Strand Associates, Inc.®
910 West Wingra Drive
Madison, WI 53715
(P) 608-251-4843
(F) 608-251-8655

January 7, 2016

Mr. Chris Saari
Wisconsin Department of Natural Resources
2501 Golf Course Road
Ashland, WI 54806

Re: NR 718.12 Soil Management Plan for 6th Street West Reconstruction, City of Ashland
Contamination in the Right of Way of 6th Street West
Associated with Former Quearm Oil Site (BBRTS Nos.: 02-02-000105 and 03-02-000975)

Dear Mr. Saari:

This letter serves as the NR 718.12 Soil Management Plan for the City of Ashland (City) 6th Street West Reconstruction project. The City will be reconstructing 6th Street West from Ellis Avenue to Sanborn Avenue and replacing underground utility lines. The project location is shown on the enclosed preliminary plan sheets. The project will be bid in February 2016 and construction is anticipated in 2016.

On behalf of the City, we are submitting this Soil Management Plan for your information. The information regarding contaminated materials and the procedures for management of contaminated materials provided in this Soil Management Plan will be included in the project drawings and specifications. The drawings and specifications will assist the contractor during construction and provide guidance for the appropriate management of petroleum-contaminated soil that we anticipate will be encountered within the right of way (R/W) of 6th Street West. Petroleum-contaminated soil was recently encountered adjacent to the former Quearm Oil site at one geotechnical boring (SB-22) and at four subsequent borings completed to define the limits of contamination (SB-1 through SB-4). The enclosed November 4, 2015, letter report summarizes the extent and magnitude of contamination detected in the 6th Street West R/W.

Site Location and Contact Information

Reconstruction of 6th Street West will be limited to the existing R/W and the City is the owner of the R/W. The City contact is Mr. Ray Hyde, Director of Public Works, (715) 682-7580, RHyde@coawi.org, 2020 Sixth Street East, Ashland, Wisconsin, 54806.

The location of petroleum contamination detected within the R/W of 6th Street West was adjacent to the former Quearm Oil site at 105 6th Street West, Ashland, Wisconsin.

Proposed Construction and Location of Contaminated Soil

Excavations for roadway reconstruction and utility line replacement within the 6th Street West R/W may encounter petroleum-contaminated soil from between approximate design Station 85+15 and Station 86+70, a distance of 155 feet. Soil borings completed within the 6th Street West R/W did not detect groundwater, and the tight clay soils encountered are not expected to yield any substantial

quantities of groundwater. Site investigations in the area reported the depth to groundwater as 30 to 50 feet. Refer to the enclosed preliminary design plan sheets (Sheet 37) for the design stationing, the estimated extent of soil contamination within the R/W, and the locations of the soil borings (B-22 and SB-1 through SB-4).

Excavation to approximately 3 feet will be required for roadway reconstruction. In the area of contamination, excavation to approximately 6 feet is required for storm sewer inlets and laterals, excavation to approximately 11 feet is required for a sanitary sewer, and excavation to approximately 13 feet is required for water main and laterals. The proposed trench excavations through this area will be approximately 4 feet wide at the bottom and increasing in width toward the surface. Regarding the volume of soil to be excavated, one of the following conditions applies:

1. If contamination is limited to the shallow fill material above the native clay soils, the estimated volume of contaminated soil/fill that will be excavated is approximately 770 cubic yards.

2. If contamination is found at greater depths in the native clay soils and impacting utility line trenches, the contaminated soil volume will increase. The worst-case scenario would be that all excavated soil within the defined zone is contaminated. That volume would be approximately 1,225 cubic yards.

Location Standards for Reuse of Excavated Soil

Excavated soil and base course materials from within the defined area of contamination shown on the enclosed preliminary design plan sheets will be reused under pavement and within the utility trenches to the maximum extent possible. All material will be replaced in excavations and trenches at the approximate location and depth from where it was excavated. Reuse of contaminated soil on the project will be limited to the defined area of contamination and will meet the locational standards specified in NR 718.12(1)(c).

Proposed Management of Contaminated Soil

Based on existing subsurface investigation data collected at these sites, it is anticipated that petroleum-contaminated soil may be encountered approximately between Station 85+15 and Station 86+70. The probable area of contaminated soil is shown on the drawings. The contractor shall control operations to minimize the quantity of contaminated soil excavated and to ensure that excavations do not extend beyond the minimum required to construct the project.

Excess contaminated soil, if any, shall be removed from the trenches and excavations and loaded directly into licensed waste-hauling trucks. The waste shall be transported off-site to a licensed landfill or treatment facility for disposal. Temporary stockpiling of the contaminated soil prior to reuse on the project or prior to off-site disposal will be allowed. The temporary stockpile location shall be approved by the City. Material shall be placed on an impermeable surface such as concrete, asphalt, or 20 millimeter thick (minimum thickness) plastic sheeting. Surface runoff shall be directed around the area. The stockpile shall be covered at the end of each day and during rainfall events. The cover shall consist of 10 millimeter thick (minimum thickness) plastic sheeting anchored with sandbags or similar ballast, and the integrity of the cover shall be maintained and repairs to the cover made promptly, as needed.

Only excess contaminated soil shall be removed from the project and hauled off-site for disposal. Contaminated soil, if suitable for reuse as backfill, shall only be reused at the same location and depth from where it was excavated.

If you have any questions or require additional information, please call me.

Sincerely,

STRAND ASSOCIATES, INC.®

Luke T. Hellermann, P.G.

Enclosures

c/enc.: Mr. Ray Hyde, City of Ashland, Director of Public Works
Mr. Patrick Rank, Strand Associates, Inc.®

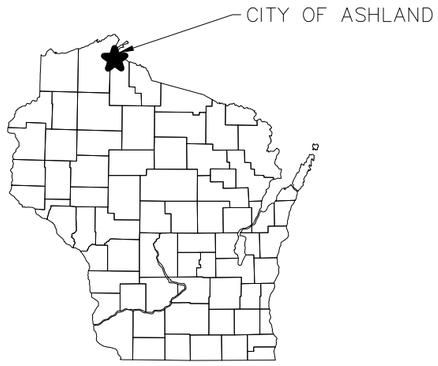
LTH:plh\S:\MAD\1300--1399\1300\010\Wrd\Phase 2 Haz Mat\MHP and Specifications\1. Soil Management Plan.docx

