Twin Ports Testing Inc.

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

10th April 2012
TPT # 12e-206

PB4144

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 Highwayy 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.

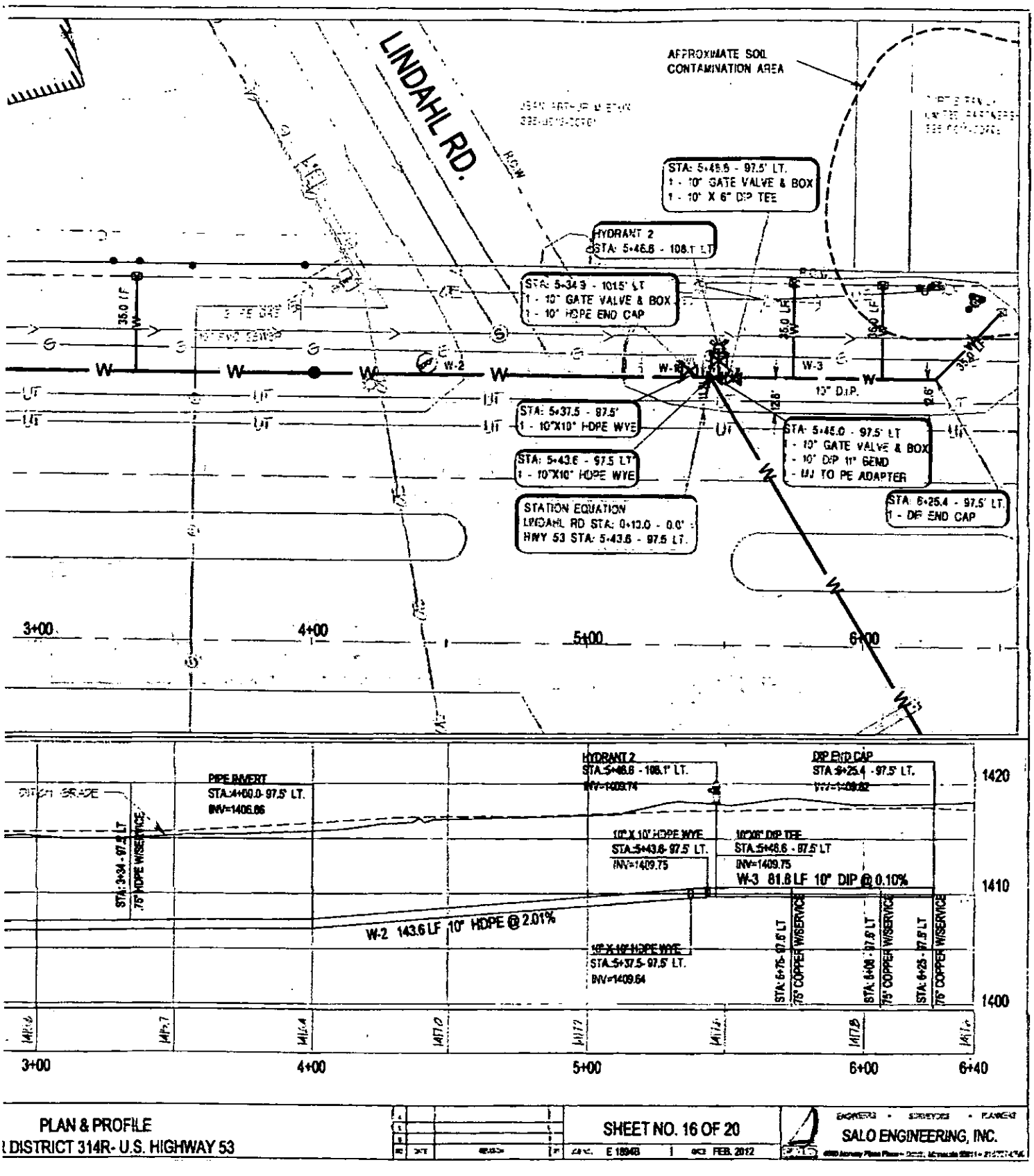


Figure 4
Site Map Showing Detailed Plan and Elevation Views
Intersection of Highways 53 and 194
Hermantown, Minnesota
Salo Engineering files

