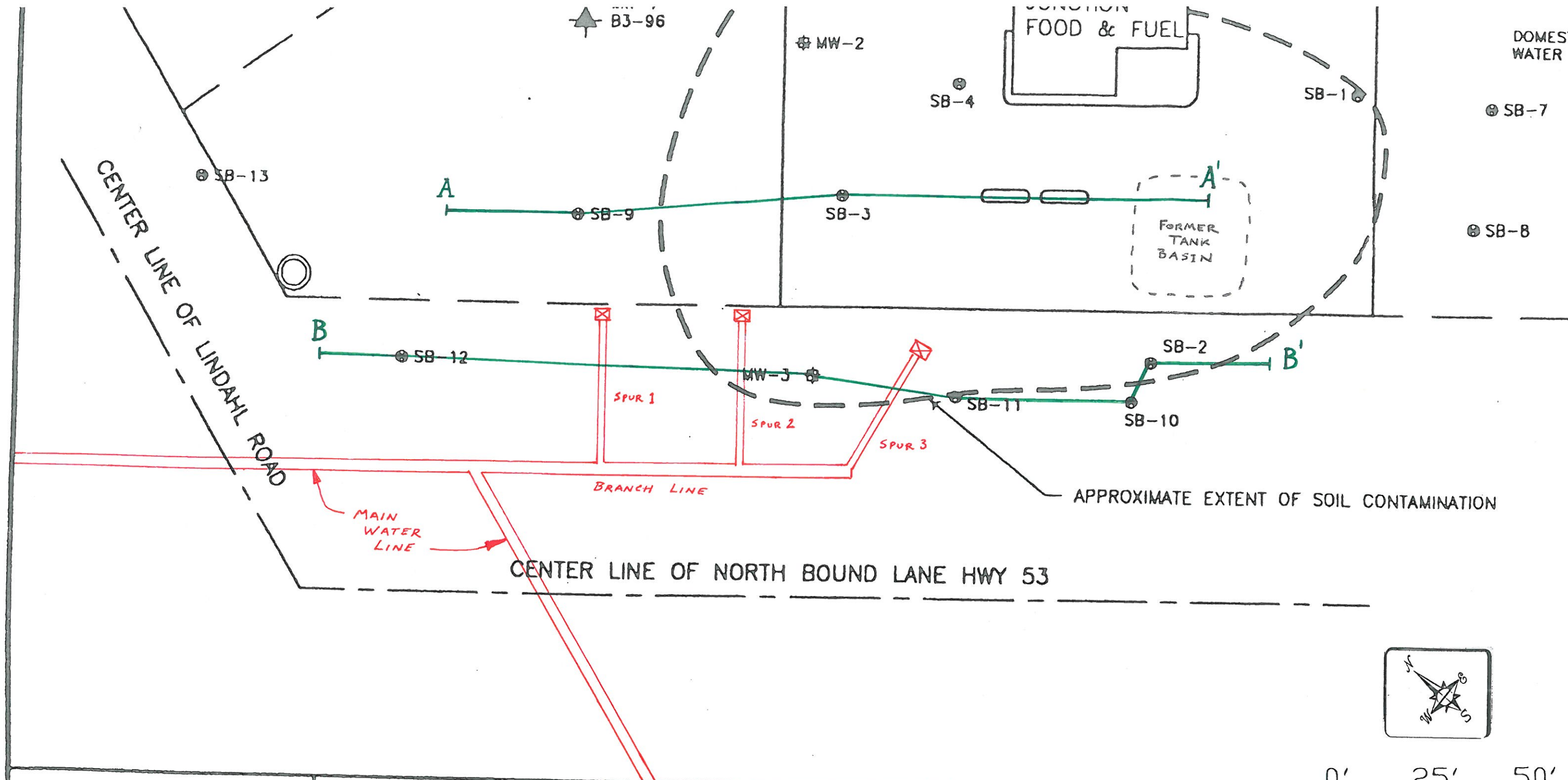


Figure 4
Site Map Showing Detailed Plan
and Elevation Views
Intersection of Highways 53 and 194
Hermantown, Minnesota
Salo Engineering files

