Purchasing Division
Finance Department

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Addendum # 2
Solicitation # 26-99116
Project 2321
Lead Service Line Replacement – Spirit Valley

NOTICE

This Addendum is issued to modify, explain or correct the original drawings, specifications and/or previous addenda and is hereby made a part of the Contract Documents.

CLARIFICATION

Project documents for Project 2321 Lead Service Line Replacement – Spirit Valley refer to both Solicitation Number 26-99116 and Solicitation # 26-99-166. The correct Solicitation Number is 26-99116; however the BidExpress solicitation cannot be corrected at this point and shows 26-99166 as the solicitation number.

CHANGES TO CONTRACT DOCUMENTS

1. The 'Exhibit A Schedule of Prices' Posted to Bid Express was updated. 400 LIN FT of '1" COPPER SERVICE PIPE (PRIVATE)' AND 200 LIN FT OF '1" COPPER SERVICE PIPE (PUBLIC)' were added. The estimated quantity of '1" HDPE SDR 9 SERVICE PIPE (PRIVATE)' and '1" HDPE SDR 9 SERVICE PIPE (PUBLIC)' were reduced by 400 LIN FT and 200 LIN FT respectively. The quantity of copper service pipe was estimated based on the findings in the attached Environmental Review Report.

   The estimated quantities in the posted construction Plan are not updated.

CHANGES TO SPECIAL PROVISIONS

1. **SP-3 (SCOPE OF WORK)** is hereby revised as follows:
   SP-3.4.5
   Furnishing and installing new service piping, valves, adapters, and fittings of the necessary size required to remove and replace the water service in conformance with the Plans, City of Duluth Standard Specifications, MNDOT Standard Specifications, these Special Provisions, applicable City details, applicable City / State plumbing codes, and applicable State / National electrical codes. This work shall be considered included for payment under the applicable bid items

provided in the Plans.

2. The following is hereby added to **SP-3 SCOPE OF WORK**:
   3.4.14
   The Contractor shall coordinate required material testing with the Agency-selected materials testing firm per the MNDOT Schedule of Materials Control.
   The Contractor shall provide a minimum of 24 hours advance notice to the Agency-selected materials testing firm prior to placement of any material requiring testing.
   All coordination, scheduling, and notifications required by this provision shall be incidental to the Contract Work. No separate payment will be made.
   Material placed without the required advance notice may be rejected, or may require additional testing, or removal at the Contractor's expense, as directed by the Engineer.

3. The following is hereby added to **SP-49.2.2 TELEVISE AND LOCATE SANITARY SERVICE:**

   When electing to remove a house trap for the purposes of televising and locating a sanitary service, the Contractor shall acquire the appropriate, separate plumbing permit, complete the work according to all applicable plumbing codes, and schedule the required inspections with the City of Duluth Division of Construction Services and Inspections.

   When the Contractor accesses the interior of a sanitary service in an excavation for the purposes of televising and locating, the repair to an existing VCP pipe shall consist of removing non-competent, collapsed, or cracked pipe and repairing or replacing the pipe section(s) with a water-tight, supportive, fabricated repair method such as a capped tapping saddle, replacing a pipe section with PVC pipe and flexible couplings, a band clamp, or other product or method approved by the Engineer. Repairs to existing PVC pipe shall be of PVC material and glued joints or flexible repair couplings. Fabric and concrete or grout will not be considered an acceptable repair method.

4. The following clarification is hereby issued regarding the 48-hour period referenced in **SP-58.1, SP-60.2, SP-61.2, and SP-62.2**:
   All Work within buildings shall be completed within 48 hours of the start of replacement of the water service. This time period shall be initiated by either discontinuing the existing water service or creating a hole in the building envelope for installation of the new service. Work in preparation for the service replacement (inspection/investigation, preparing finished basements, sewer televising (including removing house traps if necessary), electrical grounding and/or bonding, etc.) may be done in advance of the service line replacement and will not initiate the start of the 48-hour time period.
5. The following sentence is hereby added to **SP-60.2 CONNECT TO EXISTING INDOOR PLUMBING:**
   All materials and Work shall meet and maintain all requirements of applicable plumbing and electrical codes.

