Commission Meeting

SEPTEMBER 9TH, 2025

HPU HIBBING PUBLIC UTILITIES
1902 E 6TH AVE
HIBBING, MINNESOTA 55746-0249
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Commission Meeting Agenda

September 9th, 2025

Chair J. Bayliss	__	Commissioner J. Sandstede	__
Commissioner J. Hart	__	Commissioner J. Babich	__
Commissioner J. Stokes	__	Legal Counsel A. Borland	__
General Manager L. Peterson	__	Auditors Abdo, LLP	__
Interim HR Director K. Powers	__	Energy & Pricing P. Plombon	__
Customer Ser. & Finance J. Hietala	__	Admin & Comm E. Dixon	__
Electrical Operations S. Adams		Local 94 President G. Pogachnik	__

1. MPCA Super Fund Site Discussion

2. Org Chart Development Update

3. Capital Budget Update
    a. 2025 Capital Projects
        i. Reporting
        ii. Southern Interconnect Project Update – Circuit Breaker Recommendation
        iii. 2025 Hydrant Replacements
    b. 2025 Fleet Update and Recommendations
    c. 2026 Budgeting Process

Item 1

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Item 1 – MPCA Super Fund Site Discussion

Sept. 9th, 2025

James Bayliss, Chairman
Hibbing Public Utilities Commission
1902 E. 6th Avenue
Hibbing, MN 55746

RE: Item 1 – MPCA Super Fund Site Discussion

Dear Commissioners;

HPU operated a coal gasification plant from 1918 to approximately 1969. In 1997 HPU requested MPCA oversight of the the project and in 2006 the MPCA listed this site on the Permanent List of Priorities. Since then the MPCA has been monitoring the site with test wells and is ready to recommend a final disposition of the site.

Attached for your review are several documents, including the MPCA's recommended decision document that includes full excavation of the plant site and an engineered solution for the wetland area that includes barriers and other 'institutional controls' such as notifying property owners and deed notices to properties within a specific area.

I would like to discuss this item with the Commission and help determine a path forward that seeks a full remediation of this site for future development and health of the community.

Sincerely,

Luke J. Peterson

REPORT TO THE LEGISLATURE

JANUARY 2025

Minnesota's contaminated sites biennial report

State activities and expenditures in cleaning up Minnesota's most polluted industrial sites for fiscal years 2023 and 2024

MINNESOTA POLLUTION CONTROL AGENCY

Legislative charge

Minn. Stat. § 115B.20, subd. 6

Report to the Legislature

By January 31 of each odd-numbered year, the commissioners of the Minnesota Department of Agriculture and the Minnesota Pollution Control Agency shall submit to the Senate Finance Committee, the House of Representatives Ways and Means Committee, the Environment and Natural Resources Committees of the Senate and House of Representatives, the Finance Division of the Senate Committee on Environment and Natural Resources, and the House of Representatives Committee on Environment and Natural Resources Finance, and the Environmental Quality Board a report detailing the activities for which money has been spent pursuant to this section during the previous two fiscal years.

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Cover Photo 1: Perch Lake remediation project as part of the St. Louis River Area of Concern.

Cover Photo 2: Water sampling for contamination monitoring.

Estimated cost of preparing this report *(as required by Minn. Stat. § 3.197)*

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Minnesota Pollution Control Agency

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This report is available in alternative formats upon request, and online at www.pca.state.mn.us.

Document number: lrc-s-1sy25

Foreword

This report is submitted to the Minnesota Legislature under requirement of Minn. Stat. § 115B.20, subd. 6.

In 1983, the State enacted the Minnesota Environmental Response and Liability Act (MERLA),

Minn. Stat. 115B, establishing the State Superfund Program. This law is implemented by the Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Agriculture (MDA), and provides broad state authority to respond to releases or threatened releases of hazardous substances that may endanger public health, welfare, or the environment. Minn. Stat. § 116.155 establishes a state Remediation Fund from which the MPCA and the MDA can spend money to investigate and remediate releases or threatened releases of hazardous substances, pollutants or contaminants, and agricultural chemicals.

The MERLA was later amended to include sections addressing:

Harmful Substance Compensation (1985)

Investigation and Cleanup by Voluntary Parties – Land Recycling Act; more commonly known as the Brownfield Program (1992)

Landfill Cleanup Program; more commonly known as the Closed Landfill Program (1994)
Dry Cleaner Environmental Response Law (1995)

The MPCA and MDA Commissioners access money appropriated from the Remediation Fund to accomplish investigation and cleanup of hazardous substance releases at sites without responsible parties and for administrative costs associated with those programs. Administrative costs are also received from Federal sources (Environmental Protection Agency, Department of Defense, etc.) and recovered from responsible parties when applicable.

This report does not include work done by responsible parties overseen by the State Superfund Program, the Petroleum Remediation Program, or the Closed Landfill Program.

The MPCA and MDA use the authorities granted under state and Federal Superfund laws to identify, evaluate, and clean up (or direct the cleanup of) sites that pose hazards to public health, welfare, and the environment. As required by Minn. Stat. 115B.20, subd. 6, this report details activities for which Remediation Fund dollars were spent during Fiscal Years 2023 and 2024 (FY23 – FY24) (July 1, 2022 – June 30, 2024) by the MPCA and the MDA for Superfund, emergency response, and voluntary cleanup related activities.

The MPCA's and MDA's administrative costs represent salaries, travel, equipment, non-site-specific legal costs, and supply expenditures associated with responding to emergencies and implementing or overseeing site cleanup. FY23 and FY24 Remediation Fund figures are current as of December 20, 2024. All cumulative income and expenditure figures are approximations. Direct staff costs to research, write, and review this report totaled about $3,500.00.

State administrative costs from the Remediation Fund:

	MPCA	MDA	Total
FY23	29.8 FTE	2.5 FTE	32.3 FTE
FY24	25.1 FTE	2.5 FTE	27.6 FTE

FTE=Full Time Equivalent. This represents actual staff costs in terms of FTE drawn from the Remediation Fund.

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Minnesota Environmental Response and Liability Act responsibilities

The MPCA/MDA Superfund programs fulfill functions specified in MERLA for the 96 sites on the State's Permanent List of Priorities (PLP), as well as for the 161 non-listed sites being addressed by cooperative responsible parties. Additional investigation and cleanup projects are addressed by voluntary parties (those parties not responsible for the contamination/release) enrolled in the MPCA's Brownfield Program (1,650 sites) and MDA's Voluntary Investigation and Cleanup Program (83 sites), as authorized by the Land Recycling Act of 1992 and performed according to respective agency protocols.

Superfund Sites annual report project costs FY23 & FY24

Site name	Expended FY23	Expended FY24
214 & 220 Ramsey Street	$2,614.41.00	$57,391.58.00
5101 Minnetonka Blvd - Fern H	$131,859.43	$175,226.22
55th St & Lyndale	$30,939.45	$15,749.83
66th St & Vincent Ave	$61,809.87	$70,947.48
Arcade St N & Hawthorne	$35,169.62	$14,377.91
Arrowhead	$23,226.89	
Baytown	$148,485.04	$149,225.97
Boise-5yr Review	$3,651.78	
Bulinski Point	$14,988.54	$35,070.10
Capri / Byron Vapor	$86.82	$38,055.79
Centerville Rd	$19,676.49	$3,681.94
Chemart	$14,629.90	$79,037.69
Clothing Care Cleaners	$7,409.95	
Duluth Air Force Base OU1	$5,850.00	$44,815.79
Duluth Dump #1	$22,694.12	$110,231.37
Esko GW Plume	$117,398.20	$28,284.22
Farmington GW Plume	$1,350.82	$5,235.78
Fish Hatchery	$3,107.74	$35,640.83
FMC	$29,299.98	$29,842.16
General Mills	$54,743.35	$60,757.65
Hibbing Gas	$60,685.18	$197,082.60

Site name	Expended FY23	Expended FY24
Hmong Center	$47,149.63	$106,072.36
Hospital Linen	$148,306.11	$111,780.17
Joslyn	$10,036.77	$1,936.40
Lehillier	$26,723.97	$21,310.17
Littlefork	$136,751.18	$112,233.52
Long Prairie	$171,207.60	$136,017.51
Lyndale Ave Corridor	$43,823.60	$51,869.28
Main Street Plume	$97,675.39	$16,878.79
Mankato Plating	$25,163.57	$39,780.60
Mcgillis & Gibbs	$431,897.20	$397,379.66
Mn Valley Dump		$5,683.26
Oakdale		$15,194.60
Perham	$190,001.01	$224,707.73
Peter Pan Cleaners	$38,266.31	$46,703.53
Pigs Eye	$23,779.37	$14,257.58
Pine Street Dump	$45,131.74	$80,279.17
Precision Plating		$68,521.63
Pure Oil	$13,320.37	$7,059.24
Rice County Dump	$58,055.48	$272,162.05
Richfield Gold Eagle	$88,620.64	$78,341.52
Ritari	$33,470.85	$31,318.41
Rochester GW Plume	$72,678.53	$86,104.91
Schloff	$16,723.13	
SE Hennepin Area GW	$48,335.86	$73,169.21

Site name	Expended FY23	Expended FY24
Southview Blvd	$49,261.84	$40,694.19
Spring Park Mun Wells	$2,981.36	
St. Paul Levee	$10,221.11	
Superior Plating	$577,286.66	$497,314.13
SW Fridley	$17,918.59	
Universal Plating	$112,820.59	$66,465.39
US Steel / St Louis River	$35,671.44	$11,837.28
Valentine Clark	$17,941.99	$20,258.43
West Duluth	$15,302.04	$8,503.10
Whiteway Cleaners	$32,142.65	$18,606.44
Winona	$220,528.88	$52,543.41
Woodbury		$17,649.19
Cedar Service, Bemidji (MDA)	$520,074.90	$443,347.96
CMC Heartland, S. Minneapolis (MDA)	$68,029.40	$74.67
Kettle River Co - Creosote Plant Site, Sandstone (MDA)	$1,192,930.45	$1,237,761.02
Page & Hill, Big Falls (MDA)	$787.14	$10,322.72
Site subtotal	**$5,430,694.93**	**$5,618,495.18**

Superfund annual report closing numbers FY23 & FY24

Name	Expended FY23	Expended FY24
Emergencies	$425,680.20	$460,765.64
PFAS technical assistance	$51,380.62	
Harmful substance	$17,465.71	
Site assessment	$1,084,260.56	$1,706,615.01
Site assessment (MDA)	$15,281.82	
Supplemental-closed sites	$1,470,303.92	$1,620,755.86
Technical assistance	$11,658.00	
Subtotal (site specific)	**$3,075,030.83**	$3,788,136.51
Site specific lab analytical	$238,110.00	$415,575.00
Site specific lab analytical (MDA)	$5,061.00	$5,061.00
Site-specific legal	$63,362.83	$58,482.80
Subtotal (site-specific support)	**$306,533.83**	$479,118.80
Total FY expenditures	**$8,812,259.59**	$9,885,750.49

Responding to emergencies and spills

Emergency Management Unit (EMU), under the Safety and Emergency Management Section staff at the MPCA, are on call and available to respond to environmental emergencies 24 hours a day, seven days a week, 365 days a year. The MPCA receives reports from regulated parties, other units of government and citizens through the duty officer program at the Department of Public Safety. These reports are reviewed and triaged for emergency conditions and about one third of the incidents are transferred to other MPCA programs for follow-up. These transferred reports are releases of air pollutants, hazardous waste, wastewater, and petroleum. The programs have the tools and processes to address these referrals, however if a situation rises to the level of an emergency, the EMU will lead the response. When agricultural products or chemical spills occur, the MDA is the lead state agency to respond and MPCA is in a support role.

The MPCA's and MDA's emergency response role is to provide advice and oversee cleanup performed by responsible parties. In some situations, a responsible party is not identifiable or is unable or unwilling to perform the cleanup. In these situations, Superfund monies are used to cleanup, stabilize, or mitigate emergency conditions resulting from releases of hazardous substances, pollutants, or contaminants. Examples include fuel and engine oil spills from trucks, mercury spills affecting sensitive populations, abandoned containers of chemicals or oil, abandoned businesses containing chemicals, oil and waste or other situations in which the commissioner of the MPCA or the MDA (or delegates) has declared as emergencies.

During FY23 and FY24, numerous fuel spills from saddle tanks and vehicle fluid spills, along the right of way, have been an issue in identifying the responsible party and/or the RP is unable or unwilling to perform the cleanup. This has resulted in a significant increase in the use of Superfund monies for these cleanup activities.

The table below summarizes the number of reports, emergencies declared, and dollars spent on state financed emergency responses using Superfund monies.

FY23		FY24		
MPCA	MDA	MPCA	MDA	
4697		4453		Duty officer reports triaged
2692	72	2581	73	Emergency response program Incidents
17		24		Emergency situations/declarations
$425,680.00		$460,765		Spending on emergency situations

Notable MPCA emergency expenditures in fiscal year 2023 include:

a. Spent $167,771 on Tax Forfeited Property in Virginia, MN
b. Spent $136,628 on Vapor Mitigation
c. Spent $130,680 on Residual Vapor Intrusion.

Notable MPCA emergency expenditures in fiscal year 2024 include:

a. Spent $114,089 on Petro Storage tank release (MERLA portion of cost).
b. Spent $62,336 on Mercury Release.
c. Spent $45,924 on Petro release into storm sewer.

Brownfield Program

A “brownfield” is any property that is abandoned or under-used due to the known or likely presence of contamination, such as a deserted railroad depot, a closed factory, a former drycleaner, or an abandoned gas station. Minnesota’s Brownfield Program was created in 1988 and strengthened by passage of the Minnesota Land Recycling Act in 1992, to help overcome the environmental and legal barriers that prevent the redevelopment of these properties.

The Brownfield Program is a fee-for-service program for parties not responsible for the contamination. The program provides technical assistance and liability assurance letters to promote the voluntary investigation, cleanup, and redevelopment of contaminated property. The assurance letters provide liability protection for property developers and environmental closure for identified contamination. Program customers include property owners, prospective purchasers, small businesses, developers, development agencies, lending institutions, non-profit organizations, and local units of government. During FY 23 and FY 24, participation in the Brownfield Program resulted in 7,490 acres of blighted property returned to productive use.

The MPCA’s Brownfield Program includes sites managed under MERLA (Minn. Stat. § 115B) and the Petroleum Tank Release Cleanup Act (Minn. Stat. § 115C). The MDA Agricultural Voluntary Investigation and Cleanup (Ag VIC) Program also manages brownfield sites under MERLA, for sites impacted by agricultural chemicals (AgVIC). The metrics presented below reflect only sites within the MERLA portion of the Brownfield Program. The number of “open/active” sites reflects projects in various stages as they move through the environmental assessment, cleanup, and redevelopment process. Simple sites are often completed within one year, while it may take three or more years for a complex brownfield redevelopment project to complete the process.

	FY23		FY24	
	MPCA	MDA	MPCA	MDA
New sites	280	11	257	7
Open/active sites	1380	16	1358	5
Sites closed	117	76	135	78

The MPCA's Brownfield Program has seen a significant increase in requests for assurances and approvals of cleanup actions primarily due to the number of soil vapor investigations conducted during redevelopment projects.

A successful brownfield redevelopment project depends on many partners working together to navigate the environmental, legal, and financial challenges that arise when transforming a blighted property into a community resource. Key partners of the Brownfield Program include Minnesota Brownfields, a 501 (c)(3) non-profit organization which is dedicated to promoting the efficient cleanup and reuse of contaminated land through education and research. The MPCA staff are frequent speakers at Minnesota Brownfield forums, where topics are often chosen to coincide with current MPCA initiatives. The Brownfield Program partners with the Minnesota Department of Employment and Economic Development (DEED) and the Metropolitan Council by providing technical support and review of applications submitted to their contamination investigation and cleanup grant programs. On redevelopment projects where the community has questions about risk to public health, the Brownfield Program works with the Minnesota Department of Health (MDH) to resolve concerns. The U.S. Environmental Protection Agency (EPA) provides valuable financial support to MPCA's Brownfield Program through federal grants that help pay for program operational expenses and investigation grants administered by the MPCA.

The MPCA Brownfield Program 2023 Annual Report provides a more detailed description of the program and also includes financial metrics for cost recovery. Examples of successful brownfield redevelopment projects in Minnesota can be found in the annual report and also in the Brownfield Success Stories story map.

Superfund Site Assessment

The Superfund Site Assessment (SA) program is a joint effort between the MPCA and EPA. This program investigates reports of hazardous substance releases and tries to find out who is responsible. They get reports from various sources, including the state duty officer, other regulatory programs, and public complaints. The SA program evaluates these reports to see if there's a risk to people's health or the environment.

If no responsible parties are found, the SA program decides whether to use Superfund resources to take further action. Through site assessment, staff look at available data to determine if there's a risk to nearby people or the environment. If they find an imminent risk, they use available funds for investigations or actions to reduce that risk. The SA program also works with the EPA Region 5 Superfund Program and receives limited funding through a Cooperative Agreement to assess certain sites for possible inclusion in the EPA's National Priorities List (NPL).

Due to limited staff and funding, SA sites that do not pose an immediate threat are triaged. At the end of the FY21-22 period, there were 336 sites triaged and placed in the backlog. By the end of FY23-24, this backlog grew by nearly 30% to 440 sites. From this total, 117 are considered high priority because they have the highest potential to impact human health. At the current intake rate, the backlog of high priority sites is projected to grow. Work is underway to evaluate and address program processes and secure resources to appropriately address the backlog of high priority sites as well as to properly evaluate and manage lower priority backlog sites. If additional investigation shows a lower risk or if the risk has been reduced through mitigation, no further action is taken by SA. The SA program is funded by general Superfund appropriation, with priority given to sites on the PLP for funding. Without the additional resources dedicated, the SA program is projected to increase its high priority backlog by over 200 sites by 2029.

Superfund investigation and cleanup

Potential Superfund sites are identified by or reported to the MPCA or the MDA, and when responsible parties do not cooperate to investigate or cleanup; the sites enter a formal assessment process for possible addition to the PLP or the NPL.

Listing of a site on the PLP does not automatically qualify it for listing on the NPL. The EPA has developed separate NPL listing and delisting procedures. However, prior to a site being listed on either the PLP or NPL, responsible parties, landowners, or facility operators are provided an opportunity to investigate and cleanup under the oversight of the MPCA or the MDA. Should the responsible party be unwilling or unable to conduct the necessary investigations and/or cleanup, the MPCA or MDA conducts the cleanup with MERLA funding and seeks cost recovery from responsible parties.

For sites under the oversight of the MDA, both responsible and voluntary parties may be eligible for partial reimbursement of their cleanup costs from the Agricultural Chemical Response and Reimbursement Account (ACRRA). At the present time, the MDA is the lead state agency for site responses being performed at the South Minneapolis Residential Soil Contamination NPL site and five PLP only sites: Cedar Service site in Northeast Minneapolis, the Cedar Service site in Bemidji, the Kettle River Company Creosote Plant site in Sandstone, the CMC Heartland Lite Yard site in South Minneapolis, and the Page and Hill Forest Products site in Koochiching County.

The primary purpose of the PLP (and NPL) is to identify which sites are eligible for state (or federal) funding for the purpose of the MPCA/MDA (or EPA) to conduct fund-financed response actions. The MPCA does have the authority under Minn. Stat. 115B to provide oversight of investigations and response actions taken by responsible parties who agree to cooperatively work with the MPCA to complete investigation and clean-up actions. As such, and in addition to the 96 sites listed on the PLP, the MPCA currently provides oversight at 161 cooperative responsible party sites in the Superfund program.

After the listing of a site on the PLP or the NPL, and if a responsible party either cannot be identified or is unable or unwilling to take requested action, the MPCA or MDA may use the Remediation Fund to conduct response actions. The agencies follow an established process in their site responses.

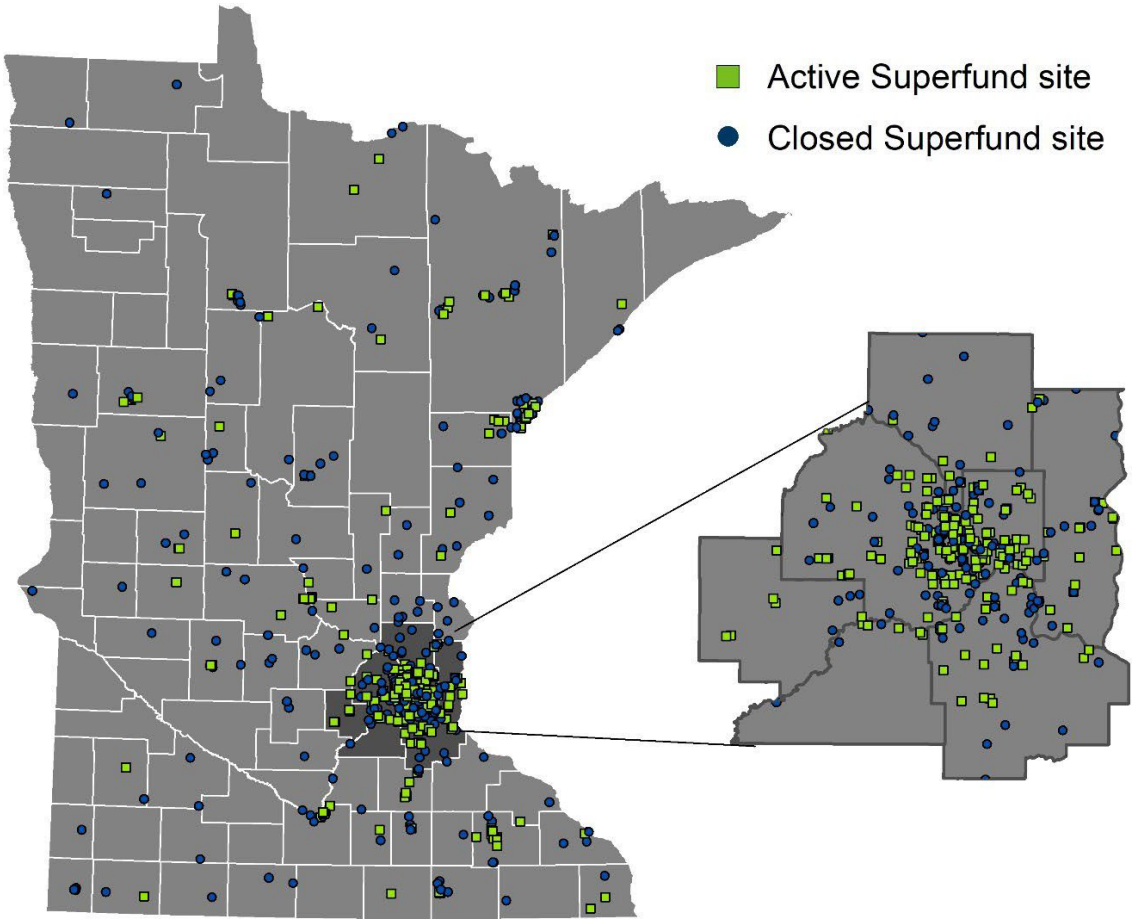
A remedial investigation/feasibility study is conducted to determine the extent of contamination and evaluate cleanup alternatives. Following a decision on the necessary activities, a plan for remedial design/remedial action is developed and implemented. If financially viable responsible parties are identified at any point during investigation or

cleanup, the State will attempt to secure their cooperation and recover costs from them. Such cooperation or cost recovery leverages private funds for cleanups, conserving State funds for truly “orphan” sites, for which no viable responsible party can be identified.

After response actions are complete or when a site no longer poses risks to public health or the environment, the site may be “delisted” from the PLP or the NPL. Sites are delisted from either the PLP or the NPL, if responsible parties have completed all necessary response actions and/or if no additional MERLA funding is needed to conduct response actions. Conditions at some responsible party-led sites may require ongoing maintenance or monitoring using land use controls after the delisting process to ensure long-term risk reduction.

Minnesota had 24 NPL sites during FY23/24 and they were eligible for federal funding under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, the Federal Superfund law) for response actions based on national priority. In return for access to these funds, states are required to match either 10% of the cost of site-specific remedial actions (when no state or local government has been identified as a responsible party) or pay 50% (if the site was owned or operated by a state or local governmental entity). The state is also responsible for long-term operations and maintenance at NPL sites as the EPA is “prohibited by CERCLA from conducting Operation and Maintenance activities at NPL sites.” (https://semspub.epa.gov/work/HQ/174124.pdf)

Below is a map of Minnesota showing the approximate location of all currently active and closed Superfund Sites followed by a table listing all the current PLP and NPL Sites.



MPCA and MDA active permanent list of priorities sites	County	HRS* score	NPL	PLP list	Site ID
Boise Cascade/Onan/Medtronic	Anoka	59	N	10/30/1984	SR0000004
Dealers Manufacturing Co	Anoka	28	N	12/30/1990	SR0000027
FMC	Anoka	66	Y	10/30/1984	SR0000029
NIROP OU1	Anoka	63	Y	10/30/1984	SR0000072
Boise Cascade Medtronic	Anoka	59	N	10/1/1984	SR0001522
Cedar Services Inc.	Beltrami	17	N	2/1/2014	SR0001051
Mankato Plating Company	Blue Earth	8	N	5/30/1995	SR0000176
D's Fabric Care	Carlton	5.81	N	8/24/2016	SR0000264
Esko Groundwater Contamination Site	Carlton	8	N	8/15/2006	SR0000369
St. Regis Paper OU1	Cass	53	Y	10/30/1984	SR0000008
BURLINGTON NORTHERN (Tie Plant, Brainerd)	Crow Wing	47	Y	10/30/1984	SR0000016
Burlington Northern Car Shops (Brainerd)	Crow Wing	38	N	12/30/1988	SR0000017
Freeway Sanitary Landfill	Dakota	46	Y	10/30/1984	SR0000098
Old Freeway Dump	Dakota	65.64	N	6/30/1993	SR0000099
Pine Street Dump	Dakota	32	N	12/30/1991	SR0000192
214 and 220 Ramsey Street	Dakota	24.07	N	4/22/2020	SR0000266
Farmington Ground Water Plume	Dakota	5.62	N	6/30/1999	SR0000329
Southview Boulevard	Dakota	3	N	4/2/2010	SR0000375
Joslyn Mfg. & Supply Co. OU1	Hennepin	44	Y	10/30/1984	SR0000001
General Mills	Hennepin	39	Y	10/30/1984	SR0000003
Honeywell Inc - Golden Valley Plant	Hennepin	31	N	10/1/1984	SR0000018
Tonka Main Plant	Hennepin	31	N	12/30/1985	SR0000025
Reilly Tar & Chem Saint Louis Park	Hennepin	59	Y	10/30/1984	SR0000060
Cedar Services	Hennepin	17	N	12/30/1990	SR0000087
Brooklyn Park Dump	Hennepin	35.5	N	12/30/1989	SR0000112
Superior Plating Inc	Hennepin	6	N	10/30/1984	SR0000131
Minnegasco OU-1 Soils	Hennepin	42	N	10/30/1984	SR0000155
Schloff Chemical	Hennepin	7	N	12/30/1989	SR0000175
Mibco Site	Hennepin	40	N	5/30/1992	SR0000177
Pilgrim Cleaners	Hennepin	12.2	N	12/30/1996	SR0000206
Precision Plating, Inc.	Hennepin	4	N	12/1/2014	SR0000249
CMC Heartland Lite Yard	Hennepin	13	Y	4/15/2002	SR0000348
Edina Well Field Site	Hennepin	50	N	7/6/2006	SR0000358
Hmong Shopping Center/Pilgrim Cleaners	Hennepin	3	N	4/1/2010	SR0000373
Highway 100 and Co Rd 3 Groundwater Plume	Hennepin	3	Y	4/15/2010	SR0000377
Chemical Marketing Corp Of America	Hennepin	23.22	N	6/30/1999	SR0001009
White Way Cleaners	Hennepin	4	N	6/30/1998	SR0001293
Spring Park Municipal Wells	Hennepin	50	Y	8/27/2014	SR0001349
Universal Plating	Hennepin	25	N	8/24/2016	SR0001398
66th St & Vincent Ave	Hennepin	50	N	8/24/2016	SR0001400
Southeast Hennepin Area Groundwater & Vapor Site	Hennepin	33	N	9/21/2015	SR0001401
Lyndale Ave Corridor	Hennepin	38	N	8/24/2016	SR0001402

MPCA and MDA active permanent list of priorities sites	County	HRS* score	NPL	PLP list	Site ID
55th St & Lyndale Ave S	Hennepin	17	N	9/24/2015	SR0001404
Pure Oil Bulk Facility	Hennepin	7	N	8/15/2016	SR0001430
Gold Eagle Cleaners – Richfield	Hennepin	50.05	N	5/1/2020	SR0001569
Minnetonka Boulevard and Raleigh Avenue South	Hennepin	51.32	N	5/1/2020	SR0001570
Isanti Solvent (Aka Charles Schumaker Farm)	Isanti	30	N	10/30/1984	SR0000063
Ace Signs, Inc	Kandiyohi	3	N	2/25/2014	SR0001351
Littlefork GW Contamination Site	Koochiching	22.56	N	5/30/1995	SR0000199
Page & Hill	Koochiching	17	N	9/1/2010	SR0001354
Finland Air Force Station (Former)	Lake	13	N	6/30/1996	SR0000205
Reserve Mining Silver Bay Scrapyard & Dro Plume	Lake	10	N	10/30/2003	SR0000351
Exclusive Cleaners Worthington	Nobles	6	N	8/1/2014	SR0001339
Rochester Groundwater Plume	Olmsted	50	N	7/6/2006	SR0000359
Capri Beauty Salon	Olmsted	4	N	4/20/2010	SR0000372
Clothing Care Cleaners	Olmsted	14	N	3/4/2014	SR0001353
Perham Arsenic Site	Otter Tail	38	Y	10/30/1984	SR0000056
Kettle River Company – Creosote	Pine	35	N	6/30/2002	SR0000349
Bell Lumber & Pole Company	Ramsey	48	Y	10/30/1984	SR0000034
Valentine Clark Corp	Ramsey	4	N	12/30/1988	SR0000044
Pig's Eye Landfill	Ramsey	43	N	12/30/1989	SR0000117
Highway 96 Dump	Ramsey	31	N	10/15/1984	SR0000122
St. Paul Levee Property	Ramsey	20	N	5/30/1992	SR0000198
MacGillis and Gibbs Waste Site	Ramsey	48	Y	10/30/1984	SR0000200
Gold Eagle Cleaners	Ramsey	50.01	N	4/30/2020	SR0000290
TCAAP General	Ramsey	59	Y	10/30/1984	SR0000313
Fish Hatchery Dump	Ramsey	22	N	8/1/2007	SR0000376
Centerville Road Dump	Ramsey	9	N	8/1/2010	SR0000379
Arcade & Hawthorne Ave E	Ramsey	24	N	9/30/2015	SR0001403
University Ave & Pascal St	Ramsey	18	N	8/15/2016	SR0001405
Hospital Linen	Ramsey	50	N	8/15/2016	SR0001406
Rice County Dump (Former, Comus)	Rice	12	N	2/1/2014	SR0000382
Pollution Controls Inc. (A.K.A. Pci)	Scott	52	N	10/30/1984	SR0000107
Minnesota Valley Landfill	Scott	14	N	7/6/2006	SR0000360
Arrowhead Refinery Co.	St. Louis	40	Y	10/30/1984	SR0000067
Duluth City Dump Former #1	St. Louis	28	N	12/31/1987	SR0000093
Duluth Air Force Base OU1	St. Louis	21	N	10/30/1984	SR0000095
St. Louis/Interlake/Duluth/Tar Site - OU Sed	St. Louis	32	Y	10/30/1984	SR0000149
West Duluth Industrial Site	St. Louis	11	N	10/30/1984	SR0000179
St. Louis River/Us Steel OU-P Wire Mill P	St. Louis	32	Y	10/30/1984	SR0000190
Former Peter Pan	St. Louis	3	N	1/30/2003	SR0000350
Hibbing Gas Manufacturing Plant Site	St. Louis	11	N	7/6/2006	SR0000361
Bulinski Point	St. Louis	5	N	2/28/2014	SR0000381
Poplar Hill Solvent Site	St. Louis	6	N	8/1/2013	SR0001273

MPCA and MDA active permanent list of priorities sites	County	HRS* score	NPL	PLP list	Site ID
Main Street Solvent Plume	St. Louis	2	N	8/1/2013	SR0001281
Waite Park Wells	Stearns	32	Y	12/30/1985	SR0000035
Electric Machinery	Stearns	38	Y	4/30/1986	SR0000136
West Broadway Ground Water Contamination	Steele	6	N	6/30/1999	SR0001503
Long Prairie Groundwater Contamination	Todd	32	Y	10/30/1984	SR0000040
Ritari Post & Pole	Wadena	30	Y	10/30/1984	SR0000039
3M Cottage Grove	Washington	33	N	10/30/1984	SR0000033
3M Oakdale Dump Sites	Washington	59	Y	10/30/1984	SR0000055
Baytown Twp Groundwater Contamination	Washington	38	Y	12/30/1988	SR0000084
Lakeland Ground Water Contamination	Washington	16	N	6/24/2014	SR0000145
Ashland Oil - Park Penta	Washington	32	N	4/30/1986	SR0000278
Winona Groundwater Contamination	Winona	25	N	12/30/1989	SR0000181

*HRS = Hazard Ranking System, an EPA scoring system to assess the relative potential of sites to pose a threat to human health or the environment. Higher score = Higher potential risk.

Institutional controls

Institutional controls are used to help ensure that exposure to residual contaminants does not occur because of inappropriate land use at former Superfund and Brownfields sites. The MPCA has developed institutional control tracking mechanisms for sites to ensure that citizens and local units of government are aware of, and honor, any controls and land use restrictions already in place. The MPCA started sharing institutional control information, including site details and location in the MN GeoSpatial Commons. They can be viewed here: https://gisdata.mn.gov/dataset/env-institutional-controls

Sites with institutional controls	Program
755	Brownfield site institutional controls
43	RCRA Remediation site institutional controls
83	Superfund site institutional controls

The MDA also includes institutional control information including site details in the Mn GeoSpatial Commons. This information can be viewed here: https://gisdata.mn.gov/dataset/env-agchem-incidents

St. Louis River Area of Concern

Remediation work at contaminated sediment sites has evolved in the last 20 years, particularly in the St. Louis River Area of Concern (SLRAOC), which stretches from the Duluth harbor to Cloquet. The SLRAOC was designated by the EPA in 1987. Nine beneficial use impairments were identified here, many of which are related to contaminated sediments.

Several small sediment investigations were conducted prior to 2006. Since then, the MPCA has partnered with the EPA and the U.S. Army Corps of Engineers (USACE) to assess the state of sediment contamination throughout the lower St. Louis River estuary. In 2013, six sites on the Minnesota side of the SLRAOC were identified during a Phase 1 Assessment as needing more investigation and cleanup. A Phase 2 Sediment Assessment using EPA Great Lakes Restoration Initiative funding was completed in late 2014. This work identified eight additional sites for potential cleanup. See the map of the SLRAOC remediation sites and completion status below.

Remediation at two of the sites was completed by outside entities through the Brownfields program, while two other sites received “no action” determinations. In 2016, Focused Feasibility Studies (FFS) for the ten remaining remedial sites were completed. The FFS identified several remedial alternatives for each site. The initial Partnership Agreement with the USACE for design of restoration projects and the Minnesota Slip sediment remediation project was amended to add the remaining remedial sites.

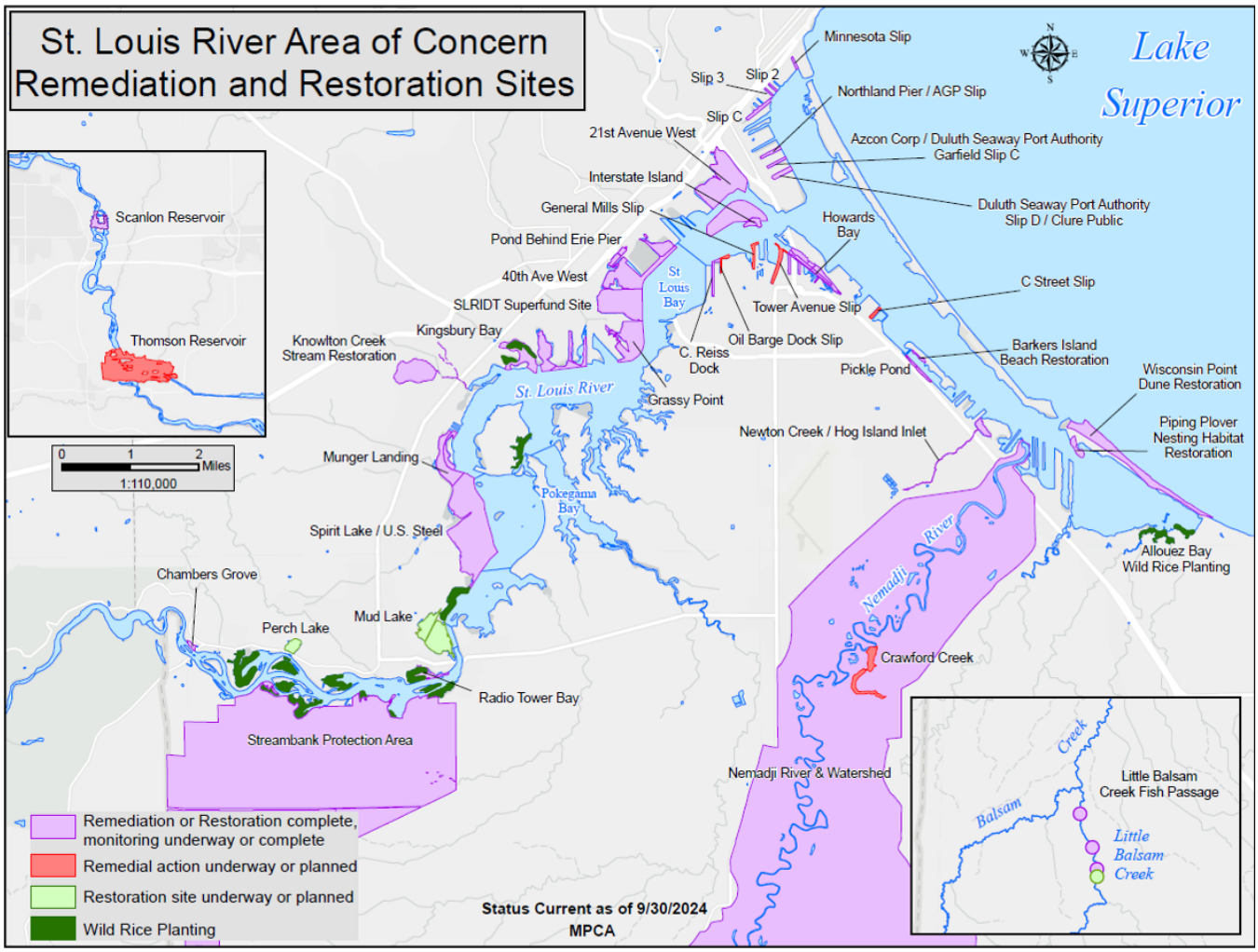
In the fall of 2018, three slips in the Duluth harbor (Minnesota Slip, Slip 3, and Slip C) were remediated. Another Duluth harbor remediation project was completed at the Azcon/Duluth Seaway Port Authority Slip in the fall of 2020. In the summer of 2021, remedial construction began at the Ponds behind the Erie Pier site, where contaminated sediments were dredged, removed, and disposed of at an offsite landfill. Remedial construction and site restoration at the Ponds was completed in the summer of 2023. In 2022, remedial construction was started and completed at the Scanlon Reservoir site where an activated carbon amendment was applied to treat dioxins/furans contaminated sediment. Also in the summer of 2022, remedial construction was started at the Munger Landing site where sediments were contaminated with PCBs at a busy public boat landing. Over 100,000 cubic yards of contaminated sediments from Munger Landing were dredged, removed, and disposed of offsite. Construction was completed in 2024 with a new motorized boat launch and a sandy paddle sport landing.

In the fall of 2024, construction began at the Thomson Reservoir, the final SLRAOC remedial site in Minnesota. This is another project where an activated carbon amendment is applied to treat dioxins/furans contaminated sediment. Construction completion is scheduled for November 2025.

Remedial construction at all eight of these sites was/is being completed through Project Agreements with the EPA and funding from Minnesota’s General Obligation Bonds and the federal Great Lakes Legacy Act (GLLA) fund, which is a component of the Great Lakes Restoration Initiative. The project agreement for the Munger Landing project also included the WI Department of Natural Resources and Paramount Global as monetary partners. The project agreement at the Thomson Reservoir also includes Potlatch Deltic as a monetary partner.

Following additional site characterization, a decision of “no action” was made for the Mud Lake West site. The MPCA also revised the remedial decision at the AGP/Northland Slip site to implementation of robust institutional controls and monitoring. The decision not to implement a remedial construction project at this time was made based on a re-examination of the site characterization and risk, and the planned future use of the Duluth Seaway Port Authority.

All the remedial actions in Minnesota are scheduled for completion by the end of 2025. Completion of all the remedial projects support the eventual delisting of the SLRAOC sometime after 2028. To date, the MPCA and EPA have completed seven remedial projects together, which have remediated over 416,000 cubic yards of contaminated sediments, with over 155,000 cubic yards of sediment dredged and removed from the estuary. In 2024, the EPA and US Steel completed the four-year remedial construction project at Spirit Lake site where over 1.3M cubic yards of contaminated sediments were remediated.


St. Louis River Area of Concern
Remediation and Restoration Sites
Lake Superior
Minnesota Slip
Slip 3
Slip 2
Slip C
Northland Pier / AGP Slip
21st Avenue West
Azcon Corp / Duluth Seaway Port Authority
Garfield Slip C
Interstate Island
General Mills Slip
Duluth Seaway Port Authority
Slip D / Clure Public
Howards Bay
Pond Behind Erie Pier
40th Ave West
St Louis Bay
C Street Slip
SLRIDT Superfund Site
Tower Avenue Slip
Kingsbury Bay
Knowlton Creek
Stream Restoration
Oil Barge Dock Slip
C. Reiss Dock
Barkers Island
Beach Restoration
Pickle Pond
Wisconsin Point
Dune Restoration
St. Louis River
Grassy Point
Piping Plover
Nesting Habitat
Restoration
Newton Creek / Hog Island Inlet
Munger Landing
Pokegama Bay
Spirit Lake / U.S. Steel
Allouez Bay
Wild Rice Planting
Nemadji River
Chambers Grove
Mud Lake
Perch Lake
Crawford Creek
Radio Tower Bay
Streambank Protection Area
Nemadji River & Watershed
Little Balsam Creek Fish Passage
Little Balsam Creek
Scanlon Reservoir
Thomson Reservoir
0 1 2 Miles
1:110,000
Remediation or Restoration complete, monitoring underway or complete
Remedial action underway or planned
Restoration site underway or planned
Wild Rice Planting
Status Current as of 9/30/2024
MPCA

Dry Cleaner Account

The Dry Cleaner Environmental Response and Reimbursement Account (Dry Cleaner Account) was established by the Minnesota Legislature in 1995 and is used to reimburse owners or operators of dry cleaning facilities for costs associated with environmental cleanups. The MPCA reviews reimbursement requests, determines reasonable costs, and approves reimbursements, minus a deductible of $10,000. The Dry Cleaner Account is funded by annual registration fees from drycleaner operators, as well as fees on solvents used in the dry cleaning process. Registration and solvent fees are increased each year to ensure the statutory required amount of $650,000 is collected.