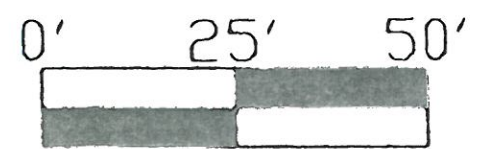


Twin
Ports
Testing

F104

APPROXIMATE EXTENT OF SOIL CONTAMINATION
 FOOD N FUEL
 5493 MILLER TRUNK HWY
 HERMANTOWN, MINNESOTA

DRAWN
 CHECK
 APPR
 DATE
 TPT N:



SCALE

Figure 5
 Site Map Showing Branch and Spur Lines
 and Cross Section Traces
 Intersection of Highways 53 and 194
 Hermantown, Minnesota
 TPT rendering

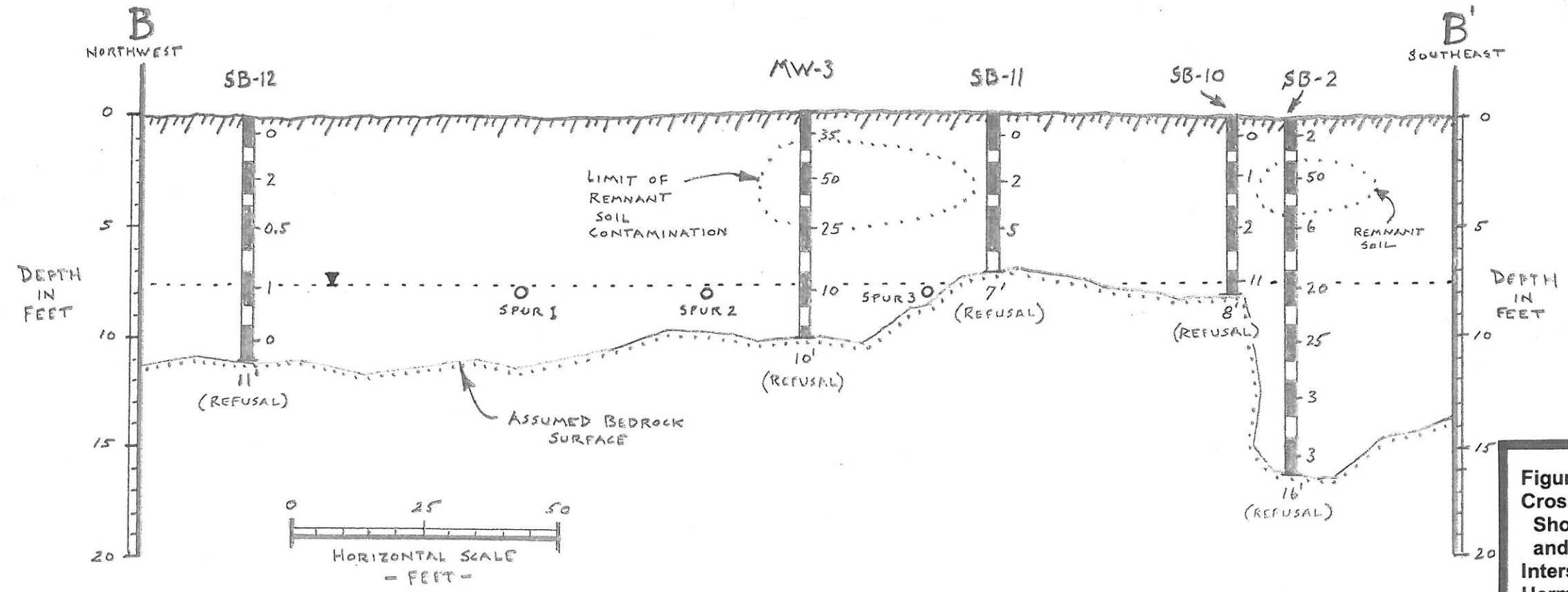
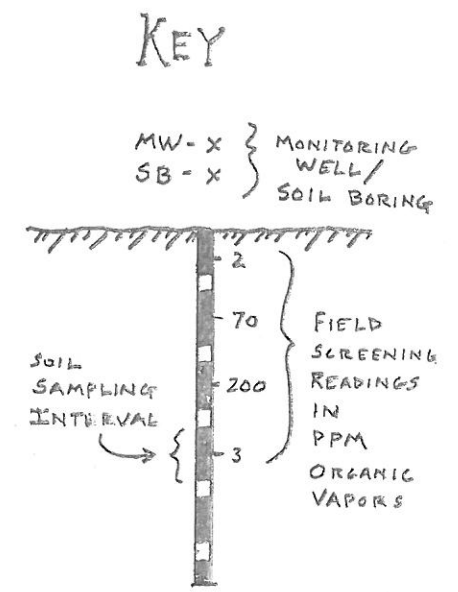
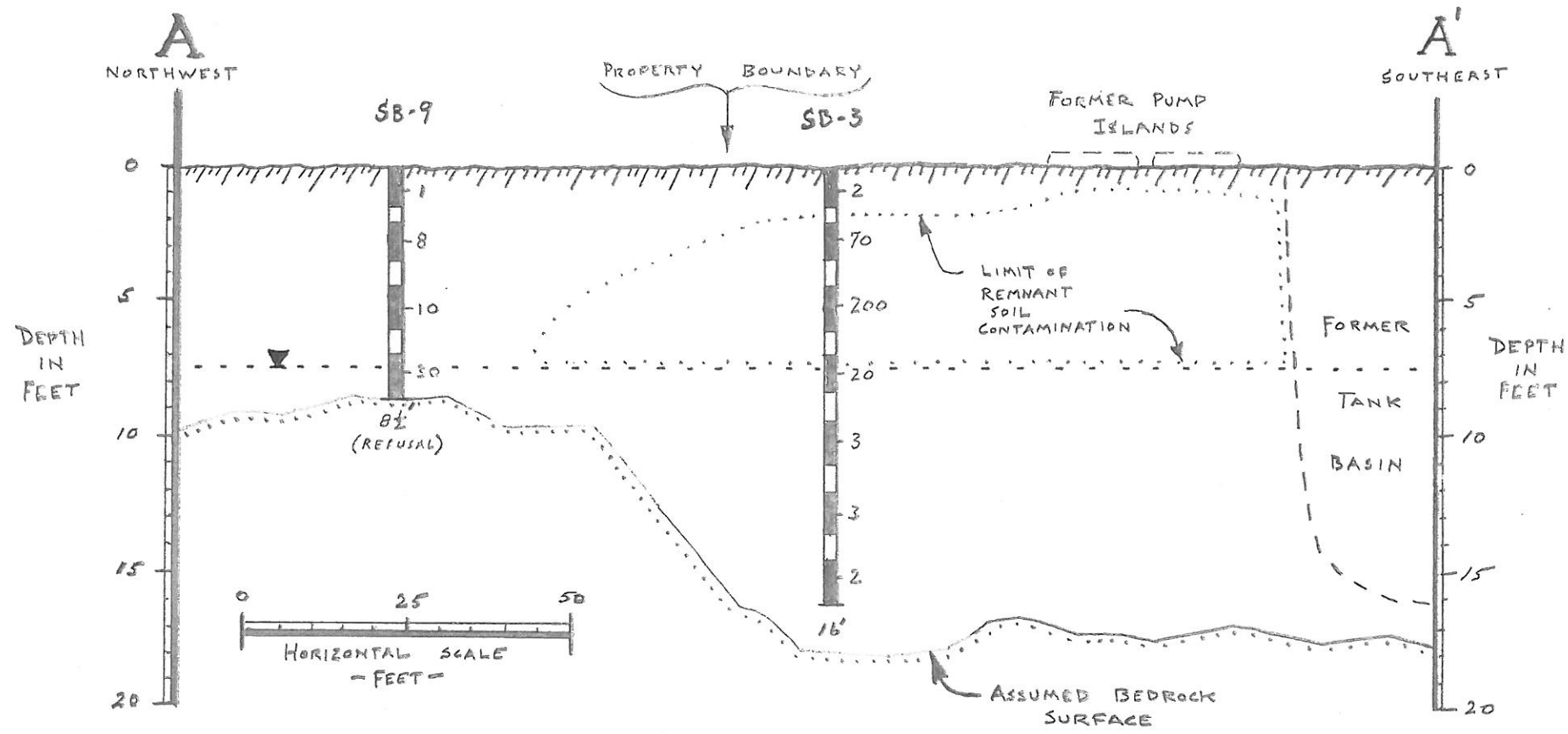


Figure 6
Cross Section Elevations
Showing Spur Line Locations
and Available Soil Impact Data
Intersection of Highways 53 and 194
Hermantown, Minnesota
TPT rendering