6. The following sentence is hereby added to **SP61.2 CONNECT TO EXISTING INDOOR PLUMBING, CRAWLSPACE:**
   All materials and Work shall meet and maintain all requirements of applicable plumbing and

electrical codes.

7. The following sentence is hereby added to **SP62.2 INDOOR PLUMBING TO RELOCATE WATER METER:**
   All materials and Work shall meet and maintain all requirements of applicable plumbing and electrical codes.

8. The following is hereby added to the project Special Provisions:

   SP-75 (1507) UTILITY PROPERTY AND SERVICE

   Contractors and sub-contractors shall follow the requirements of State Statue 216 D Excavation Notice System for City of Duluth projects. The City of Duluth, being a facility operator on all city projects, shall require that following the use of optional electronic white-lining in the Gopher State One Call system submission process, any One Call ticket associated with the project shall be accompanied with physical markings as allowed by part 216D.05.c of the statue. The physical markings must be placed prior to or the day of ticket submission to avoid delays in response. Physical markings shall be limited to the actual area of planned excavation and a 25-foot buffer may be requested. The Contractor shall submit an individual locate ticket for each site identified in the Contract Plans. All coordination, physical marking, and One Call ticket submission shall be incidental to the Contract Work. No separate payment will be made.

9. The following is hereby added to the project Special Provisions:

   SP-76 (2504) VALVE BOX TOP SECTION

   SP-75.1 DESCRIPTION

   This Work involves supplying and installing a valve box top section and cover where water service curb stop standpipes are located within driving surfaces or as otherwise directed by the Engineer.

   SP-75.2 CONSTRUCTION REQUIREMENTS

   Where curb stop standpipes fall within driving surfaces, or where otherwise directed by the Engineer, supply and install a valve box top section with cover. Valve box top sections and covers shall be supplied in accordance with City of Duluth Specification 2504.A.17. The valve box shall be placed upon concrete bricks or concrete blocks with a minimum combined bearing surface of 72 square inches. The valve box shall be set 0.5” below finished grade. The curb stop standpipe height shall be adjusted to 3.5” below finished grade.

   SP-75.3 MEASUREMENT AND PAYMENT

   This Work will be paid for under items number 2504.602 VALVE BOX TOP SECTION at the unit bid price per each installation which shall be compensation in full for all labor, equipment, and materials required to complete the Work including, but not limited to, excavation, providing and installing the valve box top section, adjusting elevation of the valve box and/or stand pipe, and backfilling. Measurement and payment of ‘Valve Box Top Section’ will be made only where the materials and Work are not otherwise included in any other pay item.

RESPONSES TO BIDDER QUESTIONS

1. **Question:** Will cultural monitoring be required for excavations in Fond Du Lac?
   Response: Yes. The City will coordinate, schedule and pay for cultural monitoring of excavations at sites 1, 2, 3, and 4.

2. **Question:** Will the City locate the electrical lines supplying power to the sanitary grinder pumps in Fond Du Lac?
   Response: No. Although the pumps themselves are owned by the City, the power supply to the pumps is a private utility line. The Contractor must plan to locate and protect private utilities present within the work site.

3. **Question:** How will the City address heat tape if present or needed crawlspaces?
   Response: There are 8 sites where the new water service will connect to plumbing in a crawlspace. The City intends to contact each owner of these addresses and have them sign a work agreement acknowledging the installation of insulation and/or heat tape is the owner's responsibility. The Contractor shall install the new service in the same location of the existing service in the crawlspace as to not cause a change in conditions or increase the likelihood of freezing.

4. **Question:** Under the 48-hour interior completion requirement, does televising the sewer, removing a house trap, and electrical service ground fall under that? Or can those still be done ahead of time outside of that rule
   Response: See Clarification language above pertaining to **SP-58.1, SP-60.2, SP-61.2, and SP-62.2**.

5. **Question:** If granular backfill is required, which material will the City require for use, granular embankment or granular bedding?
   Response: See Details LSLR-1 and LSLR-2. Granular bedding will be used in the pipe encasement zone; granular embankment will be used above the encasement zone but below the road subbase. Estimated quantities are included for both materials based on previous LSLR projects.