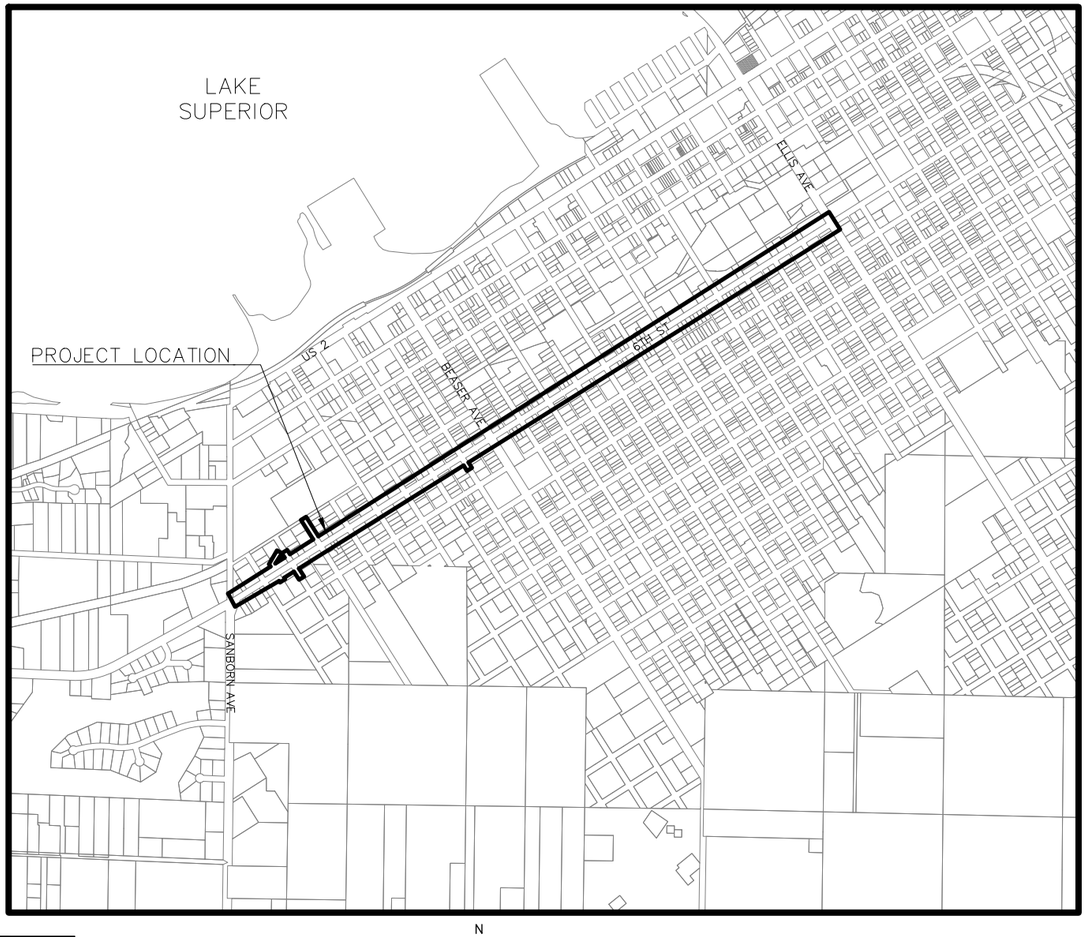
6TH STREET WEST RECONSTRUCTION

FOR THE

CITY OF ASHLAND
ASHLAND COUNTY, WI
DECEMBER, 2015

Draft
Review Set
12-23-15





AREA MAP
NO SCALE

LIST OF DRAWINGS

STANDARD SYMBOLS

SOIL BORING	GUY WIRE
BENCH MARK	VALVE
EXISTING UTILITY POLE	MANHOLE
ROAD SIGN	INLET
LIGHT POLE	FIRE HYDRANT
OBJECTS TO BE REMOVED	TELEPHONE CABLE PEDESTAL
CONIFEROUS TREE	WETLAND AREA
DECIDUOUS TREE	PROPERTY LINE AND/OR RIGHT OF WAY
PAVED ROAD	ELECTRIC
CONTROL POINT	SANITARY SEWER
WETLANDS	STORM SEWER
TELEPHONE OR TV CABLE	WATER MAIN
GAS MAIN	FIBER OPTIC
UNDERGROUND ELECTRIC CABLE	EXISTING CONTOUR
ORIGINAL GROUND IN PROFILE	PROPOSED CONTOUR
REJECT CURB AND GUTTER	FENCE
CURB AND GUTTER	SILT FENCE

UTILITY OWNERS

CENTURYLINK
3215 TOWER AVE
SUITE 106
SUPERIOR, WI 54880
MR. ALAN NICKELL
(715) 378–2131

MERIT NETWORK
100 OAKBROOK DRIVE
SUITE 200
ANN ARBOR, MI 48104–6794
MR., CARLOS RAMOS
(734) 476–3873

NORVADO, INC.
43705 U. W. HWY 63
P.O. BOX 67
CABLE, WI 54821
MR., GUY FOLSOM
(715) 580–8123

XCEL ENERGY
2400 FARM ROAD
ASHLAND, WI 54806
MR., MURRAY SMERER
(715) 209–3071

CITY OF ASHLAND
2020 6TH STREET EAST
ASHLAND, WI 54806
MR., DAN MADERICH
(715) 209–7645

CHARTER
COMMUNICATIONS
2016 18 ¾ STREET
RICE LAKE, WI 54868
MR. TOM HAASE
(715) 418–9317

910 West Wingra Drive
Madison, WI 53715
608-251-4843
608-251-8655 fax
www.strand.com

DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

CONTRACT 1-2016

STRAND ASSOCIATES®

SHEET
1
1300.009

EXISTING SANITARY SERVICE FROM ????
EXISTING WATER MAIN TO REMAIN IN SERVICE UNTIL NEW WATER MAIN IS IN SERVICE (TYP.)
CONNECT TO EXISTING WATER SERVICE (TYP.)
NEW WATER SERVICE AND CURB STOP (TYP.)
NEW CONCRETE DRIVEWAY APRON (TYP.)
CONNECT TO EXISTING WATER MAIN
PROPOSED PIPE UNDERDRAIN (TYP)
SAN MH 233
CONNECT TO EXISTING SANITARY LATERAL (TYP.)
NEW SANITARY LATERAL (TYP.)
NEW 5' WIDE SIDEWALK
POWER POLE TO BE RELOCATED BY XCEL ENERGY
I-44.2
I-44.4
SS MH 44
PROTECT EXISTING SIDEWALK (TYP.)
REMOVE EXISTING STORM SEWER, PIPING, STRUCTURES, AND APPURTENANCES (TYP.)
NO SANITARY SERVICE FOR THIS LOT
APPROXIMATE LIMITS OF CONTAMINATED SOILS
I-44.7
CONNECT TO EXISTING SANITARY SEWER PIPE STA. 86+64.9/38.7'LT IE=663.42
30.7 LF PVC @ 1.56%
16"x6" TEE STA. 85+28/4' RT 16" VALVE AND ROAD BOX SW
SAN MH 290 FIELD CORE ALL PIPE INVERTS
MATCHLINE
STA. 87+00
W 6TH STREET
2ND AVE W.
82+00
83+00
84+00
85+00
86+00
87+00
B-21
B-22
SB-1
SB-2
SB-3
SB-4
6" VALVE
16" VALVE
37' B-B
8.5'
7.0'
6.0'
8- MIN., (TYP)
16"x6" TEE STA. 81+61/4' RT
STA 81+61 RT NEW HYDRANT 6" WV AND 6" LEAD BURY LINE ELEV. = 678.24
CONNECT TO EXISTING SANITARY SEWER PIPE STA. 83+01.5/30.2'RT IE=667.19
EXISTING SANITARY SERVICE FROM ALLEY
EXISTING WATER SERVICE FROM 3RD AVE W.
16"x6" TEE STA. 84+00/ 4' RT 6" VALVE AND ROAD BOX NW
SAN MH 233.1
33.7 LF PVC @ 1.04%
EXISTING SANITARY SERVICE FROM ALLEY
EXISTING WATER SERVICE FROM 2ND AVE W.
I-44.1
I-44.3
CONNECT TO EXISTING STORM SEWER
CONNECT TO EXISTING WATER MAIN
APPROXIMATE LIMITS OF STREET RECONSTRUCTION. SAWCUT AND MATCH EXISTING (TYP.)
STA 85+28 RT NEW HYDRANT 6" WV AND 6" LEAD BURY LINE ELEV. = 676.98
I-44.6
16"x8" TEE STA. 84+93/4' RT
PROVIDE INLET PROTECTION (TYP.)
I-44.5
8" VALVE
32.6 LF PVC @ 0.66%
CONNECT TO EXISTING SANITARY SEWER PIPE STA. 86+65.5/28.6'RT IE=668.37
CONNECT TO EXISTING SANITARY SEWER
EXISTING SANITARY SERVICE FROM ALLEY
EXISTING WATER SERVICE FROM 2ND AVE W.
0 20 30 40