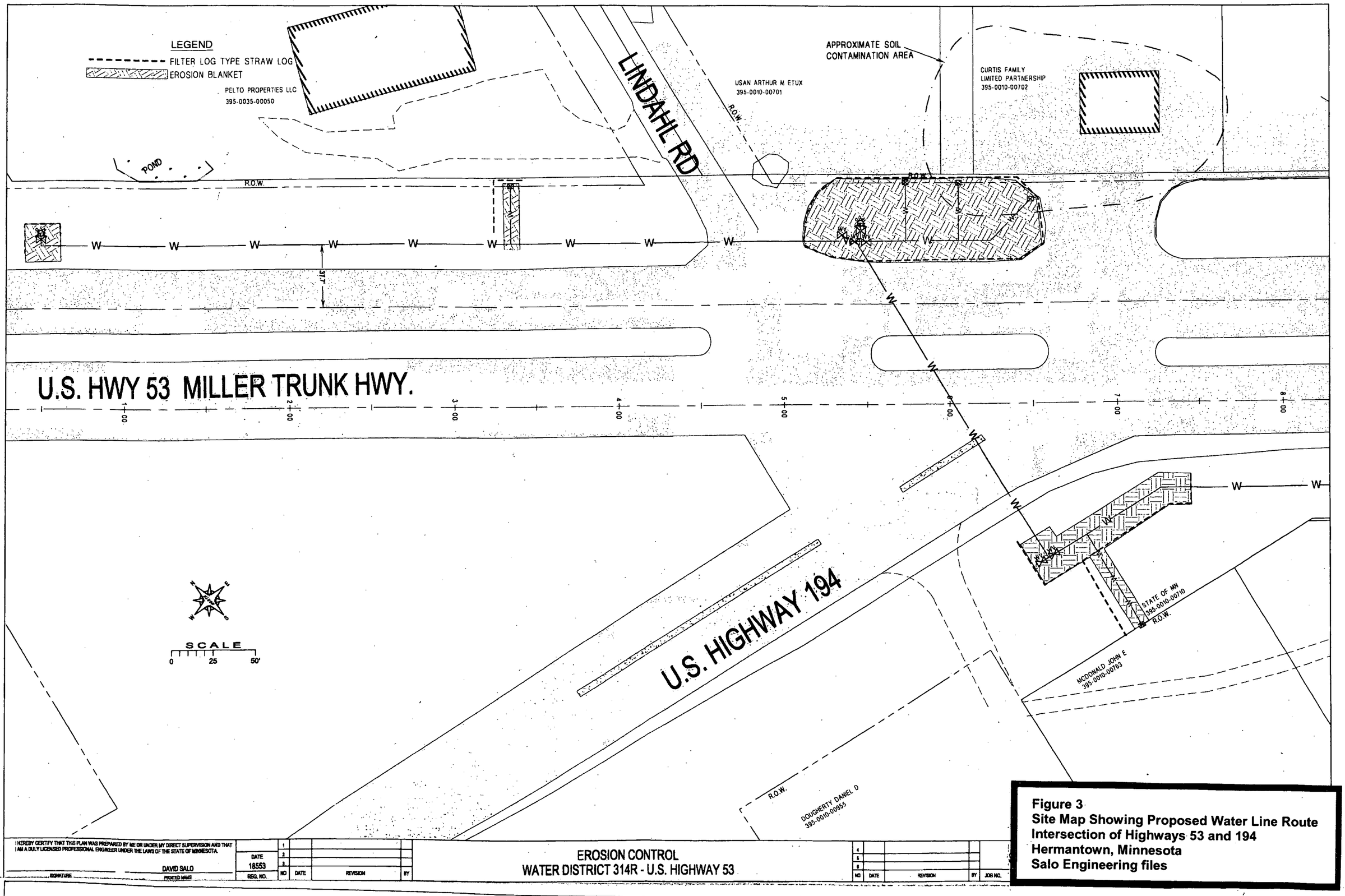


Figure 3
Site Map Showing Proposed Water Line Route
Intersection of Highways 53 and 194
Hermantown, Minnesota
Salo Engineering files