6. **Question:** The plans identify a Type L wall; however, a modular wall system is shown at one location that is not explicitly called out separately and appears to be categorized under Type L. Please clarify whether the modular wall may be bid as a separate bid item.
   Response: Site 45 does have an existing modular block wall that is incorrectly classified as a Type L wall. Direction during construction will be to relocate the curb stop on the existing copper service (Replace Curb Stop bid item) to avoid disturbing the modular block wall. If salvaging and replacing the modular block wall proves to be unavoidable, this task would be considered an increase in scope of work and eligible for a Contract Change Order.

7. **Questions:** In reference to the line item "Remove & Replace Concrete Steps" it calls out

railing in the detail on sheet D10 of D30, if the steps are removed and replaced and no railing is present prior to work, do we need to add railing to the newly replaced concrete steps?

Response: Railings will be required to be installed where there is an existing railing or where the vertical rise of the steps exceeds 30 inches.

SUPPLEMENTAL INFORMATION

The following information is hereby provided for the Contractor's consideration:

1. Notice from the City of Duluth Communications Office regarding surcharges for credit card transactions.
2. Environmental Review Report.
3. Construction Contingency Plan.

Please acknowledge receipt of this Addendum by including a copy of it with your proposal.

Posted: **1/14/2026**

END OF ADDENDUM

FOR IMMEDIATE RELEASE

DATE: 12/19/2025
SUBJECT: City of Duluth to add surcharge to some credit card transactions beginning January 2026
BY: Kelli Latuska, Public Information Officer

City of Duluth Communications Office

Mayor Roger J. Reinert
411 West First Street • Duluth, Minnesota 55802 • www.duluthmn.gov

For more information, please call 218-730-5309

City of Duluth to add surcharge to some credit card transactions beginning January 2026

[DULUTH, MN] Beginning January 5, 2026, the City of Duluth will add a non-refundable surcharge of 3.5%, with a minimum surcharge of $2.50, to all credit card payments for City of Duluth licensing, permit, code enforcement, and enterprise transactions.

Residents and customers will also have the option to pay with an e-check for a $1.95 flat fee. As always, cash and check will also still be accepted when paying in-person.

The City of Duluth regrets any inconvenience this surcharge may cause customers. The rising cost of credit card processing requires the implementation of this surcharge.

This surcharge will not apply to Comfort Systems payments or parking ticket payments at this time.

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Building a Better World for All of Us®

January 8, 2026

RE: Duluth Lead Service Line Replacement Projects – Spirit Valley Neighborhood
Duluth, St. Louis County, Minnesota
SEH No. DULUT 183604

Jon Maruska
Senior Engineering Specialist
City of Duluth
411 West First Street, City Hall Room 240
Duluth, MN 55802

Dear Mr. Maruska:

Short Elliott Hendrickson (SEH®) was retained by the City of Duluth (herein referred to as the "City") to complete an environmental due diligence review ahead of the 2026 Duluth Lead Service Line Replacements (LSLR) Project for five neighborhoods – Central Hillside 2, Denfeld, East Hillside 1; Endion, and Spirit Valley.

This letter report describes the work tasks, general scope of services, and findings specific to the Spirit Valley neighborhood.

BACKGROUND

The City is planning for the replacement of lead service lines (LSLs) using funding from the Minnesota Department of Health (MDH) Minnesota Drinking Water Revolving Fund (DWRF) Program. Lead service lines (LSLs) are the primary source of lead exposure in drinking water and were the most common material used for water services within the City through 1929 and in the early 1940s. The recently proposed Lead and Copper Rule Improvements (LCRI) is expected to require the vast majority of water systems to replace lead service lines within a period of 10 years. Prior to 2025, the City's water service inventory indicated that there are approximately 31,200 water services in Duluth. The City's estimate of LSLs and galvanized requiring replacement (GRR) was 10,700 services.

