State of Wisconsin
Department of Natural Resources

FILE: CHIPPEWA COUNTY

04-09-032510

TOXIC AND HAZARDOUS SPILL REPORT

Form 4400-91 Rev. 6-86

State Div. Emergency Gov't. (608) 266-3232
U.S. Nat'l. Response Center (800) 424-8802
Chemtrec/Pesticides/Chlorine (800) 424-9300

Spill ID Number
Y Y M M D D 0-99

Date of Incident: 6/19/94	Day of Week: Sunday	Time of Incident: 12:00 ☐ A.M. ☒ P.M.	Reported By (Name): Leroy Wilder	Telephone Number: (715) 839-2621	
Date Reported: 6/21/94	Day of Week: Tuesday	Time Reported: 9:10 ☒ A.M. ☐ P.M.	Agency or Firm Reporting: Northern States Power Co	Reported thru Div. Emergen. Gov't. ☐ Yes ☒ No	
Substance Involved: Fuel Oil #2	Quantity: 5-15	Units: gallons	Person or Firm Responsible: Northern States Power Co.		
Substance Involved	Quantity	Units	Contact Name: Leroy Wilder	Telephone Number: ( )	

Physical Characteristics

☐ Solid ☒ Liquid Color _____
☐ Semisolid ☐ Gas Odor _____

Address — Street or Route: 100 N. Barstow St.

City, State, Zip Code: Eau Claire, WI 54701

Cause of Incident: Fuel Oil Heater failed

Exact Location Description (intersection, mileage, etc.): Wheaton Generating Station

County Location: Chippewa

¼¼, ¼, Section, Town, Range: NE, NE, 30, T 28 N, R 9W

DNR Dist: Western | DNR Area: ECA

Groundwaters Affected: ☐ Yes ☒ No ☐ Potential

Surface Waters Affected: ☐ Yes ☒ No ☐ Potential

Name of Surface Water:

Date District Notified: 6/21/94

Day of Week: Tuesday

Time District Notified: 9:10 ☒ A.M. ☐ P.M.

District Person Notified: John Grump

Telephone Number: (715) 839-3775

Date Investigated: 6/21/94

Day of Week: Tuesday

Time Investigated: 9:10 ☒ A.M. ☐ P.M.

Person Investigating: John Grump

Telephone Number: (715) 839-3775

Action Taken By DNR

☐ No Action Taken ☐ Investigation ☐ Supervise/Conduct Cleanup

☒ Spiller Required To Take Action; Type: Over excavate - sample

☐ Contractor Hired By DNR; Name _____

☐ Amount Recovered _____

☐ 29.29 Enforcement

Other Agencies on Scene

Local _____

State _____

Federal _____

Action Taken By Spiller

☐ No Action Taken ☐ No Notification ☐ Investigate

☐ Containment; Type _____

☒ Cleanup; Method: Over excavation - Thermal treat

☐ Amount Recovered _____

☐ Monitor _____

☐ Contractor Hired; Name _____

☐ Other Action _____

Spill Location

☐ Industrial Facility/Paper Mill/Chem. Co.
☐ Gas/Service Station/Garage, Auto Dealer, Repair Shop
☐ Ag Coop/Facility/Cheese Factory/Creamery
☐ Other Small Business (bank, grocery, insurance co., etc.)
☐ Public Property (city, county, state, church, school, etc.)
☒ Utility Co., Power Generating/Transfer Facility
☐ Private Property (home/farm)
☐ Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler
☐ Transportation Accident, Fuel Supply Tank Spill
☐ Transportation Accident, Load Spill
☐ Construction, Excavation, Wrecking, Quarry, Mine
☐ Other _____

Spilled Substance Destination

☐ Air
☒ Soil
☐ Groundwater
☐ Surface Water
☐ Storm Sewer
☐ Sanitary Sewer
☐ Contained/Recovered
☐ Other _____

Person Filing This Report (print name): John R. Grump

Signature: John R Grump

Date Signed: 6/22/94

Additional Comments:

Hired Cedar Corporation to do soil sampling and facilitate thermal treatment.

DISTRICT

October 27, 1994

RECEIVED
1 1994
DNR - ECA

Northern States Power Company
Attn: Mr. Ken Langer
Route 2, River Road
Eau Claire, WI 54703

Dear Mr. Langer:

Enclosed is a copy of the Remedial Investigative Work Plan we have prepared for the work we are conducting at the Wheatin Power Plant. This Work Plan is required by Wisconsin Administrative Code NR 716.09. A copy of the Work Plan has been submitted to WDNR area Hydrogeologist, Mr. John Grump, for his review.

If you have any questions concerning this project, please feel free to contact me or Al Bishop at 235-9081.