695 690 685 680 675 670 665 660 655 650

VPT STA 81+59.04
VPT EL 678.01
PROPOSED CENTERLINE PROFILE
APPROXIMATE EXISTING CENTERLINE PROFILE
SAN MH 233
RIM 677.06
0.56%
7.5' MIN. COVER (TYP.)
SAN MH 233.1
RIM 676.60
VPC STA 84+28.04
VPC EL 676.50
SS MH-44
RIM 676.10
VPI STA 84+50.00
VPI EL 676.38
VCL = 43.93
K = 37.00
I-44.3
VPT STA 84+71.96
VPT EL 676.52
I-44.5
I-44.6
0.63%
550 LF - 16" PVC C905 WATER MAIN
SAN MH 290
RIM 677.58
STA 87+00.00
EL 677.95
342.5 LF - 30" RCP @ 0.21%
VCL = 68.08
K = 37.00
FLOW LINE OF PROPOSED SANITARY SEWER
FLOW LINE OF EXISTING SANITARY SEWER
MAINTAIN MINIMUM 18" CLEARANCE (TYP.)
FLOW LINE OF PROPOSED STORM SEWER
FLOW LINE OF EXISTING STORM SEWER
78.5 LF - 10" PVC @ 0.28%
23.1 LF - 30" RCP @ 1.64%
24.5 LF - 12" RCP @ 0.51%
27.2 LF - 15" RCP @ 0.51%
TOP OF PROPOSED WATER MAIN
TOP OF EXISTING WATER MAIN

677.74 678.05 | 677.49 677.79 | 677.28 677.51 | 677.02 677.23 | 676.78 676.95 | 676.61 676.67 | 676.38 676.45 | 676.44 676.68 | 676.65 676.99 | 677.05 677.31 | 677.43 677.62 | 677.89 677.94

81+50 82+00 83+00 84+00 85+00 86+00 87+00

Draft Review Set 12-23-15

DATE:
REVISIONS
NO.

SIXTH STREET WEST
PLAN AND PROFILE
2016 SIXTH STREET WEST RECONSTRUCTION
CITY OF ASHLAND
ASHLAND COUNTY, WISCONSIN

JOB NO. 1300.009
PROJECT MGR. PJR

STRAND ASSOCIATES®

SHEET 37

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ELLIS AVE

MATCHLINE STA. 87+00

W 6TH STREET

PROPOSED PIPE UNDERDRAIN (TYP)

PROTECT EXISTING CURB AND GUTTER

CONNECT TO EXISTING WATER MAIN

16" VALVE

CONNECT TO EXISTING SANITARY SEWER
STA. 87+89.8/6.4'LT
IE=663.63

16" 45° BEND
STA. 87+76/4' RT

APPROXIMATE LIMITS OF STREET RECONSTRUCTION.
SAWCUT AND MATCH EXISTING (TYP.)