The City's 2026 LSLR projects include the following:

- Central Hillside 2 LSLR (City Project No. 2323), which includes 360 service line replacements
- Denfeld LSLR (City Project No. 2322), which includes 502 service line replacements
- East Hillside 1 LSLR (City Project No. 2325), which includes 492 service line replacements
- Endion LSLR (City Project No. 2324), which includes 349 service line replacements
- Spirit Valley LSLR (City Project No. 2321), which includes 436 service line replacement

SCOPE OF SERVICES

In accordance with the MDH DWRF Program funding requirements, plans and specifications are to be provided to the MDH for review along with an Environmental Review and Section 106 exemption

checklists. Our scope of services for this Environmental Review generally consisted of evaluating the potential that contaminated soil and/or groundwater may be encountered during the project through a review of reasonably ascertainable records from standard government databases. The following databases from state and local agencies were reviewed:

- Minnesota Pollution Control Agency's (MPCA) Groundwater Contamination Atlas, which depicts known groundwater plumes from state Superfund sites.
- MPCA Institutional Control Sites, which includes parcels with restrictions, conditions, or controls that protect environmental response actions that occurred on-site.
- MPCA's What's in my Neighborhood (WIMN), which includes sites regulated by the MPCA such as brownfields, petroleum release sites, hazardous waste generators, underground and above ground storage tanks (USTs/ASTs), solid waste facilities and state Superfund sites.
- MPCA's Incident Reports (Spill Sites). Oftentimes, the location of a spill site does not correspond to an address or intersection; therefore, a number of spills may not be able to be located. However, for unlocated spills, SEH will conduct a cursory review of unlocated spills in an attempt to identify large spills involving hazardous substances or petroleum products that might impact replacement parcels.
- Minnesota Department of Agriculture's (MDA's) WIMN, which includes incidents related to agricultural chemicals.
- St Louis County's parcel database for residences with a fuel tank on-site.

The review was limited to sites with listings that indicate a release or former release to soil and/or groundwater and did not include listings related to activities that require permitting. A buffer was assigned to applicable listings based on listing type. The following listing types and buffers were applied during the review:

Listing Type	Distance
Superfund	500 feet
Site Assessment sites	200 feet
Petroleum Release (Leak sites and Petroleum Brownfield Sites)	200 feet
Voluntary Investigation and Cleanup (VIC) sites	200 feet
Spill/Incident sites	50 feet
RCRA Hazardous Waste Generator sites	Adjacent Parcel
Underground Storage Tank (UST) and Aboveground Storage Tank (AST) sites	Adjacent Parcel

When a Superfund, Site Assessment, petroleum release, or Voluntary Investigation and Cleanup (VIC) site was located within the buffer distance from a LSLR parcel, the MPCA file was requested, and if available, was reviewed. Based on factors including location and distance of the release relative to the parcel, potential depth to groundwater, assumed groundwater flow direction, and the potential migration distance of hazardous substances and/or petroleum products in the area, a status was assigned to the parcel indicating if there was no known release on the parcel, a potential release on the parcel or a documented release on the parcel.

Recommendations were then assigned to parcels where a potential release or documented release was present. Recommendations include 1) Conducting environmental monitoring during installation of the new service line; 2) Use of a copper service line rather than high-density polyurethane (HDPE); or 3) Notifying the contractor of the potential for contamination to be present. In a limited number of instances, spills were listed for a LSLR parcel, but no information regarding the quantity of the spill or the substance

spilled was available. Recommendations for these parcels include asking the homeowner if additional information regarding the spill is available. If no additional information is available or if replacement of the LSL has the potential to encounter contamination, conducting environmental monitoring during LSLR is recommended.

Several of the LSLR parcels have registered fuel oil tanks with St. Louis County. It is not known if the tanks are above ground storage tanks (ASTs) or underground storage tanks (USTs); however, based on discussions with the City, they understand most of the tanks to be ASTs in the basements of homes. Additional inquiry is being conducted to evaluate if USTs or ASTs are associated with the parcels including drive-by inspections and additional inquiries with homeowners. During the project, the contractor will be apprised of the potential for petroleum impacts to be present.

As environmental monitoring is conducted and if contamination is encountered during the 2026 LSLR projects, the procedures outlined in the Duluth LSLR Projects Construction Contingency Plan (SEH, January 2026) should be followed.

RESULTS

Our review identified the following sites that have the potential for contaminated soil and/or groundwater to be encountered during construction activities.