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

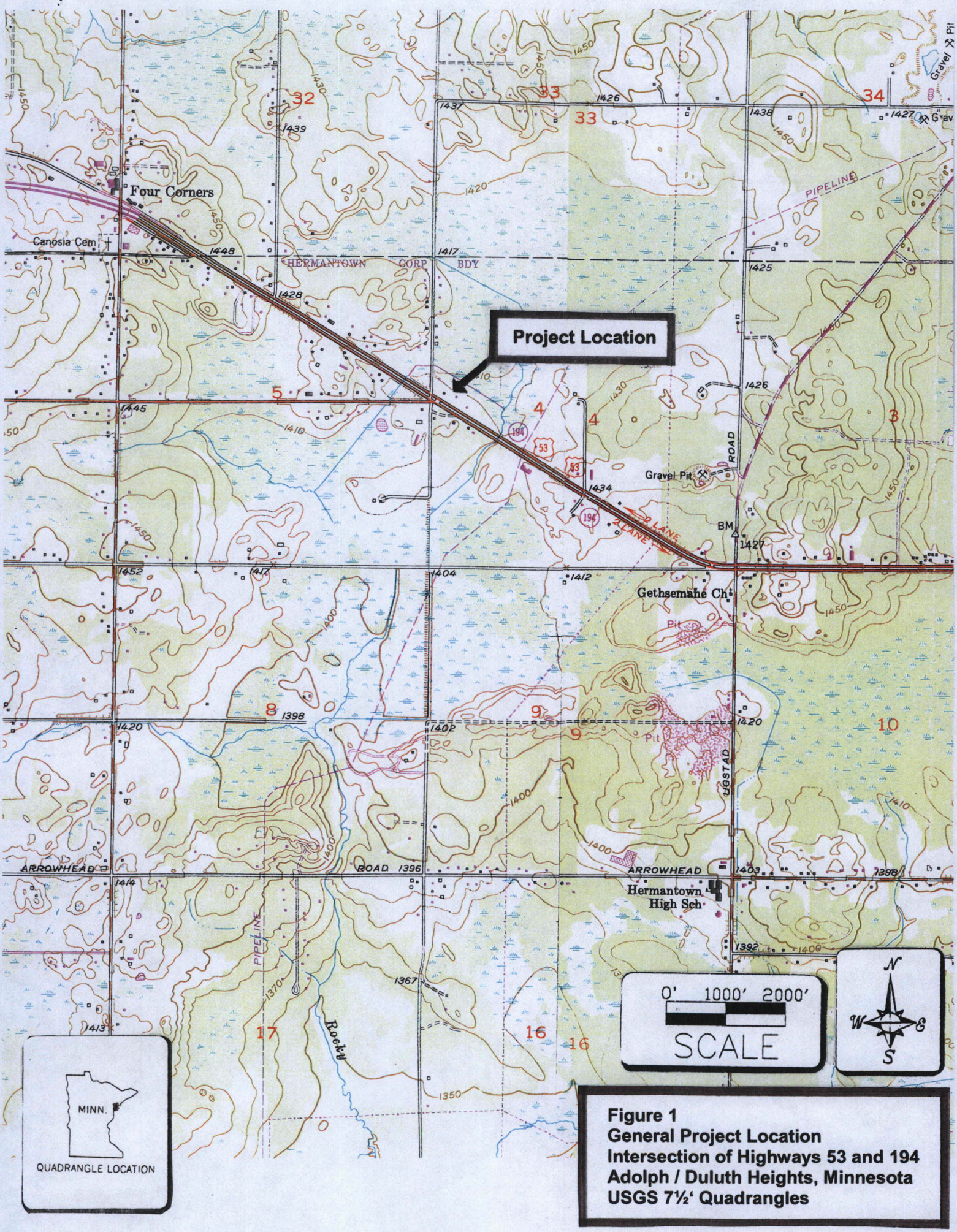


Figure 1
General Project Location
Intersection of Highways 53 and 194
Adolph / Duluth Heights, Minnesota
USGS 7½' Quadrangles