Prioritizing the reimbursement of dry cleaning operators ahead of owners of property that leased to drycleaners, a legislative action taken during the 2021 session, has dramatically reduced reimbursement wait times for operators. Operators are now reimbursed within about three months, while property owners generally wait two years or more.

Approximately $17.17 million has been reimbursed since establishment of the Dry Cleaner Account. In FY 2023, reimbursement was made to 14 facilities, for a total of over $632,500 reimbursed that fiscal year. In FY 2024, reimbursements were made to 10 facilities, for a total of over $576,500. Current outstanding reimbursement requests total approximately $1 million, with 12 applicants waiting for reimbursement.

Harmful Substance Compensation Program

The Harmful Substance Compensation Program (HSCP) was created to compensate homeowners who suffer certain kinds of injury or property damage from exposure to harmful substances in Minnesota. This exposure may come from water, soil, or air contaminated by improperly disposed of or discharged chemical waste, petroleum, or agricultural chemicals. The MPCA manages the HSCP, decisions on compensation are made by the Commissioner.

All but one of the payments listed below were associated with the replacement of the primary drinking water source for residential homes. Homeowners are reimbursed for costs incurred connecting to municipal water supplies and sealing private drinking water wells, or for the cost of installing carbon filtration systems. One payment was for costs associated with installing a soil vapor mitigation system.

Nearly all claims in recent years have been due to drinking water impacted by PFAS, because of releases from either the 3M Oakdale Superfund Site or the Washington County Closed Landfill. For payment of those claims the MPCA used funding from the 2018 Natural Resource Damage Settlement with 3M. Only two claims were unrelated to 3M releases in the East Metro, they were paid out of the Remediation Fund (Minn. Stat. 115B.25 – 115B.37).

	Number claims	Amount associated with claims
FY23	12	$160,580.76
FY24	10	$176,405.46

East Metro Per- and polyfluoroalkyl substances (PFAS)

2007 3M Consent Order (Consent Order)

Per-and polyfluoroalkyl substances (PFAS) are a family of substances made by the 3M Company (3M), and other manufacturers that have been used for decades to make products that resist heat, oil, stains, grease, and water.

3M disposed of PFAS manufacturing wastes in the past at four sites: the 3M Oakdale site, the 3M Woodbury site, the 3M Cottage Grove site, and the closed Washington County Landfill. The Superfund Program manages remediation of the three 3M sites; the Closed Landfill Program manages remediation of the Washington County Landfill.

In May 2007, the MPCA Citizens' Board approved a Settlement Agreement and Consent Order (Consent Order) negotiated between MPCA staff and 3M. The Consent Order is a legally binding document that lays out timetables, deliverables, and other requirements, including funding for investigating and cleaning up PFAS at the 3M Oakdale site, 3M Woodbury site, and 3M Cottage Grove sites and providing safe drinking water to impacted residents. Because the Washington County Landfill site is in the Closed Landfill Program, the MPCA is required by state law to fund the response action related to releases from the landfill. However, 3M did agree under the Consent Order to provide up to $8 million to help fund the State's cleanup of the site. 3M also funded the construction of a lined disposal cell at SKB Industrial Waste Landfill (SKB) in Rosemount to contain only the excavated PFAS waste material from the three 3M sites. 3M also provided $5 million to the MPCA to be used for PFAS research activities to help evaluate impacts of PFAS releases to the environment. Investigation and cleanup work at the 3M Oakdale, Woodbury, and Cottage Grove sites continues; MPCA has requested additional work to better define the extent and magnitude of the PFAS contamination at the sites that may impact the cleanup work.

2018 3M Natural Resources Damages Settlement (Settlement)

On February 20, 2018, the State of Minnesota settled its Natural Resources Damages Assessment (NRDA) lawsuit against the 3M Company in return for a grant of $850 million. Minnesota sued 3M in 2010 alleging that the company's production of substances known as PFAS had damaged drinking water and natural resources in the east Twin Cities metro area. After legal and other expenses are paid, about $720 million is being invested in drinking water and natural resource projects in the Twin Cities east metropolitan region.

The Settlement sets two top priorities for funding – ensure safe and sustainable drinking water (Priority One) and enhance natural resources (Priority Two) – and provides guidelines for using any remaining money after those two issues are adequately addressed. It also directs the MPCA and Department of Natural Resources (DNR) to set up working groups to engage with communities, stakeholders, and technical experts and to help guide use of the funds.

Priority 1 also requires that the MPCA conducts a source assessment and feasibility study regarding the role of the Valley Branch Water District's project known as Project 1007 in the conveyance of PFAS in the environment. MPCA is currently working on these efforts and will finalize the feasibility study in 2025.

In August 2021, the MPCA and DNR, with assistance from the workgroup members, finalized the Conceptual Drinking Water Supply Plan, which outlines the long-term actions needed to ensure safe, sustainable drinking water supplies for community systems and private wells.

To date the Settlement has provided funding for the planning/design and construction of several

water treatment plants, and whole-home treatment filters for private wells.

More detailed information about implementation of the Settlement can be found at the 3M Settlement webpage (https://3msettlement.state.mn.us/). This includes information about the Conceptual Drinking Water Supply Plan, legislative reports which outline progress of implementing the terms of the Settlement and expenditures of Settlement funds, and documentation from work group meetings.

Temporary drinking water treatment systems

Under the terms of the Settlement, 3M provided up to $40 million, in addition to the $850 million grant amount, over the first five years of the Settlement for temporary drinking water treatment systems until the long-term actions are implemented. These temporary treatment systems are to meet 3M's obligation to provide an alternative drinking water supply where public or private drinking water wells exceed MDH criteria for PFAS, as outlined in the 2007 Consent Order between 3M and the MPCA. Such temporary municipal carbon treatment systems are currently operating in Cottage Grove, Oakdale, and Woodbury. The five-year timeframe ended on February 20, 2023. Costs to operate these temporary treatment systems are now covered by the Settlement until the long-term drinking water treatment facilities are in operation.

Public participation in the Superfund process

Providing information to the public and public participation is an important component of the Superfund process. A public notice component is defined in state statute for selection of final remedial actions at listed sites. For example, the MPCA sought public comment on the proposed remedial actions in draft Minnesota Decision Documents (MDDs) for the West Duluth Industrial Site and the AGP Slip Site in Duluth in FY23 and FY24, respectively. Public comments were collected, taken into consideration, and responded to prior to finalizing the MDD and remedial action decisions. Public notice is also required when sites are listed to or delisted from the PLP. Superfund staff often meet with local government officials, community groups, and hold public meetings to provide updates of site-specific activities.

The MPCA coordinates closely with the EPA for public communication and outreach efforts regarding the SLRAOC remediation projects. Outreach teams are assembled for each of the SLRAOC remediation projects.

In cooperation with the EPA, in June 2023, the MPCA released its environmental assessment worksheet for the proposed Thompson Reservoir sediment remediation project. In April 2024, the EPA announced its funding investment in partnership with the MPCA for covering the contaminated sediments in the reservoir with activated carbon.

In July 2024, the EPA announced and the MPCA assisted in the completion of the four-year sediment cleanup and habitat restoration project at Spirit Lake, located adjacent to the former US Steel Site in Duluth.

In the past, the main way to communicate with the public and promote public participation was through news releases, public notices, in-person meetings, and by providing information on the MPCA's website. While these methods are still used, the agency also provides information via social media (Facebook, Twitter, and YouTube) that includes targeted ads. The agency uses virtual event options when appropriate to provide additional access to the public. The MPCA sends communications out via GovDelivery email for specific sites and for general communications. The agency also translates important information about sites to other languages to make it more accessible. The goal of these various forms of communications is to provide information to the public in real time to engage in a

dialogue on program and site activities, especially for those impacted by these issues.

The Superfund Program is working to make our data accessible – to citizens, elected officials, industry, and the environmental community. Remedial programs collect data from sites all over the state and our stakeholders rely on the data to make decisions about siting wells, buying homes, and developing properties.

The Minnesota Groundwater Contamination Atlas, launched in 2020 and developed with funding from the Environmental and Natural Resources Trust Fund (ENRTF), is a web application composed of three parts: a map, a site story, and a data download. The map and site story present groundwater contamination areas of concern and tell the contamination story of each area in a way that is understandable to the public and meaningful to technical users. The data download allows for direct public access to groundwater data hosted on the statewide enterprise database in a self-service format. Increased data accessibility will lead to better-informed stakeholders, more transparency, and accountability. The Groundwater Contamination Atlas is continually updated as new data is collected.

The MPCA also developed a framework for integrating environmental justice principles into the agency's public communications and program processes. This framework states the MPCA will, within its authority, strive for the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations or policies. These principles have been integrated into the MPCA Superfund Program's site management processes. For example, if a site is located in an area with higher concentrations of lower-income residents and people of color, the MPCA conducts more extensive community-oriented engagement including in languages besides English, if warranted. More information about the MPCA's environmental justice principles can be found at https://www.pca.state.mn.us/about-mpca/mpca-and-environmental-justice.

Priorities for the Superfund Program

As development in Minnesota continues, new sites with contamination will be discovered and old ones redeveloped. Lower detection limits and changing health-based standards sometimes may trigger investigation or cleanup at sites where action was not previously required.

The MPCA and the Superfund Program need to have adequate capacity to respond to many emerging environmental health priorities that will require significant attention over the next several years. These issues will necessitate additional assessments and work at current active sites and reassessment of closed sites to ensure that they do not pose a continued threat to public health and the environment. The Superfund program has added staff to execute these core areas of its work. The program will continue to backfill positions as necessary in the future. For many years the program has been operating in a triage state which has resulted in the need to idle and backlog active sites.

The following sections discuss issues that MPCA Superfund will prioritize over the next several years.

Groundwater/Drinking Water Protection

The Minnesota Department of Health (MDH) routinely samples public water supply systems for hazardous substances, as required by the Federal Safe Drinking Water Act. In recent years, a broader effort led by MDH has included sampling for emerging contaminants including PFAS. The MPCA Superfund Program and MDH collaborate to investigate and determine the best course to cleanup and protect public water systems that have been impacted by releases of hazardous substances and other

emerging contaminants. Sampling of the public water supply entry point(s) is led by MDH while MPCA is tasked with sampling nearby private wells potentially at risk and investigating potential sources of the contamination.

Currently, the two agencies have prioritized 82 public water supply systems with hazardous substances detected in one or more water sources supplying these systems. Public water supply systems are further prioritized based on contaminant detection frequency and concentrations found in the entry point(s).

Of the 82 public water supply systems currently prioritized, 22 are being evaluated due to the presence of PFAS. The 2023 Minnesota Legislative Session appropriated $25M to the MPCA to investigate these sites and provide grants to public water supply systems impacted by PFAS. The appropriation also funds the agency's work to conduct source investigations of PFAS contamination, identify potential responsible parties, and to sample and treat private drinking water wells. Four new permanent staff positions were created to support this work. Approximately $10.7M of grants have been dispersed to aid public water supply systems impacted by PFAS. MPCA has initiated investigations into the sources of PFAS and private well sampling/treatment which will continue for several years to come.

As the regulatory landscape of PFAS and other emerging contaminants continues to develop, the effort to ensure drinking water in these communities is safe will impose an additional significant demand on the Superfund Program resources in terms of both staff time and project funding.

Per- and polyfluoroalkyl substances (PFAS)

PFAS are a group of man-made substances that includes PFOA, PFOS, PFHxS, PFNA, PFBS, HFPO-DA (GenX), and many others. This group of substances are commonly used in non-stick and stain resistant consumer products, food packaging, fire-fighting foam, and industrial processes. These substances are very persistent in the environment and in the human body and can accumulate over time, which can lead to adverse human health effects.

The MPCA partnered with MDH to investigate PFAS in Minnesota in the early 2000s. Since then, MDH has established and updated criteria for six different PFAS compounds. In response to these published criteria, the MPCA and MDH have coordinated efforts to monitoring both public and private drinking water wells in both the East Metro and Statewide to ensure public health and the environment are adequately protected. The MPCA is taking a programmatic approach to evaluating potential sources and managing/mitigating impacts where appropriate.

In February of 2021, the MPCA released the Minnesota PFAS Blueprint (https://www.pca.state.mn.us/waste/minnesotas-pfas-blueprint) which identifies our coordinated and strategic approach to addressing PFAS across multiple programs at the MPCA. The Blueprint lays out the MPCA's desired strategy for PFAS management including:

- **Prevent** PFAS pollution wherever possible
- **Manage** PFAS pollution when prevention is not feasible, or pollution has already occurred
- **Clean up** PFAS pollution at contaminated sites

In March of 2022, the MPCA released an agency wide PFAS Monitoring Plan to support the PFAS Blueprint (PFAS Monitoring Plan (state.mn.us). The PFAS Monitoring Plan provides a path forward for PFAS monitoring at solid waste, wastewater facilities, stormwater facilities, hazardous waste landfills, facilities with air emissions, and sites in the Superfund and Brownfields programs. Appendix E of the PFAS Monitoring Plan provides high level guidance for PFAS evaluation at sites in the Remediation program including Superfund, Closed Landfill and Brownfields sites. In April 2024, initial findings, and next steps of the PFAS Monitoring Plan was released. This release included early results and follow-up

actions based on monitoring for PFAS at permitted solid waste, hazardous waste, wastewater, stormwater, and facilities with air emissions permits. Additional information is also provided regarding the development of guidance for remediating sites in the Brownfield or Superfund programs.

The MPCA Superfund staff also participate on the MPCA PFAS Lateral team which consists of representatives from all MPCA programs impacted by PFAS. The MPCA PFAS lateral team contributed to the development of the PFAS Blueprint and the PFAS Monitoring Plan. The MPCA PFAS lateral team ensures that all MPCA programs impacted by PFAS are communicating with each other regarding PFAS policy development and how PFAS policies developed by one MPCA program may affect or impact the other MPCA programs.

Another initiative was the continuation of the PFAS inventory pilot project which was completed in 2023. The primary objective of the inventory pilot is to evaluate historical and current potential PFAS-contaminated locations in Dakota, Olmsted, Stearns, and St. Louis Counties. A protocol was developed to identify and prioritize potential PFAS sources in a manner that is defensible, well documented, reproducible, financially feasible, and transparent. A PFAS Inventory Risk Communications Plan has also been developed to establish a clear communications strategy for the protocol, which includes a stakeholder analysis, a decision framework for execution and supporting tools. The EPA awarded the MPCA a Multipurpose Grant (MPG) to assist the pilot project to investigate PFAS sources and to validate the protocol. The MPCA used the protocol to select sites from the counties listed above that indicated a potential for PFAS contamination and conducted PFAS site investigation for possible soil and groundwater contamination in 2022 and 2023. The pilot project site investigations detected PFAS in the groundwater adjacent to the sites identified. The PFAS pilot protocol was then incorporated into the development of the Remediation Division PFAS guidance (discussed in further detail below) as well as other MPCA programs that address PFAS contamination.

A stakeholder advisory group consisting of MPCA staff and external stakeholders (Developing PFAS remediation guidance | Minnesota Pollution Control Agency (state.mn.us) was formed in 2021 to assist with developing the PFAS guidance document for the Remediation program. A 30- day public comment period was also provided in September and October of 2023 to allow for public input and comment on the Remediation PFAS guidance. The MPCA provided individual responses to each public comment and incorporated these comments where appropriate, into the final Remediation PFAS Guidance document that was released in May of 2024 (https://www.pca.state.mn.us/business-with-us/pfas-remediation-guidance).

1,4 dioxane

1,4 dioxane is an industrial chemical used as a stabilizer for the application of many chlorinated solvents and PFAS. 1,4 dioxane does not have an established EPA federal drinking water standard however, the MDH has established a state Health Risk Limit of 1 part per billion. During the last biennium sampling for 1,4 dioxane resulted in the discovery of this chemical at established MPCA Superfund Sites investigating the releases of PFAS's and/or chlorinated solvents. 1,4 dioxane has been detected in five community water supply wells, and they are actively being monitored by the MDH.

1,4 dioxane has been identified as a contaminant of concern in deep groundwater (at depths greater than 80 feet) associated with the former Twin Cities Army Ammunition Plant (TCAAP) Superfund site. The U.S. Army paid for drinking water treatment systems to be installed for the municipal water supplies of New Brighton and the Village of St. Anthony to treat the 1,4-dioxane, to supplement treatment systems already in place for chlorinated compounds. The city of St. Louis Park has 1,4-dioxane contamination at two of their municipal wells. The MPCA has designed water treatment plants for these

two wells to treat both chlorinated compounds as well as the 1,4 dioxane. A treatment system is now in place and operational for one well. The other well is currently offline.

1,4-dioxane has also been detected above the established health risk limit in residential drinking water wells in the Red Oaks and Eastbrook Terrace neighborhoods of Andover. The MPCA provided bottled water to impacted residents as an interim measure as we work on more permanent solutions to provide long-term safe drinking water to these communities. The MPCA received $6.1M in bond funding to connect the portion of the Red Oaks neighborhood with 1,4-dioxane impacts above health-based levels to municipal water supply as the long-term solution for the drinking water impacts.

The Gem Lake community in Ramsey County also has residential drinking water wells with 1,4-dioxane above health-based levels. The MPCA is currently providing bottled water as a temporary mitigation measure as we evaluate long-term solutions for this community that does not currently have a municipal water supply system.

There is high likelihood that additional 1,4-dioxane impacted drinking water supplies will be discovered in the future that will need direct MPCA actions due to the absence of viable responsible parties. Additional consideration is also needed for conducting surveillance monitoring across the State at potential 1,4 dioxane contamination sites to ensure that public health impacts are not occurring from this emerging contaminant.

Vapor Intrusion

Chlorinated solvents are a large family of chemical compounds that contain chlorine and are the source of much of the work for the Superfund Program. Typical chlorinated solvent compounds that are found at superfund sites include tetrachloroethylene (PCE) and trichloroethylene (TCE). PCE and TCE can migrate as a vapor into buildings from the source of the contamination through the soil. This route of exposure is called vapor intrusion. These vapors can degrade the quality of the indoor air and sometimes pose risks to human health. Vapor intrusion sites can vary in size from small sites impacting a single building to large sites encompassing many city blocks. The understanding of vapor intrusion is still evolving; it drives the work at many of our sites and is expected to continue to do so into the future.

Closed sites reassessment project

The recent lowering of health-based guidance values and the development of new vapor intrusion guidance resulted in the need to re-evaluate sites that were previously closed in order to verify closure decisions made in the past are adequately protective using current policy and guidance. Minnesota's Superfund Program is in the process of re-evaluating 1,035 closed sites for vapor intrusion and 528 closed sites for drinking water risks. These sites were closed prior to knowledge of any health risks posed by vapor intrusion and reduction of the drinking water standard for TCE. Site re-evaluations have been prioritized to focus on closed sites located near schools or daycares first followed by sites where TCE was identified as a contaminant of concern, or if sites are located within environmental justice areas.

For additional information about the MPCA's Superfund Program, please visit www.pca.state.mn.us.

For additional information about the MDA's Incident Response Program, please visit www.mda.state.mn.us.

MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

Excavation detailed corrective action design (EDCAD) report

Petroleum Remediation Program

Guidance document 7-07b

Doc Type: Corrective Action Design

Instructions: Complete this report to propose a detailed corrective action design for soil excavation when completed as a complex corrective action. See Excavation of petroleum contaminated soil and tank removal sampling and Corrective action design and implementation for more information and requirements found on the Minnesota Pollution Control Agency's (MPCA) website at https://www.pca.state.mn.us/waste/cleanup-guidance. Do not revise or delete any text or questions from this report form. Items may be added if they are needed to support the corrective action design. If an item is not applicable, provide a brief explanation.

MPCA Site ID: LS00-SA361 **Date (mm/dd/yyyy):** December 5, 2024

Responsible party information

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City: St. Paul State: MN Zip code: 55155
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Alternative contact name (if any): MPCA Hydrogeolgist – Brad Leick Phone: 218-302-6602

Leak site information

Name: Hibbing Gas Manufacturing Plant Site (SR0000361) Phone:
Leak site address: US #169 Frontage Rd & 1st Avenue
City: Hibbing State: MN Zip code: 55746
County: St Louis

Environmental professional information

By signing this document, I/we acknowledge that we are submitting this document on behalf of and as agents of the responsible person or volunteer for this leak site. I/we acknowledge that if information in this document is inaccurate or incomplete, it will delay the completion of remediation and may harm the environment and may result in a reduction in Petrofund reimbursement. In addition, I/we acknowledge on behalf of the responsible person or volunteer for this leak site that if this document is determined to contain a false material statement, representation, or certification, or if it omits material information, the responsible person or volunteer may be found to be in violation of Minn. Stat. § 115.075 or Minn. R. 7000.0300 (Duty of Candor), and that the responsible person or volunteer may be liable for civil penalties.

***By typing/signing my name below,** I certify the above statements to be true and correct, to the best of my knowledge, and that this information can be used for the purpose of processing this form.*

Signatures

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Section 1: Site conceptual model update

Include updated cumulative tables and figures from Investigation report in Appendix A. Include documentation of additional site investigation, site monitoring, and interim corrective actions in Appendix B. Also include copies of tables, figures, or other information from the focused investigation and/or pilot test if relevant to the site conceptual model or the detailed design in Appendix C.

1. **Describe any additional site investigation, site monitoring, and/or interim corrective actions completed since the last submitted report.**

   The most recent report submitted to the MPCA is Bay West's May 2023 *Focused Feasibility Study* (2023 FFS) report, which includes a summary of historical investigation along with remedial options (**Appendix C**).

   Work completed since that report was submitted includes:

   - May 2023 - Surface water sampling and analysis and monitoring well gauging;
   - September 2023 – Site-wide groundwater monitoring well sampling and testing;
   - October 2023 – Deep monitoring well installation;
   - November 2023 – Surface water and limited groundwater monitoring well sampling and testing;
   - December 2023 – On-Site Source Area (ONSA) Visual soil boings; and
   - May 2024 – Site-wide groundwater and surface water sampling and testing.

   Updated Figures and Tables associated with these sampling events are attached in the Figures and Tables sections of this EDCAD.

2. **Discuss the results of the additional site investigation, site monitoring, and/or interim corrective actions**.

   May 2023 Surface Water Sampling

   Surface water samples were collected from three locations and analyzed for mercury and PAH. Mercury was not detected above Minnesota Pollution Control Agency Class 2B surface water Chronic Standard (MPCA Class 2B CS). Anthracene was detected (estimated) in two of three samples above MPCA Class 2B CS.

   September 2023 Groundwater Monitoring

   Groundwater samples were collected from all groundwater monitoring wells on-Site and analyzed for dissolved metals, cyanide, select VOCs, PAHs, and DRO. Concentrations of zinc were detected in three samples (MW97-02, MW97-03, and MW00-13) above the MDH HRL. Cyanide was detected in one sample above the HRL (MW97-04) and EPA MCL (MW98-05). Benzene was detected above the MDH standards in one sample (MW98-05) and EPA MCLs in two samples (MW00-08 and MW00-13). No PAH nor DRO were detected above applicable regulatory standards in the samples analyzed.

   October 2023 Deep Monitoring Well Installation and Soil Sampling

   Two deep monitoring wells (HMGP-MW23-18 & -19) were installed south of the ONSA. Both wells were completed to a total depth of approximately 120-ft bgs. MW23-18 was constructed with 20-ft of screen and MW23-19 with 10-ft of screen. Two soil samples (one from each boring) were collected at depth (approximately 90-ft bgs) and analyzed for cyanide, DRO, metals, PAH, and VOC. Benzene was detected in one of the samples (estimated) above the MPCA SLV, and Trichloroethene (TCE) was detected in both samples (estimated) above the MPCA SLV.

   November and December 2023 Surface Water and Limited Groundwater Sampling

   In November 2023, surface water samples were collected from four locations and analyzed for dissolved metals, cyanide, and PAH. Cyanide was detected (estimated) in one sample above the MPCA Class 2B CS. No other analytes were detected above applicable regulatory standards.

   In November 2023, groundwater samples were collected from two monitoring wells (MW20-17 and MW23-18) and analyzed for

dissolved metals, cyanide, select VOCs, PAHs, and DRO. Zinc was detected in both wells above MDH HBV. No other analytes were detected above applicable regulatory standards.

In December 2023, a groundwater sample was collected from MW23-19 and analyzed for dissolved metals, cyanide, VOCs, PAHs, and DRO. No analytes were detected above applicable regulatory standards.

December 2023 ONSA Visual Soil Borings

Fifteen (15) soil probes were advanced to approximate depths of 20-feet bgs in the Site ONSA and surrounding the former Gas Holder Ring (GHR). Probe locations are shown on **Figure 3.** Soils were logged and visual observations were made to assess the presence of coal tar-impacted material. Boring logs of the visual borings are included in **Appendix A.** Results of the assessment are being used to enhance the precision of the coal tar-impacted soil volume estimates previously described in Bay West's 2023 FFS and apply directly to the excavation design described in this EDCAD, including the estimated lateral and vertical extent of excavation (**Figure 5**) and ONSA geologic cross sections (**Figure 6, 6A, and 6B**). No soil samples were collected for laboratory analysis during this investigation.

May 2024 Groundwater and Surface Water Sampling

Groundwater samples were collected from all groundwater monitoring wells on-Site and analyzed for dissolved metals, cyanide, VOCs, PAHs, and DRO. Concentrations of cadmium were detected in two samples (MW97-01 and MW98-07) above the MDH HRL. Cyanide was detected in one sample above the HRL (MW97-04) and EPA MCL (MW98-05). Benzene was detected above the MDH standards in one sample (MW98-05) and EPA MCLs in two samples (MW00-08 and MW00-13). No PAH nor DRO were detected above applicable regulatory standards in the samples analyzed.

Surface water samples were collected from four locations and analyzed for dissolved metals, cyanide, VOC and PAH. Cyanide was detected (estimated) in one sample above the MPCA Class 2B CS. Anthracene was detected (estimated) in one sample above MPCA Class 2B CS. No other analytes were detected above applicable regulatory standards.

3. **Provide an updated and comprehensive site conceptual model.**

This section provides an overview of the Site-wide conceptual model. It's important to differentiate between On-Site Source Area (ONSA) and Off-Site Source Area (OFSA). The ONSA is applicable as the "Site" for the purposes of the EDCAD. The OFSA is located west of the ONSA and will not be addressed during the proposed remedial investigation described in the EDCAD. However, much of the information regarding the OFSA has been included in the EDCAD for completeness.

Site Location

The Hibbing Gas Manufacturing Plant (HGMP) is a former manufactured gas plant located northwest of the intersection of Highway 169 and 73 Frontage Road in Hibbing, St. Louis County, Minnesota. The HGMP operated as a coal gasification plant from 1918 to 1923, as a carbureted water gas plant from 1923 until 1946 and as a propane gas plant from 1946 to 1969. The on-site buildings and other site features are presented on **Figure 2**. The HGMP infrastructure were demolished in approximately 1980, although some of the building and equipment foundations remain. The property is approximately 4.5 acres in size and is currently used by the City of Hibbing as an equipment and supply storage yard.

The HGMP property is bordered by former railroad tracks with wetlands beyond to the northwest, retail business properties to the northeast, Highway 169/73 Frontage Road, 1st Avenue and Beltline Highway 169/73 to the southeast, a fenced equipment storage yard and bulk oil storage facilities beyond to the southwest, and former railroad tracks with wetlands beyond to the west and northwest.

The Edwards Oil Inc. and The Tire Shop/Bemis Oil Company are properties located to the southwest of the HGMP property and are listed on the MPCA's What's in My Neighborhood web application: The Edwards Oil Inc. property is listed as an inactive Hazardous Waste and Petroleum Remediation site (MN0000121343, LS0005043, LS0013595) and as an active above ground and underground tank site (TS0053149); and the Tire Shop/Bemis Oil Company property is listed as an inactive petroleum remediation (LS0001152), an active Petroleum Remediation site (LS0019101), and an inactive underground and above ground petroleum storage tank site (TS0052284).

Site History

Site Investigations – 1986 thru 2000

A Preliminary Assessment was conducted at the Site by Ecology and Environment, Inc. on behalf of the United States Environmental Protection Agency (USEPA) in 1986. The Preliminary Assessment recommended that an on-site inspection be performed, that community and/or private wells are sampled, and that shallow soil borings be advanced (Ecology and Environment, Inc., 1986).

In 1997, the City of Hibbing entered the MPCA Voluntary Investigation Cleanup (VIC) Program to prevent future listing of the Site on the National Priority List (NPL) and/or the Permanent List of Priorities (PLP, Northeast Technical Services [NTS], 1997). The HPUC contracted NTS to perform a Phase II Investigation at the Site. The purpose of the Phase II Investigation was to characterize the vertical and areal extent of the residual contamination (NTS, 1997). Coal tar was encountered in soil borings installed in the HGMP property (On-Site Source Area, "ONSA") and off-site drain field area (OFSA). The Phase II report concluded that the main source of contamination on the HGMP property (ONSA) is associated with coal tar residuals from the former gasholder (i.e., Gas Holder Ring (GHR)) and tar separators and that a significant volume of contaminated soil is present in the off-site area. A qualitative estimate of the volume of impacted soils requiring remediation was also presented. The estimate was based on the coal thickness observed during the investigation and a 11 mg/kg clean-up standard. However, it is

unclear what contaminants of concern (COC) this cleanup criterion would be applied to. It was estimated that a 100-foot-by-200-foot-by-20-foot-deep on-site area would require remediation and a 500-foot-by-200-foot-by-10-ft-deep off-site area would have to be remediated. Based on these areas, approximately 15,000 cubic yards of soil on-site (ONSA) and 40,000 cubic yards of soil off-site (OFSA) require remediation. The report concluded that the resource aquifer is impacted at and surrounding the major source areas identified during the investigation, but that the areal extents of contamination above the HRL is limited.

An additional investigation was conducted in 1999/2000, which included the use of laser induced fluorescence (LIF) technology to provide a semi-qualitative assessment of the coal tar and NAPL-saturated soil extents in the ONSA, along with the installation of six (6) additional monitoring wells. A total of 91 LIF borings were advanced to depths of greater than 20 ft bgs. The visual classifications and laboratory results were used to correlate the LIF data to soil types and concentrations of COCs. Consistent with the findings of the Phase ll, the coal tar thickness contour maps indicate that coal tar thicknesses in excess of 20 ft are present on the former HGMP property and off-site area. Petroleum-related VOCs were detected above the laboratory analytical reporting limits in the majority of soil samples. Naphthalene was detected in soil samples by both the VOC and PAH analysis. The highest concentrations of VOC and PAH compounds were detected near the former gas holder and tar separators. Elevated cyanide concentrations (1,500 – 5,300 mg/kg) were also detected in samples collected from the Tar Separator and Gas Holder Ring (GHR) areas. Groundwater results indicated the highest VOC concentrations were detected near and downgradient from the on-site GHR/tar separator areas (MW98-06 4,296 µg/L and MW00-13 3,785 µg/L) and downgradient from the projected discharge point of the former drain field area, which was consistent with the soil sample analytical results. The deep completion monitoring wells MW00-10 and MW00-13 which are installed next to MW98-06 and MW97-04, respectively, contained VOCs at similar concentrations detected at their shallow completion nested pair well.

A Preliminary Feasibility Study (PFS) was conducted in 2002 to develop a list of remedial treatment technologies to be evaluated in a Focused Feasibility Study, to identify additional information needed to complete a Focused Feasibility Study, and to develop preliminary cost estimates for treatment technologies. The PFS stated that it was likely that a combination of the potentially viable technologies could be used to address the impacts at the Site. Based on the soil borings and LIF data generated during prior investigations, it was estimated that approximately 55,732 cubic yards (86,000 tons) of impacted soil would require treatment. The PFS concluded that the treatment technology with the highest degree of certainty was on-site thermal desorption and that treatment technologies that required blending would likely cost more than on-site thermal desorption. The report also stated that confirmation of the assumptions and resolution of the questions presented in the PFS should occur with MPCA involvement prior to proceeding with a Focused Feasibility Study.

Bay West Investigations & Monitoring - 2018 thru present

2018 Site Reconnaissance Investigation

In May 2018, Bay West conducted a Site Reconnaissance Investigation to evaluate the current conditions at the Site. The investigation included a desktop well receptor survey and vapor intrusion assessment. The survey identified 33 wells including four scientific investigation wells, three test wells, one remedial well, one abandoned well and 24 monitoring wells with in one half mile of the HGMP release area. No public, domestic, irrigation or other wells were identified within the search area. However, a Drinking Water Supply Management Area (DWSMA) was identified approximately 450 ft south of the Site. Concentrations of benzene have been detected at concentrations in excess of the HRLs at MW97-03 and MW98-07 which are located on the southern border of the Site. These wells are not screened in the resource aquifer and the concentration of benzene has fluctuated from less than the analytical detection limit to an order of magnitude over the HRL at these locations. The shallow water bearing zone appears to flow to the west on-site and to the north in the off-site drain field area. Based on these results and direction of groundwater flow, it does not appear likely that the Site coal tar impacts have affected the DWSMA.

A Vapor Intrusion Assessment consisting of a utility vapor survey and desktop soil gas receptor review was completed during the Site Reconnaissance Investigation. The utility survey consisted of reviewing subsurface utilities located around the site to identify potential preferential pathways for contamination, as well as screening for potential vapors present in accessible storm sewer manholes located to the south of the Site. The vapors present in the two storm sewers were screened for VOCs using a PID and for carbon monoxide, hydrogen sulfide, combustible gas and oxygen using a four-gas meter. The PID did not detect VOC in either manhole and the four-gas meter did not detect carbon monoxide, hydrogen sulfide or combustible gas in either. The four-gas meter detected 20.8% oxygen in both of the manholes.

The desktop vapor receptor review was completed to identify potential vapor receptors within 100 ft of the Site boundaries. The review identified one inhabitable structure within 100 ft of the Site. The structure appears to be a commercial building that is currently operational. Considering the age of the available data set and the uncertainty in the Site boundaries, it may be appropriate to evaluate additional structures for vapor intrusion.

Groundwater and Surface Water Monitoring – 2019 thru 2022

Bay West conducted groundwater sampling events at the existing monitoring wells to establish seasonal trends in groundwater contaminant concentrations. Nine (9) groundwater sampling events were conducted between May 2019 and May 2024. Groundwater samples were generally collected from 12 monitoring wells during this time. The 2023 Annual Monitoring Report (**Appendix A**) presents the results from seven groundwater monitoring events conducted between May 2019 and June 2022. The more recent monitoring events will be detailed in a report submitted under separate cover and are summarized in Section 1 of this EDCAD.

Remedial Investigation (RI) Report - 2021

The *RI Report* was completed by Bay West in June 2021 to refine the CSM in order to evaluate the risk to human health and the

environment posed by the environmental impacts related to the Site (Bay West, 2021). The report summarized analytical results and provided updated answers to environmental problems and questions posed in the UFP-QAPP and Quality Assurance Project Plan (QAPP) addendums. The report also provided an updated CSM including the Site characteristics, the contaminants of concern, and an exposure pathway analysis, and evaluated data gaps at the Site. Information from the RI Report is used elsewhere throughout this EDCAD. The full report is included in **Appendix B** of this EDCAD.

TarGOST Investigation – 2021

A TarGOST investigation was conducted in late 2021 and a *TarGOST Summary Report* was submitted in June 2022 (Bay West, 2022a). During the TarGOST investigation, portions of the ONSA, OFSA, and NSA where coal tar impacts were previously identified were targeted to assess remaining data gaps in the Site CSM. A total of 50 TarGOST soil borings were advanced at the Site to delineate the location, depth, and types of coal tar present. In addition, five verification soil borings were advanced near a subset of the TarGOST boring locations to assign semi-quantitative values to the TarGOST data and to compare analytical results with applicable regulatory criteria. **Figure 3** presents the TarGOST® boring locations in the ONSA. **Figure 4** presents a summary of analytical results from soil samples collected from the verification borings. The full report is included in **Appendix B** of this EDCAD.

The results of the TarGOST® Investigation in the ONSA indicated a smaller coal tar plume than the Laser-Induced Florescence (LIF) investigation that was conducted at the Site in 2001. Fluorescence observed by the TarGOST® is presumed to be coal tar as little peat or biological interference was encountered. There were six TarGOST® borings in the ONSA that exhibited signs of coal tar. Those were ONSA-TG-004, ONSA-TG-006, ONSA-TG-007, ONSA-TG-008, ONSA-TG-010, and ONSA-TG-020. Based on modeling the TarGOST® and confirmation data set, the volume of coal tar-saturated material in the ONSA was approximately 950 cubic yards and the volume of the coal tar-impacted clay was approximately 1,800 cubic yards (total of 2,750 yards).

Focused Feasibility Study – May 2023

Bay West most recently completed a Focused Feasibility Study (FFS) for the HGMP in May 2023 which included a discussion of remedial action objectives (RAOs) and the identification, screening, evaluation, and comparison of potential remedial alternatives. The full report is included in **Appendix C** of this EDCAD.

Alternatives evaluated for the coal tar contamination at the Site in the FFS were developed using the historical Site data and the CSM. Site investigation data was used to estimate the spatial extent of the coal tar impacted areas at the Site. Alternatives evaluated included no action, thermal desorption, excavation and disposal, land use controls, in-situ chemical oxidation/stabilization, and thermal conduction heating.

The comparative analysis of Alternatives narrative discussion and quantitation table for coal tar remediation options did not clearly identify the best Alternative to address the contamination at the Site and only slight differences in the balancing criteria score were found between these Alternatives; however, Alternative 3B (Excavation of Source Area Material) received the highest overall scores and should be evaluated further for remedy selection.

Additional discussion regarding the results and cost estimates included in the FFS is included in **Sections 9.3 and 9.4** of this EDCAD.

Geology and Hydrogeology

The following sections provide a description of the geology and hydrogeology near the HGMP property. The regional geologic and hydrogeologic descriptions are based on studies including the *Geology and Water Resources of the Hibbing Area Northeastern Minnesota, Hydrologic Investigations Atlas Ha-280* (United States Geological Survey [USGS] 1968), *Geologic Map of Minnesota, Hibbing Sheet* (Minnesota Geological Survey [MNGS], 1970), and the *Geologic Map of Minnesota, Quaternary Geology* (MNGS, 1982). Descriptions of the specific soils types and groundwater levels are based on environmental investigations performed at the HGMP and adjacent properties (NTS, 1998 and 2001).

Geology

Approximately 250 ft of glacial drift overlies the bedrock beneath the HGMP Site. Nashwauk Moraine Association deposits are underlain by older deposits of the St. Croix Moraine Association. Both Associations are deposits of the Rainy Lobe glacial advance and include drumlin ridges of resistant gravely till in the Hibbing area. The St. Croix Moraine Association includes deposits of dark gray, clayey silt with scattered coarse sand clasts. The St. Croix Moraine deposits form an aquitard beneath the upper aquifer in some areas. In some areas the lower St. Croix Moraine deposits includes outwash sands and/or gravel and form a lower aquifer zone. Lake-modified clayey till from the Culver Moraine Association were deposited over the coarser tills during the Late Wisconsinan time.

Bedrock beneath the HGMP includes 80 to 120 feet of undifferentiated Cretaceous rocks which overlie the Virginia Formation which in turn overlies the Biwabik Iron Formation. HGMP is located approximately 2 miles south of the Biwabik Iron Formation – Virginia Formation contact. The Virginia Formation is composed of slightly metamorphosed argillites, graywackes and argillaceous siltstones. The Biwabik Iron Formation is the ore producing formation of the Mesabi Iron Range. Open pit mines are located approximately 2.5 miles north of the HGMP.

The unconsolidated deposits encountered during the subsurface investigations performed at the HGMP and adjacent properties have been grouped into four site-specific categories including Surface Fill, Culver Clay, Nashwauk Till, and St. Croix Basal Till. Descriptions of each soil category are provided below:

- Surface Fill – Includes 1 to 6 feet of sandy-gravel fill often mixed with construction demolition debris, coal ash, and coal

clinkers. A discontinuous layer of moist to saturated brown, fibrous peat occasionally mixed with gray-brown, mottled clay is also present in some areas. This discontinuous layer is believed to be the original surficial deposit within the wetland area.

- Culver Clay – A dry red-brown, lean silty-clay to clay with occasional gravel clasts which underlies the Surface Fill. This unit varies in thickness from 0 to 30 feet and the average depth to the base of the Culver Clay is 18 feet bgs.
- Nashwauk Till – A heterogeneous yellow-brown, well to poorly sorted fine to coarse grained, silty-sandy to silty-gravel to boulder till with permeable zones of moderate to well sorted sand and gravel. The saturated portions of this unit form the upper aquifer. The Nashwauk Till ranges from 21.5 to 40 feet thick at the HGMP and is generally present immediately below the base of the Culver Clay.
- St. Croix Basal Till – A moist, dense gray-brown, sandy-silt, ground moraine deposit. Soil borings that extended through the St. Croix Basal Till during the deep monitoring well installations (MW23-18 & 19) indicate the presence of interbedded sand/gravel with clay from 70 – 90-ft bgs underlain by lean clay from approximately 90 – 120-ft bgs.

Hydrogeology

The HGMP is located in the northwestern headwaters of the St. Louis River Watershed. A small drainage ditch is present along the east side of the off-site former drainfield area. The ditch is a remnant of a drainage ditch that formerly surrounded the entire off-site drainfield area. The drainage ditch exits the off-site area through a concrete culvert in the southeast portion of the off-site area. The drainage ultimately discharges to an unnamed intermittent tributary of the East Swan River located approximately 0.25 mile from the off-site drainage area.

Regional groundwater flow with in the unconsolidated glacial deposits of the St. Louis River Water shed is southeasterly. Intermediate groundwater flow systems occur in permeable deposits of the Nashwauk and St. Croix Moraine Deposits. At least two vertically separated aquifers are generally present within the Nashwauk Moraine and St. Croix Moraine deposits. These aquifers are separated by 20 to 100 feet of gray, silty to clayey till that forms a leaky and/or discontinuous aquitard. The groundwater flow direction in the intermediate aquifers is generally southerly, however, groundwater flow directions are locally affected by mine dewatering activities in some areas.