88+00 89+00 90+00

MIDLAND SERVICES, INC.
109 6TH ST W
201019870000

JAMES KOLLAUF
603 ELLIS AVE S.
201022030000

WILLIAM D. SUNIE
605 ELLIS AVE
201022020000

JON E & MARY E
BRATLEY REVOCABLE TRUST
600 ELLIS AVE
201021860000

0 20 30 40

STA 87+00.00
EL 677.95

STA 87+98.00
EL 678.79

PROPOSED CENTERLINE PROFILE

APPROXIMATE EXISTING CENTERLINE PROFILE

TOP OF EXISTING WATER MAIN

100 LF – 16" PVC C900 WATER MAIN

TOP OF PROPOSED WATER MAIN

FLOW LINE OF PROPOSED SANITARY MAIN

122.3 LF – 10" PVC @ 0.40%

677.89 677.94 678.47 678.36 678.80 678.57 678.59

695 690 685 680 675 670 665 660 655 650

87+00 88+00 89+00 90+00 91+00 92+00 92+50

SIXTH STREET WEST
PLAN AND PROFILE

2016 SIXTH STREET WEST RECONSTRUCTION

CITY OF ASHLAND
ASHLAND COUNTY, WISCONSIN

JOB NO.
1300.009

PROJECT MGR.
PJR

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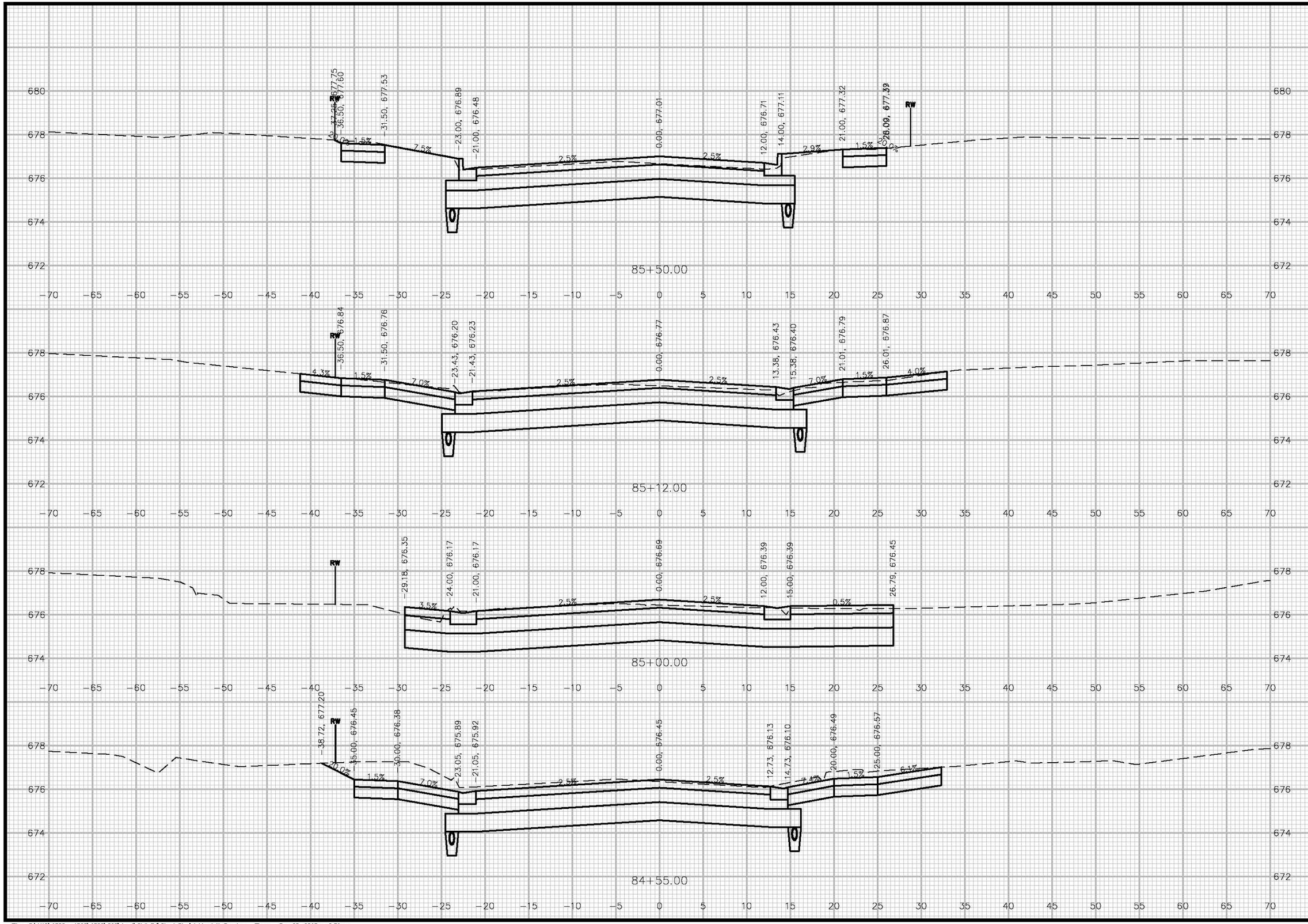

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SIXTH STREET WEST
CROSS SECTIONS

2016 SIXTH STREET WEST RECONSTRUCTION

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ASHLAND COUNTY, WISCONSIN

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2016 SIXTH STREET WEST RECONSTRUCTION

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ASHLAND COUNTY, WISCONSIN

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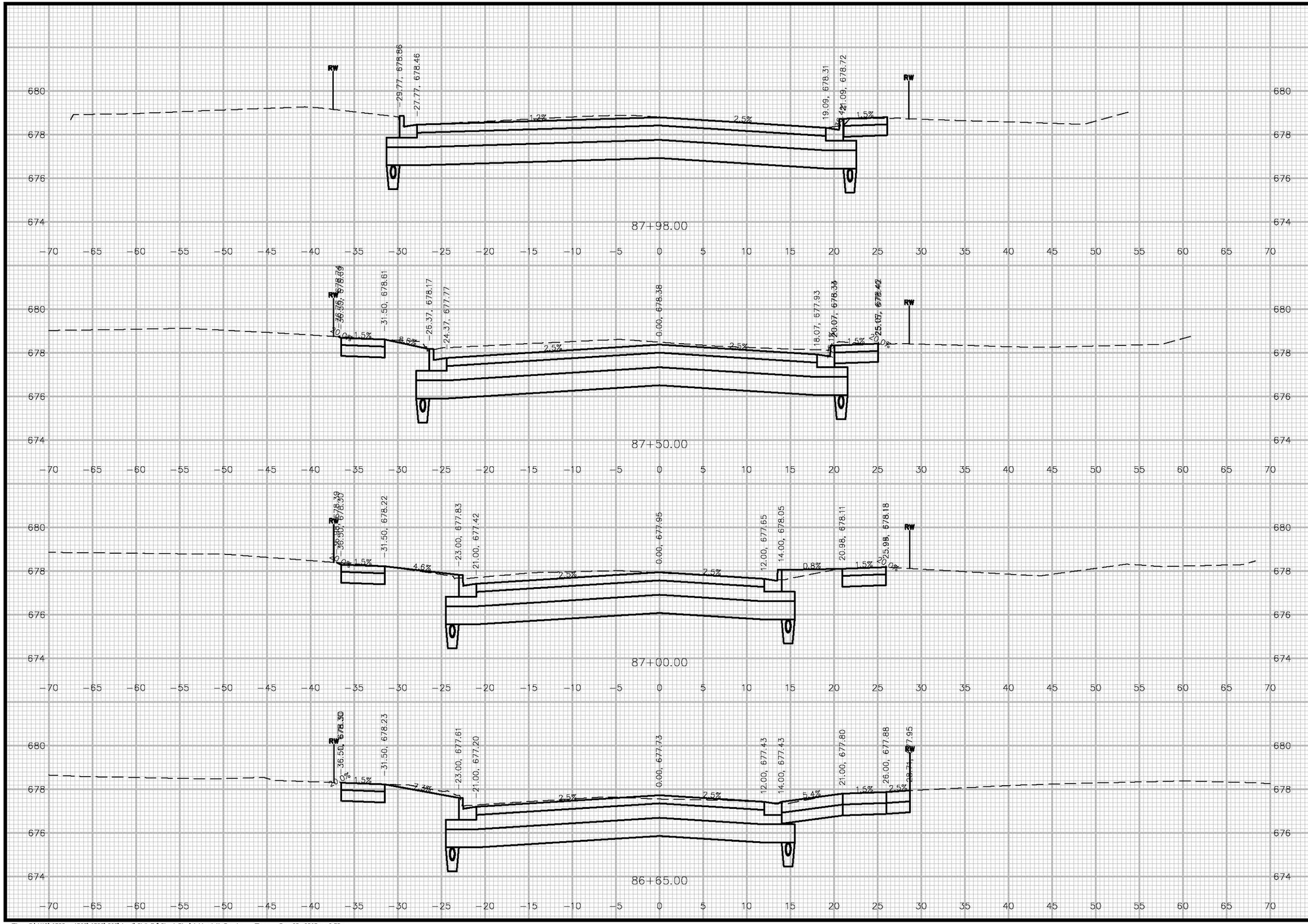

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SIXTH STREET WEST
CROSS SECTIONS

2016 SIXTH STREET WEST RECONSTRUCTION

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ASHLAND COUNTY, WISCONSIN

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Ashland 1300.010
6th St West

Strand Associates, Inc.®
910 West Wingra Drive
Madison, WI 53715
(P) 608-251-4843
(F) 608-251-8655

November 4, 2015

Mr. Raymond Hyde, Director of Public Works
City of Ashland
2020 6th Street East
Ashland, WI 54806

Re: Investigation of Petroleum-Contaminated Material
6th Street West Right of Way

Dear Ray,

This letter report summarizes the results of the soil sampling completed within the street right of way (R/W) adjacent to 105 6th Street West in Ashland. The investigation was completed to assess the extent of petroleum-contaminated material that will be encountered during the reconstruction of 6th Street West.