MINNESOTA DEPARTMENT OF TRANSPORTATION

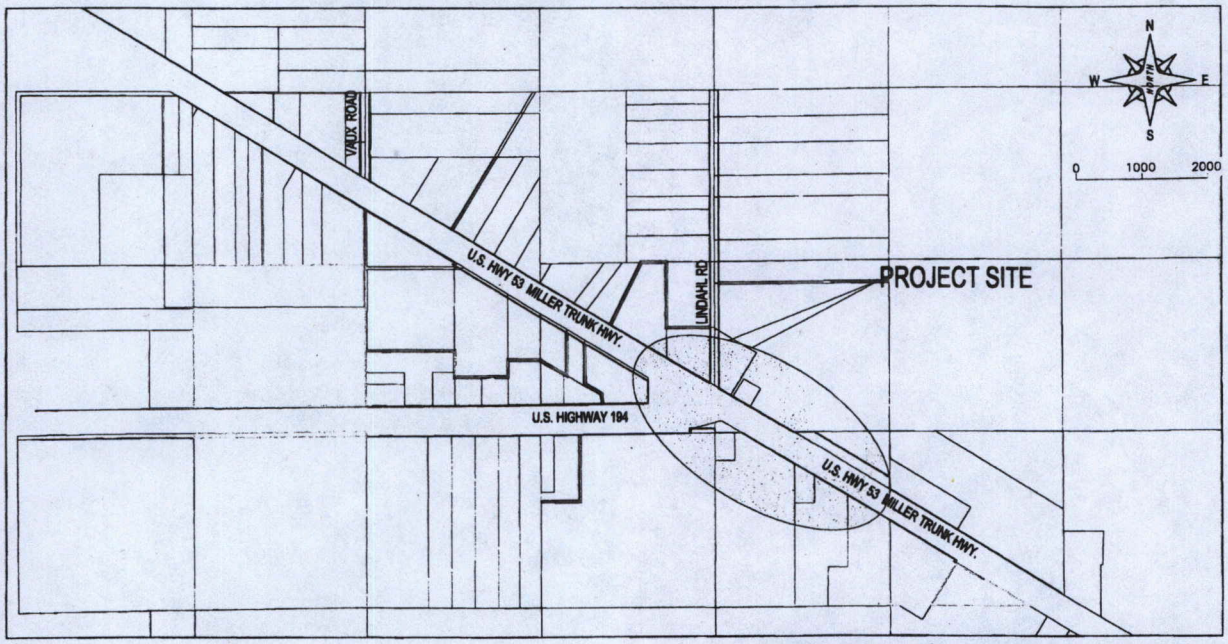
CITY OF HERMANTOWN

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

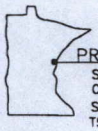


INDEX MAP

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL "D". THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/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