Based on the groundwater elevations measured during previous investigations, the top of the shallow aquifer is present at a depth ranging from approximately 23 to 30 feet bgs. Groundwater monitoring wells installed within the ONSA include MW97-01 thru -05 and MW00-13. Depth to water measurements in these wells have remained relatively constant since 2019 and have ranged from approximately 25- to 35-ft bgs in wells MW97-03 and MW97-02, respectively. Groundwater in the shallow water bearing zone flows to the west in the on-site area and flows to the north in the off-site area.

Contaminant Distribution

Overview

Byproducts, such as coal tar residuals, NAPL, and process water, produced by the HGMP operations were released to the environment. These byproducts contain COCs including PAH, VOCs, RCRA metals, and cyanide at concentrations that pose a potential risk to human health and the environment. Environmental investigations conducted at the HGMP and an adjacent property have confirmed that PAHs, VOCs, RCRA metals, and cyanide are present in soil and groundwater at concentrations exceeding regulatory screening levels. NAPL-saturated soils have been identified near the GHR at thicknesses exceeding 10 feet and coal tar residues have been observed in soil borings at thicknesses exceeding 20 feet in portions of the on-site (ONSA) and off-site (OFSA) portions of the Site.

A portion of the impacted off-site area has been identified as a jurisdictional wetland. The wetland received process water and other discharges from the HGMP while it was operational, and it appears that portions of the wetland were filled with slag, construction materials, and other debris. The surface water in the wetland reportedly flows into an unnamed tributary (location not currently known) of the Swan River, which discharges to the St. Louis River. The unnamed tributary currently has intermittent flow, but may have had sustained flow while the HGMP was operational due to the process water discharge

Prior investigations identified source areas on the HGMP Property (ONSA) and in the off-site area (OFSA). The impacts associated with each ONSA source area are shown on **Figure 2** and include:

On-site Source Areas ("ONSA")

Gas Holder Ring (GHR)
- Coal Tar Residuals
- NAPL Saturated Soils
- VOC
- PAH
- Cyanide

Tar Separator
- Coal Tar Residuals
- VOC
- PAH
- Cyanide

Old Retort/Purifier House
- Coal Tar Residuals
- VOC
- PAH
- Cyanide

Former Fuel Oil AST ("Oil Tank")
- VOC
- Diesel Range Organics
- Potential Coal Ash and Boiler Slag Fill
- Arsenic

Off-site Source Areas ("OFSA")

- Process Water/Coal Tar Discharge
- Coal Tar Residuals
- VOC
- PAH
- Potential Coal Ash/Boiler Slag Fill
- Arsenic

The on-site source areas (ONSA) targeted for excavation are associated with the operational units at the HGMP and the impacts identified in each source area are related to each of the gas manufacturing processes. The highest concentrations of VOCs and PAHs in soil samples and greatest thicknesses of NAPL saturated soils (10 feet) and coal tar residuals (20 feet) have been observed in the GHR and tar separator areas. Elevated concentrations of VOCs and PAHs and coal tar residuals were also observed in the Old Retort/Purifier House Area. Elevated concentrations of cyanide were identified in the Gas Holder, Tar Separator, and Old Retort/Purifier House areas. The source of the cyanide impacts may be related to the spent filter beds used in the purifier house (box waste). Elevated concentrations of VOCs including benzene, toluene, ethylbenzene and xylenes were detected in Former Fuel Oil AST Area. The Former Fuel Oil AST Area is also impacted by the HGMP-related COCs.

The off-site drain-field source areas (OFSA) are associated with process water that was discharged to the wetland area and the use of debris and other material to fill portions of the wetland. Coal tar residuals have been observed in soil borings installed near the wetland at depths exceeding 20 feet and elevated concentrations of VOCs and PAHs have been detected in soil samples collected from this area.

Currently the ONSA is used as an equipment storage yard and stockpiles of soil, electrical transformers and utility poles were observed during the Site Reconnaissance Investigation. Municipal water is available to properties near the HGMP and off-site drain-field areas and no known well receptors have been identified within one-half mile of the HGMP.

Soil Contaminant Distribution

Soil COCs present at the Site include arsenic, barium, benzene, cyanide, naphthalene, pyrene, total polychlorinated biphenyls (total PCBs), and the calculated BaP-equivalent. Compounds identified in one soil sample collected from outside of the Site identified a calculated BaP-equivalent value exceeding its MPCA Soil Leaching Value (SLV).

A surface soil statistical evaluation was conducted during the RI (Bay West, 2021) which determined representative concentrations of each compound. The program ProUCL was utilized to generate graphical and statistical methods to screen for outliers, identify potential hot spots/multiple populations, and determine the distribution of the soil analytical results dataset. Once these steps were taken, a 95% upper confidence level (UCL) for the mean concentration of each compound was calculated and compared to the appropriate MPCA SLV, Residential Soil Reference Value (SRV), and/or Industrial SRV. Soil COCs identified at the Site were compounds that exceeded their appropriate regulatory criteria based on the location and depth of the collected samples. The RI identified the coal tar plume as a significant data gap and additional investigation was conducted.

The TarGOST investigation conducted in late-2021 delineated the extent of coal tar impacts in soils at the Site, characterized the types of coal tar, and quantified the contaminant concentrations of coal tar impacted material in the ONSA and OFSA (Bay West, 2022b). Coal tar impacts were categorized as coal tar-saturated material, consisting of viscous, black material saturating the matrix it was identified in; and coal-tar impacted clay, consisting of seams and veins of coal tar most frequently encountered in clay and often underlying the coal-tar impacted material. The following approximate volumes and depths of coal-tar impacts were identified:

- 950 cubic yards of coal tar-saturated material in the ONSA at depths ranging from 0 to 12 ft bgs;
- 1,800 cubic yards of coal tar-impacted clay in the ONSA at depths ranging from 3 to greater than 20 ft bgs;
- 10,000 cubic yards of coal tar-saturated material in the OFSA at depths ranging from 3 to 10 ft bgs; and
- 32,000 cubic yards of coal tar-impacted clay in the OFSA at depths ranging from 5 to greater than 24 ft bgs.

Material changes to the most current site conceptual model based on results of environmental assessments conducted since the Bay West 2023 FFS are specifically related to the results of the December 2023 ONSA soil probes. Based on the results,

the area of coal tar-impacted soil increased from approximately 2,750 to 3,700 cubic yards. An updated Figure of coal tar-impacts scheduled for excavation is shown on **Figure 5.**

Groundwater Contaminant Distribution

Primary groundwater COCs present at the Site include benzene, cyanide, diesel range organics (DRO), ethylbenzene, and naphthalene. Primary groundwater COCs are compounds detected at concentrations that exceed their EPA Maximum Contaminant Levels (MCLs), and/or Minnesota Department of Health (MDH) Health Risk Limits (HRLs) in numerous sampling events and/or locations. DRO was included as a primary COC after comparing results to the MPCA guidance value of 1 milligram per liter (mg/L) for groundwater assessments established in MPCA guidance document c-prp4-01 (MPCA, 2021).

Secondary groundwater COCs present at the Site include 1,2,4-trimethylbenzene (1,2,4-TMB), benzo(a)pyrene (BaP), nickel, and zinc. Secondary groundwater COCs are compounds detected at concentrations exceeding applicable regulatory criteria in only one sampling location and in limited frequency. Secondary groundwater COCs pose a potential risk to drinking water and should continue to be monitored; however, secondary groundwater COCs have not shown consistent exceedances of MCLs or HRLs.

Groundwater in the ONSA was identified to contain concentrations of 1,2,4-TMB (secondary COC), ethylbenzene (primary COC), zinc (secondary COC), and naphthalene (primary COC) exceeding their respective HRLs in monitoring well MW00-13; concentrations of benzene (primary COC) exceeding its EPA MCL and/or MDH HRL in monitoring wells MW97-04, MW98-05, and MW00-13; concentrations of cyanide (primary COC) exceeding its MCL and/or HRL in monitoring wells MW97-03, MW97-04, and MW98-05; and concentrations of DRO (primary COC) exceeding its MPCA guidance value in monitoring wells MW00-13 and MW20-15. Groundwater in the ONSA was also identified to contain concentrations of zinc (secondary COC) exceeding its HRL in monitoring wells MW97-02, MW97-03, MW00-13.

Groundwater in the OFSA was identified to contain concentrations of benzene (primary COC), BaP (secondary COC), and naphthalene (primary COC) exceeding their HRLs in monitoring well MW00-10. Groundwater in the OFSA was also identified to contain concentrations of benzene (primary COC) exceeding its MCL and HRL in monitoring well MW00-08.

Groundwater outside of the Site was identified to contain concentrations of nickel, zinc, and cadmium (all secondary COCs) exceeding their HRLs in monitoring well MW20-15 and concentrations of DRO (primary COC) exceeding its MPCA guidance value in monitoring well MW20-14 and MW20-15.

In shallow groundwater, encountered in the upper portion of the Nashwauk Till deposit at typical depths ranging from 23 to 33 ft bgs, the horizontal and vertical extent of primary and secondary COCs above applicable regulatory criteria is summarized as follows. Concentrations of DRO, nickel, and zinc have exceeded applicable regulatory criteria in monitoring wells outside of the Site to the north and southeast; however, additional sampling events conducted at these locations indicates that these compounds have only exceeded applicable regulatory criteria in one sampling event at each location. The extent of benzene within the central portion of the NSA at concentrations exceeding applicable regulatory criteria are confined by analytical results from monitoring wells MW20-15 further to the northwest and MW20-16 to the northeast, which have not detected benzene in any sampling events. The extent of cyanide within the southern portion of the ONSA (MW97-03) observed during two 2019 sampling events has had seven subsequent sampling events with concentrations below applicable regulatory criteria, which also demonstrated decreasing or non-detect concentration trends. Based on the foregoing, the horizontal and vertical extent of primary and secondary COCs in shallow groundwater has been defined throughout the Site.

In intermediate groundwater, defined as groundwater within the Nashwauk Aquifer at depths below the upper-most groundwater monitoring well network (i.e., approximately 35- to 50-ft bgs), the horizontal and vertical extent of primary and secondary COCs at concentrations exceeding applicable regulatory criteria has been defined throughout the Site, with the exception of impacts within the central portion of the ONSA, which are discussed in the paragraph below. In the central portion of the OFSA where concentrations of primary and secondary COCs were identified in 2019 and 2020, five subsequent sampling events completed in from 2021 thru 2024 have shown COC generally decreasing concentration trends with concentrations below applicable regulatory criteria in all three events, as discussed in the paragraphs above. Intermediate monitoring well MW00-13, located in the center of the ONSA, has identified consistent detections of benzene, naphthalene, and DRO, as well as infrequent detections of 1,2,4-TMB and ethylbenzene, at concentrations above applicable regulatory criteria. It is currently unknown whether the identified COCs in monitoring well MW00-13 extend vertically downward beyond the intermediate groundwater monitoring well network or whether the identified COCs extend horizontally towards the south or west.

In deep groundwater, defined as the lowermost water bearing portion of the Nashwauk Aquifer, the deep groundwater monitoring well, MW20-17, is located to the north of the site in a downgradient orientation relative to the likely groundwater flow direction from the Site. With the exception of zinc (secondary COC) identified during the November 2023 sampling event, samples collected and analyzed from this well have not identified any COCs at concentrations above applicable regulatory criteria. Zinc was also detected above regulatory criteria in the sample collected from deep monitoring well MW23-18, located upgradient of the Site, during the November 2023 sampling event. No additional analytes were detected above regulatory criteria in the November 2023 and May 2024 sampling events in samples collected from the upgradient monitoring wells, MW23-18 and MW23-19. The assumed northerly flow direction of deep groundwater is based primarily on the similarity/relative difference between groundwater elevation measurements collected from a co-located shallow monitoring wells, as well as the lack of an observed lower permeability layer with the Nashwauk aquifer that would indicate the shallow and deep groundwater is hydraulically disconnected.

Surface Water Contaminant Distribution

Surface water COCs present at the Site include anthracene and mercury.

Surface water in the OFSA was identified to contain concentrations of anthracene exceeding its Minnesota Surface Water Quality Standard (MSWQS) Class 2B screening criteria for ecological and recreational users in surface water samples DD DIS-SW01 and DD DIS-SW02; and mercury exceeding its MSWQS Class 2B screening criteria in surface water samples DD DIS-SW01, DD DIS-SW02, and DD DIS-SW03. All three sampling locations were located within the drainage ditch in the OFSA, which is believed to discharge into the storm sewer drainage system south of the Site, ultimately discharging to an unnamed intermittent tributary of the East Swan River located approximately 0.25 mile from the Site. Based on the updated CSM presented in this report, the surface water exposure pathway is considered potentially complete and the risk to all potential receptors is considered low.

Sediment Contaminant Distribution

Sediment COCs present at the Site include acenaphthene, acenaphthylene, anthracene, benzene, benzo(a)anthracene, BaP, BaP-equivalents, chrysene, copper, dibenz(a,h)anthracene, ethylbenzene, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene, styrene, 1,2,4-TMB, 1,3,5-trimethylbenzene (1,3,5-TMB), toluene, total xylenes, and vanadium.

Concentrations of acenaphthylene, copper, and vanadium, were detected above their respective SLVs, Level I or Level II MPCA Sediment Quality Targets, Residential SRVs, and/or Industrial SRVs in more than one sediment sample collected in the off-site area. In addition, sediment sample DD-DIS-SED02 identified concentrations of additional compounds exceeding their respective regulatory criteria, including acenaphthene, anthracene, benzene, benzo(a) anthracene, BaP, chrysene, dibenz(a,h)anthracene, ethylbenzene, fluoranthene, fluorene, mercury, naphthalene, styrene, 1,2,4-TMB, 1,3,5-TMB, toluene, total xylenes, and vanadium

Soil Vapor Contaminant Distribution

Soil vapor COCs present at the Site include benzene, ethylbenzene, and naphthalene. These compounds were identified in one or more seasonal soil vapor samples from one sampling location within the OFSA at concentrations exceeding their respective 33X Residential and/or Commercial/Industrial Intrusion Screening Values (ISVs).

Receptors and Exposure Pathways

The goal of exposure pathway evaluations is to identify likely site-specific exposure situations. Bay West performed an exposure pathways analysis during completion of the RI to evaluate the specific ways in which receptors might come into contact with environmental contamination. The exposure pathway diagram represents the linkages among contaminant sources, release mechanisms, exposure pathways and routes, and receptors to summarize the current understanding of the risks to human health and the environment due to contamination. An exposure pathway diagram was completed for each media at the Site during the RI report completed by Bay West in 2021 (Bay West, 2021). A “complete” exposure pathway means that evidence supports that a COC may be released from a source and may be transported into and through the environment to an exposure point where a receptor is assumed to be present. The following sections describe the exposure pathways for each media type at the Site; however, refer to the RI Report for additional details regarding exposure pathway analysis.

Groundwater Pathway

The MDH Minnesota Well Index (MWI) was used to identify wells within one-half mile of the Site. The search identified 33 wells including four scientific investigation wells, three test wells, one remedial well, one abandoned well, and 24 monitoring wells within one-half mile of the Site. The search did not identify any public, domestic, irrigation, or other wells within the search area. Based on the physical setting in the vicinity of the Site determined by prior and ongoing investigations, the groundwater elevation monitoring conducted in the shallow Nashwauk aquifer, and groundwater analytical results from wells located outside of the Site, primary COCs in groundwater do not appear to be migrating horizontally outside of the Site boundary or vertically to the base of the deep portion of the Nashwauk Aquifer; therefore, the groundwater exposure pathway is considered incomplete at this time and the risk to potential receptors appears to be low.
Secondary COCs and the primary COC DRO have been detected in groundwater outside of the Site boundary in a limited number of sampling events; however, these compounds have not shown repeated exceedances of applicable regulatory criteria outside of the Site.

A Drinking Water Supply Management Area (DWSMA) was identified approximately 450 ft to the south of the Site. No portion of the Site is located within the DWSMA. Current analytical and stratigraphic information for the Site did not identify compounds exceeding their respective regulatory criteria outside of the surficial Nashwauk Aquifer. A confining unit of sufficient thickness to prevent downward contamination migration to the St. Croix aquifer was identified in a deep monitoring well at the Site (i.e., MW20-17). Based on this information, risk to potential receptors appears to be low.

Soil Contact Pathway

Complete exposure pathways for the Site surface soil include direct exposure to site workers and ecological receptors through incidental ingestion and dermal contact with surface soil. Exposure pathways are potentially complete for trespassers through incidental ingestion, and dermal contact with surface soil. COCs are present in soil; however, based on a statistical evaluation conducted during the RI, the average exposure concentrations are below the Industrial SRVs (Bay West, 2021). Therefore, the risk to potential receptors is considered low.

Sediment Pathway

Sediment exists in the present-day drainage ditch that surrounds the off-site drain field area. The ditch is intermittently dry and significant flow in the ditch likely only occurs during rain events. Sediment transport is expected to be minimal due to infrequent high energy flow events. Contaminated sediments were generally encountered 1 to 4 ft below the mud line. It is assumed that, if present, benthic dwelling organisms would typically reside in the upper foot of sediment and that infrequent flow in the ditch would provide poor habitat; therefore, the exposure pathway for benthic dwelling organisms is potentially complete but risk to benthic dwelling organisms is considered low. Due to the relatively remote nature of the drainage ditch and no recreational opportunities associated with the ditch or stream, exposure to humans would be minimal and limited to trespassers; therefore, the exposure pathway to human receptors is considered incomplete and the risk to human receptors is considered low.

Surface Water Pathway

The present-day drainage ditch at the Site is a remnant of a drainage ditch that formerly surrounded the off-site drain field area. The drainage ditch exits the Site into a culvert south of the OFSA. The drainage ultimately discharges to an unnamed intermittent tributary of the East Swan River located approximately 0.25 mile from the Site.

Exposure pathways are potentially complete for recreational users and ecological receptors through incidental ingestion, ingestion of biota, or dermal contact with contaminated stream water and/or stream sediments. Exposure pathways are potentially complete, but insignificant, for trespassers and site workers through incidental ingestion, ingestion of biota or dermal contact with contaminated stream water and/or stream sediments. Therefore, the surface water exposure pathway is considered potentially complete and the risk to potential receptors is considered low.

Vapor Intrusion Pathway

Soil vapor samples collected from locations closer to buildings and residential areas identified compounds at concentrations below their respective screening criteria for both Residential and Industrial ISVs; therefore, the risk to receptors is considered low.(It should be noted that the soil vapor sample which identified compounds exceeding regulatory criteria, -TSGP06, was located near the center of identified coal tar impacts in the OFSA, approximately 300 ft from the nearest building or residential area in the vicinity of the Site. A Vapor Intrusion Assessment consisting of a utility vapor survey and desktop soil gas receptor review was completed during the Site Reconnaissance Investigation for the overall Site was previously completed. Refer to that report for additional details regarding Site vapor intrusion pathways if needed.

4. Provide recommendations for additional site investigation, site monitoring, and/or interim corrective actions to be completed prior to EDCAD approval, including their purpose and schedule for completion.

   Based on the conversations with the MPCA, no additional site investigation appears warranted in the excavation area (i.e., ONSA) in soil.

   Site-wide semiannual groundwater and surface water sampling and testing should continue as planned but should not affect the excavation design described in this EDCAD.

Section 2: Detailed corrective action design overview

1. If the proposed EDCAD is different than requested by the MPCA, identify the differences and explain why.

   The proposed EDCAD is not significantly different than what has been requested by the MPCA.

2. Identify the technical lead responsible for overseeing the design, implementation, and reporting of the corrective action.

   Rob Blakely, PG of Bay West LLC

3. Discuss the reason for the proposed corrective action.

   A removal action has been requested by the MPCA. The current owner of the property, the Hibbing Public Utilities Commission (HPUC), has shown interest in future development of the Site. Impacts to shallow soil, groundwater, and soil vapor on the Site property may pose a risk to potential future receptors and significantly inhibit redevelopment options. The proposed corrective action - excavation of source area coal tar-impacted soil to up to 20 ft bgs - will allow the Site to be restored to productive use as a green space or for future construction and occupancy. Additionally, the proposed corrective action will significantly mitigate additional leaching of coal tar-related contaminants to groundwater.

4. Discuss the corrective action goal relative to the corrective action reason.

   The corrective action goal is to mitigate risks associated with the coal tar impacts to potential future receptors by physical removal of the bulk of the contaminant mass. Physically removing the bulk of the contaminant mass will mitigate any future coal tar-related risks associated with direct soil contact (during redevelopment), contaminant leaching to groundwater, and soil vapor inhalation. By accomplishing the goal of eliminating risks associated with shallow impacts, removing the bulk of the contaminant mass identified between 5 and 20 ft bgs the Site can be returned to a more productive use.

5. If interim corrective action was completed, describe how it complements the corrective action goal.

   No interim corrective actions were completed.

6. Describe how the corrective action will eliminate or reduce the risk.

There is little current risk to receptors from coal tar-impacted soil and groundwater at the Site, primarily because it is unoccupied and unimproved, and used exclusively for outdoor equipment, material, and vehicle storage by the HPUC. The corrective action is meant to protect potential future receptors utilizing the Site by removing the bulk of the contaminant mass. The corrective action will mitigate direct contact and soil leaching to groundwater risk associated with the identified coal tar-impacted material. It should be noted that the corrective action will be conducted to meet MPCA regulatory standards for commercial-industrial use and that any future development by a third party will likely necessitate additional assessment based on proposed configuration and land use.

7. Describe any proposed complementary corrective actions, including ongoing interim corrective actions, to be completed in association with the excavation.

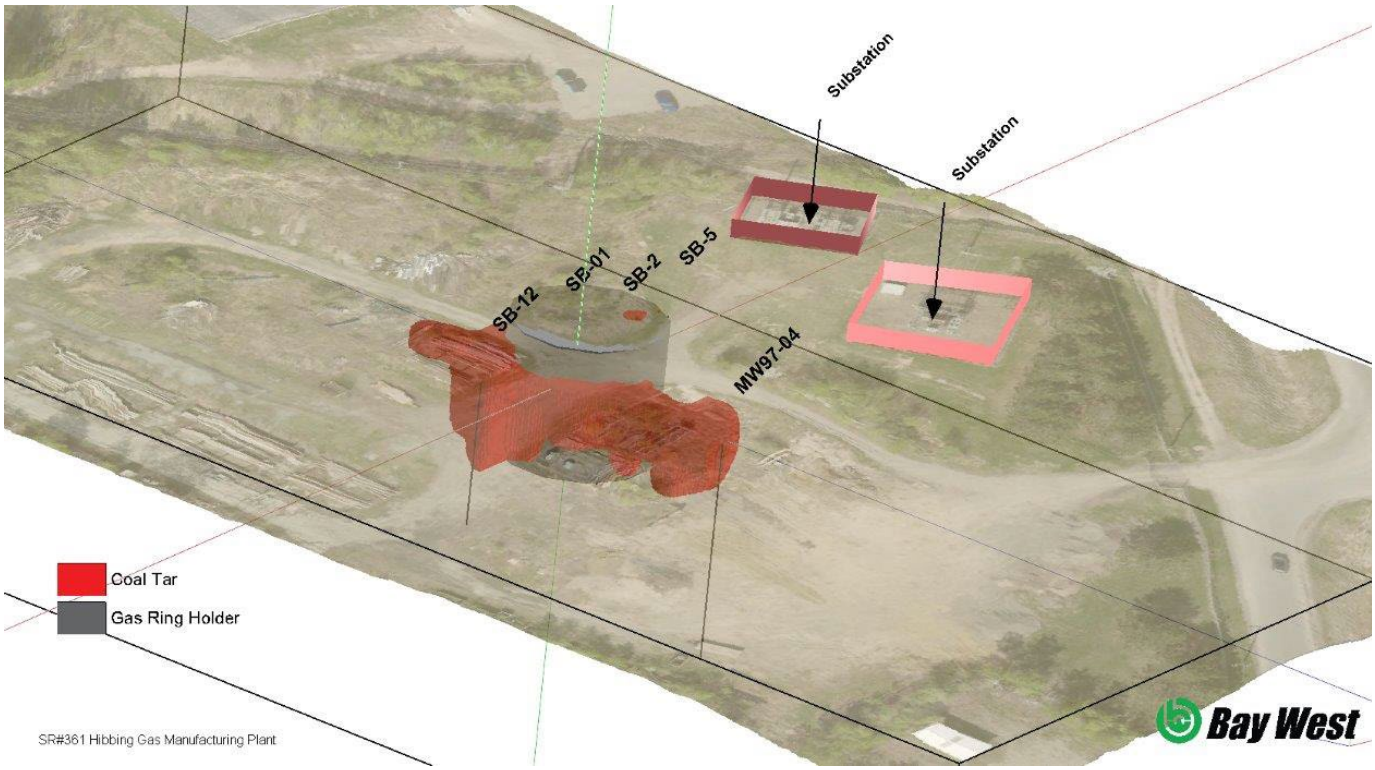
   The proposed excavation will be designed to remove nearly all of the existing coal tar impacts in the ONSA through physical removal. However, some limited coal tar mass may not be accessible beneath large physical features that may be left in-place (e.g., GHR). Complementary corrective actions in these situations, especially in the vadose zone, are assumed to be limited. If the vertical excavation limits extend to groundwater (approximately 30-ft bgs) or encounter groundwater at a shallower depth, complimentary corrective actions could include the addition of a proprietary activated carbon product (e.g., Petrofix, BOS 200, etc) which can also be applied to the vadose zone via direct push (i.e., GeoProbe) injection or other injection methods such as soil mixing, hydraulic and pneumatic fracturing, and vertical injection. For the purposes of this EDCAD, these complementary corrective actions are not planned to be performed until after the excavation has been completed and would require separate approval from the MPCA project team.

Section 3: Target zone

Illustrate the target zone's geometry, geology, and hydrogeology on a site map and cross sections in Section 10.

1. Identify the primary contaminant phase targeted by the excavation and describe the geometry, geology, and hydrogeology of the target zone.

   The primary target zone for excavation is the Gas Holder Ring (GHR) and vicinity around the feature. The primary contaminant phase targeted by soil excavation is the coal-tar impacted contaminant mass that is sorbed to soil particles and is present within the soil pore space at residual saturation levels in the vadose zone, and may extend to the capillary fringe and below the water table. The proposed target zone for excavation in the ONSA is based on visual data from fifteen (15) probes advanced in December 2023 (described above), along with approximately two dozen "TARGOST" borings advanced in the vicinity of the GHR. The magnitude and extent of source area coal tar impacts at the Site are well defined and are shown below in the 3d model.



2. Describe any surface or subsurface structures or conditions that could limit access to the target zone.

Historical Site Features and Associated Conveyance Piping

Based on historical site features (**Figure 2)** associated with former HGMP activities and their shown spatial relationship to the proposed ONSA excavation area (**Figure 3)**, Bay West anticipates encountering the following during excavation: Gas Holder Ring (GHR) foundation and Valve Pit, Tar Separator, Tar/Ammonia Well, and associated conveyance piping between these features. These historical Site features are illustrated in the former engineered design plans attached in **Appendix C**.

Based on the probe refusal in soil borings SB-1 thru 3 during the prior visual boring investigation, the GHR foundation/Valve Pit may be located 21-ft bgs. Based on former design plans, the GHR is a cylindrical feature and is believed to be constructed with concrete and measuring approximately 50 ft in diameter with a wall thickness of at least 1 foot thick. Based on surficial indications observed at the Site, the concrete walls are believed to extend from the foundations to the ground surface. The Valve Pit is shown located on the southwestern perimeter of the GHR and appears to measure 6 ft by 10ft with a wall thickness of approximately 1 ft.

The Tar Separator feature is another circular feature located east of the former Generator House and based on design specs measures approximately 15 feet in diameter. The thickness is unknown but is assumed to be approximately 1 foot. It is unknown whether the tar separator walls are still intact and how far they extend to the surface.

The Tar/Ammonia well located just north of the Old Retort House and based on design specs measures 18 ft x 12 ft x 8 ft deep. The wall thickness is approximately eight inches.

Design specs also show conveyance piping, ranging in size from 6- to 12-inches diameter, running between these features as shown on Figure 2.

Excavation specifications will include a requirement for the contractor to anticipate, remove, and properly dispose of these features, associated conveyance piping, and other appurtenances.

Utilities

Based on a 2018 Hibbing utilities map, there appears to be an electrical line labeled “3-750MCM 15KV URD, 5” Conduit” running northwest from the southern substation and in close proximity to the eastern portion of the proposed excavation (**Figure 3**). According to Luke Peterson with the HPUC, the associated substation and electrical line are currently scheduled for decommissioning beginning March 2025. Bay West assumes that the electrical line is active and will be the responsibility of the Contractor to deactivate and relocate the line during excavation activities if needed.

Based on the map, Bay West does not anticipate encountering any other active municipal utilities (e.g., gas, water, sewer, etc) during excavation activities.

Areas of Potential Refusal

Based on previous borings conducted at the Site, soil types located in close proximity to the GHR may include large gravel and/or boulders. GeoProbe refusal occurred repeatedly in this area during the visual boring investigation at depths ranging from approximately 15 to 18 ft bgs (SB-05 and SB-06). However, these soil types are not expected to hinder excavation activities. Large boulders may be encountered, however, and will be the responsibility of the contractor to manage.

Groundwater

Historical groundwater levels measured from monitoring wells screened within the shallow aquifer in the ONSA area have ranged from 25 to 35 ft bgs. The depth to groundwater measured from MW97-04, the shallow well located in closest proximity to the excavation area, measured 32.30 ft bgs during the May 2024 sampling event. The current proposed depth of excavation is approximately 20 ft bgs, so groundwater is not expected to be encountered. Any recovered groundwater, if encountered, may be impacted with petroleum hydrocarbons and will need to be managed, treated and disposed by the Contractor.

Section 4: Excavation plan

Provide a site map showing the proposed areal extent and depth contours of the final excavation and cross sections showing the soil profile, groundwater elevations, contaminant distribution, target zone, and proposed extent of excavation in Section 10.

1. Describe the excavation plan.

The coal tar impacts targeted for excavation at the Site are above the water table by up to 15 feet. Based on the soil types observed during visual soil borings, Bay West is conservatively assuming the soil scheduled for excavation qualifies as “Type C” soil as defined by Occupational Safety and Health Administration (OSHA) in 29 CFR Part 1926, Subpart P – Excavations. Excavations in Type C soil require sloping of at least 1.5:1 horizontal to vertical or require shoring. Sloped excavations in Type C soil with vertically sided lower portions require support/shielding against the vertical walls to a height at least 18 inches above the top of the vertical side.

The proposed excavation boundaries are illustrated on **Figures 4, 5, and 6,** including cross sections A-A’ (Figure 6A) and B-B’ (Figure 6B).

Excavation activities including surveying, safe excavation slope design (1:1.5 anticipated), impacted soil removal and disposal, and backfilling and restoration will be completed by the general contractor. It is not anticipated that structural integrity design, dewatering, and water treatment/disposal activities will be needed. Bay West will provide oversight of the contractor, complete all organic vapor screening during soil segregation (not including contractor employees), soil and groundwater sampling, guide excavation progression and extent, quantify/track soil removal, and complete field documentation and reporting associated with the Site work. The contractor construction tasks are anticipated to include the following:

- Obtain any necessary permits (e.g. excavation).
- Survey excavation boundaries.
- Air monitoring and health and safety protocol (including but not limited to Level C PPE if needed) for all excavator and other equipment operators employed by the contractor.
- Utility locate/clearance. Disconnect utilities within excavation zone, if necessary.
- Install erosion control best management practice (BMP) structures (such as silt fence) and construction safety fences.
- Provide and install plastic sheeting (10ml or thicker) to any non-impacted soil stockpiled on-Site at the end of each day (or during the day if needed), regardless of storm water permitting requirements. Only non-impacted soil should be stockpiled on Site to reduce vapor/odor; impacted soil should be transported off Site during the same day.
- Mobilize excavation and dewatering equipment.
- Determine haul truck traffic patterns/loading station.
- Setup stockpile locations, if necessary.
- Installation of shoring or other engineered controls, if applicable.
- Implement dewatering/treatment system and manage water, if needed.
- Excavation of target zones.
- Transport/disposal of removed soil.
- Provide and import clean backfill.
- Backfill, compact and grade the excavation.
- Complete site restoration.

Bay West will work with awarded contractor and property contact to determine the best approach/schedule to minimize disruptions to the landowner and nearby occupants, as applicable.

Site Controls

The following controls will be necessary during excavation activities to ensure the work is conducted in a manner that is protective to the health and safety of onsite workers and the general public. A SSHP detailing personal health and safety measures will be prepared prior to Site work. The earthwork contractor will also prepare their own SSHP that will address environmental concern, as well as those concerns normally associated with excavation activities. Based on our experience with similar excavations, Level C Personal Protective Equipment (PPE) will likely be required, especially during excavation of heavily impacted soil in/around the GHR. PPE may be adjusted based on observed and measured Site conditions.

Engineering controls will be implemented during the response actions to protect human health and the environment including Site-wide dust control, storm water control and Site access. These controls will be designed, planned, and documented throughout the RAP/CCP implementation to ensure thoroughness and as a technique to manage the construction.

The primary COC exposure route of concern at the Site is inhalation of VOC vapor, along with fugitive dust with potential elevated VOC, PAH, and cyanide concentrations. Currently, the Site is covered with sparse vegetation and is undisturbed, which prevents the generation of contaminant-containing dust. When earthwork occurs, controls must be in place to minimize the generation of dust during work and non-work hours. VOC vapor inhalation will be mitigated using PPE described above and vapor suppression control described below.

<u>Odor Suppression/Control</u>

Based on our experience, coal-tar impacted sites typically require odor suppression/control to suppress vapors from volatile organic compounds (VOCs) that are released during excavation of impacted soils. Vapor/odor suppression and control will be the responsibility of the Contractor. Any method(s) proposed by the Contractor will need to be pre-approved by the MPCA and Bay West. Methods will be deemed successful provided they meet the air quality requirements at the Site boundary. Suggested vapor/odor suppression controls include, but are not limited to, suppression using a chemical solution and/or erection of a structure and filtering vapors/odors during active excavation. Bay West recommends use of BioSolve Pinkwater (or acceptable alternate) to effectively control nuisance vapors during excavation activities. Equipment and materials included in vapor suppression activities will include, but not be limited to, vapor suppression raw material containerized in 55-gallon drums, a mixing tank, and pressure washer. An estimate for the recommended quantity and pricing of BioSolve is included in **Appendix E** of this EDCAD.

<u>Air Monitoring and Dust Suppression</u>

Bay West personnel will monitor particulate and/or contaminants of concern (e.g., benzene) in air during excavation to ensure health and safety of Bay West employees is in compliance with the Site-specific Health and Safety Plan. Bay West will also monitor upwind, downwind, and employee breathing zone air during excavation activities to assess airborne concentrations of dust/particulate and contaminants of concern.

Perimeter air monitoring will be performed during subgrade activities to document that the dust control measures are successful at keeping dust levels below the dust standard. Two or more real-time particulate air monitors will be installed at locations along the perimeter of the Site, located upwind and downwind from the work area, along with potentially on the excavator and/or Site field technician. The monitoring locations would be spaced to provide reasonable coverage of predominant wind directions. Wind direction would be documented by environmental field personnel daily. The monitors will be checked up to 6 times each day by the environmental field personnel to ensure the dust standard has not been exceeded over any 8-hour period. No particulate samples are proposed for laboratory analysis.

The Occupational Safety Health Administration (OSHA) nuisance dust standard would be followed. The standard is 15 milligrams per cubic meter (mg/m3) over an 8-hour time-weighted average (8-hr TWA) with a respirable fraction standard of 5 mg/m3 (8-hr TWA).

If the airborne nuisance dust concentrations at the perimeter of the Site exceed the exposure standards, one or more of the following actions shall be taken:

- Apply water to all accessible drive areas with a water truck.
- Spray water/BioSolve solution on exposed stockpiles or excavations.
- Cover exposed stockpiles or excavations with plastic or foam.
- Stop work.

The contractor will provide the defined and specified practices to control fugitive dust generation during earthwork activities. The purpose is to reduce the risk of exposure to airborne materials that may contain elevated concentrations of VOC, PAH, or other COCs to workers and to the general public adjacent to the Site. These practices will be implemented when impacted soil is exposed at or below the ground surface.

Dust during excavation and grading will be controlled by applying water/BioSolve to the soil being worked. Visibly dry areas will be watered as they are observed. The amount of impacted soil that is exposed at the end of each work shift will be minimized, and those areas left exposed will be sprayed down prior to the end of each work shift. The amount of water used for dust suppression will be carefully controlled so that runoff does not occur. Records will be kept of the date, time, location, and method of dust suppression.

Erosion Control

The contractor will be responsible for implementing appropriate erosion controls in accordance with general permit requirements for storm water control at construction sites. This typically includes installation of silt fences at the project boundaries and limits of excavations as appropriate to control erosion during work on-site. In addition, the contractor will be responsible for installing sediment traps over storm sewer catch basins and performing street sweeping to prevent muddy or dusty conditions on city streets (i.e., track out sediment control).

Scheduling

Free product coal tar and coal tar-impacted soils are associated with significant contaminant volatilization and odor if disturbed via excavation. Bay West recommends that the Contractor schedule the excavation work during the late fall/early winter to mitigate unwanted effects associated with volatilization. Additionally, residents will likely be less impacted during this time period because they will be spending less time outdoors and/or with dwelling windows open.

2. Provide the estimated in-place volume (cubic yards) of clean overburden soil to be excavated.

The estimated top of soil impacts across the ONSA based on all data collected to date and proposed excavation layout is presented in **Figure 5,** and cross sections of the proposed excavation are included in **Figures 6, 6A, and 6B**. The proposed maximum excavation depth is approximately 20 ft bgs. Assuming an Occupational Safety and Health Administration (OSHA)-recommended 1.5:1 slope for Type C soils, or for Type A or Type B soils over Type C soils, approximately 3,500 CY of "clean" soil will be excavated ("clean" soil for this EDCAD is defined as any soil with a PID reading less than 200 ppm and/or no obvious visible/olfactory evidence of contamination), stockpiled on-site, and used as backfill following removal of the GHR and excavation of coal tar-impacted soil.

Soil Types are defined by OSHA as:

- Type A means cohesive soils with an unconfined compressive strength of 1.5 ton per square foot (tsf) (144 kPa) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A. However, no soil is Type A if:
    i. The soil is fissured; or

ii. The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or
iii. The soil has been previously disturbed; or
iv. The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater; or
v. The material is subject to other factors that would require it to be classified as a less stable material.

- Type B means:
  i. Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48 kPa) but less than 1.5 tsf (144 kPa); or
  ii. Granular cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.
  iii. Previously disturbed soils except those which would otherwise be classified as Type C soil.
  iv. Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
  v. Dry rock that is not stable; or
  vi. Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H:1V), but only if the material would otherwise be classified as Type B.
- Type C means:
  i. Cohesive soil with an unconfined compressive strength of 0.5 tsf (48 kPa) or less; or
  ii. Granular soils including gravel, sand, and loamy sand; or
  iii. Submerged soil or soil from which water is freely seeping; or
  iv. Submerged rock that is not stable; or
  v. Material in a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or steeper.

Based on the historical land use at the Site and our general understanding of industrial operations, a large portion of the soil at the Site, specifically within the gas holder ring and above/near other historical site features, has likely been previously disturbed. These soils, along with the surrounding and possibly native silty soils, could potentially be considered Type B soil, but historical visual borings have also indicated the presence of more granular soils, so for design purposes the soil is being considered Type C. Actual soil conditions will be assessed in the field using methods such as the thumb penetration test, pocket penetrometer, or visual test. If soil types are determined to be Type A or B, the sloping requirements will be adjusted accordingly to implement more effective source area removal (i.e., steeper slopes) and minimize displacement of "clean" peripheral and overburden soils.

In lieu of sloping, sheet piling, trench box, or other support/shield systems may be considered as needed, but implementation of these methods is not expected and likely unwarranted.

3. Provide the estimated in-place volume (cubic yards) of petroleum-contaminated soil to be excavated for treatment.

   Using the contour intervals discussed above approximately 3,500 to 4,000 in-place CY of impacted soil will be excavated and disposed of. Most but not all of this volume will be accessible to excavation but was assumed to be excavated for conservative life-cycle cost estimations.

4. Describe how contaminated soil will be differentiated and segregated from uncontaminated soil.

   Bay West will primarily use visual and olfactory indications of contamination to determine final vertical/horizontal extent. Organic vapor screening of soil with a PID will also be used to confirm when the "clean" extents of the excavation have been established via visual/olfactory observations. Bay West will observe/screen soil as excavation approaches "impacted" depths as determined by the historical TarGOST and visual boring investigations. All soil with no significant visual/olfactory evidence of contamination will be considered "clean" and staged for later use as backfill. Excavated soil exhibiting significant visual/olfactory indications of coal tar impacts will be loaded into haul trucks for off-site disposal, or temporarily staged on plastic sheeting for subsequent loading, hauling and disposal. A PID will also be used to segregate "clean" versus impacted soil in situations where visual/olfactory observations are not feasible i.e., along the perimeter of the impacted soil with "mixed" clean and dirty soil. Soil with PID headspace readings of greater than 200 ppm will be considered "dirty" and hauled off-Site to the landfill. Soil with PID headspace readings of 200 ppm or less will be temporarily stockpiled for subsequent reuse as backfill.

   Because several TarGOST and visual borings were used to develop the targeted excavation zone, minimal field segregation will be required once impacted soil depths are reached. If soil conditions appear to change from impacted to clean (or vice versa) based on visual or olfactory observation, Bay West will assist in segregating contaminated from uncontaminated soil by using field methods including PID screening, petroleum sheen testing, and visual observation.

   <u>Proposed Excavation Phases</u>

   The excavation methodology will be developed and conducted by the Contractor based on experience and feedback from Bay West and the MPCA. Bay West proposes to complete the excavation using a phased approach to maximize efficiency by focusing on the known areas of significant coal tar impacts, which also minimizes the footprint of impacted exposed soils that are likely to create nuisance odors and contaminant volatilization. This method will prevent all of the overburden from being removed from the planned excavation area and instead use a more "excavation cell" approach.

   Phase I – GHR Source Removal

   Bay West anticipates the first phase of excavation will commence in the GHR area due to known significant vadose zone coal tar impacts. First, approximately 4-feet of "clean", overburdened soil will be excavated and stockpiled, followed by removal and disposal of coal-tar impacted material to the depth of the gas holder ring i.e., approximately 20 ft bgs. Excavation will continue

with the removal of contaminated soil along lateral limits beyond gas holder ring diameter based on visual observations and sloping requirements. Removal of the GHR foundation concrete will be discussed with the project team based on at-depth observations of the extent of coal tar impacts around the GHR area. This area will also be further assessed during Phase II described below. Contractor should assume removal of at least the top 10-feet of the GHR concrete will need to be demolished and removed. A field decision will be made whether to remove additional foundation deeper than 10-feet bgs. Concrete may be recycled at the discretion of the Contractor provided it meets recycling facility destination requirements.