Parcel Address (PIN)	Environmental Status	Recommendations
1412 COMMONWEALTH AVE (010-1800-02560)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
1426 COMMONWEALTH AVE (010-1800-02630)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
1331 COMMONWEALTH AVE (010-1800-05980)	Identified Release on Parcel - Undetermined Extent	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.
1321 COMMONWEALTH AVE (010-1800-06050)	Identified Release on Parcel - Undetermined Extent	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.
1313 COMMONWEALTH AVE (010-1800-06090)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.
1302 COMMONWEALTH AVE (010-1800-06200)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
1306 COMMONWEALTH AVE (010-1800-06230)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
1314 COMMONWEALTH AVE (010-1800-06260)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
1334 COMMONWEALTH AVE (010-1800-06360)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.

Parcel Address (PIN)	Environmental Status	Recommendations
1336 COMMONWEALTH AVE (010-1800-06370)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.
1206 COMMONWEALTH AVE (010-1800-08630)	Identified Release on Parcel - Undetermined Extent	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.
132 COMMONWEALTH AVE (010-3430-00930)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
202 COMMONWEALTH AVE (010-3430-02740)	Identified Release on Parcel - Undetermined Extent	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.
4715 Grand Ave (010-3610-08570)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
509 N 53RD AVE W (010-4470-00170)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.
513 N 53RD AVE W (010-4470-00180)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.
515 N 53RD AVE W (010-4470-00200)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
512 N 54TH AVE W (010-4470-00320)	Identified Release on Parcel - Undetermined Extent	- Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.
429 N 53RD AVE W (010-4470-00340)	Identified Release on Parcel - Undetermined Extent	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.
406 N CENTRAL AVE (010-4470-01030)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
327 N CENTRAL AVE (010-4470-01350)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
323 N CENTRAL AVE (010-4470-01390)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
326 N CENTRAL AVE (010-4470-01535)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
324 N CENTRAL AVE (010-4470-01550)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
318 N CENTRAL AVE (010-4470-01560)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.

Parcel Address (PIN)	Environmental Status	Recommendations
5302 RAMSEY ST (010-4470-02110)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
226 N CENTRAL AVE (010-4470-02900)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
108 N 56TH AVE W (010-4470-04060)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
102 N 56TH AVE W (010-4470-04090)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5612 MAIN ST (010-4470-06420)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5616 MAIN ST (010-4470-06450)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5620 MAIN ST (010-4470-06480)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
226 S 56TH AVE W (010-4480-00562)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
5511 REDRUTH ST (010-4480-00600)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
222 S 59TH AVE W (010-4500-01770)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
15 S 60TH AVE W (010-4500-03230)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
17 S 60TH AVE W (010-4500-03250)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
27 S 60TH AVE W (010-4500-03280)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
29 N 59TH AVE W (010-4500-04070)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
330 N 57TH AVE W (010-4510-03260)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
5704 CODY ST (010-4510-05080)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5708 CODY ST (010-4510-05100)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.

Parcel Address (PIN)	Environmental Status	Recommendations
601 N CENTRAL AVE (010-4510-06580)	Identified Release on Parcel - Undetermined Extent	- Conduct environmental monitoring during excavation. - Use copper service line piping rather than HDPE.
631 N CENTRAL AVE (010-4520-13680)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
634 N CENTRAL AVE (010-4520-13730)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5219 WADENA ST (010-4530-00190)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
524 N 52ND AVE W (010-4530-00620)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
514 N 52ND AVE W (010-4530-00640)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
510 N 52ND AVE W (010-4530-00680)	Possible Release on Parcel	- Conduct environmental monitoring during excavation. - Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5111 WADENA ST (010-4530-00750)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
411 N 52ND AVE W (010-4530-03910)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.
5220 WADENA ST (010-4530-03990)	Possible Release on Parcel	- Conduct environmental monitoring during excavation.

No known release was identified for the following parcels; however, SEH recommends notifying the contractor of the potential for contamination to be present based on the presence of either a fuel oil tank registered with St. Louis County or the parcels proximity to a known release. A detailed summary of each parcel is included as **Table 1**.