Background

Soil samples were collected in May 2015 from 22 geotechnical borings constructed along the project corridor. Soil samples from the geotechnical borings were field-screened with a photoionization detector (PID) to identify volatile contaminants, such as petroleum, in the soil samples. Elevated PID readings were detected at one boring, B-22, located adjacent to the City of Ashland property at 105 6th Street West (former Quearm Oil). The elevated PID readings recorded and the obvious petroleum odor noted at this boring (from approximately 0 to 4 feet) indicated that petroleum-contaminated soil likely extends into the 6th Street West R/W at that location.

Contamination Investigation

Follow-up investigation was completed on September 29, 2015, to define the extent of contamination in the street R/W near geotechnical boring B-22. Four soil borings were constructed and soil samples were collected for field screening and laboratory analysis. The locations of geotechnical borings in the area (B-21 and B-22) and the new site investigation borings (SB-1 through SB-4) are shown in Figure 1.

Each site investigation boring (SB-1 through SB-4) was advanced to 10 feet, soil samples were screened with a PID, and one sample from each boring was submitted for laboratory analysis for volatile organic compounds (VOCs) and lead. Soils observed beneath the pavement were typically sand, gravel, and clay fill materials to depths of 2 to 3 feet underlain by native red-brown clay soil. Groundwater was not encountered at any borings and no groundwater samples were collected. Soil boring logs and soil boring abandonment forms are enclosed with this letter. The boring logs show the soil type, field observations, and the PID readings recorded at each boring.

Investigation Results

As shown in Figure 1, the site investigation borings (SB-1 through SB-4) were constructed to the east, west, north, and south of the location where contamination was first detected, geotechnical boring B-22. No PID readings greater than 5 parts per million (ppm), no odors, and no visual indications of petroleum contamination were observed at borings SB-1, SB-2, or SB-4. Analysis of the soil samples from these borings also did not detect any significant contamination. No contamination was detected at levels exceeding NR 720 direct contact soil standards for noncommercial sites. Field observations and soil analytical data indicate petroleum

contamination from 105 6th Street West (the former Quearm Oil site) does not extend to these boring locations.

At boring SB-3, a slightly elevated PID reading of 5.7 ppm was recorded in the sample collected from just below the pavement to the depth of 2.5 feet. An obvious petroleum odor was also noted in this sample of sand, gravel, rock, and silt fill materials. Laboratory analysis of the sample detected petroleum-related contamination at higher concentrations than what was detected at other borings. However, concentrations were also below NR 720 direct contact standards for noncommercial sites.

Soil analytical results are summarized in the enclosed data tables for borings SB-1 through SB-4. The tables show the concentrations of the contaminants detected and the associated NR 720 direct contact soil standards for noncommercial sites. A copy of the laboratory analytical report is also enclosed.

Recommendations

No additional investigation is recommended. The area of contaminated soil that could impact the 6th Street West Reconstruction Project has been defined and is shown in Figure 1. The extent of contamination is defined by boring SB-1 to the north and by borings SB-2 and SB-4 to the west and east. Contamination appears to extend across 6th Street West to the south to the area of SB-3. Contamination is likely limited to the shallow fill material directly beneath the pavement. Native soils in the area are tight clays and highest potential for those soils to be contaminated (depths below 2 to 4 feet) would be directly adjacent to the Quearm Oil site.

With the site information acquired, contract specifications can be prepared for the reuse of contaminated soils on the project to the maximum extent practicable with off-site landfill disposal of excess contaminated soil. Depending on the extent of contamination encountered during construction, there are two potential scenarios:

1. If contamination is limited to the shallow fill material above the native clay soils, the estimated volume of contaminated soil/fill that will be excavated is approximately 770 cubic yards.

2. If contamination is found at greater depths, the contaminated soil volume will increase. The worst-case scenario would be that all excavated soil within the defined zone is contaminated. That volume would be approximately 1,225 cubic yards.

Coordination with the Wisconsin Department of Natural Resources (WDNR) should be initiated and a Soil Management Plan should be prepared and submitted to the WDNR for review and approval. The Soil Management Plan will report the previously collected soil analytical data to the WDNR and will outline proposed contaminated soil reuse, stockpiling, and landfill disposal for the project.

Please call me with any questions or if you would like to discuss these investigation results and recommendations in more detail.

Sincerely,

STRAND ASSOCIATES, INC.®

Luke T. Hellermann, P.G.