Phase II – GHR Lateral Expansion and Vertical Impact Assessment

Bay West anticipates that the second phase of excavation will include removal of the former GHR Valve Pit and conveyance piping traversing southwest of the GHR features along with associated contaminated soil impacts. Additional excavation in this area during this Phase should also include an assessment of the area immediately surrounding the GHR and the potential vertical extent of impacts past the GHR (i.e., deeper than 20 ft bgs) and whether these impacts warrant the removal of the GHR base concrete, which Bay West estimates includes approximately 60 CY of concrete that will require landfilling. It should be noted that the GHR may not have a concrete bottom, and soil boring refusal at this depth was instead due to dense, sandy soil/gravel and cobbles. Regardless, contractor should assume that contamination is present to at least 20-feet below grade.

Phase III – Additional Former Feature Excavation

Phase III of the excavation will include additional overburden removal in the areas of the former Tar Separator (east of Generator House) and Tar/Ammonia Well (north of Old Retort House), if needed. These excavations will be advanced in a similar manner to the Phase I excavation to minimize contaminant volatilization. These areas will be excavated to depth and soils will be segregated as described above. This Phase will also include the removal of any remaining suspect conveyance piping and other unplanned subgrade features, if encountered. Contractor should assume full removal of Tar Separator and Tar/Ammonia Well foundations and any associated conveyance piping (see Site Figures).

Alternate Excavation Approach

The Contractor may decide to approach the excavation differently and consider conducting removal of the smaller structures and piping prior to excavation of the GHR. This method would allow the Contractor an easier start and give the project team a better handle on the scale of potential odor issues prior to excavation of the GHR.

5. Describe field decisions that will be used to determine the final limits of the excavation.

   As discussed above, Bay West will primarily use visual and olfactory indications of contamination to determine final vertical/horizontal extent. Organic vapor screening of soil with a PID will also be used to confirm when the “clean” extents of the excavation have been established via visual/olfactory observations. For the most part, the removal of the full extent of impacted soil will not be impacted based on physical structures (e.g., gas holder ring base).

   Petroleum impacts have been relatively well defined based on multiple visual soil borings and TarGOST probes advanced in the ONSA portion of the Site to date. Final excavation limits should be similar to the proposed limits presented in this report. Limitations of the prior borings include a maximum depth of between approximately 15- and 20-ft bgs due to refusal at these depths, most commonly associated with either known subgrade obstructions (e.g., likely gas holder ring base) or probe refusal due to gravel encountered at depth. Based on the vertical extent of contamination observed during prior investigations and benzene and cyanide impacts to groundwater in the ONSA area and downgradient, it is likely that impacted soils are present in the deeper vadose zone i.e., from approximately 20- to 30-ft bgs, and may even extend deeper into groundwater-saturated soils believed to be encountered around 30-ft bgs based on ONSA monitoring well data. Removing the top ten feet of the GHR foundation should allow deeper than excavation than 20 feet bgs, if needed.

Section 5: Waste generation, handling, and disposal

Include copies of waste disposal documents, permits, and related documentation in Appendix D.

1. Provide a dewatering plan for addressing petroleum-contaminated groundwater encountered during excavation activities, including how it will be removed, handled, and disposed of. Describe any required disposal approvals or permits. If dewatering is not planned, a contingency dewatering plan must be described in the event significant volumes of petroleum-contaminated groundwater are encountered.

   Based on recent/historical depth to groundwater measurements in monitoring wells located near/within the ONSA, significant dewatering activities are not planned. The planned depth of the excavation is approximately 20-feet bgs, and groundwater has typically been encountered at depths greater than 30-feet bgs in the ONSA area (i.e., MW97-04). However, any significant precipitation into the open excavation may also trigger the need for dewatering.

   Regardless, in the event of significant precipitation or volume of perched groundwater is encountered, a contingency dewatering plan will be prepared by the excavation contractor. The excavation contractor will be responsible for providing all necessary dewatering and treatment equipment. Bay West will provide the contractor with soil data, available shallow subsurface hydrogeologic properties, and groundwater analytical results within the excavation area and will require a dewatering plan in the bid specifications. The excavation contractor will be responsible for development and implementation of the contingency dewatering plan.

   Slug tests were performed at monitoring well MW97-04, located within the proposed area of excavation, during site assessment conducted by Bay West in 2018. An average hydraulic conductivity of 0.921 ft/day in the shallow water bearing zone at MW97-

04. This hydraulic conductivity corresponds to silty or fine sand.

2. Describe how light non-aqueous phase liquid (LNAPL) encountered during excavation or dewatering activities will be recovered, handled, measured, and disposed of.

   Bay West does not anticipate encountering significant quantities of mobile LNAPL during excavation or during dewatering activities, if dewatering is required. LNAPL has not been encountered in any ONSA monitoring wells. Additionally, the vertical extent of excavation is not expected to encounter groundwater. Confirmation borings conducted during the TarGOST investigation did encounter very thin layers of what basically appears to be "free product" trapped within confining layers of fine-grained soils.

   If significant mobile LNAPL is encountered, the LNAPL will be extracted separately via vacuum truck or via the excavation dewatering equipment. If recovered by the excavation dewatering equipment, the LNAPL will be separated from the recovered liquid stream by either an oil-water separator or via an organo-clay filter or an oil absorbent media filter. Recovered LNAPL will be temporarily containerized on-site for subsequent off-site disposal at an MPCA-approved disposal or fuel recycling facility.

3. Describe how contaminated soil will be handled, stored, and treated or disposed of. Identify the location of the treatment/disposal facility.

   Excavation, staging, transport, and disposal of contaminated soil will be handled by the Contractor. Bay West anticipates petroleum impacted soil will be removed via excavator and live loaded into haul trucks and/or roll off bins lined with poly sheeting that will transport material directly to the disposal facility. Material that cannot be directly loaded into haul trucks will be temporarily placed on top of poly sheeting. Any temporarily staged petroleum-impacted soil not loaded and hauled off-site by the end of the workday will need to be covered by the Contractor with poly sheeting and secured using sandbags or other weighed materials. Contractor should also specify any additional measures necessary for odor control if heavily impacted soil is planned to be staged onsite to effectively address nuisance odors that may affect nearby residents and businesses.

   Impacted soil will be disposed at the SKB - Shamrock landfill in Cloquet, Minnesota. The landfill is addressed 761 MN-45, Cloquet, MN 55720 and is located approximately 75 miles southeast of the Site. Bay West contacted Kyle Backstrom (218-451-1386), Site Manager at SKB Environmental – Shamrock, regarding disposal of petroleum-impacted soil. After confirming that the MPCA will recognize the EPA exemption for coal tar waste and submitting a completed waste profile sheet including analytical data from the ONSA soils, SKB Shamrock landfill agreed to accept petroleum impacted soil at a cost of $25/ton (assuming disposal in calendar year 2025). The record of this correspondence along with associated forms and data submitted to Shamrock is included in **Appendix D** of this report.

4. Describe any other wastes that will be generated, the estimated waste volumes, the handling and disposal requirements, and any required discharge or disposal permits.

   Bay West anticipates encountering subsurface concrete and/or brick structures associated with former gas plant operations. The concrete structures will likely require demolition and will be hauled to- and disposed at the SKB Shamrock landfill in Cloquet, Minnesota. Based on former plant drawings and soil investigation results, the former gas holder ring base is likely constructed with 1-foot thick concrete and has a diameter of approximately 50-feet (about 75 CY) requiring removal has been estimated based on scaled Site maps of the drive areas and of former building layout. The vertical wall of the GHR are believed to extend from depth to the ground surface i.e., approximately 20-feet tall (about 120 CY). The former GHR structure will likely be removed based on the feasibility, cost, and benefit associated with the removal are assessed by Bay West, the Contractor, and the MPCA.

   Several former utilities and/or coal tar product conveyance piping associated with the Site but no longer in use will likely require removal and abandonment. Conveyance piping noted on former coal tar site plans located between the GHR and old retort house is likely still in-place and will likely require removal. Former sewer and/or water service lines associated with former buildings will also likely be encountered and removed. Refer to **Figure 2** for an illustration of former building features and conveyance piping that will likely require removal.

Section 6: Post-excavation soil sampling and monitoring

1. Describe post-excavation soil sampling to document contamination remaining in the sidewalls and bottom of the final excavation.

   Based on the nature of contamination, the primary method of delineating the lateral and vertical extents of excavation will be visual and olfactory observations. Additionally, during the course of the excavation, Bay West personnel will collect soil samples from the excavator bucket at designated locations and depths and screen soils with a PID for confirmation purposes. Prior to backfilling, excavation sidewall and bottom soil samples will be collected for PID screening at a rate of approximately one sample per 25 linear feet of sidewall and one sample per 100 square feet of excavation bottom in general accordance with MPCA Guidance Document c-prp3-01: Excavation of Petroleum-Contaminated Soil and Tank Removal Sampling. The soil samples will be analyzed for DRO, PAH, metals, cyanide and VOCs. Based on the unknown nature and distribution of coal-tar impacts related to historical subgrade features, along with the unknown vertical extent of impacts deeper than 15- to 20-feet bgs, the final limits of the excavation are difficult to predict. For cost estimate purposes, we estimate that approximately 80 confirmation soil samples will be collected and analyzed for the above-listed COC. Based on confirmation sample results collected during the first few weeks of excavation, certain COC (e.g., cyanide) may be omitted during subsequent sampling based on conversations with the MPCA.

2. Discuss recommendations for post-excavation monitoring (e.g., groundwater, vapor), if applicable, to measure the success of

the corrective action.

Bay West will evaluate and discuss post-excavation monitoring with the MPCA project staff during or upon completion of correction action activities.

Groundwater monitoring wells located in relatively close proximity to the limits of the proposed excavation include MW97-01, MW97-02, MW97-03, MW97-04, and MW00-13. Resutls from semiannual groundwater monitoring conducted by Bay West since 2019 indcate that benzene, ethylbenzene, and naphthalene have been detected in MW00-13 (co-located with MW97-04, in close proximity to the southwest portion of the proposed excavation area). Additionally, monitoring well MW00-08, located approximately 500-700 feet north-northwest (i.e., downgradient) of the proposed excavation area has historical impacts of benzene well above the MDH HRL. However, monitoring results from well MW97-01, located between the ONSA source area and MW00-08, have not indicated any analytes are present above laboratory reporting limits. These wells will continue to be monitored on a semiannual basis prior and subsequent to the proposed ONSA remedial excavation.

Monitoring wells MW97-04 and MW00-13 are located near the proposed excavation area and may need to be abandoned and rebuilt prior/subsequent to excavation. Cost estimates for well abandonment and rebuild are included in Section 9 of this EDCAD for contingency purposes as needed. Costs for ongoing groundwater monitoring are not included.

Section 7: Site restoration

1. Describe how excavated overburden soil will be reused as backfill, or otherwise disposed of.

   Excavated overburden will be staged on-site for subsequent use as fill material. Based on previous soil investigations, all soil from the surface to approximately 5-10 feet below grade will likely be considered “clean” and re-usable as fill. Topsoil in vegetated areas will be scraped and temporarily staged for subsequent re-use. Remaining “clean” subsurface soils will be staged on-site and used as backfill as needed. Prior to use as backfill, soil stockpile composite samples will be collected and analyzed for petroleum, cyanide, and potentially metals contamination per MPCA guidance.

   Based on the nature of contamination, the primary method of segregating “clean” and “dirty” soils will be visual and olfactory observations. Bay West will also screen soil with a PID as excavation approaches “impacted” depths as determined by the TarGOST and visual boring investigations. All soil with a PID reading at or below 200 ppm will be considered “clean” and staged for later use as backfill. Excavated soil exceeding a PID reading of 200 ppm will be loaded into haul trucks for off-site disposal, or temporarily staged on plastic for subsequent loading, hauling and disposal.

2. Describe how imported clean fill will be used as backfill, and where it will be placed in the excavation.

   “Clean” overburden removed during excavation activities will be used as backfill in the final excavation. Additional clean fill require will be imported from an approved location to be determined prior to the Work. A backfill origin form will be provided to- and completed by the Contractor. The backfill origin form will describe the source of the backfill and include a signed statement certifying that the material is free of contamination. The fill will consist of sand with silt (SP-SM), as defined by the current ASTM:D2488 or D2487 methods, or Engineer approved equal and shall be free of rocks or stones larger than 3 inches, organic matter, trash, chunks of highly plastic clay, snow or ice, or any other unsatisfactory material.

   Clean overburden will be placed in the excavation bottom first followed by imported clean fill. The backfill will be placed at the base of the excavation in no greater than 12-inch lifts. Each lift will be compacted to a minimum of 95 percent of standard proctor density (ASTM D-698) beneath paved or gravel areas or to a minimum of 90 percent of standard proctor density in landscaped areas.

3. Describe site restoration activities.

   The proposed excavation area includes areas with sparse grassy vegetation and hard-packed dirt and gravel and is primarily used for equipment storage by the Hibbing PUC. Therefore, upon completion of the excavation activities, the site will be restored to grade with topsoil and hydroseeded (MNDOT standard seed mix or equivalent). Restoration activities will include backfilling and compacting the excavation with “clean” overburden and imported clean fill, adding topsoil as needed, grading, hydroseeding and mulching. In addition, although none are expected to be encountered, any permanent and active utilities that were temporarily moved, padded, braced, disconnected and/or removed due to the excavation activities (if necessary) will be restored and reconnected. Inactive utilities that are encountered and removed for the excavation, most likely associated with former manufacturing plant buildings, will not be replaced.

Section 8: Schedule

1. Provide a schedule for completing major activities, including any pre-excavation activities, the excavation itself, site restoration, and submittal of Corrective action excavation report.

   The following list summarizes the anticipated schedule for completing major activities associated with the proposed corrective action:

   - Prepare plans and specifications (4 -6 weeks)
   - Bidding and procurement (4 weeks if bidding is successful first round)
   - Work plan/cost proposal (2 - 4 weeks)
   - Acquiring permits, scheduling, coordination, and planning with contractor and property contacts (5 - 7 weeks)
   - Mobilization/setup (1 week)

- Excavation Activities (8 - 10 weeks)
- Site Restoration (1 - 2 weeks)
- Prepare Final Excavation Report (2 - 4 months; upon completion of excavation activities)

The schedule above is dependent on Site access and contractor availability. Bay West will specify the project timeframe in bid specifications.

Section 9: Cost effectiveness evaluation

Provide an updated life-cycle cost estimate in Appendix E. Include all pre-excavation, excavation, and post-excavation activities; site restoration; and reporting. Update design phase costs to reflect actual costs.

1. Summarize the updated life-cycle cost estimate below. Describe any major assumptions that were made in order to estimate costs.

Design phase (incurred costs)	
Focused investigation stage	$ 100,000
Pilot test stage	$ N/A
EDCAD stage	$ 20,000
Design phase subtotal	$ 120,000
Implementation phase (estimated costs)	
Pre-excavation stage	$ 26,680
Excavation stage	$ 1,380,260
Site restoration stage	$ Included in Ex Stage
Post-excavation monitoring stage	$ TBD
Implementation phase subtotal	$ 1,406,940
Life-cycle cost estimate total	**$ 1,646,940**

2. Compare the updated life-cycle cost estimate to the life-cycle cost estimates provided in Conceptual corrective action design (CCAD) report, and if applicable, in Pilot test report and discuss the results of this comparison.

   Neither a CCAD nor Pilot test report were prepared in conjunction with this EDCAD. As described in Section 1.3 of this EDCAD, a Focused Feasiblity Study (FFS) was prepared for the Site in February 2023.

   Life-cycle cost estimates provided in the FFS were based on a model that was created prior to the Visual Borings conducted in late 2023. The estimated weight of soil scheduled for removal in the FFS was approximately 4,000 tons, while the estimate based on the latest model was based on 6,000 tons. Therefore the estimated cost to complete the excavation increased from approximately $1.2M to $1.4M.

3. List the corrective action alternatives evaluated in the CCAD with their corresponding, and if applicable, updated life-cycle cost estimate totals. Compare the life-cycle costs of the alternatives with the updated life-cycle cost estimate of the proposed excavation.

   Corrective action alternatives evaluated in the FFS and their corresponding estimated life-cycle cost estimates compared to the proposed remedial excavation are summarized below:

Remedial Alternative Evaluated	Estimated Remedial Time Frame	Estimated Life-Cycle Cost
Thermal Desorption (Saturated material only)	11 weeks	$ 5,452,080
Thermal Desorption (All impacts)	17 weeks	$ 6,358,560
Excavation & Disposal (Saturated material only)	8 weeks	$ 720,000
Excavation & Disposal (All impacts) ***chosen remedy***	12 weeks	$ 1,221,000
Combined In-situ Chemical Oxidation (ISCO) & Stabilization	10 weeks	$ 603,000*
Thermal Conduction Heating (TCH)	67 weeks	$ 3,374,000
Institutional Controls	N/A	$ 359,000

*Note: The estimated cost for ISCO & Stabilization is for one treatment only. Based on the analytical data and visual borings conducted within the proposed excavation area, more than one treatment (ISCO, not stabilization) would likely be necessary.

4.

Provide justification for whether the proposed excavation remains the most cost-effective alternative for achieving the corrective action goal.

The Bay West 2023 FFS comparative analysis of Alternatives narrative discussion and quantitation table for coal tar remediation options did not clearly identify the best Alternative to address the contamination at the Site (i.e., a few options received similar scores) and only slight differences in the balancing criteria score were found between these Alternatives; however, Alternative 3B received the highest overall scores and was chosen to be evaluated further for remedy selection. Alternative 3B is the excavation of coal-tar impacted materials within the ONSA i.e., the proposed excavation detailed in this EDCAD.

The remedial alternatives were scored in the FFS based on the following criteria: Overall Protection of Human Health & Environment, ARARs, Long-term Effectiveness and Permanence, Reduction of Toxicity, Mobility or Volume through Treatment, Short-term effectiveness, Implementability, and Cost.

Based on the results of 2023 visual boring investigation and discussions with the MPCA Project Team, the chosen remedy has remained source area removal via excavation.

Based on the results of the 2023 FFS, a strong alternative to source area removal via excavation was in-situ chemical oxidation and soil stabilization. The following factors influenced the final decision to proceed with excavation versus ISCO/SS:

- Source area excavation of contaminated materials, especially coal tar-impacted materials which are easily differentiated from “clean” soil via visual and olfactory observation, essentially has a 100% confidence of removal. ISCO/SS, however, is performed in-situ and confirmation of source area removal is based on subsequent sampling and analysis of the source area materials, which is highly infeasible due to soil stabilization. Additionally, the high number of old subgrade site features associated with MGP operations (Gas Holder Ring, Tar Pits, Wells, conveyance piping, etc) add an additional unknown degree of where the impacts are actually located in the subsurface.
- Because the impacts are located in the vadose zone, effective ISCO treatment is generally more challenging versus ISCO’s typical use in saturation soils. Additionally, ISCO is typically delivered using a push probe rig, and probe rig refusal was typically encountered in the ONSA due to a higher incidence of gravels at depths below 15 ft bgs.
- The ISCO/SS remedial strategy would essentially create a large mass of subgrade concrete within the area of treatment, which would dramatically reduce the “developability” and therefore the overall land value of the Site, especially if the intended future use required subgrade construction (e.g., basement).
- Subsequent to ISCO/SS, clay saturated materials would likely continue leaching to groundwater (even with stabilization measures). Source area removal via excavation eliminates the potential of future contaminant leaching.
- High benzene, naphthalene, and other factors that contribute to an increased oxidant demand may require multiple ISCO treatments, leading to significantly increased costs.

Section 10: Figures

Attach new figures specific to this report in order of discussion in the text. All figures must include a north arrow, scale, and legend as applicable. Approximate scales are not acceptable. Figures required in Appendix A should not be included in this section. New figures must include those listed below. Attach additional figures as needed and list below. **Double click checkboxes to select *Checked* and select *OK*.**

☒ One or more site maps showing (as applicable):

- Structures
- Boring and well locations (including any drinking water wells on site)
- Suspected source(s) of LNAPL
- Locations and depths of on-site buried utilities
- All past and present petroleum storage tanks, piping, dispensers, and transfer areas
- Horizontal extent of LNAPL
- Horizontal extent of the target zone
- Areal extent and depth contours of the final excavation

Distinguish sequential elements of investigations by dates, symbols, etc. in the legend.

☒ Cross sections showing the soil profile, groundwater elevations, contaminant distribution, target zone, and proposed excavation extent.

Section 11: Tables

Attach new tables specific to this report in order of discussion in the text. Tables required in Appendix A should not be included in this section. List all new tables below in numerical order.

Table 1 – Monitoring Well Construction Information

Table 2 – Groundwater Elevations

Table 3 – Groundwater Analytical Results

Table 4 – Surface Water Analytical Results

Table 5 – Soil Analytical Results

Table 6 – Grain Size Results

Section 12: Appendices

Attach all required or applicable appendices in the following order. Indicate those appendices that are included in this report by marking the check box. All reproduced data must be legible. Attach additional appendices as needed and list below.

☒	*Appendix A*	Cumulative and updated tables and figures from Investigation report.
☒	*Appendix B*	Additional site investigation, site monitoring, and interim corrective action methods and procedures and associated documentation (boring logs, sampling information forms, laboratory analytical reports, etc.).
☒	*Appendix C*	Focused investigation and/or pilot test tables, figures, and other information, if applicable.
☒	*Appendix D*	Waste handling and disposal documentation and required permit/approval applications and/or acquired permit/approvals.
☒	*Appendix E*	Updated life-cycle cost estimate for the proposed corrective action, and if applicable, updated life-cycle costs estimates for non-selected alternatives.

FIGURES

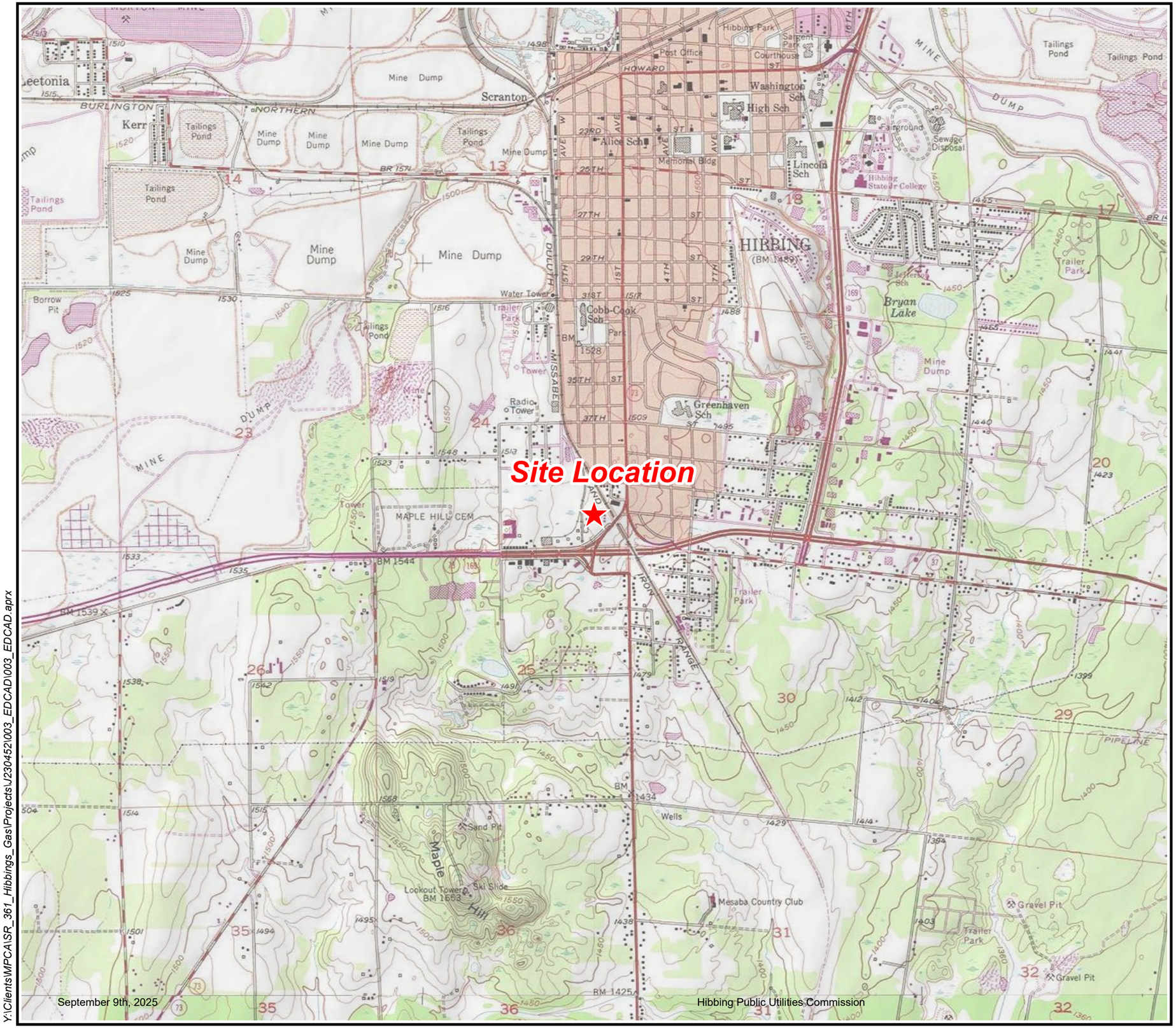


Figure 1

Site Location Map

Former Hibbing
Gas Manufacturing Plant

Hibbing, MN

Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: National Geographic Society, i-cubed

0 2,000 4,000 Feet

0 600 1,200 Meters

1:24,000

★ Site Location

Bay West

Drawn By: N.J. Date Drawn/Revised:6/10/2024 Project No.J230452

September 9th, 2025

Hibbing Public Utilities Commission

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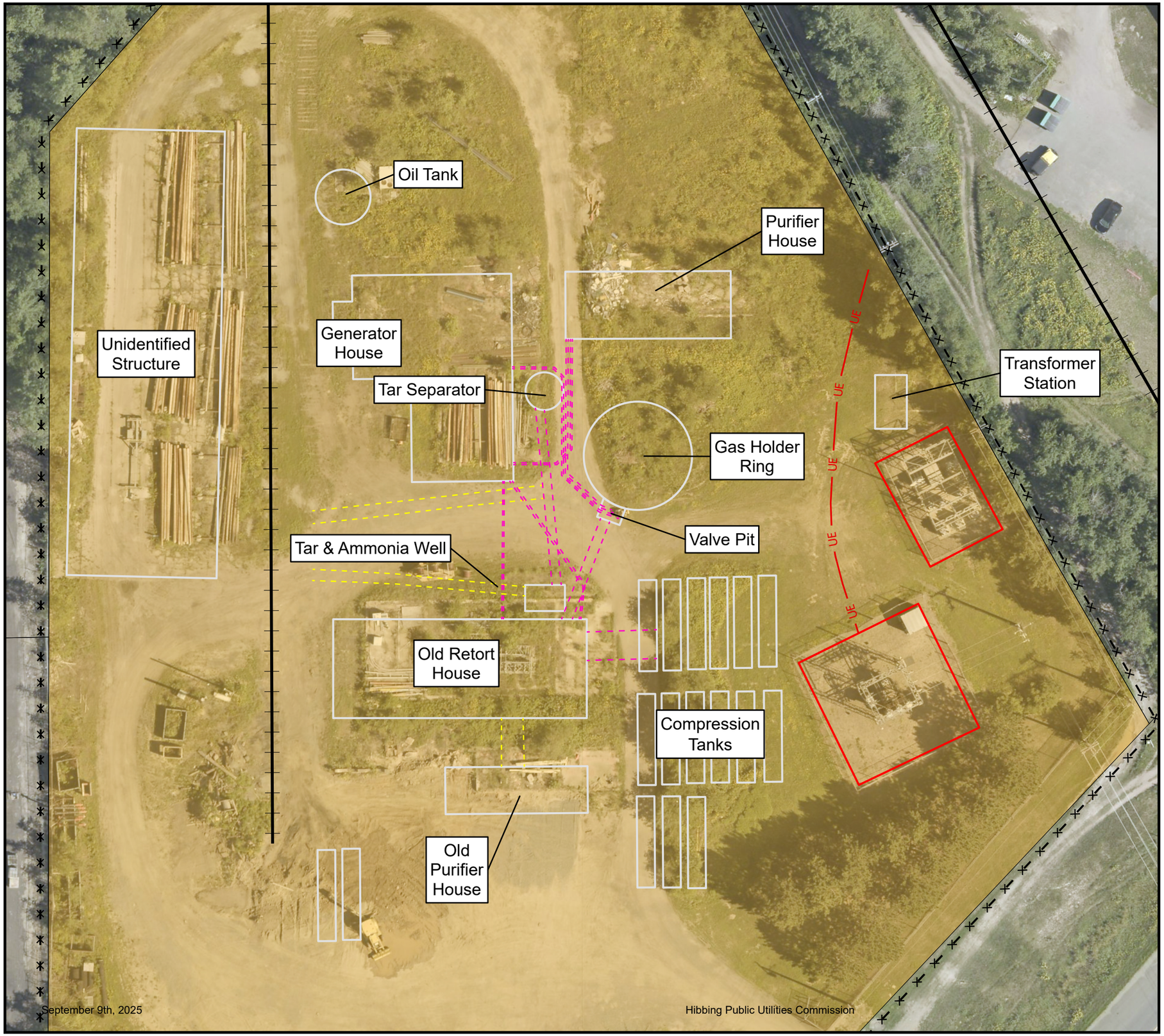
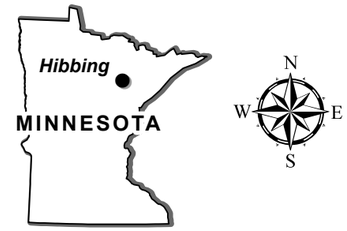


Figure 2

Former/Current ONSA Features

Former Hibbing Gas Manufacturing Plant

Hibbing, MN



Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 40 80 Feet

0 10 20 30 Meters

- Fence
- Former Railroad
- UE — Presumed Active 15kV Buried Electrical Line
- Suspect Conveyance Piping
- Conveyance Pipe to be Removed
- Former Stucture
- Electric Substation
- Parcel Boundary
- On-Site Source Area

Notes:
kV = kilovolt
ONSA = On-Site Source Area
TarGOST = Tar-specific Green Optical Screening Tool

Bay West

Drawn By: MF | Date Drawn/Revised: 9/25/2024 | Project No.J230452

September 9th, 2025

Hibbing Public Utilities Commission

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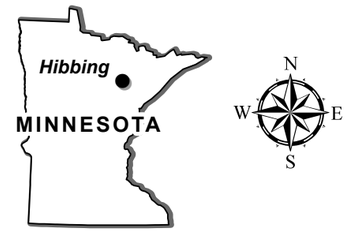
Figure 3

ONSA Soil Boring Locations

Former Hibbing
Gas Manufacturing Plant

Hibbing, MN



Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 40 80 Feet
0 10 20 30 Meters

- Soil Boring
- ONSA TarGOST Boring (20 ft bgs)
- Monitoring Well
- Fence
- Former Railroad
- UE Presumed Active 15kV Buried Electrical Line
- Suspect Conveyance Piping
- Conveyance Pipe to be Removed
- Former Stucture
- Electric Substation
- Parcel Boundary
- Estimated Lateral Extent of Elevated Coal Tar Impact
- Estimated Lateral Extent of Proposed Excavation
- On-Site Source Area

Notes:
bgs = below ground surface
ft = feet
kV = kilovolt
ONSA = On-Site Source Area
TarGOST = Tar-specific Green Optical Screening Tool

Bay West

Drawn By: MF Date Drawn/Revised: 9/25/2024 Project No.J230452

September 9th, 2025

Hibbing Public Utilities Commission

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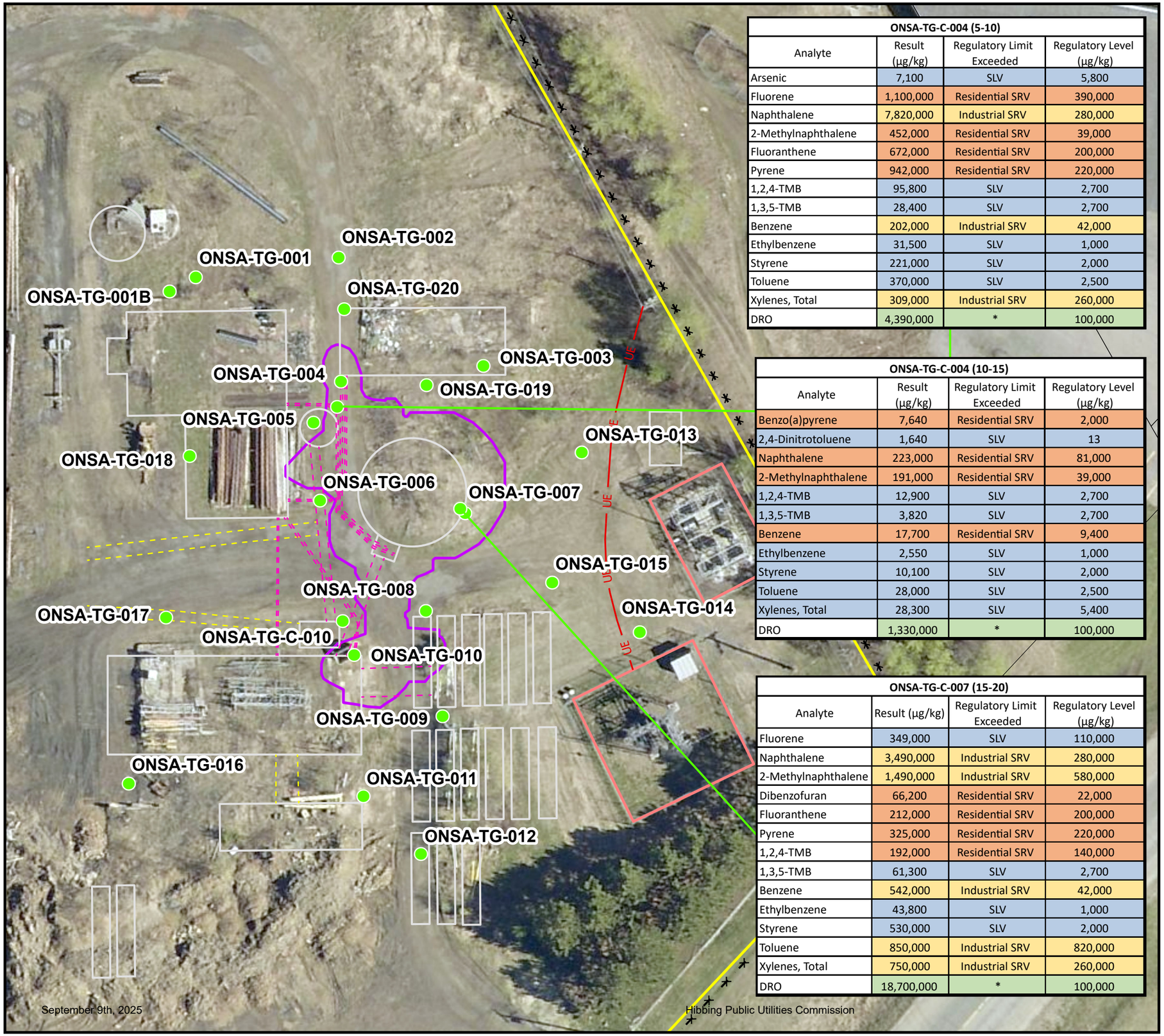


ONSA-TG-C-004 (5-10)			
Analyte	Result (µg/kg)	Regulatory Limit Exceeded	Regulatory Level (µg/kg)
Arsenic	7,100	SLV	5,800
Fluorene	1,100,000	Residential SRV	390,000
Naphthalene	7,820,000	Industrial SRV	280,000
2-Methylnaphthalene	452,000	Residential SRV	39,000
Fluoranthene	672,000	Residential SRV	200,000
Pyrene	942,000	Residential SRV	220,000
1,2,4-TMB	95,800	SLV	2,700
1,3,5-TMB	28,400	SLV	2,700
Benzene	202,000	Industrial SRV	42,000
Ethylbenzene	31,500	SLV	1,000
Styrene	221,000	SLV	2,000
Toluene	370,000	SLV	2,500
Xylenes, Total	309,000	Industrial SRV	260,000
DRO	4,390,000	*	100,000

ONSA-TG-C-004 (10-15)			
Analyte	Result (µg/kg)	Regulatory Limit Exceeded	Regulatory Level (µg/kg)
Benzo(a)pyrene	7,640	Residential SRV	2,000
2,4-Dinitrotoluene	1,640	SLV	13
Naphthalene	223,000	Residential SRV	81,000
2-Methylnaphthalene	191,000	Residential SRV	39,000
1,2,4-TMB	12,900	SLV	2,700
1,3,5-TMB	3,820	SLV	2,700
Benzene	17,700	Residential SRV	9,400
Ethylbenzene	2,550	SLV	1,000
Styrene	10,100	SLV	2,000
Toluene	28,000	SLV	2,500
Xylenes, Total	28,300	SLV	5,400
DRO	1,330,000	*	100,000

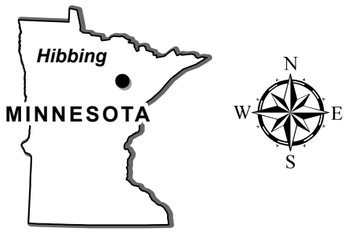
ONSA-TG-C-007 (15-20)			
Analyte	Result (µg/kg)	Regulatory Limit Exceeded	Regulatory Level (µg/kg)
Fluorene	349,000	SLV	110,000
Naphthalene	3,490,000	Industrial SRV	280,000
2-Methylnaphthalene	1,490,000	Industrial SRV	580,000
Dibenzofuran	66,200	Residential SRV	22,000
Fluoranthene	212,000	Residential SRV	200,000
Pyrene	325,000	Residential SRV	220,000
1,2,4-TMB	192,000	Residential SRV	140,000
1,3,5-TMB	61,300	SLV	2,700
Benzene	542,000	Industrial SRV	42,000
Ethylbenzene	43,800	SLV	1,000
Styrene	530,000	SLV	2,000
Toluene	850,000	Industrial SRV	820,000
Xylenes, Total	750,000	Industrial SRV	260,000
DRO	18,700,000	*	100,000

Figure 4

ONSA Soil Sampling Results

Former Hibbing Gas Manufacturing Plant

Hibbing, MN



Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2019

0 40 80 Feet
0 10 20 30 Meters

- ONSA TarGOST Boring (20 ft bgs)
- Fence
- UE Presumed Active 15kV Buried Electrical Line
- Suspect Conveyance Piping
- Conveyance Pipe to be Removed
- Former Stucture
- Electric Substation
- Former Hibbing Gas Manufacturing Plant Site
- Parcel Boundary
- Estimated Lateral Extent of Elevated Coal Tar Impact

Notes:
bgs = below ground surface
ft = feet
kV = kilovolt
ONSA = On-Site Source Area
TarGOST = Tar-specific Green Optical Screening Tool

Bay West

Drawn By: MF Date Drawn/Revised: 9/25/2024 Project No.J230452

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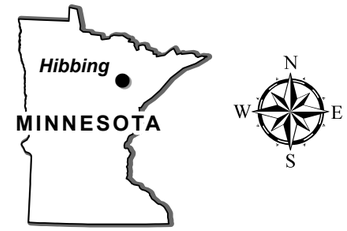
Figure 5

Proposed Excavation Contour Map

Former Hibbing
Gas Manufacturing Plant

Hibbing, MN



Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 40 80 Feet
0 10 20 30 Meters

- Excavation Plans Contour (ft bgs)
- Fence
- Former Railroad
- UE — Presumed Active 15kV Buried Electrical Line
- Suspect Conveyance Piping
- Conveyance Pipe to be Removed
- Former Stucture
- Electric Substation
- Parcel Boundary
- Estimated Lateral Extent of Elevated Coal Tar Impact
- Estimated Lateral Extent of Proposed Excavation
- On-Site Source Area

Notes:
bgs = below ground surface
ft = feet
kV = kilovolt

Bay West

Drawn By: MF Date Drawn/Revised: 9/25/2024 Project No.J230452

September 9th, 2025

Hibbing Public Utilities Commission

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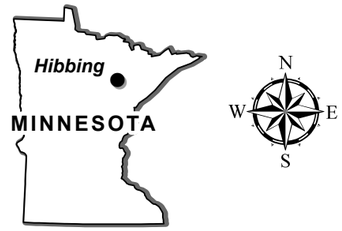
Figure 6

Cross Section Location Map

Former Hibbing
Gas Manufacturing Plant

Hibbing, MN



Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 40 80 Feet
0 10 20 30 Meters

- Soil Boring
- Monitoring Well
- Cross Section Line A to A'
- Cross Section Line B to B'
- Fence
- Former Railroad
- Former Stucture
- Electric Substation
- Parcel Boundary
- Estimated Lateral Extent of Elevated Coal Tar Impact
- Estimated Lateral Extent of Proposed Excavation
- On-Site Source Area

Bay West

Drawn By: MF Date Drawn/Revised: 9/25/2024 Project No.J230452

September 9th, 2025

Hibbing Public Utilities Commission

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NORTH
A

SOUTH
A'

ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL (Estimated)

1,530'
1,520'
1,510'
1,500'
1,490'
1,480'
1,470'
1,460'

SB-14
Tar Separator
ONSA-TG-C-004 (projected)
SB-15
SB-2
SB-6
SP-7
Gas Holder Ring
Projected water table surface

ONSA-TG-C-004 (10-15)

Analyte	Result (µg/kg)	Regulatory Limit Exceeded	Regulatory Level (µg/kg)
Benzo(a)pyrene	7,640	Residential SRV	2,000
2,4-Dinitrotoluene	1,640	SLV	13
Naphthalene	223,000	Residential SRV	81,000
2-Methylnaphthalene	191,000	Residential SRV	39,000
1,2,4-TMB	12,900	SLV	2,700
1,3,5-TMB	3,820	SLV	2,700
Benzene	17,700	Residential SRV	9,400
Ethylbenzene	2,550	SLV	1,000
Styrene	10,100	SLV	2,000
Toluene	28,000	SLV	2,500
Xylenes, Total	28,300	SLV	5,400
DRO	1,330,000	*	100,000

ONSA-TG-C-004 (5-10)