Sincerely,

CEDAR CORPORATION

Mark W. Vinall
Hydrogeologist

MWV

Enclosure

c: John Grump, WDNR, 2004 Highland Ave, Eau Claire, WI 54701-4346

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cedar corporation
land surveyors • planners • landscape architects

604 wilson avenue
menomonie, wi 54751

715-235-9081
WATS 800-472-7372
FAX 715-235-2727

September 1, 1994

RECEIVED

SEP 6 1994

DNR - ECA

NSP
Attn: Mr. LeRoy Wilder
100 North Barstow Street
Eau Claire, WI 54701

RE: Township of Wheaton Power Plant Fuel Oil Leak

Dear LeRoy:

Please find attached a letter report for the Site Assessment completed at the NSP - Township of Wheaton Power Plant. This document has been reviewed and sent to the WDNR.

As stated in the letter report, fuel oil contamination is present in the soils at the location of the 100,000 gallon water aboveground storage tank (AST). The limits of contamination were not able to be determined, and will therefore require a subsurface investigation to be completed.

The investigation is recommended to be completed using a hand auger as there are several underground utilities in the immediate area. The hand augered borings would be completed through the excavation/spill location to determine the vertical limits of contamination. Three to four additional borings would also be completed in a radial pattern around the excavation to determine the horizontal limits. It is possible to bore to 15 to 20 feet of depth with a hand auger if cobbles or rocks are not encountered. If it is not possible to bore the holes to the necessary depths, a soil boring drill rig will be required to complete the investigation.

An estimate of the costs to complete a hand auger investigation has been completed and totals $4,000. This total includes consulting services (on-site and reporting), laboratory analyses, and coordinating the stockpiled soil disposal. Should a drilling rig be necessary, costs will increase accordingly.

The stockpiled soils contaminant levels have been determined, and will be able to be disposed of at an approved facility. Senn Blacktop of Chippewa Falls is close by, and will accept the soils for $42/ton. It is estimated that 10 to 15 tons have been stockpiled on-site. Previously, I attached the "Application to Treat Petroleum Contaminated Soils" and am requesting that you sign the form and send it back to me.

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At your request, I will complete an Environmental Investigation Work Plan for the proposed hand auger investigation to be reviewed by you and the WDNR. Please contact Mark Vinall or me at 1-800-472-7372 if you have any questions.

Sincerely,

CEDAR CORPORATION

Al J. Bishop BR

Alan J. Bishop
Environmental Specialist

AJB/jlj

Enclosures

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menomonie, wi 54751

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September 1, 1994

NSP
Attn: Mr. LeRoy Wilder
100 North Barstow Street
Eau Claire, WI 54701

RE: Township of Wheaton Power Plant Fuel Oil Leak

Dear Mr. Wilder:

Cedar Corporation has completed an environmental site assessment at the NSP - Township of Wheaton Power Plant located east of Chippewa Falls, Wisconsin (Figure 1).

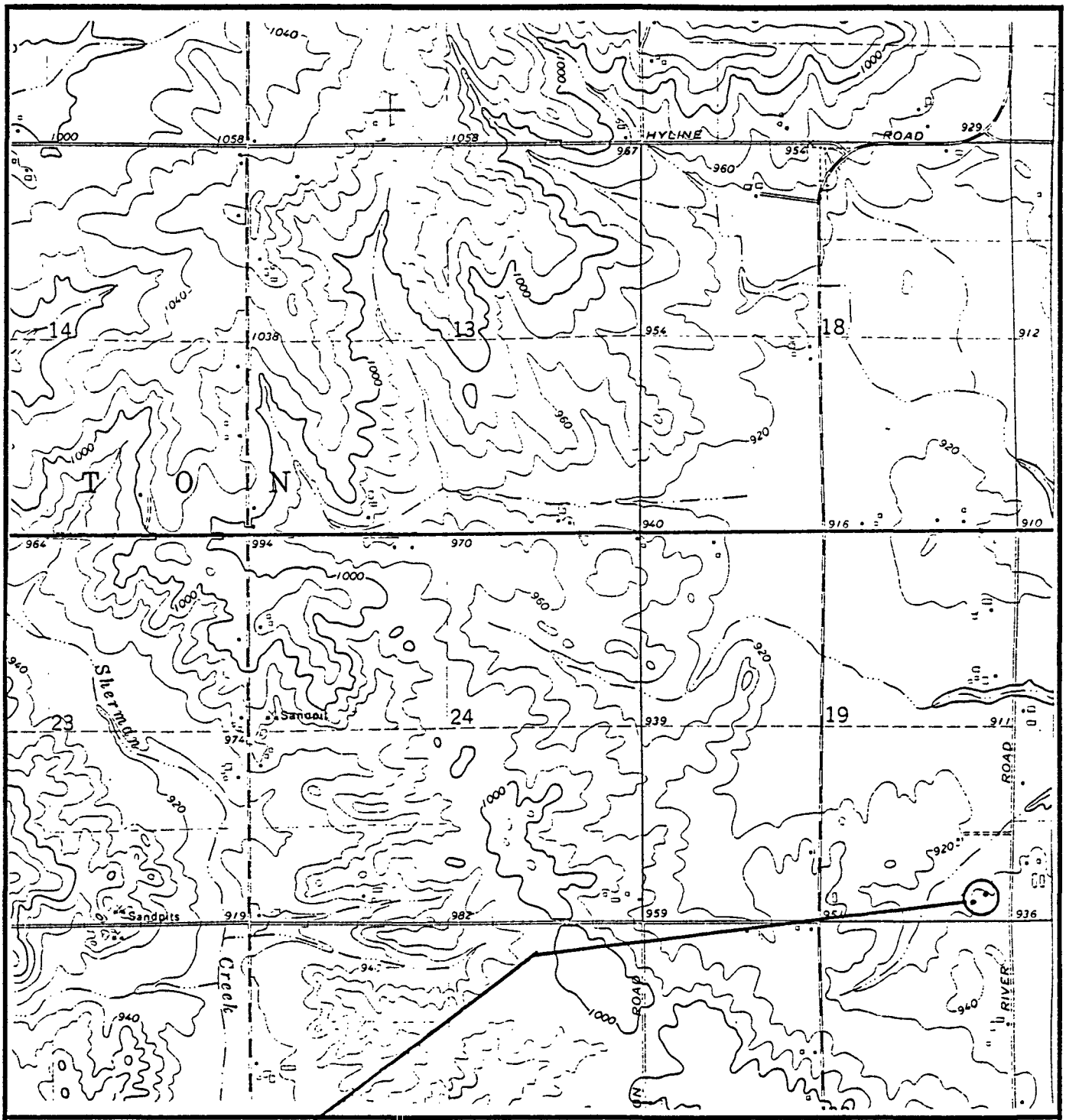
The assessment was necessitated as a result of a fuel oil release at a 100,000 gallon water storage tank heater. The leak occurred due to the failure of a delivery pipe fitting. This resulted in the loss of an estimated 5 to 15 gallons of fuel oil product adjacent to the water storage tank. The leak was discovered by patrol guards an estimated 2 hours after it began, and was found to be leaking at a rate of approximately 1 cup each 2 to 3 minutes. The fuel delivery line fitting was then repaired.