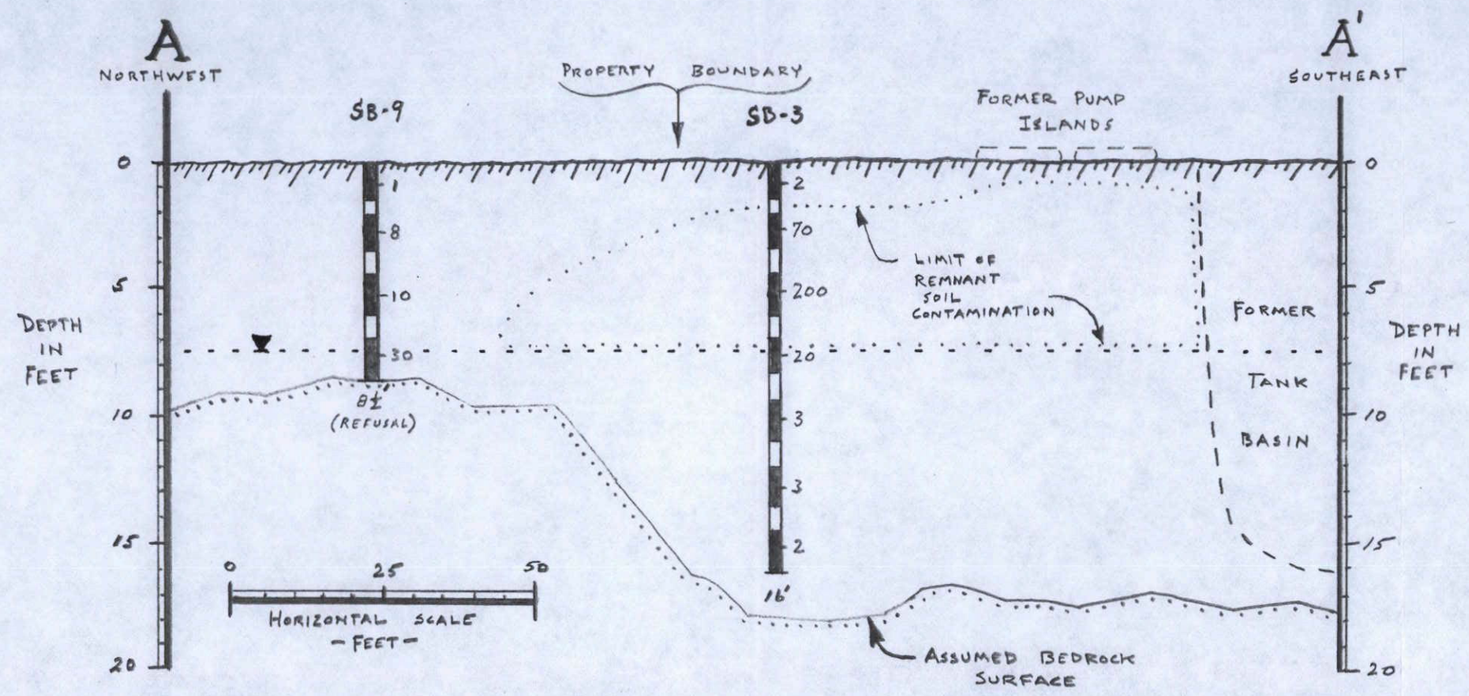


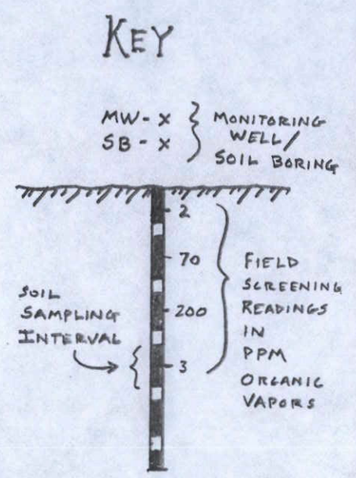
PROJECT LOCATION
ST. LOUIS COUNTY
CITY OF HERMANTOWN
SE 1/4 SEC. 4
T50N R15W

GOPHER ONE CALL STATE

TWIN CITY AREA 454-0002
MN. 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