Analyte	Result (µg/kg)	Regulatory Limit Exceeded	Regulatory Level (µg/kg)
Arsenic	7,100	SLV	5,800
Fluorene	1,100,000	Residential SRV	390,000
Naphthalene	7,820,000	Industrial SRV	280,000
2-Methylnaphthalene	452,000	Residential SRV	39,000
Fluoranthene	672,000	Residential SRV	200,000
Pyrene	942,000	Residential SRV	220,000
1,2,4-TMB	95,800	SLV	2,700
1,3,5-TMB	28,400	SLV	2,700
Benzene	202,000	Industrial SRV	42,000
Ethylbenzene	31,500	SLV	1,000
Styrene	221,000	SLV	2,000
Toluene	370,000	SLV	2,500
Xylenes, Total	309,000	Industrial SRV	260,000
DRO	4,390,000	*	100,000

Boring Name
Boring

Silty Clay
Sand and Gravel Fill
Concrete
Sand and Gravel
Sand, Gravel, and Silt

Excavation Boundary
Estimated Coal Tar Body

Notes:
Deep lithology and groundwater depth estimations provided from MW97-04 (as seen on B-B').
SB-15 was projected ~10 feet west to provide lithology. Boring had no visual indication of coal tar.
Actual Subsurface conditions may vary.
* - Best Management practices for offsite re-use of unregulated fill (February 2012) MPCA Guidance Document c-rem 1-01
J - Estimated result due to quality control failures (see associated MPCA Laboratory Data Review Checklist)
Blue – Result exceeds the SLV
Orange – Result exceeds the Residential SRV
Yellow – Result exceeds the Industrial SRV
Green – * DRO/GRO limit in soil described in MPCA Guidance Document c-rem1-01: "Best Management Practices for the Off Site Reuse of Unregulated Fill" (February 2012)

VERT. EXAG.	5x
DRN. BY / DATE	PLS / 24-Sep-24
REV. BY / DATE	PLS / 24-Sep-24
PROJECT NAME	SR361 Hibbing Gas Manufacturing Plant
TITLE	CROSS SECTION A - A'

Bay West

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WEST
B

EAST
B'

ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL (Estimated)

1,530'
1,520'
1,510'
1,500'
1,490'
1,480'
1,470'
1,460'

SB-12
MW97-04 (projected)
SB-1
SB-3
ONSA-TG-C-007
SB-5

Gas Holder Ring

Projected water table surface

Boring Name
Boring

ONSA-TG-C-007 (15-20)

Analyte	Result (µg/kg)	Regulatory Limit Exceeded	Regulatory Level (µg/kg)
Fluorene	349,000	SLV	110,000
Naphthalene	3,490,000	Industrial SRV	280,000
2-Methylnaphthalene	1,490,000	Industrial SRV	580,000
Dibenzofuran	66,200	Residential SRV	22,000
Fluoranthene	212,000	Residential SRV	200,000
Pyrene	325,000	Residential SRV	220,000
1,2,4-TMB	192,000	Residential SRV	140,000
1,3,5-TMB	61,300	SLV	2,700
Benzene	542,000	Industrial SRV	42,000
Ethylbenzene	43,800	SLV	1,000
Styrene	530,000	SLV	2,000
Toluene	850,000	Industrial SRV	820,000
Xylenes, Total	750,000	Industrial SRV	260,000
DRO	18,700,000	*	100,000

Silty Clay

Sand and Gravel Fill

Concrete

Sand and Gravel

Sand, Gravel, and Silt

Excavation Boundary

Estimated Coal Tar Body

Notes:
MW97-4 is projected ~150 feet north to provide deep lithology and groundwater depth estimations.
SB-2 is projected ~10 feet north to provide lithology and coal tar mass details.
Actual Subsurface conditions may vary.
* - Best Management practices for offsite re-use of unregulated fill (February 2012) MPCA Guidance Document c-rem 1-01
J - Estimated result due to quality control failures (see associated MPCA Laboratory Data Review Checklist)
Blue – Result exceeds the SLV
Orange – Result exceeds the Residential SRV
Yellow – Result exceeds the Industrial SRV
Green – * DRO/GRO limit in soil described in MPCA Guidance Document c-rem1-01: "Best Management Practices for the Off Site Reuse of Unregulated Fill" (February 2012)

VERT. EXAG.	5x	Bay West
DRN. BY / DATE	PLS / 24-Sep-24	
REV. BY / DATE	PLS / 24-Sep-24	
PROJECT NAME	SR361 Hibbing Gas Manufacturing Plant	
TITLE	CROSS SECTION B - B'	

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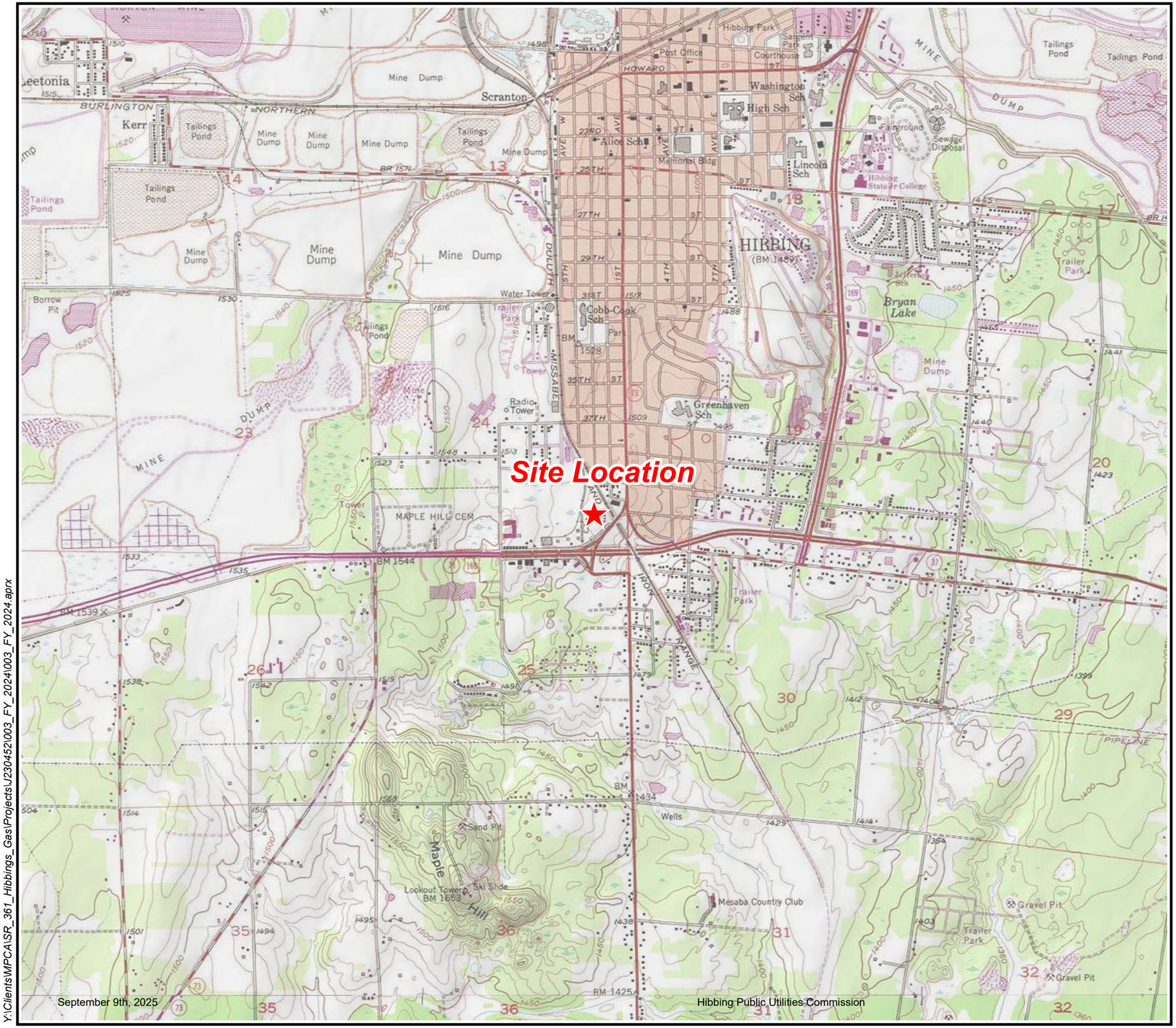
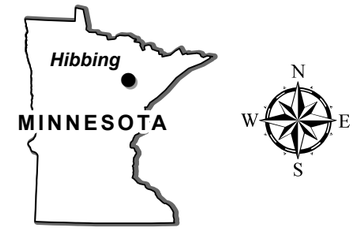


Figure 1

Site Location Map

Former Hibbing
Gas Manufacturing Plant

Hibbing, MN



Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: National Geographic Society, i-cubed

0 2,000 4,000 Feet

0 600 1,200 Meters

1:24,000

★ Site Location

Bay West

Drawn By: N.J. Date Drawn/Revised:6/10/2024 Project No.J230452

September 9th, 2025 Hibbing Public Utilities Commission

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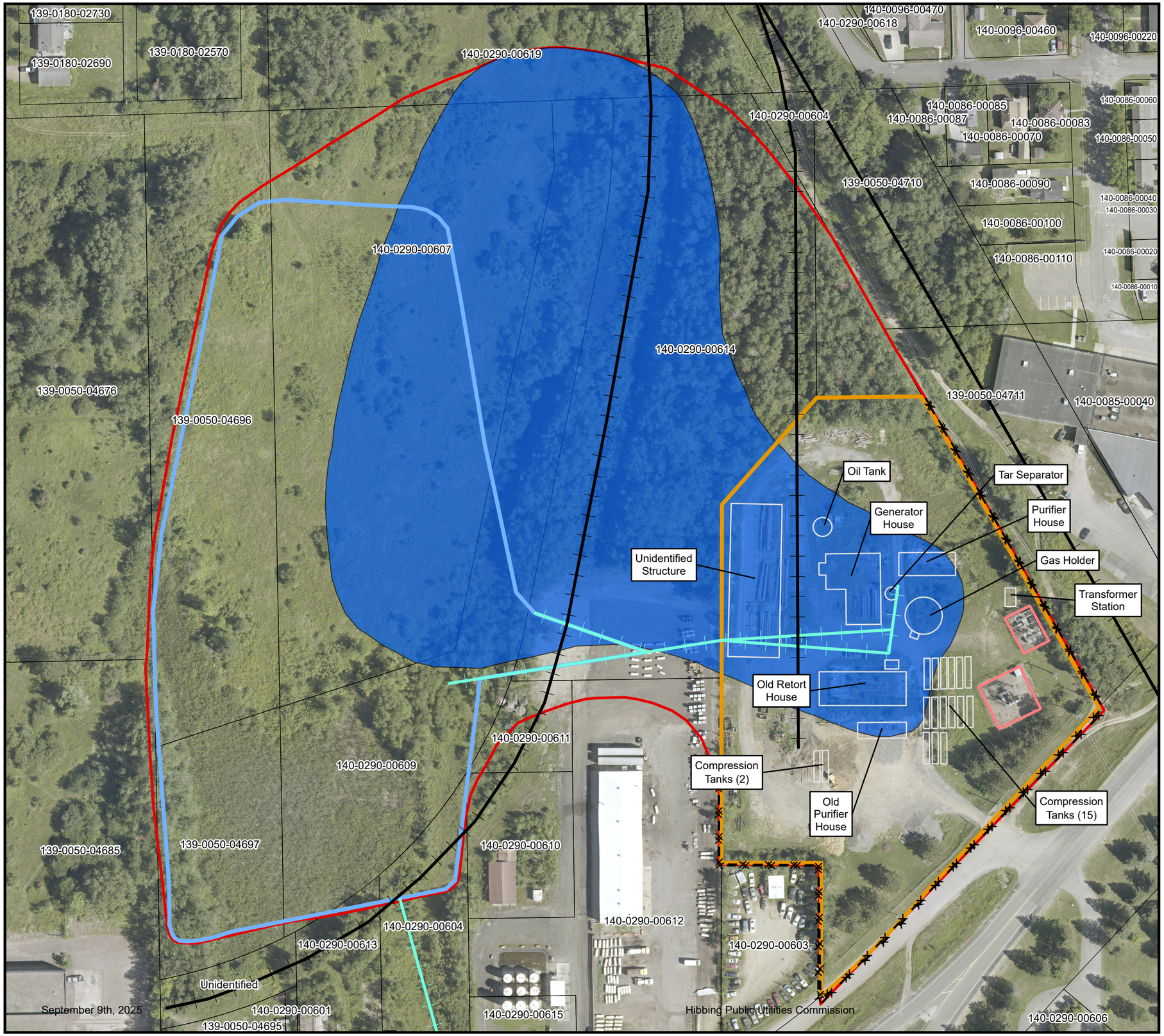

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September 9th, 2025

Hibbing Public Utilities Commission

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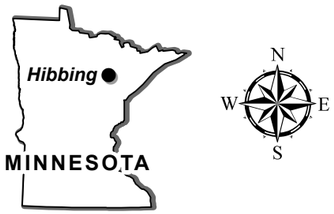
Figure 2A

Site Map

Former Hibbing Gas Manufacturing Plant

Hibbing, MN



Map Projection: NAD 1983 UTM Zone 15 N, Meters

Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 100 200 300 Feet

0 25 50 75 100 Meters

- Fence
- Former Railroad
- Drainage Ditch
- Former Stuctures
- Electric Substations
- Wetland Discharge Area
- Manufacturing Area
- Site Boundary
- Parcel Boundary
- Impacted Groundwater Plume

Bay West

Drawn By: J.Q. Date Drawn/Revised: 10/16/2024 Project No.J240788

Figure 3

Groundwater and Surface Water Sampling Locations

Former Hibbing
Gas Manufacturing Plant

Hibbing, MN

Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 100 200 300 400 Feet

0 50 100 Meters

- Monitoring Well
- Surface Water Sampling Location
- Fence
- Off-Site Source Area
- On-Site Source Area
- Parcel Boundaries

Bay West

Drawn By: J.Q. Date Drawn/Revised: 11/12/2024 Project No.J240778

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September 9th, 2025

Hibbing Public Utilities Commission

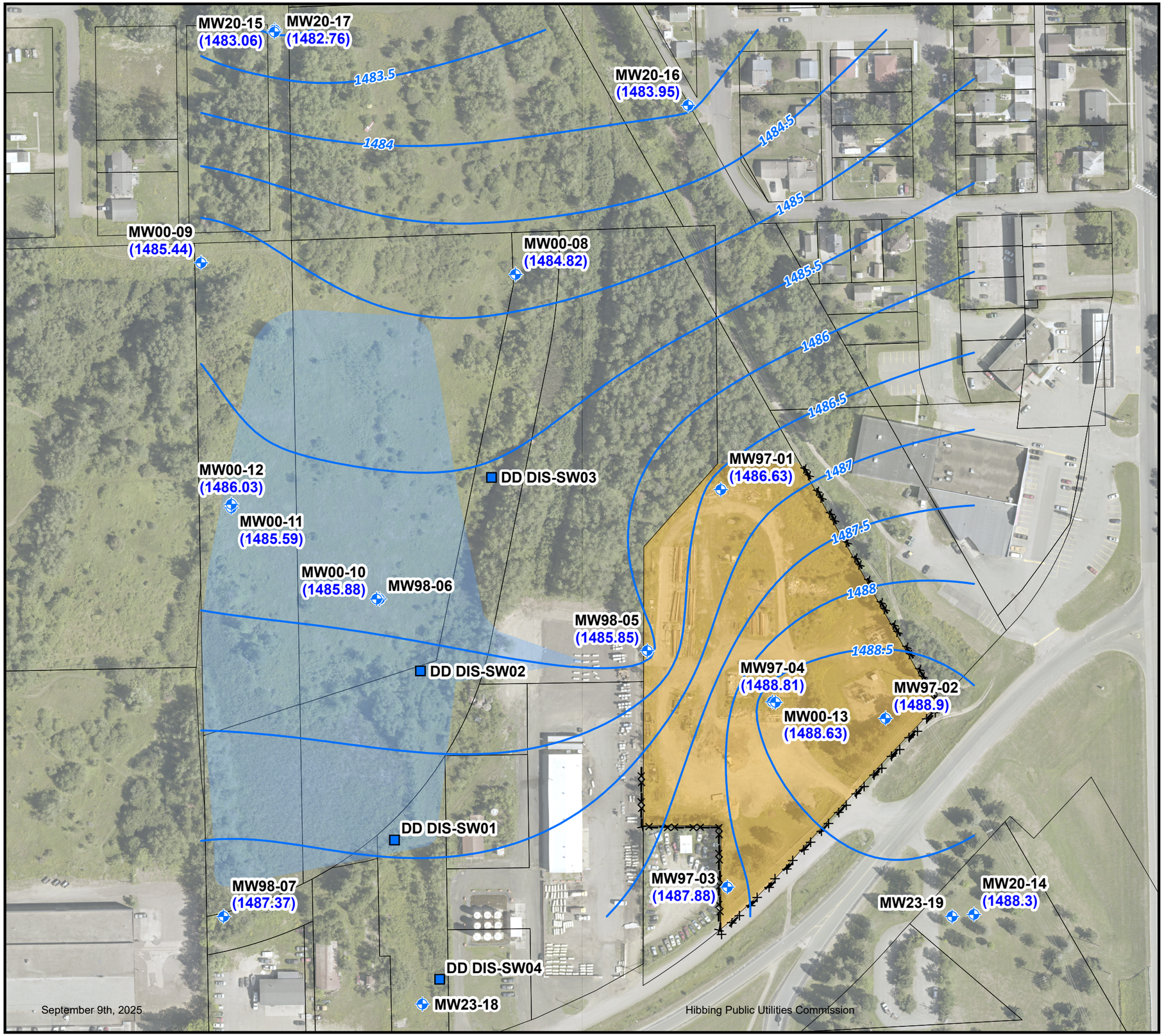

Figure 4A

Groundwater Contour Map (May 2023)

Former Hibbing Gas Manufacturing Plant

Hibbing, MN

Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 100 200 300 400 Feet

0 50 100 Meters

- Monitoring Well
- Surface Water Sampling Location
- Groundwater Elevation Contour Line (ft amsl)
- (1489.88) Groundwater Elevation at Well (ft amsl)
- Fence
- Off-Site Source Area
- On-Site Source Area
- Parcel Boundaries

Notes:

ft amsl - feet above mean sea level
NM - not measured

Groundwater elevations from intermediate monitoring wells, MW00-10, MW00-12, and MW00-13 have been excluded from groundwater contouring

MW98-06 was not measured for groundwater elevation

Bay West

Drawn By: J.Q. Date Drawn/Revised: 11/12/2024 Project No.J240788

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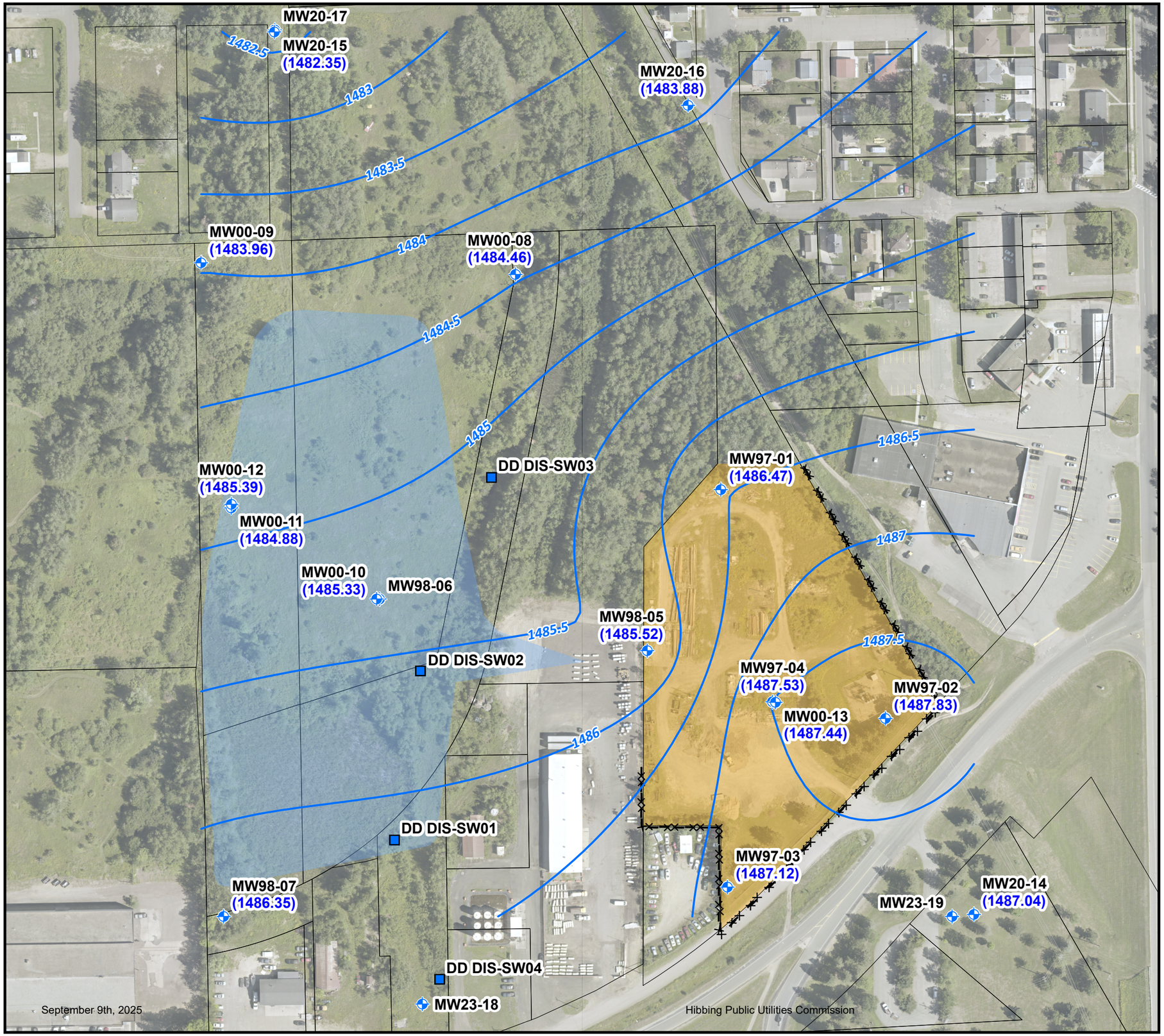

Figure 4B

Groundwater Contour Map (September 2023)

Former Hibbing Gas Manufacturing Plant

Hibbing, MN

Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 100 200 300 400 Feet

0 50 100 Meters

- Monitoring Well
- Surface Water Sampling Location
- Groundwater Elevation Contour Line (ft amsl)
- (1489.88) Groundwater Elevation at Well (ft amsl)
- Fence
- Off-Site Source Area
- On-Site Source Area
- Parcel Boundaries

Notes:

ft amsl - feet above mean sea level
NM - not measured

Groundwater elevations from intermediate monitoring wells, MW00-10, MW00-12, and MW00-13 have been excluded from groundwater contouring

MW98-06 was not measured for groundwater elevation

Bay West

Drawn By: J.Q. Date Drawn/Revised: 11/12/2024 Project No.J240788

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Figure 4C

Groundwater Contour Map (November 2023)

Former Hibbing Gas Manufacturing Plant

Hibbing, MN

Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 100 200 300 400 Feet

0 50 100 Meters

- Monitoring Well
- Surface Water Sampling Location
- Groundwater Elevation Contour Line (ft amsl)
- (1489.88) Groundwater Elevation at Well (ft amsl)
- Fence
- Off-Site Source Area
- On-Site Source Area
- Parcel Boundaries

Notes:

ft amsl - feet above mean sea level
NM - not measured

Groundwater elevations from intermediate monitoring wells, MW00-10, MW00-12, and MW00-13 have been excluded from groundwater contouring

MW98-06 was not measured for groundwater elevation

Bay West

Drawn By: J.Q. Date Drawn/Revised: 11/12/2024 Project No.J240788

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September 9th, 2025

Hibbing Public Utilities Commission

Figure 4D

Groundwater Contour Map (December 2023)

Former Hibbing Gas Manufacturing Plant

Hibbing, MN

Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 100 200 300 400 Feet

0 50 100 Meters

- Monitoring Well
- Surface Water Sampling Location
- Groundwater Elevation Contour Line (ft amsl)
- (1489.88) Groundwater Elevation at Well (ft amsl)
- Fence
- Off-Site Source Area
- On-Site Source Area
- Parcel Boundaries

Notes:

ft amsl - feet above mean sea level
NM - not measured

Groundwater elevations from intermediate and deep monitoring wells, MW00-10, MW00-12, MW00-13, and MW20-17 have been excluded from groundwater contouring

MW98-06 was not measured for groundwater elevation

Bay West

Drawn By: J.Q. Date Drawn/Revised: 11/12/2024 Project No.J240788

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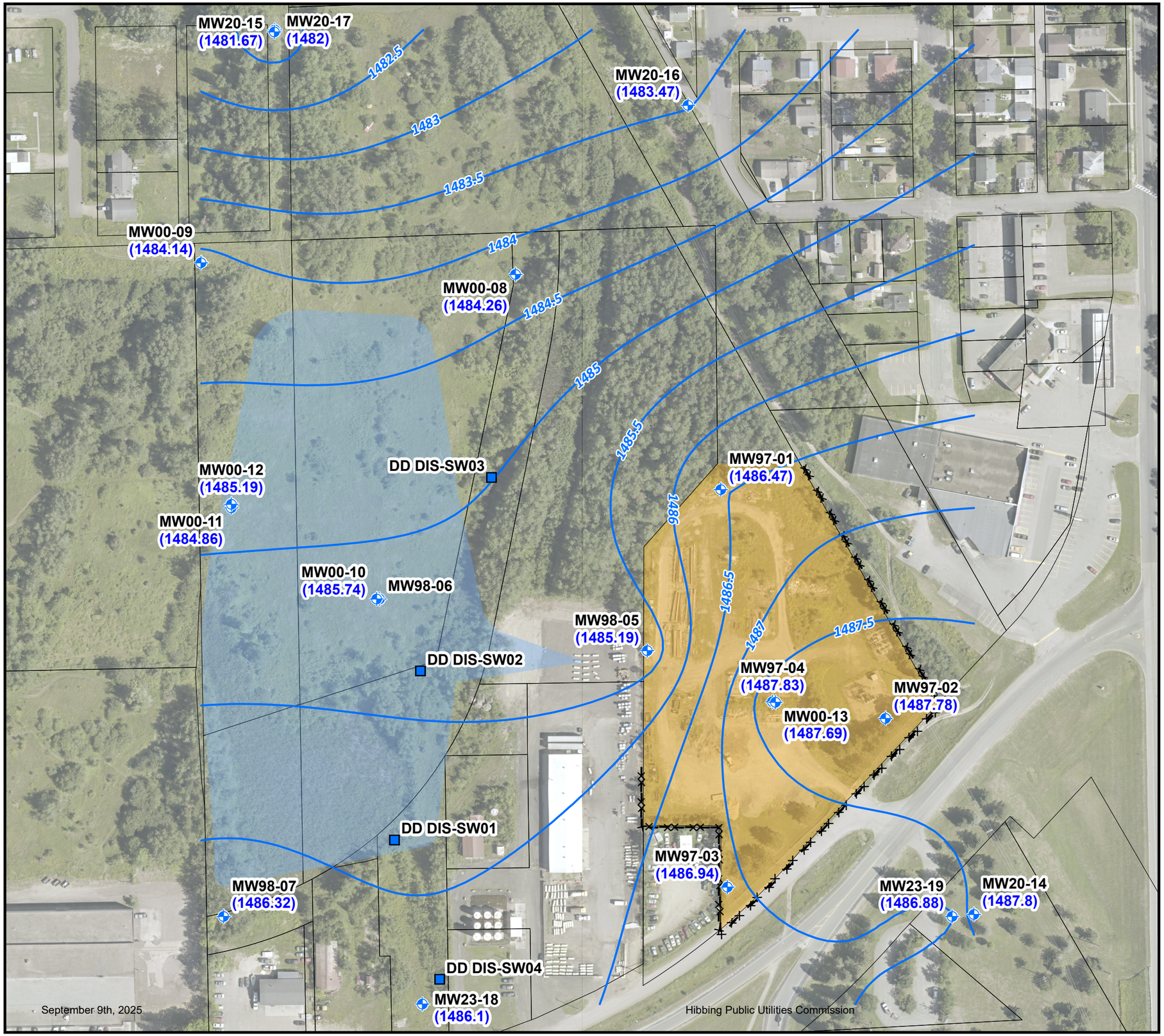

Figure 4E

Groundwater Contour Map (May 2024)

Former Hibbing Gas Manufacturing Plant

Hibbing, MN

Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 100 200 300 400 Feet

0 50 100 Meters

- Monitoring Well
- Surface Water Sampling Location
- Groundwater Elevation Contour Line (ft amsl)
- (1489.88) Groundwater Elevation at Well (ft amsl)
- Fence
- Off-Site Source Area
- On-Site Source Area
- Parcel Boundaries

Notes:

ft amsl - feet above mean sea level
NM - not measured

Groundwater elevations from intermediate and deep monitoring wells, MW00-10, MW00-12, MW00-13, and MW20-17 have been excluded from groundwater contouring

MW98-06 was not measured for groundwater elevation

Bay West

Drawn By: J.Q. Date Drawn/Revised: 11/12/2024 Project No.J240788

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State of Minnesota
Minnesota Pollution Control Agency

MINNESOTA DECISION DOCUMENT
Pursuant to the Minnesota Environmental Response and Liability Act (MERLA),
Minn. Stat. § 115B.01 to 115B.24.

I. SITE DESCRIPTION

Hibbing Gas Manufacturing Plant Site
235 41st Street West
Hibbing, MN 55746

II. STATEMENT OF PURPOSE

This Minnesota Decision Document (MDD) presents the selected remedial action and cleanup levels for the Hibbing Gas Manufacturing Plant Site (Site) and summarizes the facts and determinations made by the Minnesota Pollution Control Agency (MPCA) staff in approving the recommended response action alternative.

The MPCA has determined that source area removal and institutional controls are necessary to protect human health and the environment.

The MPCA Commissioner or her delegate has determined that the response actions set forth in this MDD are reasonable and necessary to protect the public health and welfare and the environment from the release and threatened release of hazardous substances and/or pollutants and contaminants from the Site.

III. DESCRIPTION OF PROBLEM

A. Site History

The Site (as shown on the figures in Attachments 1 and 2) operated by the City of Hibbing as a coal gasification plant from 1918 to 1923, as a carbureted water gas plant from 1923 to 1946, and as a propane gas plant from 1946 to 1969. The on-site buildings and other above-ground infrastructure were demolished in approximately 1980, although many of the foundations remain. The area of the Site where the coal gas manufacturing occurred (Manufacturing Area) is approximately 4.5 acres in size and is presently used as an equipment and supply storage yard for the City of Hibbing. This area of the Site is zoned light industrial.

Coal tar and other process wastes from the gas plant were discharged to an adjacent 10-acre wetland (Wetland Discharge Area). Historic aerial photos show the wetland was filled after closure of the gas plant. Coal tar, coal ash, boiler slag, and impacted soil are present below the fill layer in an approximately 3-acre area of the Wetland Discharge Area. Data from soil borings conducted in this area indicate the fill cover overlying impacted soils is approximately 1.5 to 7 feet thick and is serving as a protective cover. Except for one residential parcel (139-0050-

04696), the parcels located within Wetland Discharge Area are currently zoned light industrial. The majority of the Wetland Discharge Area is owned by the City of Hibbing. The far eastern extent of the Wetland Discharge Area, near the historical discharge location, is owned by Edwards Oil.

B. Site Investigations

In 1984 the MPCA referred all coal gasification plants in Minnesota to the EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). The EPA's environmental contractor conducted a Preliminary Assessment and Screening Site Inspection in 1986 and 1991, respectively. In 1997, the Hibbing Public Utilities commission (HPUC) requested MPCA oversight of its proposed investigation and response actions at the Site. HPUC completed two site investigations and a preliminary feasibility study before meeting the statutory municipal liability cap (*See* Minn. Stat. §115B.04) in 2006, at which time the MPCA's Superfund Program listed the Site on the Permanent List of Priorities and conducted additional work at the Site under the state Superfund Program. The MPCA conducted several investigations to further evaluate the magnitude and extent of impacts from the release and threatened release at the Site (as shown on the figure in Attachment 2).

The investigations identified multiple contaminants of concern (COCs) at the Site in soil, soil vapor, groundwater, surface water, and sediment. The COCs likely originated from coal tar and other process wastes released during operation of the gas plant. The investigations revealed the presence of free-phase coal tar within and adjacent to the gas holder foundation and other below-ground infrastructure in the Manufacturing Area and identified degraded coal tar within a portion of the Wetland Discharge Area.

i. Soil Analytical Data

Soils in the Manufacturing Area exceeding the MPCA's Industrial Soil Reference Values (SRVs) were identified within three former operating areas: the gas holder ring, the tar separator, and the tar and ammonia wells. Coal tar impacted soil is generally found in these areas at depths ranging from 4 to 20 feet below ground surface (bgs). COCs identified in the Manufacturing Area soils exceeding Industrial SRVs include benzene, benzo(a)pyrene, cyanide, ethylbenzene, 2-methylnaphthalene, naphthalene, toluene, and xylenes. The estimated volume of coal tar-impacted soil in the Manufacturing Area is approximately 3,700 cubic yards.

Soils impacted by waste discharges (including coal tar) from the historical operation of the gas plant have been delineated within the central and eastern portion of the Wetland Discharge Area (As depicted in the map in Attachment 2). COCs identified in soil in the Wetland Discharge Area include benzene, benzo(a)pyrene, ethylbenzene, 2-methylnaphthalene, and naphthalene at concentrations generally one to two orders of magnitude less than those found in the Manufacturing Area. Coal tar and impacted soil in the Wetland Discharge Area are present below a layer of fill and demolition debris that is serving as a protective cover.

ii. Groundwater Analytical Data

Depth to groundwater at the Site ranges from approximately 30 feet bgs in the Manufacturing Area to 24 feet bgs in the Wetland Discharge Area; however, the Wetland Discharge Area contains wetlands with intermittent surface water and areas of perched groundwater from 1 to 12 feet bgs. Groundwater COCs include benzene, cyanide, ethylbenzene, and naphthalene (*See* Table 1). An area of groundwater contamination originates in the Manufacturing Area and extends to portions of the Wetland Discharge Area to the west and northwest. Groundwater COC concentrations above MDH Health Risk Limits (as shown on the figure in Attachment 2) do not appear to be a risk to any identified receptors.

Table 1: Summary of Groundwater Analytical Results

Contaminant of Concern	Maximum Concentration (µg/L)	Health Risk Limit (µg/L)
Cyanide	554	100
Benzene	1,290	2.0
Ethylbenzene	146	40
Naphthalene	359	70

iii. Surface Water and Sediment Analytical Data

Impacts to surface water are limited to a small stream that is present along the east side of the Wetland Discharge Area. The stream discharges to an intermittent tributary of the East Swan River. Although anthracene was identified in the stream water sample slightly exceeding Minnesota Surface Water Quality Standards (MSWQS) Class 2B screening criteria for ecological and recreational users, COCs were not identified downstream in surface water outside the Wetland Discharge Area.

One sediment sample located within the wetland discharge area showed sediment contaminated with several polycyclic aromatic hydrocarbons (PAHs), including anthracene, exceeding the MPCA's Level II sediment quality targets (SQTs). A subsequent sediment sample collected downstream of the impacted area showed no SQT exceedances and appears to delineate the area of impacted sediment within the Wetland Discharge Area boundary.

iv. Vapor Intrusion Assessment

Soil gas was collected at eight locations during the heating and non-heating seasons to determine the potential risk for vapor intrusion at the Site. One location within the Wetland Discharge Area exceeded the 33x Commercial/Industrial Vapor Intrusion Screening Value (ISV) for benzene; however, the stability and extent of the groundwater plume as well as the lack of receptors suggest that vapor intrusion risks are low at the Site. Due to the lack of receptors and limited extent of vapor impacts, soil vapor sampling at the Site did not identify a completed vapor pathway.

IV. DESCRIPTION OF COMPLETED ACTIONS

No response actions have been completed at the Site.

V. SITE RISKS AND EXPOSURE PATHWAYS

Soil

The direct contact risk through the soil exposure pathway is moderate for this site. Contaminated soil and coal tar is generally absent in the accessible zone (soil located from zero to four feet bgs) and is largely present in what the MPCA considers the potentially accessible zone (soil located from four to 12 feet bgs) and deeper. Significant concentrations of COCs and coal tar saturated soils are present in the potentially accessible zone soils within and near the below-ground infrastructure in the Manufacturing Area. The gas holder, tar separator, and tar and ammonia wells contain soil and coal tar with the highest concentrations of COCs identified at the Site.

Groundwater

The exposure pathway through groundwater consumption is incomplete. The existing groundwater plume appears to be stable, and no groundwater receptors have been identified. However, the potential future risk to groundwater remains a concern due to the concentrated mass of coal tar present within the below ground infrastructure in the Manufacturing Area. A response action addressing known source areas in the Manufacturing Area would reduce the potential future threat to groundwater resources in the area.

Sediment and Surface Water

The human health risk from sediment and surface water exposure at the Site is considered low. Mid-point Sediment Quality Targets (SQTs), which are protective of benthic invertebrates, typically the most sensitive receptor in aquatic environments, exceeded criteria at one location within a small stream at the east side of the Wetland Discharge Area. This location also exceeded criteria for industrial soil reference values (SRVs). Sediment samples located upstream and downstream of this location were found to be below Mid-point SQTs and Residential SRVs. The stream is an intermittent water feature that is not easily accessible and is not used for recreational purposes.

Soil Vapor

Soil vapor samples collected from the site were below screening criteria, with the exception of one location within the Wetland Discharge Area where benzene exceeded the 33x Commercial/Industrial ISV. With no receptors present, the soil vapor pathway is considered incomplete, therefore soil vapor was not evaluated in the feasibility study. However, any future development near the site should evaluate the potential for vapor intrusion.

VI. ESTABLISHMENT OF RESPONSE ACTION OBJECTIVES AND SOURCE AREA CLEAN-UP CONCENTRATIONS

Response action objectives were developed by the MPCA to minimize human exposure risk through Applicable or Relevant and Appropriate Requirements (ARARs) and are based on soil, soil vapor, groundwater, surface water, and sediment analytical data collected during site investigations. A full list of ARARs for the site can be found in the Focused Feasibility Study. The primary ARARs considered by the MPCA in selecting a remedy for the Site are:

1. MPCA Soil Reference Values (SRVs)
2. MPCA Soil Vapor Intrusion Screening Values (ISVs)
3. MPCA Sediment Quality Targets (SQTs)
4. Minn. Rules Chapter 7050 Surface Water Criteria
5. Minnesota Department of Health (MDH) Health Risk Limits (HRLs)

The objectives for response actions at the Site are to:

1. Eliminate or significantly reduce human health risk exposure to Site COCs in soil.
2. Reduce Site contaminants in groundwater through source area removal of coal tar and coal tar-impacted soil.
3. Reduce potential exposure to surface water and sediment contamination in the Wetland Discharge Area.
4. Remove free-phase coal tar and coal tar-saturated soils to the maximum extent practicable.

VII. FEASIBILITY STUDY AND EVALUATED ALTERNATIVES

A Focused Feasibility Study (FFS) was completed in May 2023. The FFS evaluated eight remedial alternatives for the Manufacturing Area and seven remedial alternatives for the Wetland Discharge Area. The alternatives evaluated were:

- No Action (Alternative 1)
- Thermal Desorption (Alternatives 2A and 2B)
- Excavation (Alternatives 3A and 3B)
- Institutional and Engineering Controls (Alternative 4)
- Chemical Oxidation (Alternative 5)
- Thermal Conduction Heating (Alternative 6, Manufacturing Area only).

VIII. DESCRIPTION OF SELECTED REMEDIES

The MPCA has selected Alternative 4 (Institutional and Engineering Controls) for the Wetland Discharge Area and Alternative 3A/3B (Excavation and Disposal of Coal Tar Impacted Soil) for the Manufacturing Area. The selected response actions meet the site response action objectives and are protective of human health and the environment.

Institutional and Engineering controls will be implemented in the Wetland Discharge Area to restrict access. An environmental covenant will be filed at the St. Louis County Recorder's Office on affected parcels to restrict parcels within the Site boundaries to commercial or industrial use, restrict soil disturbance, prohibit groundwater extraction, and require an annual inspection to verify the proposed restrictions remain effective at limiting site access and exposure. This includes parcel #139-0050-04696, which the City of Hibbing has committed to rezone because it is currently zoned for residential use. The environmental covenant will not exclude future owners from redevelopment of any parcel provided they join the MPCA's VIC Program and develop a cleanup plan to eliminate any potential future exposure pathways prior to development of the Wetland Discharge Area property.

Excavation with off-site disposal in the Manufacturing Area will remove free-phase coal tar, contaminated soil above risk criteria, and below ground infrastructure. The Manufacturing Area is the primary source of coal tar impacted soil at the Site. Contaminated soil will be removed to depths up to 20 feet bgs within and near the gas holder foundation, tar separator, and tar and ammonia wells. Where possible, below ground piping in the Manufacturing Area will be excavated and removed from the Site. Clean soil will be imported to backfill the excavated area and restore the Site to pre-construction elevations.

IX. DOCUMENTS REVIEWED

The MPCA based its decision on project files, records, and proceedings including but not limited to the formal reports listed in Attachment 3. Documents reviewed include site assessments and investigations, summary and monitoring reports, and feasibility studies evaluating proposed remedies for the Site.