The assessment was initiated by Cedar Corporation by sampling the contaminated soil stockpile. This was done to document contaminant presence in the excavated soils. The excavated soils were found to be very "oily" and field screening (FID) indicated the presence of 150 instrument units (IU) of volatiles present. The fuel oil contamination was documented by sampling and analysis at a WDNR certified laboratory (NET, Inc.). The results indicated 5,600 parts per million (ppm) diesel range organics (DRO) present.

The subsequent assessment was completed on June 24, 1994, by Alan J. Bishop of Cedar Corporation. Upon arrival at the site it was determined that the soils at the leak area had been partially excavated (5 - 7 yards) and stockpiled on and covered with sheet plastic at the site. Mr. Ken Langer, NSP Mechanical Engineer, was also on site and informed Mr. Bishop of the findings and actions taken at the site.

The excavation at the leak site was found to be approximately 8' x 6' and 3.5' deep (see Figure 2). To determine the concentration of the remaining contamination at the limits of the excavation, soil samples were collected from the sidewalls and base of the excavation. The samples were collected and split for field screening and laboratory analysis (procedures are attached). The samples for laboratory analysis were analyzed for diesel range organics (DRO) and petroleum volatile organic compounds (PVOCs).

Field screening of the samples indicated no volatiles (0 IU - FID) present in Samples No. 4 and No. 5 (northeast wall and northwest wall of the excavation, respectively). Volatiles



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DRAWN BY: AJB	**SITE LOCATION MAP**	CHECKED BY: AJB
DATE: 8-4-94	PROJECT TITLE: NSP WHEATON POWER PLANT, TOWNSHIP OF WHEATON, CHIPPEWA FALLS, WI	JOB NO.: 724-055-61
REVISED BY:		FIGURE: 1
SCALE: 1 : 24,000		

were detected in Samples No. 1, No. 2, and No. 3 at values of 175, 45, and 20 IU, respectively. A complete list of field screening values is presented in Table 1.

Laboratory analysis of the samples collected support the field screening readings, as detections of DRO contamination was found in Samples No. 1 (50,000), No. 2 (10,000), No. 3 (34), and the stockpile (5,600). DRO was found to be present in Sample No. 1, collected from the base of the excavation (beneath the leaky fitting), at a value of 50,000 ppm. Benzene (0.23 ppm), toluene (3.1 ppm), ethylbenzene (8.6 ppm), and xylenes (26 ppm) were also detected in this sample. The values detected at Sample No. 1 are believed to represent the most concentrated area of soil contamination as it is located directly beneath where the leak occurred.

Soil Sample No. 2 was also found to contain DRO (10,000 ppm). This area was not accessable for excavation as it was directly adjacent/under the aboveground storage tank. DRO was also found at Sample No. 3 (34 ppm) which correlates to its lower field screening reading (20 IU) than Sample No. 1 (175 IU). No contamination was detected at Samples No. 4 or No. 5 (<10 ppm DRO and <5.0 ppb PVOCs) above the laboratory method detection limits. Table 1 presents all field screening and analytical results. Complete analytical reports are attached.