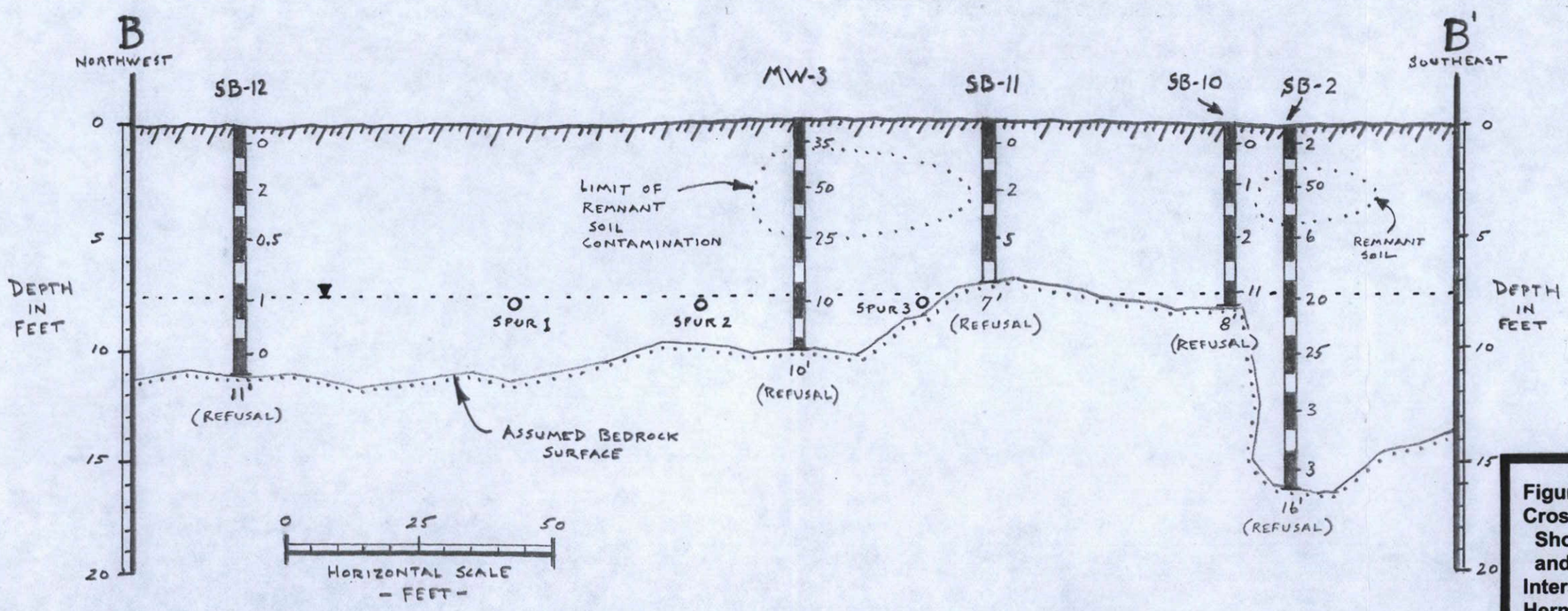
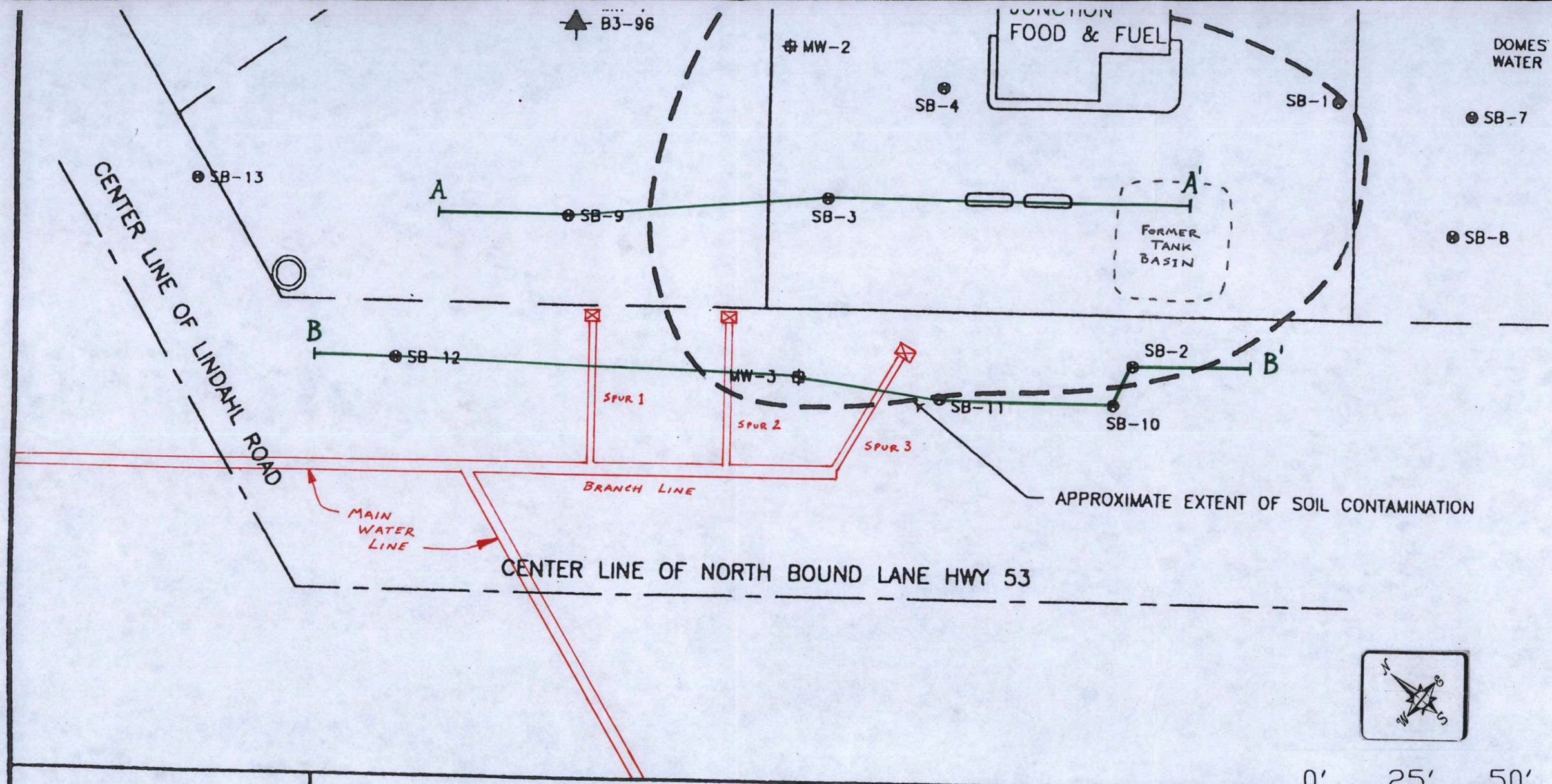


Figure 6
Cross Section Elevations
Showing Spur Line Locations
and Available Soil Impact Data
Intersection of Highways 53 and 194
Hermantown, Minnesota
TPT rendering



Twin Ports Testing

F104

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

DRAWN
CHECK
APPR
DATE
TPT NO

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

BATCH SCANNING SHEET

updated 1/17/2013

Scan Queue* (circle one):

AST/UST Scan	Hazardous Waste
Air Quality**	Major AST
Barcodes	Major AST Permit Application
CSW/ISW/MS4 Scan	Permitting – Scan
C&E – ER Scan Queue	Remediation/Leak Sites
Generic	Rulemaking

*No batch sheet needed for: DMRs or Grants

** Air Quality – Only for Criteria & Mercury Emissions Inventories

Batch Number:

_____

File Type (for archiving):

LeaKS /PB4144

Comments:

_____

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Date Submitted:

Records Center Use ONLY
6126114

Status:

Prepped by: TIM Sorensen

Date: 6/26/14 Diane Flatness 7-3-14

Prep QC'd by: _____

Date: _____

Scanned by: Tiordia Copeland

Date: 7-11-14

Scan QC'd by: _____

Date: _____