X. RESPONSIVENESS SUMMARY

Pursuant to Minn. Stat. § 115B.17, subd. 2b (2024), the MPCA issued a public notice regarding the proposed response action. The notice was published in the Mesabi Tribune on Month day, year and comments were accepted until Month, day, year. No comments were received. OR The following addresses comments made to the MPCA during the public comment period:

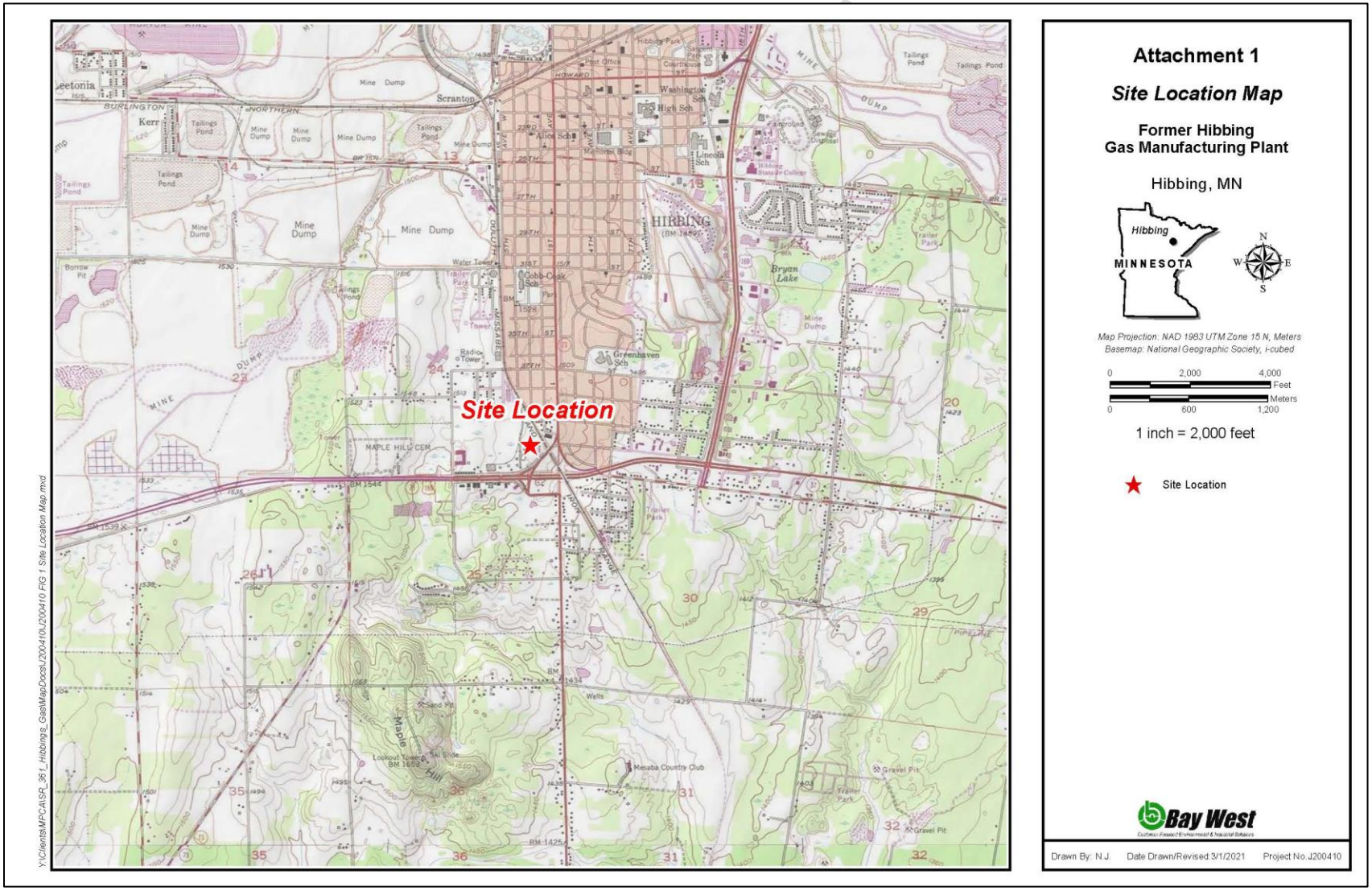
XI. STATUTORY DETERMINATIONS

The selected response actions are consistent with the Minnesota Environmental Response and Liability Act, Minn. Stat. §§ 115B.01 to 115B.24 (MERLA), and are not inconsistent with the Federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq* (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300. I have determined the selected response actions are protective of public health and welfare and the environment.

_____ _____

Pam Anderson Date
Director, Remediation Division

ATTACHMENT 1
Site Location Map



ATTACHMENT 2
Site Map

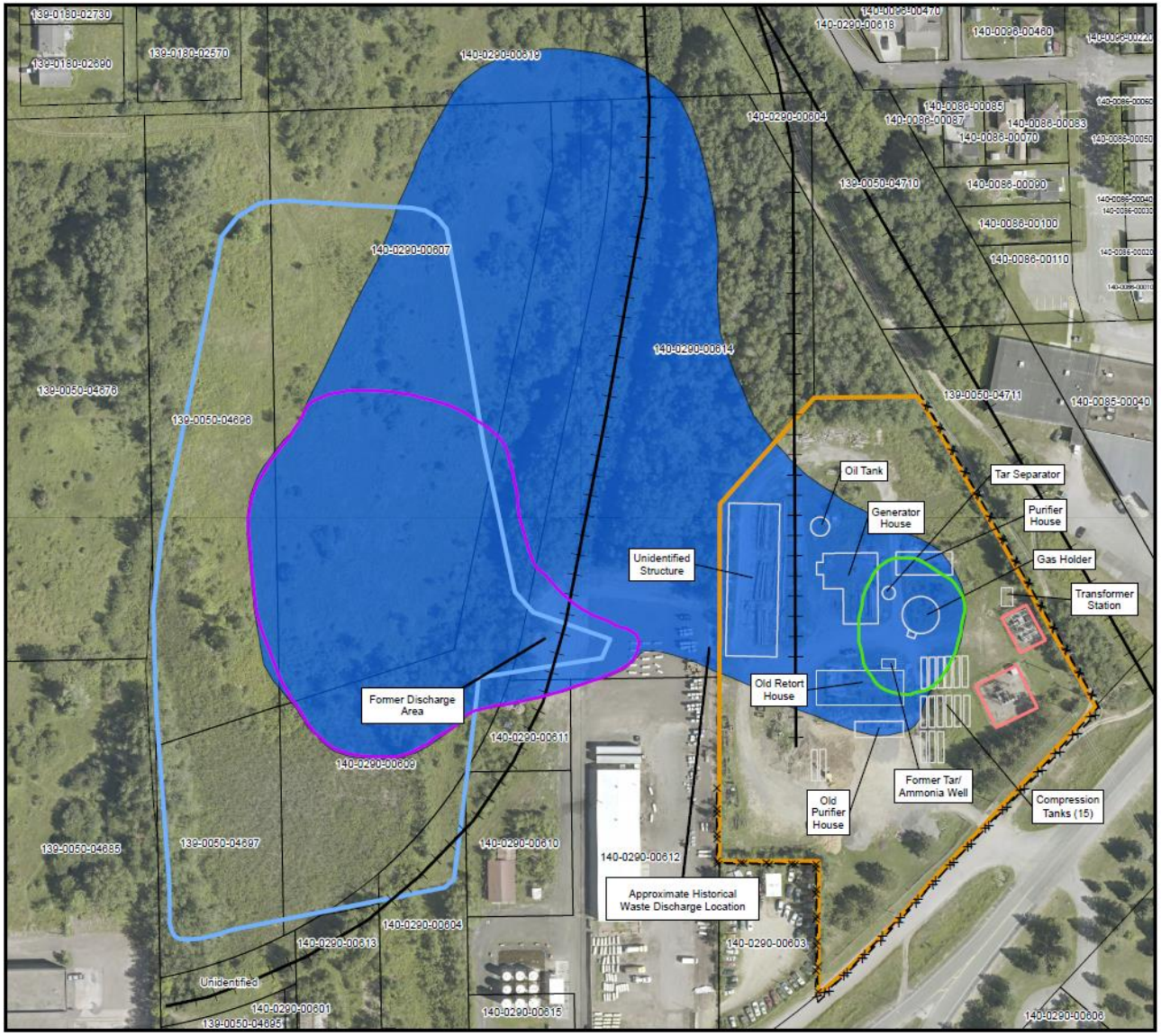


Figure 2A

Site Map

Former Hibbing
Gas Manufacturing Plant

Hibbing, MN

Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: Saint Louis County Aerial Imagery WMS, 2020/2021

0 100 200 300 Feet
0 25 50 75 100 Meters

- Fence
- Former Railroad
- Former Stuctures
- Electric Substations
- Wetland Discharge Area
- Manufacturing Area
- Approximate Extent of Manufacturing Discharge Area Soil Impacts
- Approximate Extent of Wetland Discharge Area Soil Impacts
- Approximate Extent of Groundwater Impacts
- Parcel Boundary

Bay West

Drawn By: J.Q. Date Drawn/Revised: 3/5/2025 Project No.J240788

ATTACHMENT 3

Prior Investigations for Hibbing Gas Manufacturing Plant Site

Date	Description	Conducted by
1986	Preliminary Assessment	USEPA
1991	Screening Site Inspection	USEPA
1995	Site Inspection Prioritization	MPCA
1998	Phase II Investigation Report	HPUC
2001	Extensive Investigation Report and Phased Conceptual Response Action Plan	HPUC
2002	Preliminary Feasibility Study	HPUC
2018	Summary Report	MPCA
2021	Focused Remedial Investigation Report	MPCA
2022	TarGOST Summary Report	MPCA
2023	Annual Monitoring Report	MPCA
2023	Focused Feasibility Study	MPCA
2024	Excavation Detailed Corrective Action Design Report	MPCA

HPUC Hibbing Public Utilities Commission
MPCA Minnesota Pollution Control Agency
USEPA United States Environmental Protection Agency

Item 2

HPU HIBBING PUBLIC UTILITIES
1902 E 6TH AVE
HIBBING, MINNESOTA 55746-0249
TELEPHONE: 218-262-7700
FAX: 218-262-7702

Item 2 – Org Chart Development Update

Sept. 9th, 2025

James Bayliss, Chairman
Hibbing Public Utilities Commission
1902 E. 6th Avenue
Hibbing, MN 55746

RE: Item 2 – Org Chart Development Update

Dear Commissioners;

I have been working to develop an updated HPU Org Chart in order to more accurately reflect the current organizational structure and will provide an outline for HPU staffing levels.

I have collaborated with the HPU Management team to establish a working draft and I am seeking to provide the Commission with an update and opportunity for input to the development process.

The working document will additionally be presented to the HPU leadership team for evaluation and input from all HPU employees in supervisory and other key positions on the morning of Sept. 10th. I am anticipating having a final draft ready for the MMUA meeting on Sept. 19th. My goal is to have the final org chart presented to the commission for approval by Oct 1st.

Sincerely,

Kendra Powers
Interim HR Director
Hibbing Public Utilities Commission

Item 3

HIBBING PUBLIC UTILITIES
1902 E 6TH AVE
HIBBING, MINNESOTA 55746-0249
TELEPHONE: 218-262-7700
FAX: 218-262-7702

Item 3 – Capital Project Update

Sept. 9th, 2025

James Bayliss, Chairman
Hibbing Public Utilities Commission
1902 E. 6th Avenue
Hibbing, MN 55746

RE: Item 3 – Capital Project Update

Dear Commissioners;

Pleases find attached a variety of topics on capital budgeting including updated reporting on progress year to date as well as several items that we wish to present at the September 23rd Regular Meeting for review and approval. This includes a recommendation on Transmission Circuit Breakers, Fleet Updates, as well as 2025 Hydrant replacements.

Sincerely,

Luke J. Peterson

Item 3.a

HPU HIBBING PUBLIC UTILITIES
1902 E 6TH AVE
HIBBING, MINNESOTA 55746-0249
TELEPHONE: 218-262-7700
FAX: 218-262-7702

Item 3.a – 2025 Capital Projects Updates

Sept. 9th, 2025

James Bayliss, Chairman
Hibbing Public Utilities Commission
1902 E. 6th Avenue
Hibbing, MN 55746

RE: Item 3.a – 2025 Capital Projects Update

Dear Commissioners;

Please find attached report on the 2025 Capital Projects with additional reporting details based on Commission Feedback. HPU's Interim Controller, Tammy Mattonen will be joining us to discuss the projects reporting.

Sincerely,

Luke J. Peterson

2025 Capital Budget

	2025 Budget (in thousands)	January- July 2025 Actual Expenditures	% Budget
WATER			
Carey Valley well	1,000	76	8%
Townline Road treatment plant	4,612	2,569	56%
Water Distribution			
17th Street Project	3,493	909	26%
Sliplining Project	4,632	2,229	48%
23rd Street Project	1,616	229	14%
Other Water Projects	259	219	85%
ELECTRIC			
Distribution Lines	3,000	357	12%
Substation Construction	5,800	1,828	32%
Plant updates	6,000	4,006	67%
GAS			
	150	368	245%
STEAM		-	
	2,500	297	12%
ADMIN			
AMI - Meters, radio towers and Installation	5,000	104	2%
Facilities	2,250	312	14%
IT, Communications and Fleet	1,000		56%
-Fleet		317	
- GIS, Computers, Server project		243	
Total	41,312	14,063	34%
TRANSMISSION PROJECT		617	

Item 3.a.ii

HIBBING PUBLIC UTILITIES
1902 E 6TH AVE
HIBBING, MINNESOTA 55746-0249
TELEPHONE: 218-262-7700
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Item 3.a.ii – Southern Interconnect

Sept. 9th, 2025

James Bayliss, Chairman
Hibbing Public Utilities Commission
1902 E. 6th Avenue
Hibbing, MN 55746

RE: Item 3.a.ii – Southern Interconnect Circuit Breakers

Dear Commissioners;

As you may recall, the Commission authorized public bids PB-25-04 for High Voltage Circuit Breakers for the 115KV Transmission Line on February 25th. Electric Power Engineers has conducted the bidding process and is recommending selecting the Circuit Breakers from Hitachi due to their shorter lead time versus GE.

As this is a working session, this item is for discussion only and will be forwarded to the Commission at its regular meeting on September 23rd.

Please see attached detail letter and supplemental materials for your review.

Please note, this item has been included in the Transmission project budget in the amount of $740K.

Sincerely,

Luke J. Peterson

Luke J. Peterson

Recommendation – High Voltage Circuit Breaker Vendor Selection

Following a thorough evaluation of the proposals received for the HPU High Voltage Circuit Breaker, we prepared our recommendation based on a comparative analysis of cost, technical compliance, project experience, and delivery lead times. This assessment aims to support HPU in making an informed and thoughtful procurement decision.

After reviewing the submissions from Hitachi and GE Vernova, our evaluation results show that Hitachi offers a better proposal with regards to project experience with Minnesota utilities, lead time, and willingness to accept a Letter of Intent to commit to a delivery slot.

A comparison based on the evaluation criteria is shown below:

Evaluation Criteria	GE Vernova	Hitachi
Total Evaluated Price	$729,306.40 (W/ 5 years warranty)	$840,232.00 (W/ 5 years warranty)
Delivery Lead Time	29 – 30 Months ARO	23 – 24 Months ARO
Estimated Delivery	April 2028 (If PO is issued by Oct 27th, 2025.)	October 2027 (If LOI is issued by Sep 15th, 2025 and PO by Oct 27th, 2025)

Our recommendation is based on the following key findings:

- Hitachi and GE Vernova meet the minimum requirements, with their score being similar in the evaluation of the technical requirements, emphasizing their alignment with project specifications, design, and quality.

- Hitachi's proposed lead time is more favorable than GE Vernova's proposed lead time and meets the expected requirements outlined in the bid package.

- When compared to GE Vernova, Hitachi is able to accept a Letter of Intent (LOI), for the purposes of committing and reserving a delivery slot. GE Vernova only accepts a Purchase Order (PO) for the commitment of a delivery slot.

- Hitachi has proven circuit breaker delivery experience across the U.S., including the utilities in the Minnesota region. This experience lowers the execution risk and increases confidence in the vendor's ability to meet project timelines and specifications. The total evaluated cost includes the spare parts, tools, extended warranty and tariff impact as of now, and is subject to change.

With regards to technical compliance, project experience, willingness to accept an LOI and lead time, EPE recommends that HPU proceed with procuring the High Voltage Circuit Breaker from Hitachi.

Further breakdown of the optional items included in the price is given on the next page.

Explanation of the Optional or Adder Items - Hitachi

A comparison based on the evaluation criteria is shown below:

Item	Cost	Purpose/Explanation	Recommendation
Tariff adder. (Item 1.a)	$15,240.00	This is the tariff estimation calculated as per today's tariff situation.	Two (2) months prior to delivery, the final value will be recalculated and invoiced.
SF6 gas fill kit. (Item 2)	$1,350.00	SF6 gas fill kit (01), Fill adapter DILO DN20 (01), Gas sample kit (01), SF6 gas Solon Calibration kit & sling assembly (01).	Required for filling the SF6 gas and performing calibrations.
SF_6 gas – 70 lbs. (Item 3)	$1,650.00	The SF_6 gas provides insulation and arc-quenching capabilities to the breaker, ensuring safe and reliable tripping operations.	Required for HVCB commissioning and operation.
Trip Coil (Spare Part)	$1,759.00	Operates the breaker to open (trip).	If rapid spare part procurement is not in place, it is recommended to have a spare.
Close Coil (Spare Part)	$1,759.00	Operates the breaker to close.	If rapid spare part procurement is not in place, it is recommended to have a spare.
Charging Motor (Spare Part)	$1,800.00	Charges the spring mechanism for breaker operation.	If rapid spare part procurement is not in place, it is recommended to have a spare.
Extended Warranty	$6,500.00	Price adder for five (5) years of Extended Warranty per breaker. Supplier's standard warranty period offered is two (2) years (24 months from energization but not to exceed 30 months from shipment).	It is recommended to order the Extended Warranty.

Item 3.a.iii

HPU HIBBING PUBLIC UTILITIES
1902 E 6TH AVE
HIBBING, MINNESOTA 55746-0249
TELEPHONE: 218-262-7700
FAX: 218-262-7702

Item 3.a.iii – 2025 Hydrant Replacement Projects

Sept. 9th, 2025

James Bayliss, Chairman
Hibbing Public Utilities Commission
1902 E. 6th Avenue
Hibbing, MN 55746

RE: Item 3.a.iii – 2025 Hydrants

Dear Commissioners;

HPU is seeking approval of the HPU's 2025 Hydrant Replacement Projects bid. Bolton & Menk staff initiated a project bidding advertisement to have bid results and recommendations prepared for the September 23rd Commission Meeting.

Attached for your review is a correspondence from Bolton & Menk Project Manager Andy Brotzler outlining the scope of the project.

Sincerely,

Luke J. Peterson

Luke J. Peterson

BOLTON & MENK
Real People. Real Solutions.

301 E Howard Street
Suite 26
Hibbing, MN 55746

Phone: (218) 231-0018
Bolton-Menk.com

September 8, 2025

Luke Peterson
General Manager
Hibbing Public Utilities Commission
1902 6th Avenue E
Hibbing, MN 55746

RE: Receive Plans & Specifications/Authorize Advertising for Bid
2025/2026 Hydrant Replacement Project
Hibbing Public Utilities Commission
Project No.: 25X.138209.000

Dear Mr. Peterson:

Plans and specifications have been developed for bidding and construction of the 2025/2026 Hydrant Replacement Project which includes the replacement of 47 hydrants and fittings.

This project was developed collaboratively between HPU Water Operations and Engineering personnel and the Hibbing Fire Department to identify high priority, out-of-service hydrants requiring replacement throughout the HPU municipal water supply system. The majority of the 47 hydrants proposed for replacement are at or beyond their life cycle and are to the point that repair parts are no longer available. Additionally, the replacement of these hydrants continues with the implementation of a modern and standard hydrant and nozzles. It is anticipated that the improvement project will begin in Spring 2026 with final completion schedule for July 31, 2026.

We are ready to proceed with acquiring bids for the project and are requesting Commission authorization to advertise for bids. A bid opening is to be scheduled on or after October 17, 2025.

Please feel free to contact me at andrew.brotzler@bolton-menk.com or 218-812-8900 if you have any questions or comments.

Sincerely,

Bolton & Menk, Inc.

Andy Brotzler, PE
Municipal Senior Project Manager

H:\HIBBING_MU_MN\25X138209000\1_Corres\C_To Others\2025.09.08 Ltr to Luke Peterson_Receive P&S_Authorize Ad for Bid.docx

HIBBING PUBLIC UTILITIES

CONSTRUCTION PLANS FOR

2025 FIRE HYDRANT REPLACEMENT

RESOURCE LIST

HIBBING PUBLIC UTILITIES

HPU OFFICE
1902 6TH AVE E
HIBBING, MN 55746

Commision Members:
James Bayliss
Jeffrey Hart
Jeffrey Stokes
Jesse Babich
Julie Sandstede

General Manager:
Luke Peterson

Electric Line Crew Foreman:
Esko Savela

Heat Crew Foreman:
Paul Boswell

Water Crew Foreman:
Gary Jarmer

CITY OF HIBBING

City of Hibbing Administrator:
Greg Pruszinke

Public Works Director / Engineer:
Jesse M. Story, P.E.
218-262-3486, ext. 725
JesseStory@hibbingmn.gov

UTILITIES

Arvig:
John Vonruden
john.vonruden@arvig.com
(218)346-8480

Century Link / Lumen:
Bill Byers
bill.byer@lumen.com
(612)431-3257

Consolidated Telephone:
Eddie Dolezal
eddil@goctc.com
(218)454-1148

Mediacom:
Scott Sandquist
ssandquist@mediacomcc.com
(218)741-8691

Minnesota Power:
Deb Kellner
dkellner@alletecleanenergy.com
(218) 576-9776

Northeast Service Cooperative:
Andy Doll
adoll@nescmn.net
(218)748-7610

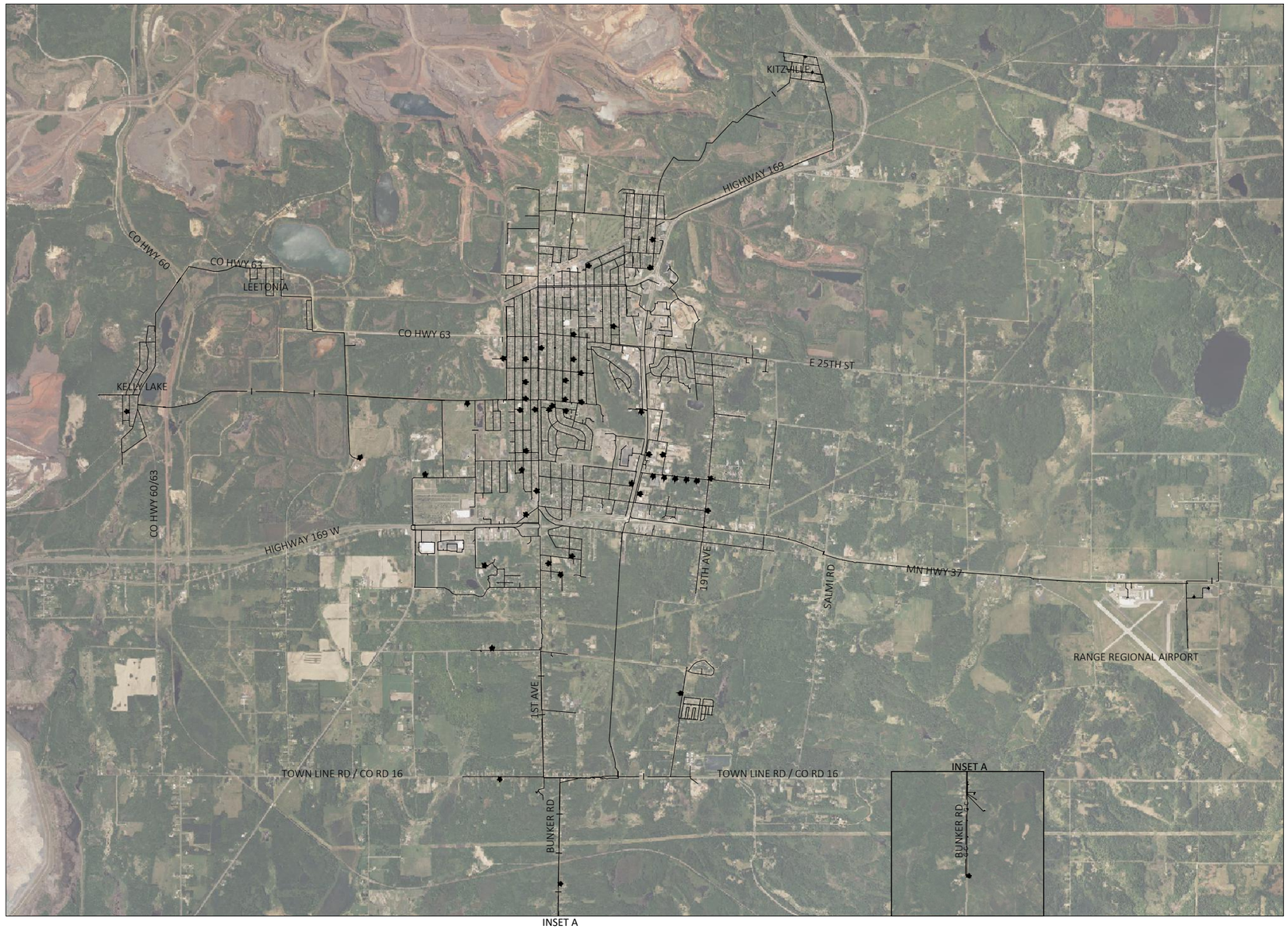
Paul Bunyan Rural Telephone Cooperative:
Ron Vold Jr.
jrvold@paulbunyan.net
(218)444-1234

NOTE: ALL HPUC WORK REQUESTS MUST GO THROUGH THE HPUC SERVICE DESK

CONTACT THE SERVICE DESK AT:
(218) 262-7712
operations@hpuc.com

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."



SHEET NUMBER	SHEET TITLE
GENERAL	
G0.01 - G0.02	TITLE SHEET & LEGEND
G1.01	SEQ & CONSTRUCTION NOTES
G2.01	LOCATION PLAN
CIVIL	
C1.01 - C1.09	DETAILS
C4.01 - C4.24	HYDRANT REPLACEMENT PLAN

THIS PLAN SET CONTAINS 36 SHEETS.

MAP LEGEND

HYDRANT LOCATION

MAP OF THE
CITY OF HIBBING
ST. LOUIS COUNTY, MN

0 2500 5000
SCALE FEET

September 9th, 2025

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

Kerry B. Johnson
LIC. NO. 53580 DATE 08/22/2025

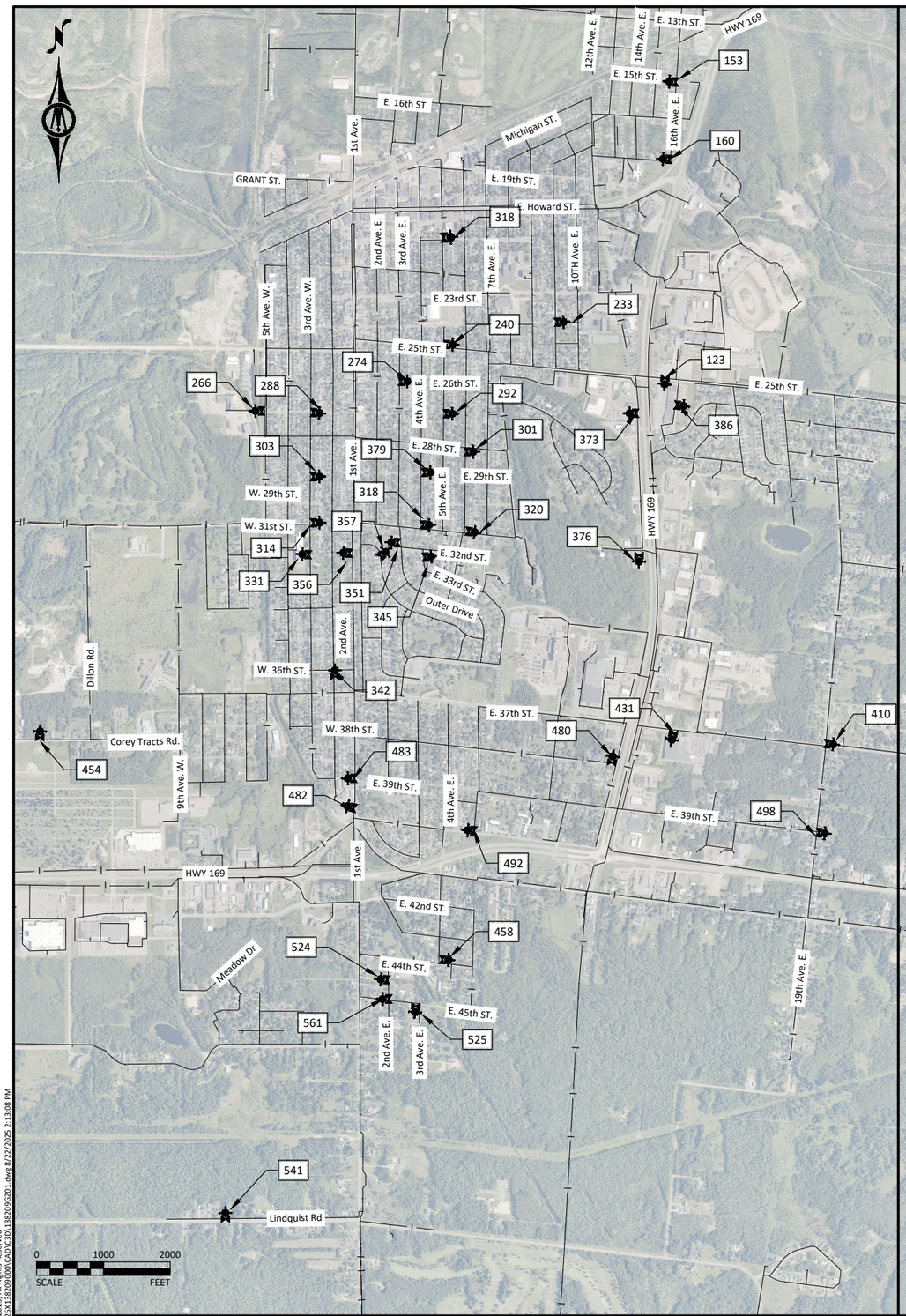
BOLTON & MENK
4960 MILLER TRUNK HIGHWAY, SUITE 550
DULUTH, MN 55811
Phone: (218) 729-5939
Email: Duluth@bolton-menk.com
Hibbing Public Utilities Commission

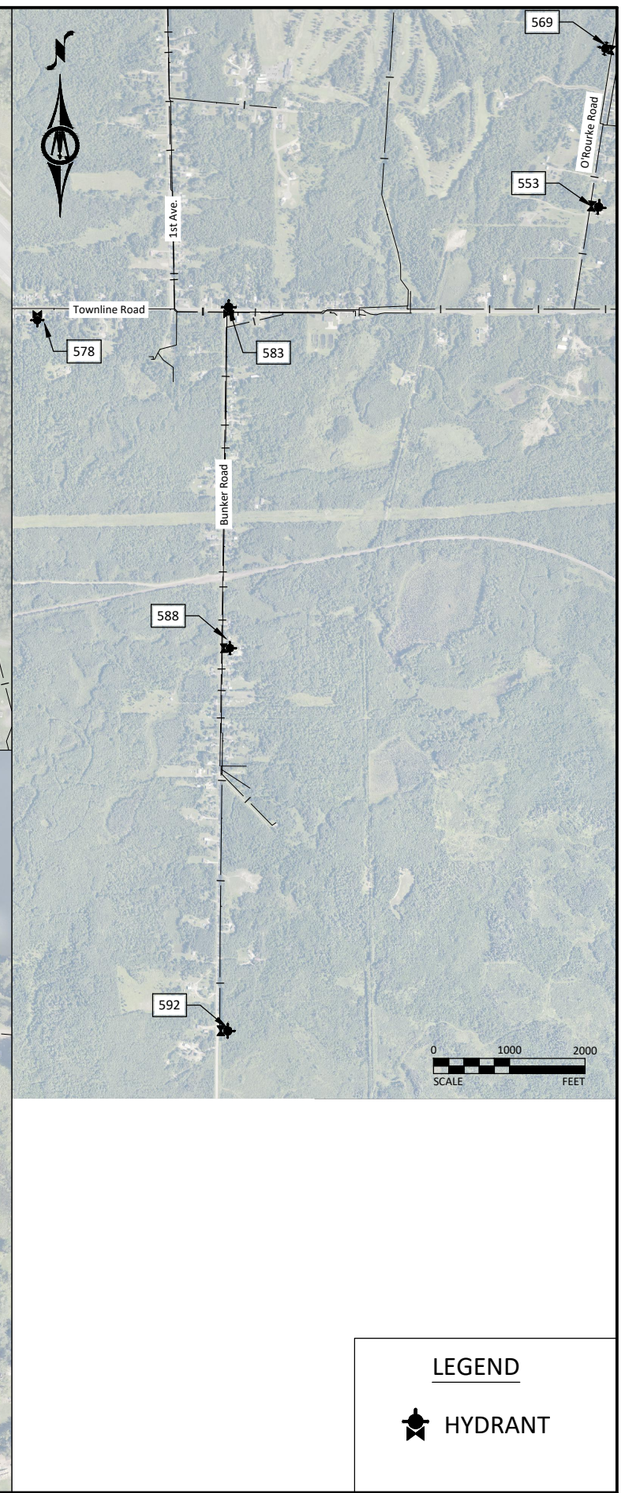
DESIGNED	MFM
DRAWN	MFM
CHECKED	KBJ
CLIENT PROJ. NO.	XXXXX

NO.	ISSUED FOR	DATE

HIBBING PUBLIC UTILITIES COMMISSION
2025 HYDRANT REPLACEMENT
TITLE SHEET

SHEET G0.01





LEGEND

HYDRANT

September 9th, 2025

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

Kerry B. Johnson
LIC. NO. 53580 DATE 08/22/2025

BOLTON & MENK
4960 MILLER TRUNK HIGHWAY, SUITE 550
DULUTH, MN 55811
Phone: (218) 729-5939
Email: Duluth@bolton-menk.com
Hibbing Public Utilities Commission

DESIGNED	NO.	ISSUED FOR	DATE
MFM			
DRAWN			
MFM			
CHECKED			
KBJ			
CLIENT PROJ. NO.			
XXXXXX			

HIBBING PUBLIC UTILITIES COMMISSION
2025 HYDRANT REPLACEMENT
LOCATION PLAN

SHEET G2.01

Item 3.b

HPU HIBBING PUBLIC UTILITIES
1902 E 6TH AVE
HIBBING, MINNESOTA 55746-0249
TELEPHONE: 218-262-7700
FAX: 218-262-7702

Item 3.b – Utility Fleet

Sept. 9th, 2025

James Bayliss, Chairman
Hibbing Public Utilities Commission
1902 E. 6th Avenue
Hibbing, MN 55746

RE: Item 3.b – Utility Fleet

Dear Commissioners;

Staff is presenting for your consideration the 2025-2026 Fleet Planning. This plan outlines the vehicles and equipment recommended for surplus or auction, authorizes critical replacements to support HPU's operations, and includes forward-looking considerations for 2026-2027. Staff goals in this planning is to maintain a safe, reliable, and cost effective utility fleet that supports the daily work of our electrical, water, heat, and admin work groups.

Auction / Declare Surplus 2025

Truck 23 (2004 International 4300 - Electrical failure)
Truck 19 (Chevrolet 1-ton pickup – weak transmission, rusted frame)
Truck 48 (Dodge 1-ton pickup – Engine injector pump failure)
Truck 45 (2008 International Digger – approved to be replaced Spring 25)
Vehicle 53 (Hatchback Ford Focus – rusted frame)
Truck 63 (Light-duty pick up – engine failure)
1991 Altek Wire Tugger

Fleet Budget for 2025/ 2026

Bucket Truck (Replacement for Truck 23) - $450K
Sherman Reilly Wire Tugger PT3000H (replacement for 1991 Altek Wire Tugger) -~100k
Water Crew Fleet Size Service Truck (replacement for Truck 60) – $60K
Water Crew Service Truck w/ Vmax Compressor (replacement for Truck 61) -$110K
Admin/Janitorial light transportation (replacing Vehicle 53) – recommended to lease
Transportation Mech. 2500 Series Fleet Size (Replacing Truck 14) – $60K

Plan for 2026/2027

Truck 25 Coal and Ash
Truck 41 Plant Mechanic
Truck 57 Heat Crew
Truck 58 Heat Crew

Sincerely,

HPU HIBBING PUBLIC UTILITIES
1902 E 6TH AVE
HIBBING, MINNESOTA 55746-0249
TELEPHONE: 218-262-7700
FAX: 218-262-7702

Luke J. Peterson

CUSTOMER ORDER ACKNOWLEDGEMENT

Terex USA, LLC dba Terex Utilities - 3140 15th Avenue SE - Watertown, SD 57201 - Phone: 605-882-4000

Date: 06-AUG-2025 **Quote Number:** QU36239-TU-V1 **Unit:** TL55
Sourcewell Contract Number: 110421-TER

Hibbing Public Utilities
1902 6th Ave E
Hibbing , MN 55746

Baseline Price: $303,065.00

Grand Total Each: **$303,065.00**

This written description and attached specifications have been producted by Terex USA, LLC dba Terex Utilities and shall not be released, disclosed, nor duplicated without the written permission of Terex USA, LLC dba Terex Utilities.

Prices are subject to change until shipment. Applicable taxes and any applicable surcharges to be added. Taxes, shipping, handling and lead times are estimates and subject to change. Quoted prices are based on total package and subject to change if all items not purchased. All prices quoted are in U.S. dollars unless otherwise specified. Payment by cash or certified check only. **Chassis price based off current pricing available at time of quote. Pricing is subject to change based on vehicle sourcing; final price to be confirmed prior to time of invoice**. Chassis payment is due within 30 days of chassis receipt at our facility. Quote withdrawn after 60 days.

Please ensure the accuracy of the specifications and drawings you provide. Changes made after receipt of order may incur additional charges. If you are trading equipment in, you warrant that: You have good title to the trade-in; it is free of all liens and encumbrances; all information you have provided related to the trade-in is true and correct.

Terex purchased chassis through Terex preferred International Dealer will include at no additional cost a special tow package for 12 months/unlimited mileage to nearest International Dealership for a warrantable failure. Coverage limited to $550 per incident. For roadside assistance call 1-800-448-7825.

Terex-purchased chassis through Terex preferred Freightliner Dealer will include at no additional cost a special tow package for 12 months/unlimited mileage/KM extended towing coverage $550 cap FEX applies. For roadside assistance call 1-800-FTL-HELP.

Notes:

1) Delivery Terms are CPT - 2020 .

- Delivery to customer included.

2) Payment Terms are Net 30 Pending Approval .

3) Delivery days from receipt of order shall be 520-720 Days .

Buyer hereby agrees to purchase the products in this quotation, subject to acceptance by Seller. Buyer has read and agrees to Seller's Terms and Conditions of Sale.

Buyer agrees that it shall not export or re-export Terex equipment or parts, technology, information or warranty related services directly or with its knowledge indirectly into: (a) Russia, Belarus or the following regions of Ukraine: Crimea, Sevastopol, Donetsk People's Republic (DNR), Luhansk People's Republic (LNR), Kherson and Zaporizhzhia; or (b) Iran, Cuba, Syria or North Korea without first obtaining written approval from Seller.

Terex USA, LLC dba Terex Utilities

Project Leader: Ben Storm

Account Manager: Ben Pahl

Accepted By: _____

PO Number: _____

Quantity: _____

Grand Total: _____

Date: _____

TEREX USA, LLC dba TEREX UTILITIES (“Seller”)
TERMS AND CONDITIONS OF SALE
U.S. and CANADA (except Quebec)

1. Terms and Conditions. The provision by Seller to Buyer of any Equipment or Parts (collectively referred to as “Products”) shall be exclusively governed by these Terms and Conditions of Sale (“Terms and Conditions”) and Seller’s sales order acknowledgement (collectively referred to as “Agreement”). This Agreement cancels and supersedes any and all terms and conditions previously issued by Seller and shall remain in effect unless and until superseded in writing by Seller. Acceptance of an order for Products by Seller shall be deemed to constitute a binding agreement between the parties pursuant to these Terms and Conditions and Buyer agrees that the order may not thereafter be countermanded or otherwise changed without the explicit prior written consent of Seller. No other terms and conditions shall apply, including the terms of any purchase order submitted to Seller by Buyer, whether or not objected to by Seller or whether or not such terms are inconsistent or conflict with or are in addition to these Terms and Conditions. These Terms and Conditions shall be deemed accepted by Buyer if any of the following occurs: (i) if confirmed by Buyer, (ii) if undisputed by Buyer within ten (10) days after receipt, or (iii) if Seller delivers Products to Buyer. Any communication construed as an offer by Seller and acceptance thereof is expressly limited to these Terms and Conditions. The Products are intended for industrial/commercial use by professional contractors and their trained employees and are not intended for use by consumers.

2.Terms of Payments. Payment for Products purchased by Buyer shall be made in accordance with any of the following terms, provided they have been previously arranged with and expressly approved by Seller in writing: (1) cash in advance; (2) confirmed, irrevocable letter of credit established in such amount and form and at such time and at such bank as shall be approved by Seller in respect of each order; (3) credit account purchases for which payment will be due and payable on net thirty (30) day terms, plus service and other charges applicable to past due amounts in accordance with Seller's written notices; or (4) other payment arrangements expressly approved by Seller in writing prior to or at the time the order is placed. If any Buyer credit account purchase is not paid in accordance with Seller's credit payment terms, in addition to any other remedies allowed in equity or by law, Seller may refuse to make further shipments without advance payment by Buyer. Nothing contained herein shall be construed as requiring Seller to sell any Products to Buyer on credit terms at any time, or prohibiting Seller from making any and all credit decisions which it, in its sole discretion, deems appropriate for Seller. Seller shall have the right, at its option, to charge interest on all amounts not paid when due and Buyer agrees to pay such interest calculated on a daily basis, from the date that payment was due until the Seller receives payment in full, at the rate of 1.5% per month or the maximum rate permitted by applicable law. Unless otherwise agreed in writing between Seller and Buyer, Seller may, in its sole discretion, increase or decrease the price of any Product, as Seller deems reasonably necessary, at any time prior to shipment and invoice Buyer for the same. If Buyer orders the chassis through Seller, the chassis payment is due upon receipt of chassis by Seller and the balance owed for the completed unit is due in accordance with agreed upon payment terms. When supplied by Buyer, Seller will inspect the chassis upon receipt and will notify Buyer of any chassis mounted components (including but not limited to fuel tanks, air tanks, battery boxes and exhaust systems) that require relocation. Buyer will be invoiced for such work upon completion of the finished Equipment.

3. Taxes and Duties. Unless otherwise noted, prices quoted do not include taxes or duties of any kind or nature. Buyer agrees that it will be responsible for filing all tax returns and paying applicable tax, duty, export preparation charge and export documentation charge resulting from the purchase of the Products. In addition, in the event any other similar tax is determined to apply to Buyer's purchase of the Products from Seller, Buyer agrees to indemnify and hold Seller harmless from and against any and all such other similar taxes, duties and fees. All prices quoted are U.S. dollars unless otherwise specified. The amount of any present or future taxes applicable to the sale, transfer, lease or use of the Products shall be paid by Buyer; or in lieu thereof, Buyer shall provide Seller with a tax exemption certificate satisfactory to the applicable taxing authority proving that no such tax is due and payable upon such sale, transfer, lease or use.