The results of the soil samples indicate that a portion of the released fuel oil product has been excavated and stockpiled on site. However, contaminants still remain in the soils at the base and two sidewalls of the excavation. The contaminants are present above allowable closure levels at the base of the excavation and will require further evaluation to completely determine the horizontal and vertical limits.

Soils at the site consist of coarse sands and gravels and are highly permeable. In highly permeable soils, vertical migration of contaminants tends to be greater than horizontal migration. Therefore, the potential for vertical contaminants migration is greater than in a finer grained soil (see attached cross sections, Figures 3 and 4). Ground water is present at a depth of approximately 50 feet below surface and is not believed to be in danger of being contaminated based on quantity of the reported release of fuel oil product. If the release was larger than reported, the potential for ground water impacts increases.

A portion of the contaminants has been removed; however, due to the presence of DRO allowable levels at the base of the excavation and coarse nature of native soils, further evaluation is recommended to define the extents of contamination. The work can be completed with a hand auger if the vertical limits are less than 20 feet below surface and

the soils/geology are conducive. A soil vent can be installed in the area of the excavation during the boring installations. Due to the proximity of the aboveground water tank and underground utilities, excavation is not believed to be possible without damaging the water tank structure.

Upon receipt of the Application To Treat Petroleum Contaminated soils, I will be able to dispose of the stockpiled soils. Please contact Mark Vinall or me at 1-800-472-7372 if you have any questions.

Sincerely,

CEDAR CORPORATION

Al J. Bishop BR

Alan J. Bishop
Environmental Specialist

AJB/jlj

Enclosure

cc: John Grump - WDNr
2004 Highland Avenue
Eau Claire, WI 54701-4346

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TABLE 1

NSP WHEATON POWER PLANT
SOIL SAMPLE ANALYSES
(VALUES IN PARTS PER MILLION)

Sample No. Lab Sample I. D. Sample Depth Sample Location	Interim Soil Guidelines (a)	Stockpile 138775 — Exc. Soil	No.1 138776 4' Mid. Exc.	No.2 138777 3.5' SE Wall Exc.	No.3 138778 3.5' SW Wall Exc.	No.4 138779 3.5' NE Wall Exc.	No.5 138780 3.5' NW Wall Exc.
FID In Inst. Units	None	150	175	45	20	0	0
DRO (ppm)	100	5,600	50,000	10,000	34	<10	<10
Benzene (ppm)	0.055	0.16	0.23	<0.36	<0.005	<0.005	<0.005
Toluene (ppm)	1.5	0.76	3.1	1	<0.005	<0.005	<0.005
Ethylbenzene (ppm)	2.9	1.8	8.6	3.3	<0.005	<0.005	<0.005
Xylenes (ppm)	4.1	8.8	26	11	<0.005	<0.005	<0.005
MTBE (ppm)	None	<0.09	<0.22	<0.36	<0.005	<0.005	<0.005
1,2,4 TMB (ppm)	None	27	42	2.3	<0.005	<0.005	<0.005
1,3,5 TMB (ppm)	None	7	3.4	16	<0.005	<0.005	<0.005

FID= Flameionization Detector.
MTBE = Tert - methyl - butyl - ether
TMB = Trimethylbenzene
Complete analytical reports are attached.
(a) = WDNR Interim Soil Cleanup Guidelines — Petroleum Contamination (January 27,1994).

#2 F.O. AST

#2 F.O. AST

6' BERM

METAL SHED

AGGREGATE

LIMITS OF EXCAVATION

A

B'

B

A'

U/G ELECTRIC

100,000 GAL.
H_2O AST

HEATER (LEAK)

METAL SHED
(PUMP HOUSE)

BITUMINOUS ROAD

seal

date JULY '94

rev.

cad file NSPWHEAT.DWG

architects engineers land surveyors planners
cedar corporation
804 wilson avenue menomonie, wisconsin 54751
715-235-9081
800-472-7372
715-235-2727
FAX NUMBER