Enclosures

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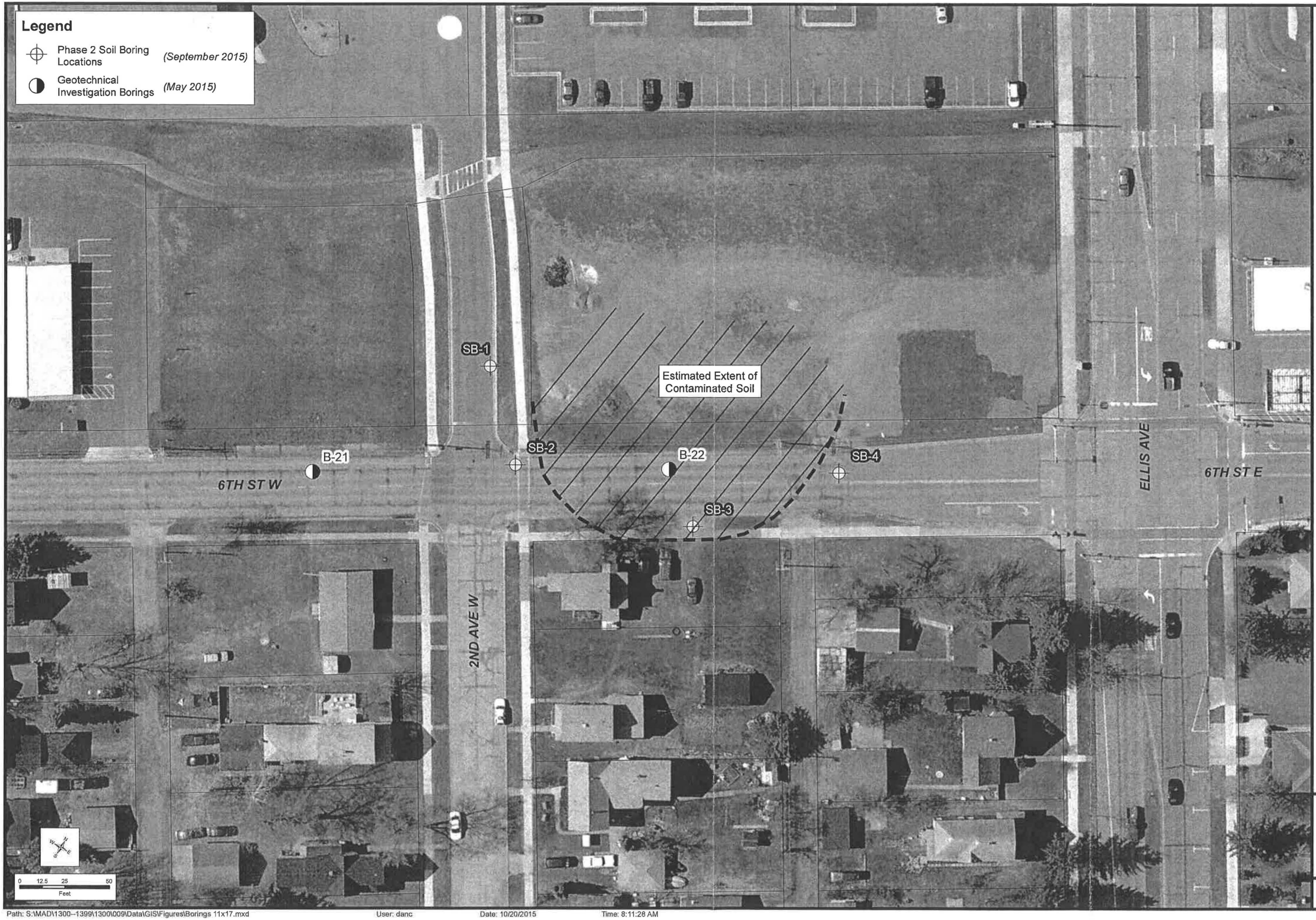

SOIL BORING LOCATIONS
6TH STREET WEST RECONSTRUCTION

CITY OF ASHLAND
ASHLAND COUNTY, WISCONSIN

STRAND ASSOCIATES®

FIGURE 1
1300.009

Path: S:\MAD\1300--1399\1300\009\Data\GIS\Figures\Borings 11x17.mxd User: danc Date: 10/20/2015 Time: 8:11:28 AM

Twin Ports Testing

SB-1

Page 1 of 1

BORING LOG

PROJECT:	CLIENT:	TPT Project No.:
6th Street West Subsurface Investigation	**City of Ashland**	**15M7161**

ARCHITECT - ENGINEER:	SITE LOCATION:
Strand Associates	**Ashland, Wisconsin**

BORING LOCATION:	REPORT DATE:
See Boring Location Sketch	**10/22/15**

DEPTH (ft) / ELEVATION (ft)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	WATER LEVEL	GRAPHIC LOG	STRATA CHANGE DEPTH	DESCRIPTION OF MATERIAL SURFACE ELEVATION:	PID READING (ppm)
0.0								3-4" Asphalt.	
							0.3	3" brown, moderately dry, moderately loose medium grain sand and gravel.	
	1	CS					0.5	brown moderately moist med sand, moderately loose	3.7
							2.5	Top 3" brown moderately moist, moderately loose medium sand.	
	2	CS					3.0	2" layer wood/roots. grey brown silt/clay, tight moderately dry	3.7
	3	CS					5.0	Red brown, tight silty clay, dry	2.5
	4	CS							2.0
10.0							10.0	End of Boring	

○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT²) 1 2 3 4 5

☆ PERCENT PASSING #200 SIEVE 10 20 30 40 50

× PLASTIC LIMIT % ● WATER CONTENT % △ LIQUID LIMIT % 10 20 30 40 50

⊗ STANDARD PENETRATION TEST N-VALUE 10 20 30 40 50

WATER LEVEL **NE**	*THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU, THE TRANSITION MAY BE GRADUAL.*	
WATER LEVEL	BORING STARTED **09/29/15**	BORING COMPLETED **09/29/15**
WATER LEVEL	CAVE IN LEVEL	
SPT HAMMER	RIG **6625CPT**	CREW CHIEF **JJ**

ABBREVIATIONS: ACR-After Casing Removal, BCR-Before Casing Removal, AB-After Boring, WD-While Drilling, WS-While Sampling, NE-None Encountered, DB-Diamond Bit, HSA-Hollow Stem Auger, RB-Rock Bit, SS-Split Spoon, ST-Shelby Tube, PA-Power Auger, MR-Mud Rotary, CS-Continuous, RP-Rock Probe, PH-Percussion Hammer, WL-Water Level, WOH-Weight of Hammer, EIL-Exceeds Instrument Level, TS-Topsoil, PP-Pocket Penetrometer

Twin Ports Testing

SB-2

BORING LOG

PROJECT:	CLIENT:	TPT Project No.:
6th Street West Subsurface Investigation	**City of Ashland**	**15M7161**

ARCHITECT - ENGINEER:	SITE LOCATION:
Strand Associates	**Ashland, Wisconsin**

BORING LOCATION:	REPORT DATE:
See Boring Location Sketch	**10/22/15**

DEPTH (ft) / ELEVATION (ft)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	WATER LEVEL	GRAPHIC LOG	STRATA CHANGE DEPTH	DESCRIPTION OF MATERIAL	PID READING (ppm)
0.0								SURFACE ELEVATION:	
							0.3	1" asphalt over 2" concrete, Red brown tight, mod dry silty clay. low recovery.	
	1	CS							1.7
	2	CS							1.4
							5.0	Brown tight mod dry clay.	
	3	CS							1.2
	4	CS							1.0
10.0							10.0	End of Boring	

○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT^2) 1 | 2 | 3 | 4 | 5

☆ PERCENT PASSING #200 SIEVE 10 | 20 | 30 | 40 | 50

× PLASTIC LIMIT % ● WATER CONTENT % △ LIQUID LIMIT % 10 | 20 | 30 | 40 | 50

⊗ STANDARD PENETRATION TEST N-VALUE 10 | 20 | 30 | 40 | 50

WATER LEVEL	*THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU, THE TRANSITION MAY BE GRADUAL.*	
NE		
WATER LEVEL	BORING STARTED **09/29/15**	BORING COMPLETED **09/29/15**
WATER LEVEL	CAVE IN LEVEL	
SPT HAMMER	RIG **6625CPT**	CREW CHIEF **JJ**

ABBREVIATIONS: ACR-After Casing Removal, BCR-Before Casing Removal, AB-After Boring, WD-While Drilling, WS-While Sampling, NE-None Encountered, DB-Diamond Bit, HSA-Hollow Stem Auger, RB-Rock Bit, SS-Split Spoon, ST-Shelby Tube, PA-Power Auger, MR-Mud Rotary, CS-Continuous, RP-Rock Probe, PH-Percussion Hammer, WL-Water Level, WOH-Weight of Hammer, EIL-Exceeds Instrument Level, TS-Topsoil, PP-Pocket Penetrometer