4. Title, Property, Risk and Delivery. Unless otherwise stated in writing, for all intra-continental United States shipments, all prices and delivery are FCA, point of manufacture (Incoterms 2020); for all other shipments, all prices and delivery are FAS, named port of shipment (Incoterms 2020). Title and all risk of loss or damage to Products shall pass to Buyer upon delivery, as per Incoterms 2020. Any claims for loss, damage or delay in transit must be entered and prosecuted by the Buyer directly with the carrier, who is hereby declared to be the agent of the Buyer. Seller shall not be liable for any delay in performance of this agreement or delivery of the Products, or for any damages suffered by Buyer by reason of delay, when the delay is caused, directly or indirectly, by a force majeure event described in Section 20 herein or any other cause beyond Seller's control. Claims for shortages in shipments shall be deemed waived and released by Buyer unless made in writing within five (5) days after Buyer's receipt of shipment. Seller's responsibility for shipment shall cease upon delivery of the Products to the place of shipment, and all claims occurring thereafter shall be made to or against the carrier by Buyer. Delivery shall generally be 240 to 270 days after receipt by Seller of a signed Order, provided that, where applicable: (1) Seller receives the chassis a minimum of 90 days prior to scheduled delivery, (2) drawings are timely sent by Buyer and the approved drawings are returned to Seller by Buyer by the requested date, (3) all vendor-supplied components and Buyer-supplied accessories are received by Seller by the date necessary to comply with scheduled delivery. Seller shall not be liable for any delay in performance of this agreement or delivery of the Products, or for any damages suffered by Buyer by reason of delay, when the delay is caused, directly or indirectly, by a force majeure event described in Section 20 herein or any other cause beyond Seller's control. Claims for shortages in shipments shall be deemed waived and released by Buyer unless made in writing within fifteen (15) days after Buyer's receipt of shipment. Seller's responsibility for shipment shall cease upon delivery of the Parts and or Equipment to the place of shipment, and all claims occurring thereafter shall be made to or against the carrier by Buyer.

5.Delays Caused By Buyer. In the event of a delay in shipment or delivery due to delay by Buyer in furnishing delivery instructions, arranging a method of payment satisfactory to Seller, submitting valid import permits or licenses, or any other delay caused by Buyer or at Buyer’s request, if the Products are not shipped or delivered within five (5) days from the first date they are ready to be shipped or

delivered, then Seller shall be entitled to charge, as compensation, any additional costs incurred related to such delay. If the Products are not shipped or delivered by the date which is ten (10) days from the first date they are ready to be shipped or delivered, then Buyer's order shall be deemed cancelled and Seller may, in its sole discretion, sell such Products to another buyer without any liability or responsibility to Buyer whatsoever. Seller shall have the right to keep payments on account already received from Buyer, and the difference between the sales price (increased by any other and all further costs, including but not limited to attorney's fees and expenses, storage and other costs, and interest accrued thereon) and the price received from another buyer shall constitute a debt of Buyer and bear interest at the same rate set forth in Section 2 herein. Seller shall be entitled to claim for any further damages suffered as a consequence of Buyer's breach of its obligations hereunder.

6.Cancellation. Prior to delivery to place of shipment, a Product order may be cancelled only with Seller's prior consent and upon terms indemnifying Seller from all resulting losses and damages. Seller shall have the right to cancel and refuse to complete a Product order if any term and/or condition governing this agreement is not complied with by Buyer. In the event of cancellation by Seller, or in the event Seller consents to a request by Buyer to stop work or to cancel the whole or any part of any order, Buyer shall, in the event that Seller asks Buyer to do so, make reimbursement to Seller, as follows: (i) any and all work that can be completed within thirty (30) days from date of notification to stop work on account of cancellation shall be completed, shipped and paid in full; and (ii) for work in progress and any materials and supplies procured or for which definite commitments have been made by Seller in connection with the order, Buyer shall pay such sums as may be required to fully compensate Seller for actual costs incurred, plus fifteen percent (15%). Buyer may not cancel any order after Seller's delivery to place of shipment. Orders for "Special" Equipment may not be cancelled after acceptance, except by Seller. Items of "Special" Equipment are those that differ from standard Seller specifications, have a limited market, or incorporate specifications that have been determined for a specific application. Determination of whether an item of Equipment is "Special" shall be made by Seller in its sole discretion.

7. Inspection and Acceptance. Buyer agrees that it shall inspect the Products immediately after receipt and promptly (in no event later than fifteen (15) days after receipt) notify Seller in writing of any non-conformity or defect. Buyer further agrees that failure to give such prompt notice or the commercial use of the Products shall constitute acceptance. Acceptance shall be final and Buyer waives the right to revoke acceptance for any reason, whether or not known by Buyer at the time of such acceptance. The giving of any such notice by Buyer shall automatically cause the provisions of Seller's warranty to apply and govern the rights, obligations and liabilities of the parties with respect to such nonconformity or defect, provided under no circumstances shall rejection give rise to any liability of Seller for incidental or consequential damages or losses of any kind. Seller shall not be bound by any agent's, employee's or any other representation, promise or inducement not set forth herein. Seller's catalogues, technical circulars, price lists, illustrations, drawings and any other similar literature are for Buyer's general guidance only and the particulars contained in them shall not constitute representations by Seller and Seller shall not be bound by them.

8. Warranty for New Products. Seller warrants its new Equipment and Parts manufactured and sold worldwide, to be free, under normal use and service, of any defects in material or workmanship for a period of twelve (12) months from the date of delivery(as limited by Seller's Limited Product Warranty); provided that Buyer sends Seller written notice of the defect within thirty (30) days of its discovery and establishes that: (i) the Equipment has been operated and maintained in strict compliance with Seller's operating and maintenance manuals ; and (ii) the defect did not result in any manner from the intentional or negligent action or inaction of Buyer, its agents or employees and (2) a new machine registration certificate has been completed, signed and delivered to the Seller within thirty (30) days of the Equipment's "in-service" date. If requested by Seller, Buyer must return any defective Product to Seller's manufacturing facility, or other location designated by Seller, for inspection, and if Buyer cannot establish that conditions (i) and (ii) above have been met, then this warranty shall not cover the alleged defect. Failure to give written notice of defect within such period shall be a waiver of this warranty and any assistance rendered thereafter shall not extend or revive it. Accessories, assemblies and components included in the Products of Seller, which are not manufactured by Seller, are subject to the warranty of their respective manufacturers. This warranty shall not cover any item on which serial numbers have been altered, defaced or removed. Maintenance and wear parts are not covered by this warranty and are the sole maintenance responsibility of Buyer. This warranty is limited to the original purchaser or end-user if sold to a distributor, and is not assignable or otherwise transferable without written agreement of Seller. **THIS WARRANTY IS EXPRESSLY IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED (INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) AND ALL OTHER OBLIGATIONS OR LIABILITY ON SELLER'S PART. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY CONTAINED HEREIN.** Seller neither assumes nor authorizes any other person to assume for Seller any other liability in connection with the sale of Seller's Products. This warranty shall not apply to any of Seller's Products or any part thereof which has been subject to misuse, alteration, abuse, negligence, accident, acts of God or sabotage. No action by either party shall operate to extend or revive this limited warranty without prior written consent of Seller

9. Warranty for Used Equipment. Used Equipment sold hereunder is sold on an "AS IS, WHERE IS, WITH ALL FAULTS" BASIS WITH NO WARRANTIES WHATSOEVER, EXCEPT AS TO TITLE, UNLESS OTHERWISE SPECIFICALLY AGREED IN WRITING BY BUYER AND SELLER. SELLER ASSUMES NO RESPONSIBILITY FOR THE CONDITION, SAFETY, LEGAL COMPLIANCE, OR USABILITY OF THE USED EQUIPMENT AND MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE USED EQUIPMENT INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SELLER MAKES NO REPRESENTATION OR WARRANTY REGARDING THE CONDITION OF THE USED EQUIPMENT, NOR THE SUFFICIENCY OF ANY WARNINGS, INSTRUCTIONS OR MANUALS PROVIDED WITH THE USED EQUIPMENT. Seller recommends and Buyer acknowledges that Buyer should contact the original manufacturer to obtain all available information for the used Equipment, including but not limited to product manuals, warnings, safety bulletins, recall notices, and instructional placards before using the used Equipment. Seller shall not be responsible for providing such information. Buyer agrees not to assert any claims against Seller with respect to the used Equipment or its use. Buyer agrees that it shall inspect the used Equipment prior to issuance of a purchase order for such Equipment and acknowledges that it is not relying upon

any photographs, images, videos, representations, statements or other assertions made by Seller with respect to the used Equipment's condition, but is relying upon its own knowledge and/or inspection of the used Equipment.

10. Remedies for Breach. IN THE EVENT OF ANY BREACH OF THE WARRANTY BY SELLER, THE PARTIES AGREE THAT SELLER'S LIABILITY SHALL BE LIMITED EXCLUSIVELY TO THE REMEDIES OF REPAIR OR REPLACEMENT (AT SELLER'S SOLE DISCRETION) OF ANY DEFECTIVE EQUIPMENT COVERED BY THE WARRANTY. In no event shall any repair or replacement of any defective equipment covered by the Seller's warranty extend the length of the warranty beyond the period specified in Section 8 herein.

11. Limitation of Liability. **NOTWITHSTANDING ANYTHING CONTAINED IN THIS AGREEMENT TO THE CONTRARY, Seller and its affiliates shall not be liable for, and specifically disclaim, any liability for any: (a) LOST PROFITS and/or business interruption (WHETHER DIRECT OR INDIRECT); and (b) indirect, incidental, consequential (whether direct or indirect) or other damages or losses of any kind whatsoever, including, without limitation, labor costs, lost profits, loss of use of other equipment, third party repairs, personal injury, emotional or mental distress, improper performance or work, penalties of any kind, loss of service of personnel, or failure of Products to comply with any federal, state, provincial or local laws, regardless of whether arising from a breach of contract, or warranty, legal claims or otherwise. Nothing in this Section shall operate to exclude Seller's liability for death or personal injury when directly related to Seller's negligent act or omission.**

12. Limitation of Actions. Any action for breach of this agreement must be commenced within one (1) year after the cause of action has accrued.

13. Specification Changes. In the event Seller incurs additional expense because of changes in specifications or drawings previously approved by Buyer, or in the event Seller is required to modify the ordered Equipment, perform any additional work or supply any additional Products, the additional expense shall be added to the purchase price. Buyer must submit to Seller a revised purchase order specifying any and all requested changes. Upon receipt of Buyer's revised purchase order, Seller shall have the right, in its sole discretion, to accept or reject any changes in specifications requested by Buyer.

14. Trade-in Offers. Trade-in offers are subject to Seller's inspection and acceptance of the equipment, which must have been maintained to U.S. Department of Transportation operating and safety standards. All accessories on the equipment, including without limitation jibs, winches, pintle hooks and trailer connectors, must remain with the equipment unless otherwise agreed by Seller and Buyer in writing. Seller reserves the right to cancel any trade-in offers or agreements if these conditions are not met, or if Buyer has misrepresented any information about the trade-in unit.

15. Insurance. Until the purchase price of any Products is paid in full, the Buyer shall provide and maintain insurance equal to the total value of the Equipment delivered hereunder against customary casualties and risks; including, but not limited to fire and explosion, and shall also insure against liability for accidents and injuries to the public or to employees, in the names of Seller and Buyer as their interest may appear, and in an amount satisfactory to Seller. If the Buyer fails to provide such insurance, it then becomes the Buyer's responsibility to notify the Seller so that the Seller may provide same; and the cost thereof shall be added to the contract price. All loss resulting from the failure to affect such insurance shall be assumed by the Buyer.

16. Patents, Copyrights, Trademarks, Confidentiality. No license or other rights under any patents, copyrights or trademarks owned or controlled by Seller or under which Seller is licensed are granted to Buyer or implied by the sale of Products hereunder. Buyer shall not identify as genuine products of Seller products purchased hereunder which Buyer has treated, modified or altered in any way, nor shall Buyer use Seller's trademarks to identify such products; provided, however, that Buyer may identify such products as utilizing, containing or having been manufactured from genuine products of Seller as treated, modified or altered by Buyer or Buyer's representative, upon prior written approval of Seller. All plans, photographs, designs, drawings, blueprints, manuals, specifications and other documents relating to the business of Seller ("Information") shall be and remain the exclusive property of Seller and shall be treated by Buyer as confidential information and not disclosed, given, loaned, exhibited, sold or transferred to any third party without Seller's prior written approval; provided, however, that these restrictions shall not apply to Information that Buyer can demonstrate: (a) at the time of disclosure, is generally known to the public other than as a result of a breach of this Agreement by Buyer; or (b) is already in Buyer's possession at the time of disclosure by from a third party having a right to impart such Information.

17. Default and Seller's Remedies. In the event of default by Buyer, all unpaid sums and installments owed to Seller, shall, at Seller's sole option, become immediately due and payable without notice of any kind to Buyer. In addition to its right of acceleration, Seller may pursue any and all remedies allowed by law or in equity, including but not limited to any and all remedies available to it under the Delaware Uniform Commercial Code. In addition to the foregoing, and not in limitation thereof, Seller shall have the right to set off any credits or amounts owed to Buyer against any amounts owed by Buyer to Seller.

18. Indemnification by Buyer. Buyer hereby agrees to indemnify, release, defend and hold harmless Seller, its directors, officers, employees, agents, representatives, successors, and assigns against any and all suits, actions or proceedings at law or in equity (including the costs, expenses and reasonable attorney's fees incurred in connection with the defense of any such matter) and from any and all claims demands, losses, judgments, damages, costs, expenses or liabilities, to any person whatsoever (including Buyer's and Seller's employees or any third party), or damage to any property (including Buyer's property) arising out of or in any way connected with the performance or the furnishing of Products under this agreement, regardless of whether any act, omission, negligence (including any act, omission or negligence, relating to the manufacture, design, repair, erection, service or installation of or warnings made or lack thereof with respect to any Products furnished hereunder) of Seller, its directors, officers, employees, agents, representatives,

successors or assigns caused or contributed thereto. If Buyer fails to fulfill any of its obligations under this paragraph or this agreement, Buyer agrees to pay Seller all costs, expenses and attorney's fees incurred by Seller to establish or enforce Seller's rights. The provisions of this paragraph are in addition to any other rights or obligations set forth in this agreement.

19. Installation. Unless otherwise expressly agreed in writing, Buyer shall be solely responsible for the installation and erection of the Products purchased. Although Seller may in some cases provide a serviceman, data and drawings to aid Buyer with installation or start-up, Seller assumes no responsibility for proper installation or support of any Products when installed and disclaims any express or implied warranties with respect to such installation and support. Notwithstanding whether data and drawings are provided or a serviceman aids in the installation, Buyer shall indemnify and hold Seller harmless and at Seller's request, defend Seller from all claims, demands or legal proceedings (including the costs, expenses and reasonable attorney's fees incurred in connection with the defense of any such matter) which may be made or brought against Seller in connection with damage or personal injury arising out of said installation or start-up.

20. Force Majeure. Seller shall not be liable to Buyer or be deemed to be in breach of this agreement by reason of any delay in performing, or any failure to perform, any of Seller's obligations in relation to the Products if the delay or failure was due to any cause beyond the reasonable control of Seller including (without limitation) strike, lockout, riot, civil commotion, fire, accident, explosion, tempest, act of God, war, epidemic, stoppage of transport, terrorist activity, supply shortage or changes in government, governmental agency, laws, regulations or administrative practices.

21. Anti-Corruption; Export Controls; No Boycotts. Buyer agrees that it shall, and that any party retained or paid by the Buyer ("Retained Party") shall, comply with all applicable laws including, but not limited to, laws prohibiting public corruption and commercial bribery. Buyer further agrees that it shall, and that any Retained Party shall, comply with all applicable export controls, economic sanctions, embargoes and regulations regarding the export, re-export, shipment, distribution and/or sale of Products, technology, information or warranty related services. Buyer further agrees that it shall not, and any Retained Party shall not, export or re-export Products, technology, information or warranty related services directly or with its knowledge indirectly into Iran, Sudan, Cuba, Syria, North Korea, the Crimea Region of the Ukraine or Russia without Buyer first obtaining written approval from Seller. Failure to comply strictly with this section and all applicable laws, regulations and licensing/approval requirements shall be grounds for immediate termination of this agreement by Seller. Notwithstanding anything to the contrary contained in any agreement between the Buyer and Seller or in any other document or agreement relating to the Products sold hereunder, Seller will not comply with requests related to the boycott of any country or other jurisdiction, except to the extent such boycott is required by or otherwise not inconsistent with United States law.

22. Telematics. If a telematics system is included with the Equipment, the telematics system is administered by a third party ("Teleservice Provider") and collects a range of operational data about the Equipment including, but not limited to, usage, performance and reliability. Buyer consents to Seller's obtaining such data from the Teleservice Provider for warranty, product improvement, marketing and customer support purposes and to Seller's management and reporting of data (personal and non-personal) about the Equipment including, but not limited to, fuel consumption, up/down times, operation, defects, parts replacement, movement and location. Buyer shall, to the extent required by applicable law, obtain consent from its customers and/or any third party for Seller and/or third parties to provide teleservices and data to Buyer. Buyer shall comply with all applicable laws relating to the provision of teleservices. Buyer agrees to be bound by the current version of the Terex Telematics Terms of Use at https://www.terex.com/en/products/telematics-tou.

23. Construction and Severability. These Terms and Conditions of Sale constitute the entire agreement between the parties regarding the subject matter hereof and shall be construed and enforced in accordance with the laws of Delaware. The United Nations Convention on Contracts for the International Sale of Goods (1980) (CISG) shall not apply. The invalidity or unenforceability of any provisions of this agreement shall not affect any other provision and this agreement shall be construed in all respects as if such invalid or unenforceable provision were omitted.

24. Jurisdiction. The parties agree that the proper and exclusive forum and venue in all legal actions brought to enforce or construe any provisions herein shall be in United States District Court, District of Delaware or, if federal jurisdiction is lacking in such action, in New Castle County Superior Court in Delaware.

25. No Assignment. No rights arising under this agreement may be assigned by the Buyer unless expressly agreed to in writing by the Seller.

26. No Set-off. Buyer shall have no right to set-off any amounts it may owe Seller against amounts Seller may owe Buyer under this or any other agreement between Buyer and Seller.

27. Miscellaneous. Buyer represents that: (i) it is solvent and has the financial ability to pay for the Equipment and Parts purchased hereunder and (ii) it has all requisite right, power and authority to perform its obligations under this agreement.

Buyer's Initials: _____

LIMITED PRODUCT WARRANTY

TEREX USA, LLC dba TEREX UTILITIES (“Seller”),as to the equipment manufactured by each respective company, warrants its new equipment and parts manufactured and sold worldwide to be free, under normal use and service, of any defects in manufacture or materials for a period of **12 months from date of delivery to the first end user, but in no event longer than 18 months from date of shipment from the factory**; provided that (1) Seller receives written notice of the defect within thirty (30) days of its discovery and Buyer establishes that (i) the equipment has been maintained and operated within the limits of rated and normal usage; and (ii) the defect did not result in any manner from the intentional or negligent action or inaction by Buyer, its agents or employees, and (2) a new machine registration certificate has been completed and received by Seller within thirty (30) days of the equipment’s “in-service” date. If requested by Seller, Buyer must return the defective equipment to Seller’s manufacturing facility, or other location designated by Seller, for inspection, and if Buyer cannot establish that conditions (1) (i) and (1) (ii) above have been met, then this warranty shall not cover the alleged defect.

Seller’s obligation and liability under this warranty is expressly limited to, at Seller’s sole option, repairing or replacing, with new or remanufactured parts or components, any part which appears to Seller upon inspection to have been defective in material or workmanship. Such parts shall be provided at no cost to the owner, FOB Seller’s parts facility (Incoterms 2010). If requested by Seller, components or parts for which a warranty claim is made shall be returned to Seller at a location designated by Seller. All components and parts replaced under this warranty become the property of Seller. This warranty shall be null and void if parts (including wear parts) or attachments other than genuine OEM Seller parts or approved attachments are used in or attached to the equipment.

Accessories, assemblies and components included in Seller’s equipment, which are not manufactured by Seller, are subject to the warranty of their respective manufacturers. Normal maintenance, adjustments, or maintenance/wear parts, are not covered by this warranty and are the sole maintenance responsibility of Buyer.

The following structural members have a lifetime parts only warranty for the original Buyer after date of shipment from Seller: sub frame, pedestal, turntable, and boom. Replacement of fiberglass jibs, seals, gaskets, hoses, and exterior coating is not covered under the lifetime warranty. The lifetime warranty requires an annual service inspection of the equipment by an authorized distributor of Seller. The sub frame, pedestal, turntable, and boom shall have a 5 year parts only warranty if the annual service inspection is performed by an approved entity other than an authorized distributor of Seller. All replacement parts must be genuine OEM Seller parts.

SELLER MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE,AS TO THE EQUIPMENT AND PARTS IT SUPPLIES.

No employee or representative of Seller is authorized to modify this warranty unless such modification is made in writing and signed by an authorized officer of Seller. Seller’s warranty is continuous for the stated period, and “stopping and restarting” such period is not permitted.

Seller’s obligation under this warranty shall not include duty, taxes, environmental fees, including without limitation, disposal or handling of tires, batteries, petrochemical items, or any other charges whatsoever. Seller shall not be liable for indirect, incidental, or consequential damages, even if advised of the possibility of such damages.

Improper maintenance, improper use, abuse, improper storage, operation beyond rated capacity, operation after discovery of defective or worn parts, accident, sabotage or alteration or repair of the equipment by persons not authorized by Seller shall render this warranty null and void. Seller reserves the right to inspect the installation of the product and review maintenance procedures to determine if the failure is covered under this warranty.

Parts Warranty: Seller warrants the parts ordered from the Seller to be free of defects in materials or workmanship for either (1) a period of 12 months after date of shipment from the factory, or (2) the balance of the remaining new equipment warranty, whichever occurs first. With respect to parts ordered from Seller for equipment for which the warranty has expired, Seller warrants such parts to be free of defects in materials or workmanship for a period of 12 months after date of shipment from the factory.

NO TRANSFERABILITY OF WARRANTY: This warranty is limited to the original purchaser or original end-user if sold to a distributor, and is not assignable or otherwise transferable without the written agreement of Seller.

ITEMS NOT COVERED BY WARRANTY

The following listed items, which are not exhaustive, are **NOT** covered under this warranty:

1. Items sold by any individual, corporation, partnership or any other organization or legal entity that is not authorized by Seller to distribute its equipment.

2. Inbound freight, duty and taxes for replacement components or outbound freight, duty, and taxes for any part requested as a warranty return.
3. Components which are not manufactured by Seller or its affiliates. Such components may include, but are not limited to, chassis, engines, batteries, tires, customer-supplied products, transmissions, air compressors, and axles.
4. Replacement of a complete assembly that is field repairable by the replacement or repair of defective part(s) within the assembly. Seller has the option to repair or replace any defective part or assembly.
5. Wear parts and maintenance services including, but not limited to: lamps, lenses, seals, gaskets, hoses, filters, breathers, belts, nozzles, friction plates, glass, clutch and brake linings, wire rope, nuts and fittings, exterior coatings, proper tightening of bolts, adding or replacing of fluids, adjustments of any kind, services, inspections, diagnostic time, travel time and supplies such as hand cleaners, towels and lubricants.
6. Damage caused by carrier handling. Any such claim for damage should be filed immediately with the respective carrier.
7. Repairs, work required or parts exposed as the result of age, storage, weathering, lack of use, demonstration use, or use for transportation of corrosive chemicals.
8. Damage resulting to the equipment or parts should the owner or operator continue to operate the equipment after it has been noted that a failure has occurred.
9. Damage caused by, or labor or other costs related to, work performed by personnel not authorized by Seller to service the equipment.

IN NO EVENT SHALL SELLER, OR ANY AFFILIATE, SUBSIDIARY OR DIVISION THEREOF BE LIABLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES RESULTING FROM ANY BREACH OF WARRANTY, REPRESENTATION OR CONDITION, EXPRESS OR IMPLIED, OR ANY TERMS OF THIS WARRANTY, OR ANY BREACH OF ANY DUTY OR OBLIGATION IMPOSED BY STATUTE, CONTRACT, TORT, COMMON LAW OR OTHERWISE (WHETHER OR NOT CAUSED BY THE NEGLIGENCE OF THE SELLER, ITS EMPLOYEES, AGENTS OR OTHERWISE), INCLUDING, WITHOUT LIMITATION, LOSS OF USE, LOST PROFITS OR REVENUES, LABOR OR EMPLOYMENT COSTS, LOSS OF USE OF OTHER EQUIPMENT, DOWNTIME OR HIRE CHARGES, THIRD PARTY REPAIRS, IMPROPER PERFORMANCE OR WORK, LOSS OF SERVICE OF PERSONNEL, LOSS OF CONTRACTOR OPPORTUNITY AND PENALTIES OF ANY KIND, PERSONAL INJURY, EMOTIONAL OR MENTAL DISTRESS, OR FAILURE OF EQUIPMENT TO COMPLY WITH ANY APPLICABLE LAWS. The Seller's liability to the Buyer shall not in any event exceed the purchase price of the equipment.

THIS WARRANTY IS EXPRESSLY IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, REPRESENTATIONS AND CONDITIONS, EXPRESS OR IMPLIED AND ALL OTHER STATUTORY, CONTRACTUAL, TORTIOUS AND COMMON LAW OBLIGATIONS OR LIABILITY ON SELLER'S PART ARE HEREBY EXPRESSLY EXCLUDED TO THE MAXIMUM EXTENT PERMITTED BY LAW. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY CONTAINED HEREIN. Seller neither assumes nor authorizes any other person to assume for Seller any other liability in connection with the sale of Seller's equipment. In the event that any provision of this warranty is held unenforceable for any reason, the remaining provisions shall remain in full force and effect.

Terex USA, LLC dba Terex Utilities - 3140 15th Avenue SE - Watertown, SD 57201 - Phone: 605-882-4000

Date: 06-AUG-2025 **Quote Number: QU36239-TU- V1** **Unit: TL55**

Hibbing Public Utilities
1902 6th Ave E
Hibbing , MN 55746

Qty. Description

UNIT

1 **Tl55 Telescopic Aerial Device**

One (1) new Terex Hi-Ranger TL55 Articulating / Telescoping Aerial Device providing a working height of 60.1 ft (18.3 m).
Unit will be mounted behind the cab.

Design Criteria:
* Design criteria is in accordance with current industry and engineering standards applicable and accepted for structural and hydraulic design.

Aerial device is designed as a Category C machine in accordance and is dielectrically tested and rated for operation on systems up to 46 Kv phase to phase per ANSI/SIA A92.2-2021

Turntable and Lower Boom Assembly:
Lower Boom:
* Filament wound high strength fiberglass insert providing an insulation gap.
* The lower boom articulation is from 0 to 93 degrees.

Lower Controls:
* Individual control levers are located in an accessible location on the turntable.

Rotation:
* Self-locking worm gear rotation drive is provided and equipped with bi-directional motor.

Hydraulic System:
* Full pressure open center hydraulic system.
* Hydraulic hoses are equipped with permanent type fittings.

Miscellaneous:
* All metallic components of the complete aerial device are powder coat white.
* The fiberglass upper boom, boom inserts, platforms and covers are white.
* One complete paper manual and access to an electronic copy of the manual providing operational and maintenance procedures, and a replacement parts listing.
* Warning decals provided with unit.

1 **Pedestal,58 (To 68 Cab),Internal Tank**

Pedestal with 20 gallon integral tank.
* The pedestal is designed with access holes for maintenance of hydraulic plumbing.
* An internal 20-gallon hydraulic oil reservoir provided with a 60-mesh filler screen baffles gauge. 100 mesh suction screen with bypass clean out access hole and dip stick.

Sight Gauge With Thermometer:
* Mounted within an aluminum body to protect sight tube.
* Thermometer has a range of 0-300 degrees Fahrenheit.

1 **Boom Tip,End,Rot&Lifter,Cobra Style Jib**

Date: 06-AUG-2025 **Quote Number: QU36239-TU- V1** **Unit: TL55**

Boom Tip with 4 Function Controls, Platform Rotator, Platform Lifter and
1000 lb. removable top mounted cobra style jib that does not rotate with platform.

Upper Controls: Control-Plus single stick controller.
* Enable lever must be actuated before operation.

The end mount platform rotator offering 180 degrees of hydraulic rotation.

The platform lifter provides 24 of vertical platform lift.

Hydraulic Platform Tilt is provided at platform and lower controls.

Engine Stop/Start controlled at platform and lower controls.

Upper Boom:
* Filament wound high strength fiberglass boom providing an insulation gap.

Top mount, Removable 1000 lb. Jib/Winch
* Levels with platform.
* Hydraulic articulation from -20 to 70 degrees.
* 51 load radius from the platform shaft.
* Manual extension 17 .
* Maximum jib capacity of 1000 lb.
* Includes up to 75' of 3/8 winch rope and hook.
* Low profile stowed position of 16 and the boom can still utilize its full range of motion down to -40 degrees.
* Poppet valve protection of fiberglass boom. Stops boom operation if jib contacts fiberglass boom.
* King post attached to jib. Low profile socket when jib removed to minimize interference and overall height.

1 **Q15454 - 3/4-in Pin Cobra Jib ILO Standard - Terex PN-639284**

1 **Safety Harness For Single Platform**

A safety harness with lanyard is provided for fall arrest.

1 **Platform Rest,Single,24x30,Lifter**

A rigid platform rest provides platform support during road travel.

1 **Two Speed (Std)**

Engine Throttle Control:
* A two speed engine throttle control is provided at the upper controls.
* The engine will advance to a pre-set speed when engaged and decrease to idle when disengaged.

1 **Tools, Dual, Flow Control**

Dual Hydraulic Tool Outlets At Platform With Flow Control:
* Installed at the platform to accommodate two open center hydraulic tools.
* Provides 5 GPM at 2250 psi at engine idle.

Date: 06-AUG-2025 **Quote Number: QU36239-TU- V1** **Unit: TL55**

1 **Auxiliary Letdown,12v**

Auxiliary Let Down for use with Open Center Hydraulics:
* Allows for the descent of the boom (platform) in the most direct manner for a time limited by the duty cycle of the electric motor.
*Includes 12 volt electric motor for use on a 12 volt chassis.
Note: This includes a switch for activation at pedestal for electric or air function.

1 **Single Conductor Holder for 3/4-in Jib - Terex PN-640500**

1 **Collector Block, 4 Channel Electric Ring**

Continuous And Unrestricted Rotation:
* A hydraulic rotary manifold provides a rotating oil distribution system for continuous and unrestricted rotation.
* A 4 channel electric collector ring is provided as standard.

1 **Terex Advanced Chassis Controller**

Terex Advanced Chassis Controller:
* Multiplexed system to include: Controller, LCD Screen, Manual and Schematics.
* Standard Options: Diagnostics, Status Screens, Event Log, Hours Meter, Selectable Button Labels, System Alerts and System Test.
* Programmable settings allow installer to customize/select options need for their application.
* Screw terminal-type connections and enclosure to cover connections.
* Recommended on Class 6 and above chassis with multiple outputs
* The PTO hour is standard. The engine hour meter is standard (When available). This is a message we get from the truck Data link. All trucks except Ford give us the Engine hours. So if it's a Ford, we just display PTO hours.

1 **A-Frame,Extra Heavy Duty,(8348)**

Extra Heavy Duty A-Frame Outriggers with swivel type stabilizer pads. (8348)

1 **A-Frame,Modified,(8352)**

Underslung Modified A-Frame Outriggers with swivel type stabilizer pads. (8352)

1 **O/R Cntrls, 2 Sets W/Tool Outlet**

Controls For 2-Sets Of Outriggers And Auxiliary Tool Outlets (Open center systems):
* Recessed at rear of truck each side for ease of view for outrigger placement.
* Includes switches and alarm for outrigger in motion alarm.

1 **Outrigger Interlock,12v,Std (2 Sets Af)**

Outrigger Interlock:
* To operate the boom the outriggers must be extended.

Terex USA, LLC dba Terex Utilities - 3140 15th Avenue SE - Watertown, SD 57201 - Phone: 605-882-4000

Date: 06-AUG-2025 **Quote Number: QU36239-TU- V1** **Unit: TL55**

1 **Subframe Selection - 120 Inch Ca - 197 Inches Long - 10.5 Feet Pb**

Subframe for 120 CA chassis.
* Subframe constructed with a 10.5' possum belly length
* Subframe is 197.00 long
* Constructed with 6 x 6 x 3/8 wall square tubing with 5/16 thick steel plate.

1 **Tie Dowk Kit For Set 2 Sets Outriggers**

Tie down kit.

1 **Ub Rest, Automatic**

A boom rest with a automatic latch is provided.

1 **Pump, Vane, 8 Gpm, Rh (Auto)**

Pump for systems requiring 8 gallons per minute:
*Fixed displacement vane pump providing 5 gallons per minute at 725 engine rpm and 8 gallons per minute at 1050 engine rpm with a 128% pto.

1 **Usa**

American flag displayed on unit.

1 **Limited Product Warranty - Standard**

Factory Warranty

1 **Q15454 - 24x30 Platform w/ (2) Inside/Outside Steps and 3-Sided Toe Space - Terex PN-487622**

1 **Platform Cover for 24x30 platform - Terex PN-65305400**

1 **Customer Disclamier On Customer Supplied Chassis**

Customer Supplied Chassis:
* Along with the purchase order the customer will be required to include a copy of the chassis specification intended for use and the contact information of the supplying chassis dealer. If the chassis specification does not meet minimum requirements for the application additional costs may be incurred to meet those requirements.
* Terex Utilities, Inc. requires a weight study analysis to insure chassis loading and stability.
* Chassis's delivered to the installation facilities that do not meet minimum specification requirements will be noted at time of delivery and a suggested resolution will be provided back to the customer.
* Reference Terex Customer Furnished Chassis Delivery Policy for additional instructions.

Terex USA, LLC dba Terex Utilities - 3140 15th Avenue SE - Watertown, SD 57201 - Phone: 605-882-4000

Date: 06-AUG-2025 **Quote Number: QU36239-TU- V1** **Unit: TL55**

1 **156-inch Fiberglass Line Body and Accessories per attached spec**

1 **Tailshelf and Accessories per attached spec**

1 **Install Tl Behind Cab**

Install Aerial Device Behind Cab And Install All Associated Components:
* Final test and inspect completed unit including stability and dielectric testing per manufacturers requirements.

1 **Hose & Fitting Kit Group 1**

Hose and fittings to connect the hydraulic system from the oil reservoir to the pump and unit.

1 **Misc Shop Supplies Group 3**

Miscellaneous shop supplies.

1 **Platform Rest Bottom Base Group 3**

Platform rest, bottom base

1 **Chassis Spring Add Left Rear(Req. Art)**

Chassis Spring Additions:
* Build up left rear chassis springs to level vehicle.

1 **Pto (Muncie) For Automatic Transmission**

Power take off with indicator light for automatic transmission.

1 **Dot Inspection**

DOT Inspection.

1 **Set Chassis Parameters (Req\'D)**

Set chassis parameters.

Date: 06-AUG-2025 **Quote Number: QU36239-TU- V1** **Unit: TL55**

1 **Ecco Back-Up Alarm**

Back-up alarm to sound when the vehicle is shifted into reverse.

4 **Wood 24 X 24 Painted Black (Standard)**

Laminated wood outrigger pad 24 x 24 x 2-1/4 with rope handle.

4 **Rubber Wheel Chock Eye Bolt (Standard)**

Rubber wheel chocks with eye bolt.

1 **5 Vise With Bracket (Standard)**

Wilton #675 - 5 vise.

1 **Vise Mounting Bracket**

Vise Mounting Bracket

1 **Grab Handle Set Three Point Contact**

Grab Handle set for three point contact.

1 **Cable Stirrup Step (Standard)**

Cable type gripstrut stirrup step.

1 **Stirrup Step Rigid For Side Of Body**

Rigid stirrup step mounted on side access for ground to body access.

1 **Access Step (Standard)**

Access steps to platform from top of body or flatbed floor.

2 **Mud Flap - Terex Logo (Standard)**

Mud flap with logo.
Note: Trim As-Required.

1 **Grounding Loop Kit (One Each)**

Grounding Loop Kit:
* Consists of (2) grounding copper rings located one at front and one at rear.

Date: 06-AUG-2025 **Quote Number: QU36239-TU- V1** **Unit: TL55**

1 **(1) Hastings spring rewind grounding reel installed at the streetside rear of the tailshelf under the hotstick door. Includes 50-ft of 2/0 Yellow Cable Terex PN - 65321346**

1 **Rear Window Guard Kit**

Window guard constructed of angle and heavy duty flatten expanded metal mesh.
Note: Attaches to boom rest of cab guard support.

1 **Bed Mount Tl55-60 (65388508-Npn)**

Boom rest.

1 **Peterson 7-Lamp Led Kit Fmvss Dot**

Peterson LED 7-lamp DOT Lighting Package:
* Complies with FMVSS 108.
* Includes required lights, junction box and wiring harness.
* Note: Includes lighted License Plate Area
* Note: Includes Clearance Lights if Applicable to application.

2 **Outlet Electrical W/Gfi 110 Volt**

110 volt outlet with GFI.

Install (1) in SS Horizontal (locate top front of inside of bin) and (1) in cab on 4-cord

1 **Inverter 2400w**

2400 watt inverter, continuous, 120VAC, Up to 20A.

Install in curbside 1st vertical - Inverter switch in chassis controller - off with ignition off

1 **Battery Relocation On Chassis**

Battery relocation on chassis.

2 **Kit 4 Amber Led Strobe Light/Guard(Std)**

Amber strobe light (LED) with 4 inch tall and 6 inch diameter lens and branch guard.

1 **Strobe Lht Kit 2-Cnr Fl Mt Led Amber 4**

Whelen 2 corner, 4 inch LED, Amber Strobe Light Kit with grommets.
*Wired into On/Off swtich in cab.

2 **Light Led Amber (Grill Mount)(One Light)**

Date: 06-AUG-2025 **Quote Number: QU36239-TU- V1** **Unit: TL55**

Whelen LED 3.5 Amber Flash Light.
*3 LED Clusters, 10 flash pattern.

1 **Led Tractor Light**

Truck-Lite 8150 - Round Work Light, LED.

Install on rear of pedestal

4 **Work Light Led Under Carriage 13 36led**

Work Light, LED, Under Carriage, 13 long.

Install (2) under body at rear near outriggers and (2) under tail shelf each side facing rear near outside edges. Need to be on Separate switch in chassis controller.

3 **Milwaukee 2123 Remote Controlled LED Work Light**

Install (1) curbside & (1) Streetside of cab guard - under strobe light bars. Install (1) curbside of hood

3 **Grote LED Work Lights - Install (1) each on underside of cab guard (inset from Milwaukee lights) and (1) at rear of curbside compartments / PN-65353840**

1 **Glad Hand Kit - Swing Away**

Glad Hand Kit, Swing Away:
*Requires tractor protection valve and air lines to the rear.

1 **Voyager Brake Contrller**

Voyager Brake Controller.

1 **Stop/Start Rear Of Truck**

Remote engine stop/start control from rear of vehicle.

1 **Two Speed Rear Of Truck**

Remote two speed control from rear of vehicle.

1 **Pintle Hook 15t**

15 ton pintle hook:
* Safety chain eyes.
Pintle hook brackets and attachment methods are designed to meet the associated pintle hook ratings. They are not designed for recovery purposes. If recovery attachments are required, please order the appropriate tow eyes.

1 **Icc Rear Bumper**

Date: 06-AUG-2025 **Quote Number: QU36239-TU- V1** **Unit: TL55**

ICC rear bumper.

1 **7-Prong Trailer Socket Rv Style Combined**

7-blade trailer socket. (RV style)

1 **Install a stainless steel shut-off valve in the bottom of the hydraulic tank - Terex PN-65341312**

35 **Hyd Oil-Red Flomite(Tc Tcx Rmx Dbl Lift)**

Fill with Hydraulic oil for low temperature use.
* Refer to the product maintenance manual for specific type to be used.

1 **Safety Kit 10# Fire Extinguisher-Abc**

Safety Kit consists of the following:
*10-lb ABC fire extinguisher with the use of 0092099 bracket.
*James King triangle reflector kit.

1 **Camera Rear Vision 7 Screen**

Rear view vision square light camera & 7 monitor system.

1 **Paint Body Floor With Non-Skid Paint**

Paint body floor with non-skid paint.

1 **Paint Compartment Top Non-Skid Paint**

Paint compartment top with non-skid paint.

1 **First Article Inspection, Factory Onsite**

First Article Inspection, Factory On-Site

Terex USA, LLC dba Terex Utilities

1. Federal Excise Tax will be added if certificate is not supplied with order.

2. The following items must be considered by the purchaser if not already included: Strobe Light; Wheel Chocks; Outrigger Pads; Outrigger Out of Stow Light; Truck Grounding Kit; Barricade Kit; Boom Stow Interlock; Auxiliary Let Down; Platform Liner; Platform Cover; Two-Speed; Start/Stop Controls; Oil Cooler; PAL; Anti-Two Block (Digger Derricks); Load Display (Digger Derricks) and Load Alert (Aerials).

3. Terex USA, LLC dba Terex Utilities strongly recommends all installation accessories be located up front in front in the quote or secondarily on the approved engineering drawing. Any accessories located or relocated during manufacturing may be subject to additional charges.
4. Terex USA, LLC dba Terex Utilities - Offers In-service Training.
5. Terex USA, LLC dba Terex Utilities - Assembly in Watertown.South Dakota is ISO 9001:2000 Certified.