project
NORTHERN STATES POWER COMPANY
WHEATON

drawn by PKF

checked by AJB

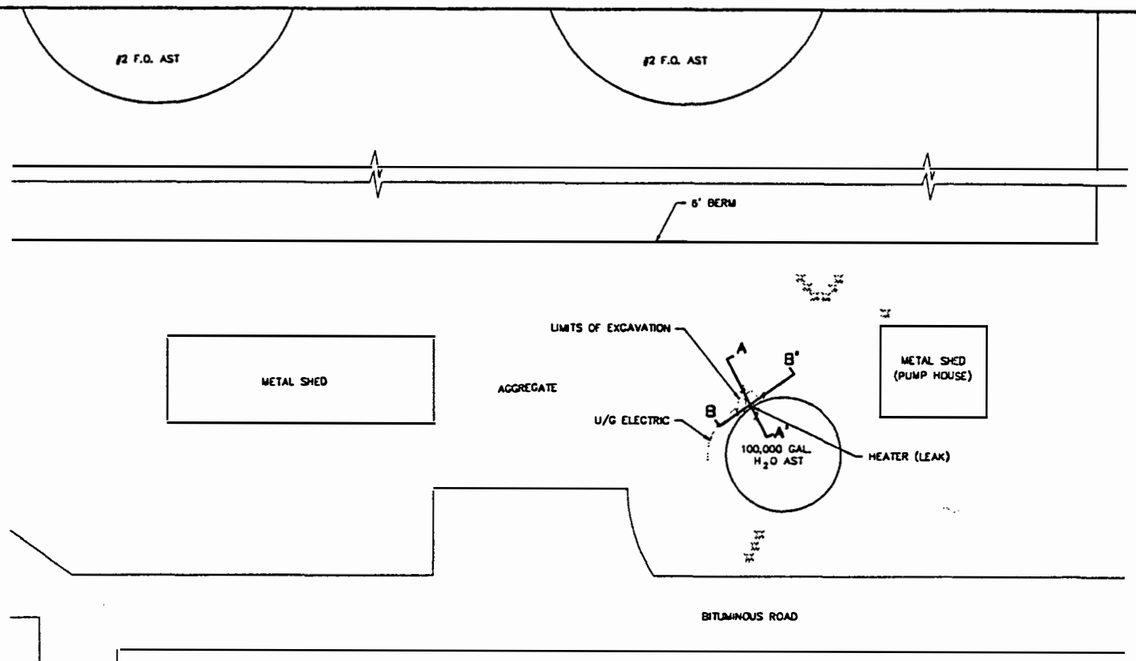
scale 1"=20'

sheet no.

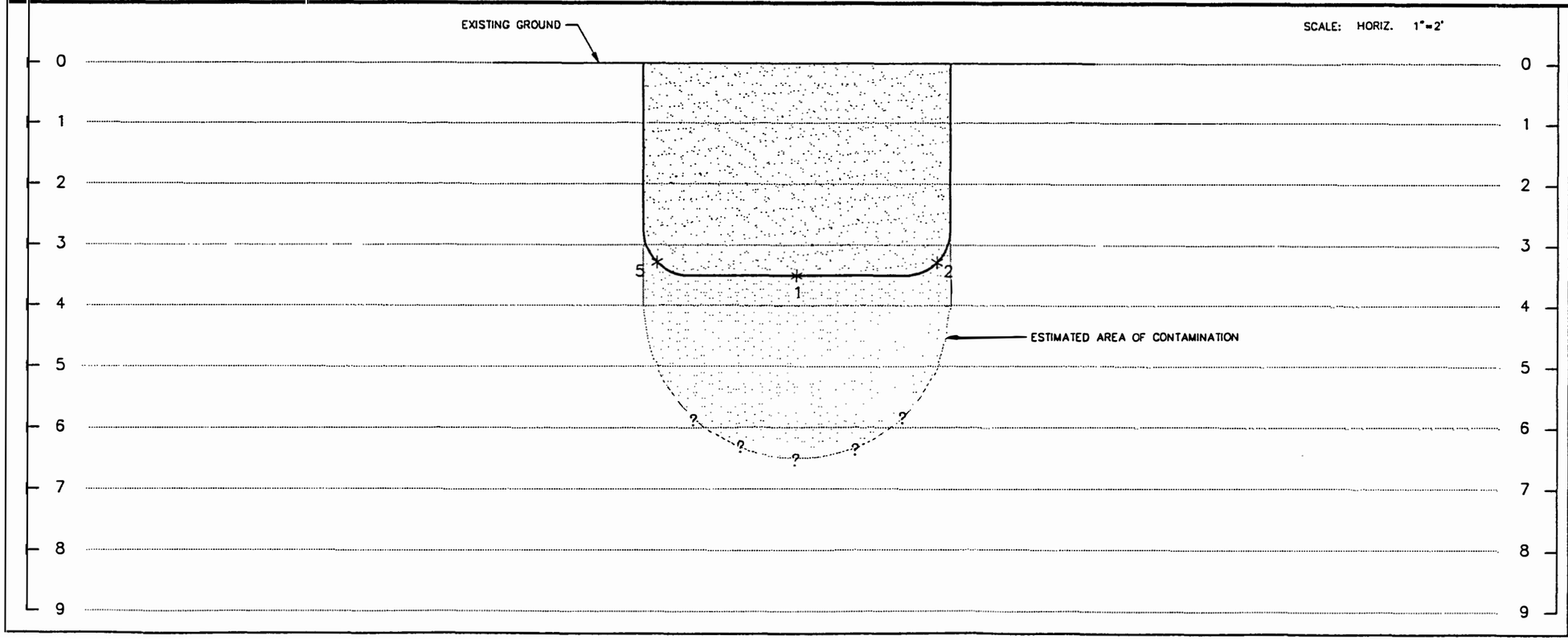
FIGURE 2

job no. 0724-055-61

CROSS SECTION A–A'