Twin Ports Testing

SB-3

BORING LOG

PROJECT:	CLIENT:	TPT Project No.:
6th Street West Subsurface Investigation	**City of Ashland**	**15M7161**

ARCHITECT - ENGINEER:	SITE LOCATION:
Strand Associates	**Ashland, Wisconsin**

BORING LOCATION:	REPORT DATE:
See Boring Location Sketch	**10/22/15**

DEPTH (ft) / ELEVATION (ft)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	WATER LEVEL	GRAPHIC LOG	STRATA CHANGE DEPTH	DESCRIPTION OF MATERIAL SURFACE ELEVATION:	PID READING (ppm)
0.0								0.5" asphalt over 4" concrete. Top	
							0.3	4" brown medium sand/grael fill moderately dry.	
							0.7	Layer of broken rock (appears to be obsidian) odor.	
	1	CS						Red brown, tight, dry silt	5.6
	2	CS							0.4
	3	CS							0.0
	4	CS							0.0
10.0							10.0	End of Boring	

○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT^2) 1 2 3 4 5

☆ PERCENT PASSING #200 SIEVE 10 20 30 40 50

× PLASTIC LIMIT % ● WATER CONTENT % △ LIQUID LIMIT % 10 20 30 40 50

⊗ STANDARD PENETRATION TEST N-VALUE 10 20 30 40 50

WATER LEVEL	*THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU, THE TRANSITION MAY BE GRADUAL.*		
NE			
WATER LEVEL	BORING STARTED **09/29/15**	BORING COMPLETED **09/29/15**	ABBREVIATIONS: ACR-After Casing Removal, BCR-Before Casing Removal, AB-After Boring, WD-While Drilling, WS-While Sampling, NE-None Encountered, DB-Diamond Bit, HSA-Hollow Stem Auger, RB-Rock Bit, SS-Split Spoon, ST-Shelby Tube, PA-Power Auger, MR-Mud Rotary, CS-Continuous, RP-Rock Probe, PH-Percussion Hammer, WL-Water Level, WOH-Weight of Hammer, EIL-Exceeds Instrument Level, TS-Topsoil, PP-Pocket Penetrometer
WATER LEVEL	CAVE IN LEVEL		
SPT HAMMER	RIG **6625CPT**	CREW CHIEF **JJ**	

Twin Ports Testing

SB-4

BORING LOG

PROJECT:	CLIENT:	TPT Project No.:
6th Street West Subsurface Investigation	**City of Ashland**	**15M7161**

ARCHITECT - ENGINEER:	SITE LOCATION:
Strand Associates	**Ashland, Wisconsin**

BORING LOCATION:	REPORT DATE:
See Boring Location Sketch	**10/22/15**

DEPTH (ft) / ELEVATION (ft)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	WATER LEVEL	GRAPHIC LOG	STRATA CHANGE DEPTH	DESCRIPTION OF MATERIAL	PID READING (ppm)
0.0								SURFACE ELEVATION:	
							0.3	1/4" asphalt over 4" concrete. 2" brown/grey moderately moist, moderately loose, silt. Red brown moderately, moderately dry tight clay.	
	1	CS							1.8
							2.5	Red brown, moderately dry, tight clay	
	2	CS							0.6
	3	CS							0.4
	4	CS							0.4
10.0							10.0	End of Boring	

○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT^2) 1 | 2 | 3 | 4 | 5

☆ PERCENT PASSING #200 SIEVE 10 | 20 | 30 | 40 | 50

× PLASTIC LIMIT % 10 | 20 | 30 | 40 | 50 ● WATER CONTENT % △ LIQUID LIMIT %

⊗ STANDARD PENETRATION TEST N-VALUE 10 | 20 | 30 | 40 | 50

WATER LEVEL	*THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN-SITU, THE TRANSITION MAY BE GRADUAL.*	
NE		
WATER LEVEL	BORING STARTED **09/29/15**	BORING COMPLETED **09/29/15**
WATER LEVEL	CAVE IN LEVEL	
SPT HAMMER	RIG **6625CPT**	CREW CHIEF **JJ**

ABBREVIATIONS: ACR-After Casing Removal, BCR-Before Casing Removal, AB-After Boring, WD-While Drilling, WS-While Sampling, NE-None Encountered, DB-Diamond Bit, HSA-Hollow Stem Auger, RB-Rock Bit, SS-Split Spoon, ST-Shelby Tube, PA-Power Auger, MR-Mud Rotary, CS-Continuous, RP-Rock Probe, PH-Percussion Hammer, WL-Water Level, WOH-Weight of Hammer, EIL-Exceeds Instrument Level, TS-Topsoil, PP-Pocket Penetrometer

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Ashland	_ _ _ _ _ _ _	

Latitude / Longitude (see instructions): 46° 35' 16.37" N, 90° 52' 50.71" W

Format Code: ☐ DD ☒ DDM

Method Code: ☐ GPS008 ☒ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
NE	NW	4	47 N	☐ E ☒ W

or Gov't Lot #

Well Street Address: 6th St W between 2nd Ave W. & STH 13

Well City, Village or Town: Ashland

Well ZIP Code: 54806

Subdivision Name:

Lot #:

Reason for Removal from Service:

WI Unique Well # of Replacement Well: _ _ _ _ _ _ _

2. Facility / Owner Information

Facility Name:

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner:

Present Well Owner:

Mailing Address of Present Owner:

City of Present Owner | State | ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 9/29/15

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☐ N/A
Liner(s) perforated?	☐ Yes	☐ No	☐ N/A
Screen removed?	☐ Yes	☐ No	☐ N/A
Casing left in place?	☐ Yes	☐ No	☐ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☐ N/A
Did sealing material rise to surface?	☐ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☐ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite chips capped with cement	Surface	10	1/2 sack	

6. Comments

Borehole filled to 9 1/2' with bentonite chips, capped with 6" cement

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Twin Ports Testing		9/29/15

Street or Route	Telephone Number
1301 N 3rd ST	(715) 392-7114

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Superior	WI	54880		10/23/15

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment ☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Ashland	_ _ _ _ _ _ _	

Latitude / Longitude (see instructions)	Format Code	Method Code
46° 35' 15.73" N	☐ DD	☐ GPS008
90° 58' 51.47" W	☒ DDM	☒ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
NE	NW	4	47 N	4 ☐ E ☒ W

or Gov't Lot #

Well Street Address: 6th St W between 2nd Ave W. & STH 13

Well City, Village or Town	Well ZIP Code
Ashland	54806

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
	_ _ _ _ _ _ _

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS)

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner

City of Present Owner	State	ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well ☐ Water Well ☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 9/29/15

If a Well Construction Report is available, please attach.