QUOTATION

TEREX UTILITIES
BEN STORM
3140 15TH AVE SE
WATERTOWN, SD 57201
618-635-2062

HIBBING PUBLIC UTILITIES

Exp. Date: 08/09/2025
Quote No: 64236-0001
LINE BODY: BFXBA108T BFXB 108T LINE BODY

07/09/2025

REF. NO	DESCRIPTION	QTY	
	== BFXB 108T LINE BODY - 0.000 ==		
1084818	BFXB 108T LINE BODY	1	
	SS= 25.75 / 25.25 / 27.25 / 53.5 / 24.25		
	CS= 25.75 / 25.25 / 27.25 / 53.5 / 24.25		
	OL= 156		
	FBCA= 105		
SB-WI94	OVERALL WIDTH - 94.00	1	
SB-PD18	PACK DEPTH - 18.00	1	
	PACK HEIGHT - 48	1	
	MOUNTING HEIGHT - 30.00	1	
SB-USS6	STEEL UNDERSTRUCTURE	1	
SB-FS8	STEEL TREADPLATE FLOOR	1	
ABLB	ALUMINUM BULKHEAD (LB)	1	
	STEEL REAR FLAT	1	
NSWGLB	STANDARD LINE BODY WHITE GELCOAT	1	
	(MATCHES INTERNATIONAL 9219)		
SB-LRH	ROTARY LATCH STAINLESS STEEL	1	
	TYPE 304 STAINLESS STEEL HARDWARE	1	
SB-HSH	TYPE 304 STAINLESS STEEL DOOR HINGE	1	
SB-DHVC	VINYL COVERED S/S CABLE DOOR STOPS	1	
SB-DHOCR	OVER CENTER DOOR CHECK	7	
SB-CTNS	NON SKID COMPARTMENT TOPS	1	
SB-DRA	FULL LENGTH ALUM DRIP RAIL	1	
	CLEAR VINYL ROCK GUARDS	1	
	AUTOMOTIVE GRADE BUBBLE GASKET	1	
	ONE PIECE MOLDED DOORS	1	
	WITH AUTOMOTIVE FINISH		
	BOTH SIDES		
	RECESSED DOOR JAMBS	1	
	FLOW THROUGH VENTILATION SYSTEM	1	
SB-LPE	FULL LED LIGHTING PACKAGE	1	
	STOP / TAIL / TURN / MARKER & BACK-UP LIGHT		
	NO HOLES IN REAR OF BODY		
	LIGHTS RECCESSED IN TAILSHELF		
SB-HSST	HOTSTICK DOOR (STREET SIDE)	1	
SB-HSLS	HOTSTICK FULL LENGTH SHELF-STREET SIDE	1	
SB-HSB	HOTSTICK BRACKETS (PAIR)	1	
LB	STREET FRONT COMPT	1	

REF. NO	DESCRIPTION	QTY	
SB-XLS1	|-- LOCKING SWIVEL HOOK 2-3-2	7	
	|-- HANGER BAR (TOP CENTER)	1	
LB	STREET FRONT COMPT #2	1	
SB-SAD2	|-- 2 ADJUSTABLE SHELVES W/DIVIDERS	1	
LB	STREET FRONT COMPT #3	1	
SB-SAD3	|-- 3 ADJUSTABLE SHELVES W/DIVIDERS	1	
LB	STREET HORIZ COMPT	1	
SB-SFD	|-- DIVIDER TRAY (BOTTOM OF COMPARTMENT)	1	
LB	STREET REAR COMPT	1	
SB-XLS1	|-- LOCKING SWIVEL HOOK 2-3-2	7	
LB	CURB FRONT COMPT	1	
SB-SAD2	|-- 2 ADJUSTABLE SHELVES W/DIVIDERS	1	
SB-XVD	|-- SQUARE DOOR VENT REAR WALL	1	
LB	CURB FRONT COMPT #2	1	
SB-SAD3	|-- 3 ADJUSTABLE SHELVES W/DIVIDERS	1	
LB	CURB FRONT COMPT #3	1	
SB-SAD2	|-- 2 ADJUSTABLE SHELVES W/DIVIDERS	1	
LB	CURB HORZ COMPT	1	
SB-SFD	|-- DIVIDER TRAY (BOTTOM OF COMPARTMENT)	1	
LB	CURB REAR COMPT	1	
SB-XLS1	|-- LOCKING SWIVEL HOOK 2-3-2	7	
SB-LPGO	LED FLEXGLO COMPARTMENT LIGHTING TOP & SIDES OF DOOR PRICED PER COMPARTMENT	9	
SB-WLS	WHEEL WELL LINERS - GALVANIZED STEEL	1	
FTSP	FLIP TOP FOR LINE BODY CURBSIDE. ABOVE C3, C4 AND C5 OPENS FROM CARGO AREA MINIMUM OF 5" DEEP	107	
SB-X1WF	WHEEL CHOCK HOLDER (FENDER) WITH PENDULUM STYLE RETAINER	4	
SB-X1OP	OUTRIGGER PAD HOLDER SHIP LOOSE	4	
SB-X1RT	FLOOR TIE DOWN (RECESSED)	6	
SB-X2UN	AUTOMOTIVE UNDERCOATING	1	
	SLIDE N LOCK 1 RAIL PER SIDE	1	

Quotation Number PTQ7315

To:	**Terex Utilities**		
Attn:	**Ben Storm**	**Date:**	**7/15/2025**
Customer:	**Hibbing Public Utilities**		
Spec Number:	**OPP 339633**		
State:	**Unknown**		
Engine Type:	**Diesel**		
Crane/Unit Model:	**TL55**		
Chassis:	**Kenworth**	**Reference:**	
Axle Configuration:	**4x2**	**Same As:**	

TL55 Subframe
Dakota Bodies Welded and Wet Painted Taffeta White Subframe Assembly
- Terex Supplied Parts:
  - Qty. 1 Subframe Weldment (#1000138) Weld On / Installed
  - Qty . 1 Socket / Wrapper (#495429) Weld On / Installed
  - Qty. 1 Front Plate (#429240) Weld On / Installed
  - Qty. 2 Shear / Tie Down Plates (#495430) Weld On / Installed
  - Qty. 1 A-Frame Front Jack (#475723) Weld On / Installed
  - Qty. 1 Under Slung Rear Jack (#430195) Weld On / Installed
  - Qty. 2 Vertical Bolt Subframe Tie Down Brackets (#496673) Weld On / Installed
- Dakota Bodies Supplied Parts:
  - Qty. 1 Grounding Angle (Weld On / Installed)
  - Qty. 1 Round Hose Pass Cut into Subframe
  - Qty. 1 Subframe Extension with Lightbar Relief (Weld On / Installed)
  - Qty. 1 Boom Rest Receiver Tube Welded to SS Front Jack
  - Qty. 2 Rear Jack Angle Risers / Extensions (Weld On / Installed)

- Boom Rest #65381014 Provided and Installed by Dakota Bodies
- Two (2) light mounting brackets on 2"x20"L channels welded to boomrest. One (1) streetside and one (1) curbside
- 1/2" formed angle welded on top of 3/8" hr plate
- One (1) 1/4"x3"x3"x15" angle installed on boom rest

Possum Belly:
- Possum Belly Located in Subframe made with 12 ga (.109) Galvanneal Material
  - with Door and Latch
  - Include Stops in tubes and center at 100"

Tailshelf: ship loose
- 30" Length x 6" High x 93.5" Wide
- 12 ga (.109) 4-Way Treadplate

Side Access Step 30" Wide
- Hinged Gripstrut Access Step to Bed Area
  - To Have a 1/4" x 4" Flat Added to Bottom of Step for Mounting Cable Step
- Reverse Paddle Single Point Rotary Latch
- One (1) Gas Assist Door Opener
- 6"h composite retainers installed around tailshelf perimeter with capture brackets, pins, and lanyards
- Two (2) bolt on pool for install on streetside
- One (1) S/S 36139IH and one (1) C/S 36138IH valve mount installed on tailshelf
- Painted Black

Lightbar:
- 9 Lamp Light Bar located in Tailshelf; No Lights (Installed)

Ladder Box: (Bolt-on/Shiploose)
- 156" L x 7" H x 20" W 11Ga Aluminum Treadplate
- Roller at Bottom
- No Paint/ No Grind

Aluminum Treadbrite Top Mounted Box on With Lift up Lid: (Bolt-On/Shiploose)

156" Long x 10" High x 18" Wide 1/8" Aluminum Treadbrite Box

1/8" Aluminum Treadbrite Top with Two (2) Lift up Lids
- Gas Assist Door Openers.
- Lift-Up Handle Installed on Front Edge of Box Lid.
- Two (2) Over Center Pad Lockable Latches (PN# 30763) and Two (2) Handles
- Automotive Bulb Weatherstrip Installed Around Top Opening
- Carpet Lining
- No Paint/ No Grind

Basket: (Bolt-on/Ship Loose)
- 104" L x 10" H x 18" W
  - No Paint/ No Grind

Aluminum Treadbrite Top Mounted Box on With Lift up Lid: (Bolt-On/Shiploose)

25" Long x 10" High x 18" Wide 1/8" Aluminum Treadbrite Box

1/8" Aluminum Treadbrite Top with One (1) Lift up Lid
- as Assist Door Openers.
- ft-Up Handle Installed on Front Edge of Box Lid.
- er Center Pad Lockable Latches (PN# 30763)
- utomotive Bulb Weatherstrip Installed Around Top Opening
- arpet Lining
  - Paint/ No Grind

KENWORTH

RIHM KENWORTH - SUPERIOR (R203)
4501 TOWER AVE
SUPERIOR, Wisconsin 54880

HPU
1902 EAST 6TH AVENUE
HIBBING, Minnesota 55746
United States of America

Chuck Rupar
Cell Phone: 218-929-0604
Office Phone: 715-395-5350
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Chris Adams
Cell Phone: 218-969-6372
Email: chrisa@hpu.com

Vehicle Summary

Unit

Model:	T380 Series Conventional
Type:	FULL TRUCK
Description 1:	Terex bucket chassis
Description 2:	33000 GVW

Application

Intended Serv.:	Local Pickup & Delivery: Vehicles which
Commodity:	General Freight

Body

Type:	Service Body
Length (ft):	14
Height (ft):	12
Max Laden Weight (lbs):	4000

Trailer

No. of Trailer Axles:	2
Type:	Flatbed.
Length (ft):	16
Height (ft):	13.5
Kingpin Inset (in):	0
Corner Radius (in):	0

Restrictions

Length (ft):	75
Width (in):	102
Height (ft):	13.5

Chassis

Fr Axle Load (lbs):	13000
Rr Axle Load (lbs):	20000
G.C.W. (lbs):	50000
Road Conditions:	
Class A (Highway)	5
Class B (Hwy/Mtn)	94
Class C (Off-Hwy)	1
Class D (Off-Road)	0
Maximum Grade:	6
Wheelbase (in):	190
Overhang (in):	100
Fr Axle to BOC (in):	69.5
Cab to Axle (in):	120.5
Cab to EOF (in):	220.5
Overall Comb. Length (in):	546

Special Req.

U.S. Domestic Registry, 50-state.

Approved by: _____ **Date:** _____

Note: All sales are F.O.B. designated plant of manufacture.

Sales Code	Std/ Opt	Description	$ List	Weight
Model				
0000380	S	**T380 Series Conventional**	108,874	**9,930**
0070087	O	**T380 Vocational Hood**	0	**0**
0080101	O	**CARB Low NOX Omnibus Registration Guidelines** Dealer/Customer acknowledges that this vehicle is NOT intended for registration or domicile/primary use in the State of California.	0	**0**
0080314	O	**EPA Clean Idle Label - PACCAR PX Engines**	36	**0**
0090143	O	**T380 Automatic**	0	**0**
0098423	O	**State of Registry: Minnesota**	0	**0**
Engine & Equipment				
0130221	O	**PACCAR PX-9 330 330@1750 1000@1200, 2024** With Turbo Exhaust Brake (VGT Brake) N09420 C333 0.....Reserve Speed Limit Offset (N09380 C334 0.....Maximum Cycle Distance (C334 N09360 C400 252...Reserve Speed Function Reset N09200 C399 100...Standard Maximum Speed Limit N09400 C401 10....Maximum Active Distance (C40 N09220 C402 0.....Expiration Distance (C402) N09540 C395 0.....Expiration Distance (C395) N09260 C121 70....Max Vehicle Speed in Top Gea N09440 C234 NO....Engine Protection Shtdwn N09460 C231 NO....Gear Down Protection N09580 C133 5.....Idle Shtdwn Time N09680 C233 NO....Idle Shtdwn Override N09480 C132 1400..Max PTO Speed N09300 C128 70....Max Cruise Control Speed N09500 C239 NO....Cruise Control Auto Resume N09520 C238 NO....Auto Engine Brake in Cruise N09780 C190 80....High Ambient Temperature Thr N09740 C188 40....Low Ambient Temperature Thre N09760 C189 60....Intermediate Ambient Tempera N09720 C382 YES...Enable Hot Ambient Automatic N09600 C396 YES...Enable Impending Shutdown Wa N09620 C397 60....Timer For Impending Shutdown N09640 C206 35....Engine Load Threshold N09560 C225 NO....Enable Idle Shutdown Park Br	10,290	**694**
1000046	O	**EPA Emissions Warranty Engine**	0	**0**
1000151	S	**PremierSpec**	0	**0**
1000244	O	**Gearing Analysis: Balance** power/economy blend results.	0	**0**
1000250	O	**Customer's Typical Operating Spd: 58 MPH**	0	**0**

Sales Code	Std/ Opt	Description	$ List	Weight
1000344	O	**EWI Tracking - A2 Engine Module Chassis**	0	**0**
1000525		**RegistrationYear** Year of Registration: 2025	0	**0**
1000684		**Effective VSL Setting NA**	0	**0**
1000858	O	**Engine Idle Shutdown Timer Disabled**	0	**0**
1000891		**Eff EIST NA Expiration Miles** Use only with MX and Cummins engines	0	**0**
1002060	S	**Air Compressor: Cummins 18.7 CFM For Cummins And** PACCAR PX engines.	0	**0**
1041399	S	**Air Cleaner: MD Composite Engine Mounted**	0	**0**
1107060	O	**Fan Hub: Borg Warner On/Off for PX-9 or L9N**	194	**0**
1121234	O	**Cooling Module: 2.1M MD Vocational Hood,** Clog Resistant, 1000 Square Inches	548	**10**
1160105	O	**Radiator Winterfront.**	52	**0**
1160213	O	**Bug Screen: Front of Grille Mounted**	132	**2**
1247263	O	**EXH: Single Can 2024 RH Under with RH** Side-of-Cab Vertical Tailpipe	3,108	**0**
1290130	O	**Tailpipe: 5 in. single 30 in. 45 degree curved.**	199	**12**
1321102	S	**Fuel Filter: PACCAR 2.1M MD for PX-7 or PX-9** Fuel/water separator for 2021 and later engines.	0	**0**
1321205	O	**Run Aid:Fuel Heat** *For Fuel Filter	41	**0**
1321305	O	**Start Aid:12V Heat** *For Fuel Filter	22	**1**
1504006	O	**Block Heater: PACCAR 750 watt 120V for PX-7** and B6.7N. 1000 watt for PX-9 and ISL9 Engines.	26	**2**
1816200	O	**Alternator: SEG 200 amp, Brush Type** Formerly Bosch.	68	**0**
1821210	O	**Batteries: 3 PACCAR GP31 Threaded Post (700-730)** 2100-2190 CCA dual purpose.	179	**62**
1836106	O	**Mitsubishi 105P55 12V Starter with Cummins and PX** PACCAR 12 volt electrical system. W/ centralized power distribution incorporating plug-in style relays. Circuit protection for serviceability, 12-volt light system w/circuit protection circuits number & color coded. Only for Cummins or PX engines.	35	**0**
1840065	S	**12V Low Voltage Disconnect for Battery Protection**	0	**0**
1840067	O	**Battery Disconnect Switch Mounted on Battery Box** Provides One (1) Switch	404	**0**
1901017	O	**Remote PTO/Throttle, 12-Pin, Engine Bay**	34	**0**

Sales Code	Std/ Opt	Description	$ List	Weight
		Remote Control Provision		
Transmission & Clutch				
2011631	O	**Transmission: Allison 3500RDS 6-speed, With PTO** drive gear. Limited to 1050LBFT. 6th Generation Controls. Includes heat exchanger & oil level sensor. Rugged Duty Series for vocational applications. Transynd transmission fluid is standard on all Allison 1000, 2000, 3000 & 4000 series transmissions.	10,031	**443**
2401405	O	**Driveline: 2 Dana Standard-Duty; 1 Centerbearing.** *Standard duty is 1710 series.	274	**67**
2409941	O	**One Heavy-Duty One-Piece Aluminum Crossmember** This option upgrades an existing crossmember. The cost does not include the centerbearing and bracket. Crossmember location will be in accordance with Kenworth engineering standards, using the major components specified on the DTPO.	129	**0**
2410018	O	**Torque Converter Included W/ Allison** Transmission.	0	**0**
2410153	O	**Push Button Shifter Controls, Center Console** Mounted for Allison Transmission. 2.1m Medium Duty only.	0	**0**
2410244	O	**J1939 Park Brake Auto Neutral**	0	**0**
2410310	O	**Allison Neutral at Stop**	0	**0**
2410319	O	**Allison Fuel Sense: Dynactive** Includes Dynamic Shift Sensing	244	**0**
2429358	O	**Rear Transmission Support Springs for** transmission PTO applications are required to ensure that engine flywheel housings are not overloaded when transmission PTO's are installed.	93	**0**
2429378	O	**Customer Installed Transmission PTO in the LH** Mounted position (8 o'clock) for Allison 3000 & 4000 transmissions.	0	**0**
2460069	O	**Transmission Cooler: Automatic Transmission** For use with 2.1M MD with Vocational Hood. Includes cooler protector.	1,218	**38**
Front Axle & Equipment				
2512050	O	**Meritor MFS13 PLUS 13K 3.5 in. Drop** standard track.	319	**-1**
2607001	O	**Front Brakes: 14.6K Bendix Air Disc Brakes Lube** Free.	310	**0**
2690025	O	**Splined Rotor for Front Air Disc Brakes for Use** with Iron Hubs.	501	**0**
2690028	O	**Integral Knuckle for Air Disc Brake, for use on** Meritor MFS PLUS Steer Axle	0	**20**
2702500	S	**Front Hub: Iron Hub Pilot 14,600 lbs.** 11-1/4 in. bolt circle. For use w/ air disc brakes. Consider wheelguards (5850002) w/ aluminum wheels.	0	**0**
2741970	S	**ConMet PreSet Plus Hub Package; Front Axle.**	0	**0**
2750001	S	**Hubcap: Front Vented.**	0	**0**

Sales Code	Std/ Opt	Description	$ List	Weight
2769000	O	**Slack Adjusters Included W/ Front Axle or Brakes.** Also use with disc brakes.	0	**0**
2864070	O	**Front Springs: Taperleaf 13.2K W/ Shock Absorbers** w/ maintenance-free elastomer spring pin bushings.	420	**111**
2895223	S	**Single Power Steering Gear: 13.2K for Air Brakes.**	0	**0**
2900055	O	**5 mm Front Suspension Spacer Block**	0	**0**
Rear Axle & Equipment				
3031180	O	**Single Dana Spicer S21-172 Single Reduction Rear** axle. Single rear axle 20K.	658	**102**
3200557	S	**Rear Axle Ratio - 5.57.**	0	**0**
3302001	O	**Single Rear Brakes Bendix Air Disc Brakes for** single rear axles to 23K capacity.	0	**20**
3392205	O	**Splined Rotor for Single Rear Air Disc Brakes for** use with iron hubs.	1,456	**-104**
3403220	S	**Single Rear Hubs: Iron Hub Pilot 26k; 11.25" Bolt** circle. Requires "R" series outer ends.	0	**0**
3441971	S	**ConMet PreSet Plus Hub Package; Single Rear Axle.**	0	**0**
3465001	S	**Single Rear Axle Automatic Slack Adjusters.** For use with drum brakes.	0	**0**
3485004	O	**Spring Brakes Included W/ Single Rear Air Disc** brakes.	0	**0**
3495226	S	**Bendix 4S/4M Anti-Lock Brake System.**	0	**0**
3636425	O	**Rear suspension: single Reyco 79KB taperleaf 23K.** Medium-duty. For use with rear air disc brakes. Unladen Height: 9.3 in. Laden Height: 8.0 in.	896	**58**
3836315	O	**Bolted Rear Suspension Crossmembers for Reyco** 79KB. Replaces medium duty standard.	322	**41**
Tires & Wheels				
4083284	O	**Front Tires: Yokohama RY617 295/75R22.5 16PR**	-15	**-8**
4283253	O	**Rear Tires: Yokohama TY517 MC2 295/75R22.5 16PR**	22	**0**
4900004	O	**Rear Tire Quantity: 4**	0	**0**
5042268	O	**Front Wheel: Accuride 50885 22.5x8.25 steel** Steel Armor[TM] powder coat, hub-pilot mount.heavy-duty 5 hand-hole hub pilot mount.	51	**26**
5242392	S	**Rear Wheel: Accuride 51455 22.5x8.25 steel** Steel Armor[TM] powder coat, hub-pilot mount. 7400lb. maximum rating. 5-hand hole. Air disc brake compatible. Code is priced per pair of wheels.	0	**0**
5853906	O	**Powder Coat White Steel Wheel. Use in Conjunction**	0	**0**

Sales Code	Std/ Opt	Description	$ List	Weight
		with front, dual front, rear, spare or lift axle wheel code(s). All wheels on chassis must have same finish color.		
5900004	O	**Rear Wheel/Rim Quantity: 4**	0	**0**
Frame & Equipment				
6054410	O	**Frame Rails: 10-5/8 x 3-1/2 x 5/16 in. Steel to** 309 in. to 380 in. Truck frame weight is 2.91 lb.-in. per pair of rails. Section modulus is 14.80 cu.in., RBM is 1,776,000 in-lbs per rail. 120,000 PSI yield. Heat treated. Frame rail availability may be restricted based upon application, axle/suspension capacity, fifth wheel setting, or component/dimensional specifications. The results of the engineering review may result in a change to the requested frame rail. If a change is required, Kenworth Application Engineering will advise the dealer of the appropriate material specification for a substitute rail.	425	**338**
6309910	O	**Delete bumper: Requires a bumper setting code.**	-162	**-27**
6319064	O	**64 in. Bumper Setting. Requires a Bumper Code.**	0	**0**
6321010	S	**Front Tow Loops: Two**	0	**0**
6390034	O	**24 in. Frame Rail Extensions. Vocational Hoods** only.	360	**36**
6400633	O	**Battery Box: Temporary Across the Rails. Includes** maximum cable length available.	216	**-99**
6409210	O	**Rubber Battery Pad in Bottom of Battery Box.** For cantilever-style or between the rails battery boxes.	22	**2**
6409908	O	**Battery Box Location: BOC Across the Rails.**	0	**0**
6451125	O	**DPF/SCR Box Natural End Plates and Natural** cover.	0	**0**
6490139	O	**Heavy-Duty One-PC Aluminum Intermediate/ Fill-In** crossmember.	249	**13**
6490434	O	**Heavy-Duty 5-Piece Rear Cab Support, Bolted** assembly. Huck fastened to frame.	49	**15**
6679911	O	**Component Restriction: Do Not Drive- Unit May be** decked.	0	**0**
6742009	S	**Square End-of-Frame W/O Crossmember; Non-Towing.**	0	**0**
Fuel Tanks & Equip				
7140050	S	**50 US Gallon D-Shape Rectangular Aluminum Under** fuel tank, replace. With non-slip step.	0	**0**
7722170	S	**Small DEF Tank, 5.5 Gallons.**	0	**0**
7889203	O	**DEF to Fuel Fill Ratio 2:1 or Greater.**	0	**0**
7889606	S	**DEF Tank Location is LH Under Cab.**	0	**0**
7920050	S	**Location: 50 gal fuel tank LH under cab.**	0	**0**

Sales Code	Std/ Opt	Description	$ List	Weight
Cab & Equipment				
8024311	S	**Cab: Stamped Aluminum with Curved Windshield** LED markers. Requires seperate roof code.	0	**0**
8090153	O	**Hood: Sloped Vocational w/ Stationary Grille** w/ Chrome Crown	1,984	**-24**
8108011	S	**Cab HVAC - Day Cab and 40 in. Sleeper** System With Defrost, A/C, and 48,000 BTU/hr Heater. Includes automatic temperature control with one touch defrost operation and dash mounted cab temperature and solar intensity sensors. Pleated fresh air filter and cabin recirculation air filter standard. The Kenworth HVAC system is designed to provide optimal heating and cooling in all operating environments without need for additional insulation. Cab HVAC without sleeper heater AC is available with 40in sleeper.	0	**0**
8201047	O	**Kenworth Smartwheel: 18 in. Non-Leather With** Integrated Radio and Cruise Controls.	143	**0**
8201200	S	**Adjustable Telescoping Tilt Steering Column.**	0	**0**
8203196	O	**Dash Mounted Compact Trailer Brake Valve.** Self Returning.	0	**0**
8205012	O	**Off-Highway Dash Switch: For ABS System. Includes** indicator light.	52	**0**
8205177	O	**Dash Switch:1st Allison-Mounted PTO.** Electric switch and wiring are factory-installed to control the 1st Allison Trans mounted PTO.	167	**0**
8205228	O	**One (1) Spare Accessory Electric-Over-Air** Switch with Latching Air Solenoid. Mounted on dash for customer-installed option. Latching means the output air pressure will remain on, while there is air remaining in the air tank, when the ignition is off and switch position is on. Not intended for Trailer Lift Axle controls, see 8208607 and 8208608.	95	**0**
8205283	O	**Info for C/I PTO: Chelsea 10 Bolt**	0	**0**
8208475	O	**Two Spare Switches: Wired to Power. BOC Wire** termination.	69	**0**
8220106	O	**Gauge: Dash Mounted Air Filter Restriction Gauge.**	122	**0**
8222409	O	**Gauge: DD Virtual Gauge - Air Filter** Restriction	0	**0**
8222411	O	**Gauge: DD Virtual Gauge - Eng Pto Hour**	36	**0**
8222413	O	**Gauge: DD Virtual Gauge - Manifold** Pressure Boost	0	**0**
8222414	O	**Gauge: DD Virtual Gauge - Engine Percent** Torque	0	**0**
8222418	O	**Gauge: DD Virtual Gauge - Engine Hours**	0	**0**

Sales Code	Std/ Opt	Description	$ List	Weight
		Instrument Cluster		
8222419	O	**Gauge: DD Virtual Gauge - Volts** Instrument Cluster	0	**0**
8222712	O	**Gauge: Fuel Filter Restriction Gauge.**	134	**0**
8282024	S	**Main Instrument Package: 7" Digital Display** Cluster. Includes Physical (Analog): Speedometer, Tachometer, Oil Pressure, and Coolant Temp; and Digital: Fuel Level #1, DEF Level, DPF Filter Status, Fuel Economy, Volts Telltale, OAT and Primary Air Pressure, Secondary Air Pressure, and Air Application for air brake trucks.	0	**0**
8330591	S	**Interior Trim Package: 2.1M MD Gray Foam** Backing/Cloth Headliner W/Gray Sunvisor & Seat Color Three Underdash Center Console Cupholders (Two If Allison Transmission Is Selected).	0	**0**
8410122	O	**Driver Seat: KW Air Seat HB Vinyl w/ Dual** Armrests/Susp Cover	197	**0**
8460103	O	**Rider Seat: KW Air Seat HB Vinyl w/ Susp Cover/** Occupancy Sensor w/o Armrests	40	**0**
8570012	O	**Low Profile Roof Interior LH Overhead Storage**	91	**0**
8601432	O	**Kenworth Radio DEA710 AM/FM/WB/USB, Bluetooth**	405	**0**
8698965	O	**Speaker Package For Cab: (2) Speakers** B-Pillar	56	**0**
8700196	S	**Turn Signal: Self-Cancelling**	0	**0**
8700283	S	**LH and RH Trip Ledge Rain Deflectors**	0	**0**
8700601	S	**Global Telematics Unit**	0	**0**
8800382	O	**Grabhandle: LH SOC Non-Slip Ergonomic** Grab Handle Mounted To The Left Hand Exterior Of The Cab For Entry and Exit. NFPA Compliant.	139	**3**
8800402	S	**Dual Cab Interior Grabhandles: A Pillar Mounted** Dash Wrap and B Pillar Mounted Grabhandles	0	**0**
8832113	S	**Kenworth Daylite Door With Standard LH/RH** electric door locks and LH/RH electric window controls.	0	**0**
8841411	O	**Single Air Horn Under Cab.**	105	**0**
8850139	S	**Look-Down, Pass. Door, Black 11x6**	0	**0**
8850842	S	**Mirror Shell: Dual Aero In-Mold Black**	0	**0**
8860852	O	**Mirror: Dual KW Aero Rear View** Motor, heated with Integral CX.	66	**0**
8871446	S	**Rear Cab Stationary Window 19in x 36in**	0	**0**

Sales Code	Std/ Opt	Description	$ List	Weight
8890101	S	**One-Piece Bonded-In Windshield With Curved Glass.** Standard.	0	**0**
8890874	O	**Kenworth Cab Air Suspension.**	160	**0**
8891009	O	**Thermal/Sound Insulation Package**	270	**0**
8891012	S	**Roof: Low Profile Stamped Steel**	0	**0**
Lights & Instruments				
9010813	O	**Headlamps: Single Halogen Complex Reflector w/** Turn Indicator, Reflector and w/o DRL. Fender Mtd.	-3	**0**
9020103	O	**Delete Standard 14-Pin RP170 Body Lighting** Connector.	-57	**0**
9022137	S	**Marker Lights: Five Rectangular LED.**	0	**0**
9030052	S	**LED Stop,Turn,Tail: With Two LED** Backup Lights and With An LED License Plate.	0	**0**
9090151	O	**Wiring:Cust. Install Trlr Elec. Brake Controller.** Class 8/T4 Content Includes Dash Signals: Ignition Power (20A), Ground, Stop Lamp and Electric Trailer Brake Controller Wired To EOF Junction Box. These Signals Are Located Near The NavPlus HD Area. No Need To Code For An Additional End of Frame Junction Box. EOF Junction Box Signals Are: Ground, Tail Lamp, Marker Lamp, Left Turn, Right Turn, Stop Lamp and Electric Trailer Brake Controller Wired To Dash. Medium Duty (not T4) Content Includes A MP 280 Series Connector In Dash Near Driver Door Connections With Signals: Battery Power (40A), Ground, Stop Lamp and Electric Trailer Brake Controller Wired To Chassis Connector. Medium Duty (not T4) 2 Way Deutsch Chassis Connector Located Near Back of Cab, With Signals: Ground and Electric Trailer Brake Controller Wired To Dash Connector.	156	**4**
9090312	O	**Body Builder Lighting Harness Coiled End Of Frame** For Additional Customer Installed Exterior Lighting. Harness Includes Circuits for Additional Customer Installed Tail Lamps, Turn Lamps, Stop Lamps, and Marker Lamps.	156	**0**
9090849	O	**Polyswitches Replacing Fuses. Switch Will** automatically reset after removal of excess load.	43	**0**
Air Equipment				
9101218	S	**Air Dryer: Bendix AD-HF Puraguard Heated**	0	**0**
9108001	S	**Moisture Ejection Valve W/ Pull Cable Drain.**	0	**0**
9110020	O	**Full Truck Kit** Gladhands mounted at end-of-frame. Seven-way female receptacle mounted at end-of-frame in taillamp bracket. Kit includes dash mounted trailer air supply valve, trailer hand control valve, and hoses/fittings for the valves. Dash mounted parking brake valve, tractor protection valve, and spring brake inversion/relay valves are standard.	938	**15**

Sales Code	Std/ Opt	Description	$ List	Weight
9140020	S	**Nylon Air Tubing in Frame & Cab, Excluding Hoses** subject to excessive heat or flexing.	0	**0**
9140328	O	**Trailer ABS Electric Supply Through SAE J560** 7-pin connector per TMC RP137).	0	**0**
Extended Warranty				
9200008	O	**Base Warranty - PACCAR PX-9 Engine** 24 months / 250,000 miles / 402,336 km / 6250 hours.	0	**0**
9200022	S	**Base Warranty - Standard Service Medium Duty** 12 months / Unlimited miles & km	0	**0**
9204229	O	**PACCAR EW: PX-9 Protect Plan 1 EPA24** 5YR/100K (160,935KM). Each code registered between 366 and 546 days after the vehicles in-service date will be subject to a $400 late fee. Coverage cannot be added after 200K MI or 545 days past the in-service date	1,950	**0**
9204241	O	**PACCAR EW: Aftertreatment PX-9 Use W/ PP1 EPA24** 5YR/100K (160,935KM). Each code registered between 366 and 546 days after the vehicles in-service date will be subject to a $400 late fee. Coverage cannot be added after 200K MI or 545 days past the in-service date	1,005	**0**
9210402	O	**Allison 3000 Series Transmission Surcharge**	700	**0**
9212661	O	**TruckTech+ RD - 5YR Sub PACCAR PX Engines**	799	**0**
9220001	O	**Base Warranty: Emissions** 5YR/100K MI - EPA Engine	0	**0**
Miscellaneous				
9409852	O	**GHG Secondary Manufacturer: Does Not Apply**	0	**0**
9491652	S	**EMUX Architecture**	0	**0**
Promotions				
9511124	O	**Model Year 2025 Engine**	0	**0**
Paint				
9700000	O	**Paint Color Number(s).** N9702 A - L0006 WHITE N9720 FRAME N0001 BLACK	0	**0**
9943048	O	**Day Cab Bulk Paint**	0	**0**
9943050	S	**Day Cab Standard Paint**	0	**0**
9944820	S	**1 - Color Paint - Day Cab** Color will be White if no other color is specified.	0	**0**
9965510	S	**Base Coat/ Clear Coat.**	0	**0**

Sales Code	Std/ Opt	Description	$ List	Weight
		The Kenworth Color Selector contains additional instructions, as well as information on Kenworth paint guidelines and surface finish applications. Kenworth is standard with Dupont Imron Elite paint.		

Special Requirements

Special Requirement 1 0098025
Special Requirement 2
Special Requirement 3
Special Requirement 4

Order Comments

Total List Price (W/O Freight & Warranty & Surcharges)	$147,894
Marketing and Service Support Fee	$920
Prepaid Freight	$3,775
Total Surcharge/Options Not Subject To Discount	$4,454
Total Weight (lbs)	11,802

Any price increase as the result of force majeure, rising costs of components (including but not limited to material shortage s) or government tariffs are not included in the quoted price and will be the financial responsibility of the customer.

Prices and Specifications Subject to Change Without Notice.

Unpublished options may require review/approval.
Dimensional and performance data for unpublished options may vary from that displayed in CRM.

PRICING DISCLAIMER

While we make every effort to maintain the web site to preserve pricing accuracy, prices are subject to change without notice. Although the information in this price list is presented in good faith and believed to be correct at the time of printing, we make no representations or warranties as to the completeness or accuracy of this information. We reserve the right to change, delete or otherwise modify the pricing information which is represented herein without any prior notice. We carefully check pricing specifications, but occasionally errors can occur, therefore we reserve the right to change such prices without notice. We disclaim all liability for any errors or omissions in the materials. In no event will we be responsible for any damages of any nature whatsoever from the reliance upon information from these materials. Please check your order prebills to confirm your pricing information

Shipping Destinations

Intermediate Destination:

Final Destinations	Quantity

RIHM KENWORTH

RIHM KENWORTH
4501 Tower Ave
Superior WI 54880
Phone: (715) 395-5350

QUOTE

Date: 08/18/2025
Quote#: DE-13708
Type: Cash
Salesperson: Chuck Rupar

Bill To: 237172
HIBBING PUBLIC UTILITIES PO BOX 249
PO BOX 249
HIBBING MN 55746-0249
P:(218) 262-7700

Ship To:
HIBBING PUBLIC UTILITIES PO BOX 249
PO BOX 249
HIBBING, MN 55746-0249

Stock#: T380bucket VIN:Order Out
New 2026 KENWORTH T380

Price: $125,036.00

Total Price	**$125,036.00**
Admin Fees	$350.00
Total	**$125,386.00**

*Pricing based on SourceWell Kenworth Trucks Contract 032924-KTC as per September 2024 Update
The vehicle covered by this order is NEW and the written Manufacturer's Warranty delivered to the purchaser with such vehicle shall apply.

Price does not include applicable taxes. Due to potential tariff-related cost increases, pricing on this order is subject to change.

THIS ORDER SHALL NOT BECOME BINDING UNTIL ACCEPTED BY THE MANAGER.

Purchaser's Signature — 08/18/2025 Date — Sales Representative

Manager

HPU HIBBING PUBLIC UTILITIES

1902 E 6TH AVE
HIBBING, MINNESOTA 55746-0249
TELEPHONE: 218-262-7700
FAX: 218-262-7702

James Bayliss
Commission Chair
1902 E. 6th Avenue
Hibbing, MN 55746

Subject: Request for Approval of Equipment Purchase

Dear Commissioners:

I am writing to formally request the Commission's approval for the purchase of the PT 3000H Heritage Puller Tensioner, which is essential for, rated and capable for overhead and underground conductor pulling work. The specified machine and some comparable models were reviewed, and the PT-3000H was demoed and trained to our crew. During this time, we identified this equipment greatly enhanced operational efficiency, improved safety, reduced labor, and lowered outage response times.

Without this equipment, our current machine, manufactured in 1991, no longer satisfies modern operations in terms of performance, safety, or efficiency and our operations will continue to face delays, reduced efficiency, and higher maintenance/outage costs.

Justification:

- **Operational Need:** Enhanced operational efficiency, improved safety, reduced labor, and lowered outage response times.
- **Expected Benefits:** This will also be used on our voltage conversion project, for underground street light conductor repairs, most new services, and other system work that is unplanned for the construction season.
- **Alternatives Considered:** Rental vs Purchase. The rental option of $4,715.17/month with 70% of first year's rental costs able to be applied toward a purchase. However, after the demo period the positive impacts have been realized and we recommend a purchase.

Long-Term Cost Savings:

  - **Reduced Labor Costs:** The spec'd Puller/Tensioner has potential to reduce labor hours by up to 50%, greatly increasing crew productivity and allowing for more efficient job completion.
  - **Enhanced Safety:** Modern safety guards and updated grounding features greatly improve job site safety for our crew, reducing the risk of injury.
- **Increased Capacity and Efficiency:** The new machine allows for continuous wire pulling with a single setup. This is unlike HPU's current equipment which required a warm up and multiple set up and break downs to pull similar wire lengths.

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- **Greater Versatility:** The new model is designed and rated for both underground and overhead conductor pulling, unlike the current machine which is specs only for underground cable pulling.
- **Ease of Transport:** With electronic braking and a more compact, trailer-friendly design, the new tensioner can be safely towed using our ¾-ton or 1-ton vehicles. This eliminates the need for special license endorsements, simplifying logistics and reducing compliance hurdles.
- **Improved Outage Response Times:** The ease of transportation, quick setup, and user-friendly operation of the new machine will allow our crews to mobilize and restore service faster during unplanned outages, minimizing customer downtime and improving overall service reliability.

Cost and Funding:
The total estimated cost for the equipment is $100,000.00

Conclusion:
Given the operational importance and long-term benefits of this purchase, I respectfully request the Commission's approval to proceed with a purchase option for the 2025 or 2026 fleet budget.

Thank you for your consideration. I am available to provide further details or answer any questions the Commission may have.

SHERMAN+REILLY®

PT-3000H HERITAGE PULLER TENSIONER

3,000 LB. SINGLE DRUM PULLER TENSIONER

1. Safe-Zone® enclosure with Ocu-View.™
2. Quick and easy X-change™ bolt-action drum coupling.
3. Ergonomic Heritage control panel with adjustable seat.
4. Spider® Pilot Line System with independent levelwind. (optional)

FEATURES

- Provides unmatched versatility as a puller or tensioner.
- Capable of pulling 3,100 lb. and tensioning 2,000 lb.
- Underground package capable of pulling 7,500 lb. (optional)
- Hydraulic Low Force Tension under 200 lb. with Manual Pull Off tension under 100 lb.
- Compact footprint at 16 ft. 10 in. with a single axle, dual tire configuration.
- Multiple options to configure the unit to specific needs.

PT-3000H HERITAGE PULLER TENSIONER

3,000 LB. SINGLE DRUM PULLER TENSIONER

Sherman-Reilly.com

SPECIFICATIONS

Pulling Capacity	3,100 lb.
Max. Tensioning Capacity	2,000 lb.
Min. Tensioning Capacity	Hydraulic Low Force Tension under 200 lb. with Manual Pull Off tension under 100 lb.
Line Speed	Pulling: 3 mph, Tensioning 3 mph.
Max. Conductor Reel Size	66 in. diameter/38 in. width
Max. Conductor Reel Weight	Dynamic over the road: 4,000 lb. Static jacks extended: 6,000 lb.
Drum Dimensions	Core Diameter: 18 in. Total Outside Width: 40 in. Flange Diameter: 46 in.
Drum Capacity	6,000 ft. of 5/8 in. PE-12 6,000 ft. of 5/8 in. Uniline
Drive System	Direct Drive: single hydraulic motor X-Change™ Coupling System
Drive System Engine	Turbocharged, Tier-4 Final, diesel, 49 Hp, water-cooled Kubota™
Fuel Capacity	13 Gallon
Hydraulic Fluid	ISO Grade 32
Hydraulic Reservoir	25 Gallon
Hydraulic Fluid Filtration	10 micron return filters
Levelwind	Hydraulically driven, Steady-Rest™ controlled
Operator's Enclosure	Safe-Zone® Open-Air enclosure
Frame Construction	Steel tubing, Steel plate, continuous weld
Length (Overall, Nom.)	16 ft. 10 in.
Width (Overall, Nom.)	8 ft. 6 in.
Height (Overall, Nom.)	9 ft. 1 in.
Weight*	6,110 lb. without rope 8,860 lb. with drum and rope
GVWR	11,000 lb.
Suspension	Leaf-spring
Axle Configuration	Single
Wheel Config. & Tires	Dual 235/85R 16 LRE; 8-6.5
Brakes (Trailer)	Electric, with break-away switch
Towing Attachment	3 in. pintle eye, with 2 safety chains & hooks
Tie Downs	5/8 in. dia. Steel D-Rings (2)
Tie Off Points	Tie off point at bumper, 3000 lb. working load limit
Bumper (SS/CS) Jacks	Manual (2) or Drop and Pin

Tongue Jack	Manual, 2 speed hand crank
Electrical System	12 VDC
Battery	12 V 840 CCA, BCI group 27
Lights / Navigation	US DOT, LED, 12 VDC
Grounding	3/4 in. dia. Copper-clad Steel ground loops (4)
Wheel Chocks	Standard
Fire Extinguisher	ABC
Color	S+R White

OPTIONS

Re-Conductoring Reel: RCR-60: Core: 24 in. to 18 in. tapered Total Outside Width: 39 in. (Flange Diameter: 60 in.)
Spider® Pilot Line System with independent levelwind S-75 or S-85 spider reels with 3,000 ft. or 6,000 ft.
Hydraulic Jacks
RDG-2100 Rotating Distribution Ground (compatible with reel widths < 34.75 in.)
DG-4100 Running Ground
Underground Package Levelwind | UG Drum | Hardline
Premium Rope (Uniline®)
Galvanized
Air Brakes

TRIM LEVELS

Entry Level: Manual Jacks | No Spider | Rope
Mid-Tier: 3 Hydraulic Jacks | No Spider | Rope
Loaded: 3 Hydraulic Jacks | Spider | Rope

Heritage Style Ergonomic Control Panel

Spider® Pilot Line System with independent levelwind

X-Change™ Coupling System

*Specifications are subject to change