0' 10' 20' 40'
RAPHIC SCALE



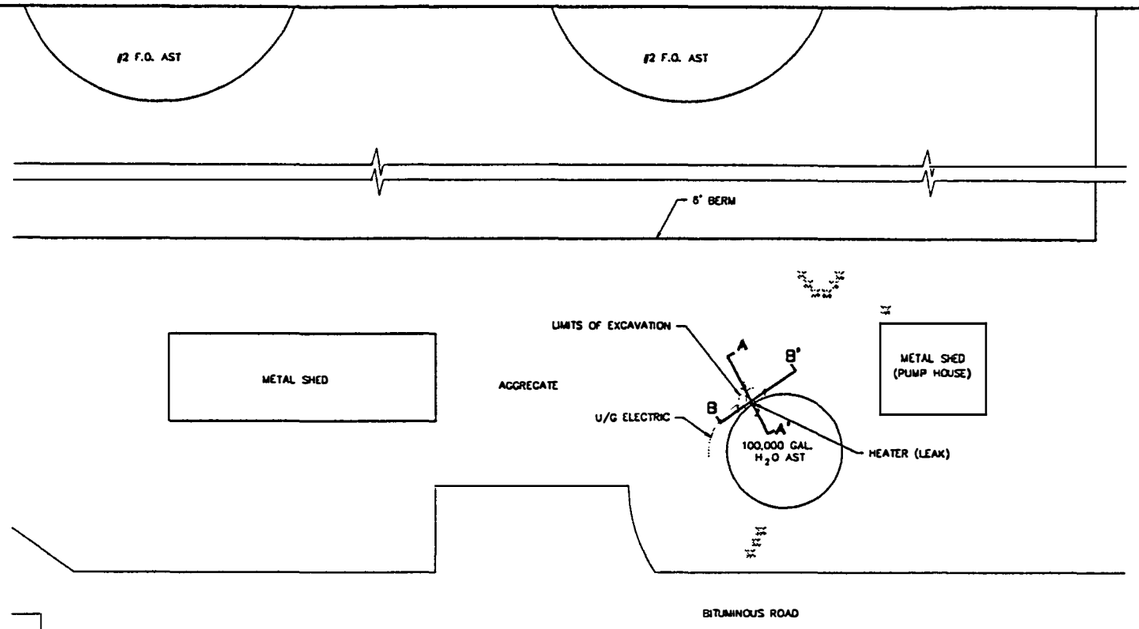
KEY

- SAND
- ESTIMATED AREA OF CONTAMINATION
- $*_5$ – SAMPLE LOCATION NO. 5

NORTHERN STATES POWER COMPANY
WHEATON

CROSS SECTION A – A'
FIGURE 3

Drawn By	PKF	Plans Checked	AJB
cedar corporation		CADD FILE	NSPWHTA.DWG
		JOB NUMBER	0724-055-61



CROSS SECTION B–B'