Construction Type: ☒ Drilled ☐ Driven (Sandpoint) ☐ Dug ☐ Other (specify): _____

Formation Type: ☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☐ N/A
Liner(s) perforated?	☐ Yes	☐ No	☐ N/A
Screen removed?	☐ Yes	☐ No	☐ N/A
Casing left in place?	☐ Yes	☐ No	☐ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☐ N/A
Did sealing material rise to surface?	☐ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☐ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material: ☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped ☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials: ☐ Neat Cement Grout ☐ Concrete ☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only: ☐ Bentonite Chips ☐ Bentonite - Cement Grout ☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite chips capped with cement	Surface	10	½ sack	

6. Comments

Borehole filled to 9 ½' with bentonite chips, capped with 6" cement

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Twin Ports Testing		9/29/15

Street or Route	Telephone Number
1301 N 3rd St	(715) 392-7114

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Superior	WI	54880		10/23/15

DNR Use Only

Date Received	Noted By

Comments

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Ashland	_ _ _ _ _ _	

Latitude / Longitude (see instructions): 46° 35' 15.45" N, 90° 52' 52.75" W
Format Code: ☐ DD ☒ DDM
Method Code: ☐ GPS008 ☒ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
NE	NW	4	47 N	4 ☐ E ☒ W

or Gov't Lot #

Well Street Address: 6th St W between 2nd Ave W. & STH 13

Well City, Village or Town	Well ZIP Code
Ashland	54806

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
	_ _ _ _ _ _

2. Facility / Owner Information

Facility Name:
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 9/29/2015
If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)

Lower Drillhole Diameter (in.)	Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☐ N/A
Liner(s) perforated?	☐ Yes	☐ No	☐ N/A
Screen removed?	☐ Yes	☐ No	☐ N/A
Casing left in place?	☐ Yes	☐ No	☐ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☐ N/A
Did sealing material rise to surface?	☐ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☐ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

Material	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite chips capped with cement	Surface	10	1/8 sack	

6. Comments

Borehole filled to 9 1/8' with bentonite chips, capped with 6" of cement

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Twin Ports Testing		9/29/2015

Street or Route	Telephone Number
1301 N 3rd St	(715) 398-7114

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Superior	WI	54880		10/23/15

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Ashland	_ _ _ _ _ _ _	

Latitude / Longitude (see instructions): 46° 35' 15.51" N, 90° 52' 53.16" W
Format Code: ☐ DD ☒ DDM
Method Code: ☐ GPS008 ☒ SCR002 ☐ OTH001

¼ ¼ NE ¼ NW or Gov't Lot # | Section: 4 | Township: 47 N | Range: 4 ☐ E ☒ W

Well Street Address: 6th ST W between 2nd Ave W & STH 13

Well City, Village or Town: Ashland | Well ZIP Code: 54806

Subdivision Name | Lot #

Reason for Removal from Service | WI Unique Well # of Replacement Well: _ _ _ _ _ _ _

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS)

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner

City of Present Owner | State | ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 9/29/2015

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (In.)
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)? | Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☐ N/A
Liner(s) perforated?	☐ Yes	☐ No	☐ N/A
Screen removed?	☐ Yes	☐ No	☐ N/A
Casing left in place?	☐ Yes	☐ No	☐ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☐ N/A
Did sealing material rise to surface?	☐ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☐ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite chips capped with cement	Surface	10	1/2 sack	

6. Comments

Borehole filled to 9 1/2' with bentonite chips, capped with 6" of cement

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Twin Ports Testing		9/29/2015

Street or Route	Telephone Number
1301 N 3rd St	(715) 392-7114

City	State	ZIP Code
Superior	WI	54880

Signature of Person Doing Work: [signature] Date Signed: 10/23/15

DNR Use Only

Date Received	Noted By

Comments

Direct-Contact ***Exceedance - Hazard - Risk*** Calculation Summary from Soil Data

Note: This Summary is OLD. Update with 'Get Summary' in Row 872 of the applicable *_DC_RCLs worksheet.

BRRTS # :
SB-1, 6th St West, Ashland

# of Soil-Concentration Entries: 3

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.0004	1.9E-09

Bottom-Line: Yes, levels are below direct-contact concern.

Date of Entry: 10/16/2015.
Date of Worksheet Used: 01/22/2015.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Tetrachloroethylene	127-18-4	115.	30.7	30.7	ca		0.0151		0.0001	4.9E-10
Lead and Compounds	7439-92-1	-	-	400.	nc	52.	6.2			
Methylene Chloride	75-09-2	385.	60.7	60.7	ca		0.0856		0.0002	1.4E-09

Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :
SB-2, 6th St West, Ashland

# of Soil-Concentration Entries: 3

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.0102	1.3E-09

Bottom-Line: Yes, levels are below direct-contact concern.

Date of Entry: 10/16/2015.
Date of Worksheet Used: 01/22/2015.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Lead and Compounds	7439-92-1	-	-	400.	nc	52.	4.			
Bromomethane	74-83-9	10.3	-	10.3	nc		0.103		0.01	
Methylene Chloride	75-09-2	385.	60.7	60.7	ca		0.0782		0.0002	1.3E-09

Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :

SB-3, 0 to 2.5 ft, 6th Street West, Ashland, WI

# of Soil-Concentration Entries: 9

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.0139	3.1E-07

Bottom-Line: Yes, levels are below direct-contact concern.

Date of Entry: 10/20/2015.
Date of Worksheet Used: 01/22/2015.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Benzene	71-43-2	111.	1.49	1.49	ca		0.133		0.0012	8.9E-08
Ethylbenzene	100-41-4	4,220.	7.47	7.47	ca		0.0466		0.	6.2E-09
Xylenes	1330-20-7	890.	-	258.	Csat		0.06		0.0001	
Tetrachloroethylene	127-18-4	115.	30.7	30.7	ca		0.0131		0.0001	4.3E-10
Trimethylbenzene, 1,2,4-	95-63-6	89.8	-	89.8	nc		0.0479		0.0005	
Naphthalene	91-20-3	188.	5.15	5.15	ca		1.11		0.0059	2.2E-07
Lead and Compounds	7439-92-1	-	-	400.	nc	52.	5.3			
Bromomethane	74-83-9	10.3	-	10.3	nc		0.0608		0.0059	
Methylene Chloride	75-09-2	385.	60.7	60.7	ca		0.0729		0.0002	1.2E-09

Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :
SB-4, 6th St West, Ashland

# of Soil-Concentration Entries: 3

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.0106	1.2E-09

Bottom-Line: Yes, levels are below direct-contact concern.

Date of Entry: 10/16/2015.
Date of Worksheet Used: 01/22/2015.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Lead and Compounds	7439-92-1	-	-	400.	nc	52.	5.7			
Bromomethane	74-83-9	10.3	-	10.3	nc		0.107		0.0104	
Methylene Chloride	75-09-2	385.	60.7	60.7	ca		0.0704		0.0002	1.2E-09