0' 10' 20' 40'
GRAPHIC SCALE

KEY

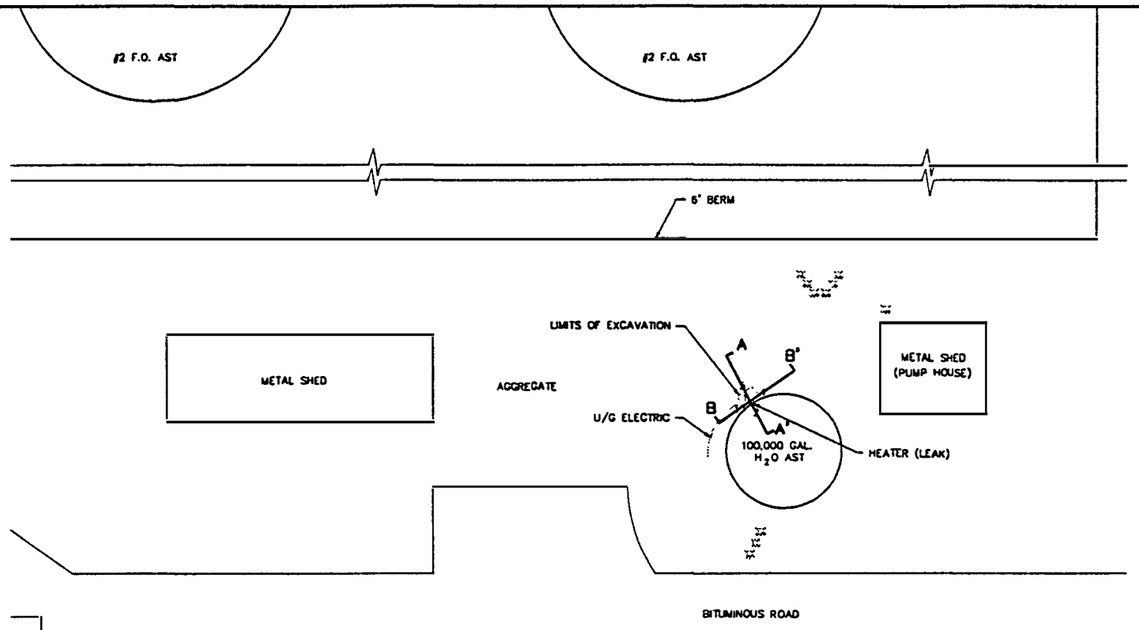
- SAND
- ESTIMATED AREA OF CONTAMINATION
- $*_4$ – SAMPLE LOCATION NO. 4

NORTHERN STATES POWER COMPANY
WHEATON

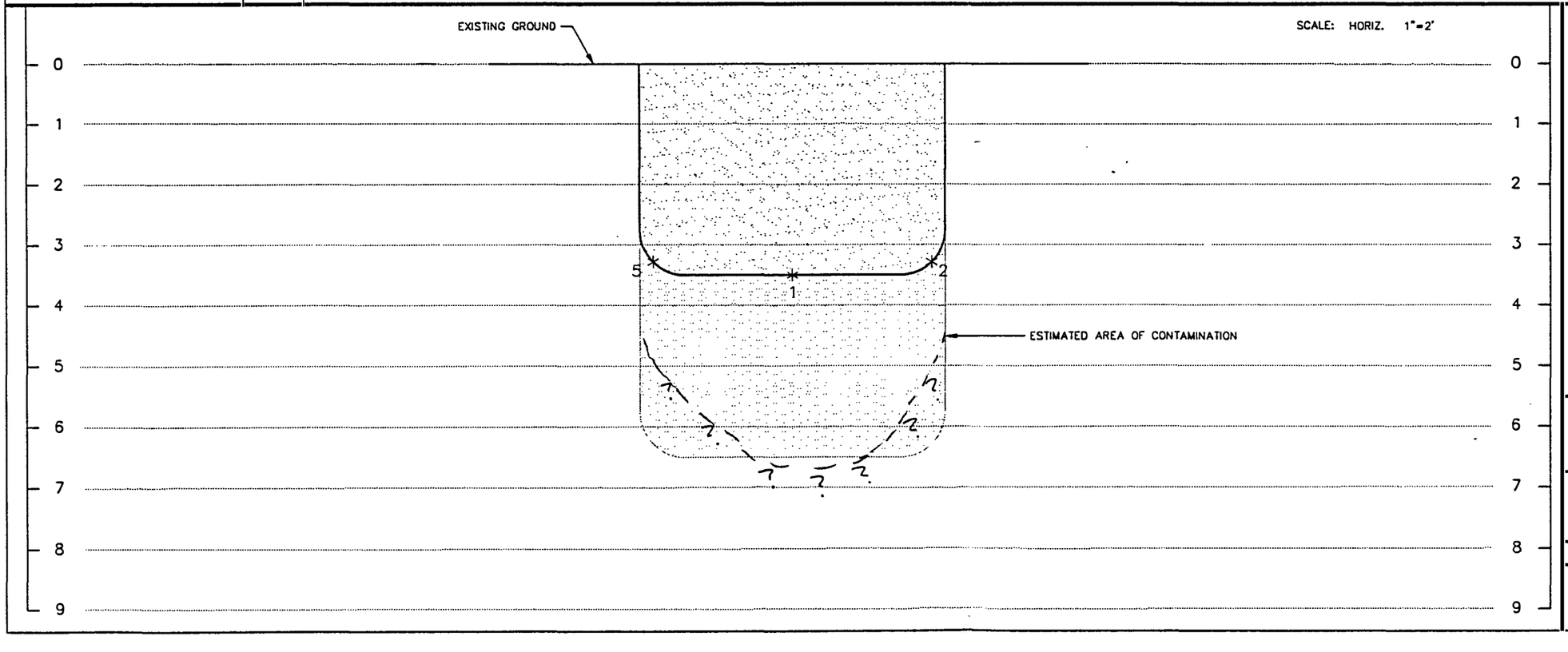
CROSS SECTION B – B'
FIGURE 4

Drawn By	PKF	Plans Checked	AJB
cedar corporation		CADD FILE	NSPWHTB.DWG
		JOB NUMBER	0724-055-61

CROSS SECTION A–A'



0' 10' 20' 40'
GRAPHIC SCALE



KEY

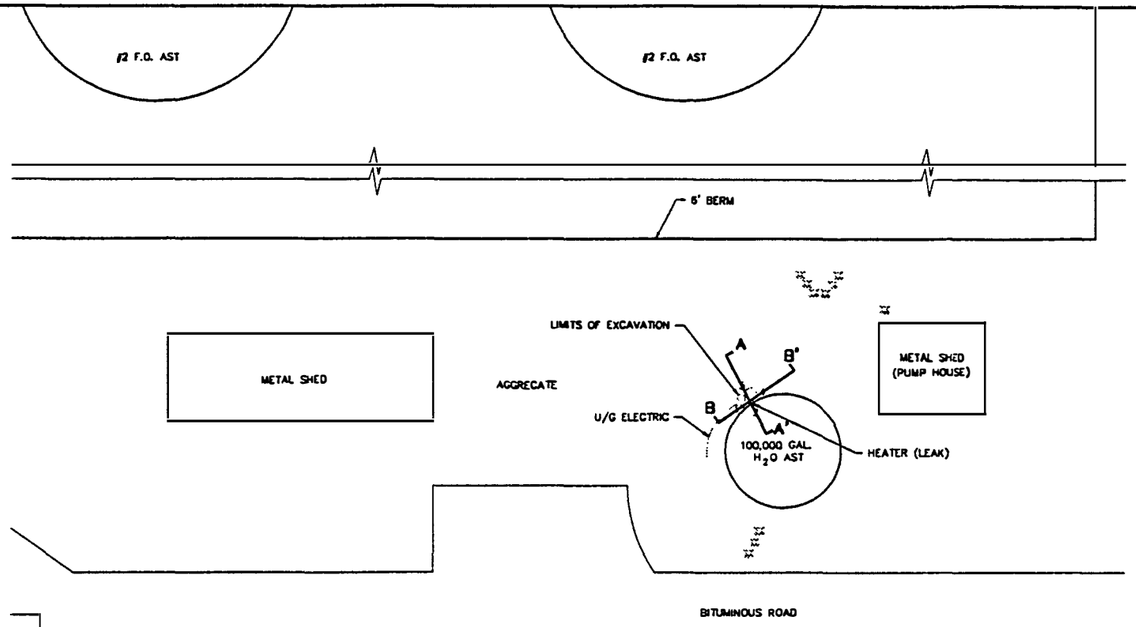
- SAND
- ESTIMATED AREA OF CONTAMINATION
- $*_5$ – SAMPLE LOCATION NO. 5

NORTHERN STATES POWER COMPANY
WHEATON

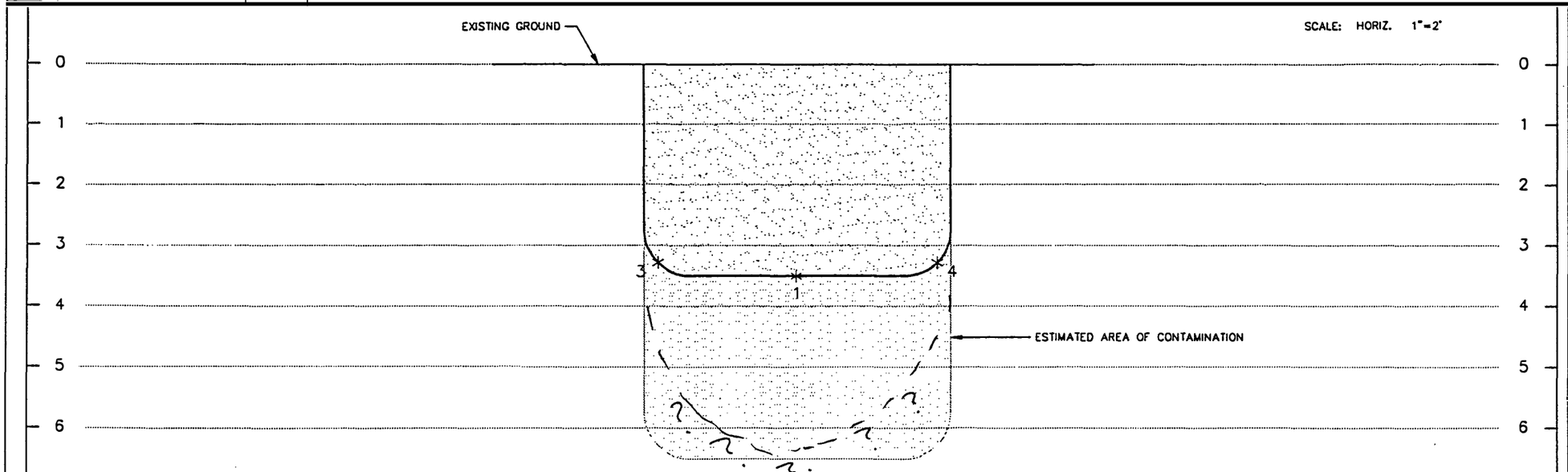
CROSS SECTION A – A'
FIGURE 3

Drawn By	PKF	Plans Checked	AJB
cedar corporation		CADD FILE	NSPWHTA.DWG
		JOB NUMBER	0724-055-61

CROSS SECTION B–B'



0' 10' 20' 40'
GRAPHIC SCALE



KEY

- SAND
- ESTIMATED AREA OF CONTAMINATION
- $*_4$ – SAMPLE LOCATION NO. 4

NORTHERN STATES POWER COMPANY
WHEATON

CROSS SECTION B – B'
FIGURE 4

Drawn By	PKF	Plans Checked	AJB
cedar corporation		CADD FILE	NSPWHTB.DWG
		JOB NUMBER	0724-055-61