Parcel Address (PIN)	Environmental Status	Recommendations
13115 W 6TH ST (010-1640-01260)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
13101 W 6TH ST (010-1640-01320)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
804 131ST AVE W (010-1660-01340)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
1408 COMMONWEALTH AVE (010-1800-02540)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Parcel Address (PIN)	Environmental Status	Recommendations
1430 COMMONWEALTH AVE (010-1800-02640)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
1415 COMMONWEALTH AVE (010-1800-03100)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4702 W 6TH ST (010-1940-00010)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4715 W 5TH ST (010-1940-00120)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4711 W 5TH ST (010-1940-00130)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
513 N 47TH AVE W (010-1940-00140)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
509 N 47TH AVE W (010-1940-00160)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4701 W 5TH ST (010-1940-00180)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4624 W 6TH ST (010-1940-00220)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4620 W 6TH ST (010-1940-00230)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4601 W 5TH ST (010-1940-00300)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4603 W 5TH ST (010-1940-00320)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4605 W 5TH ST (010-1940-00330)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4619 W 5TH ST (010-1940-00380)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4621 W 5TH ST (010-1940-00390)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
324 N 46TH AVE W (010-1940-01680)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
318 N 46TH AVE W (010-1940-01690)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4612 W 4TH ST (010-1940-01930)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4616 W 5TH ST (010-1940-02120)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4614 W 5TH ST (010-1940-02130)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4612 W 5TH ST (010-1940-02140)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4603 W 4TH ST (010-1940-02190)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4609 W 4TH ST (010-1940-02200)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4615 W 4TH ST (010-1940-02220)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Parcel Address (PIN)	Environmental Status	Recommendations
4619 W 4TH ST (010-1940-02240)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4611 W 6TH ST (010-2600-00150)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4613 W 6TH ST (010-2600-00160)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
226 COMMONWEALTH AVE (010-3430-02840)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
806 COMMONWEALTH AVE (010-3430-18440)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4710 W 4TH ST (010-3610-08440)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
329 N 47TH AVE W (010-3610-08460)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4625 W 4TH ST (010-3610-09580)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4811 GRAND AVE (010-3610-10210)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4809 GRAND AVE (010-3610-10220)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4807 GRAND AVE (010-3610-10230)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4801 GRAND AVE (010-3610-10250)	No Known Release Identified	- Request additional information from the property owners; potential monitoring if no additional information regarding spill or if potential to encounter impacts.
4801 W 4TH ST (010-3610-10260)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4716 W 5TH ST (010-3610-10320)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4712 W 5TH ST (010-3610-10340)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4710 W 5TH ST (010-3610-10350)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4706 W 5TH ST (010-3610-10360)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
321 N CENTRAL AVE (010-4470-01420)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
315 N CENTRAL AVE (010-4470-01430)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
311 N CENTRAL AVE (010-4470-01450)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
309 N CENTRAL AVE (010-4470-01460)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
305 N CENTRAL AVE (010-4470-01470)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
316 N CENTRAL AVE (010-4470-01590)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Parcel Address (PIN)	Environmental Status	Recommendations
314 N CENTRAL AVE (010-4470-01600)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
312 N CENTRAL AVE (010-4470-01610)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5619 RALEIGH ST (010-4470-09180)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5613 RALEIGH ST (010-4470-09240)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5512 REDRUTH ST (010-4480-01040)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
312 S 56TH AVE W (010-4480-01090)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
332 S 57TH AVE W (010-4480-01560)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
318 S 58TH AVE W (010-4480-01820)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
215 S 57TH AVE W (010-4480-02560)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
105 S 58TH AVE W (010-4480-03000)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
109 S 58TH AVE W (010-4480-03040)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
121 S 58TH AVE W (010-4480-03100)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
123 S 58TH AVE W (010-4480-03110)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
23 N 58TH AVE W (010-4480-04270)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
19 N 58TH AVE W (010-4480-04290)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
17 N 58TH AVE W (010-4480-04300)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
13 N 58TH AVE W (010-4480-04320)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
324 N 52ND AVE W (010-4490-01050)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
320 N 52ND AVE W (010-4490-01070)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
318 N 52ND AVE W (010-4490-01080)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
304 N 53RD AVE W (010-4490-01890)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
302 N 53RD AVE W (010-4490-01940)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
309 S 59TH AVE W (010-4500-00210)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5814 RALEIGH ST (010-4500-01670)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Parcel Address (PIN)	Environmental Status	Recommendations
5812 RALEIGH ST (010-4500-01680)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
116 S 59TH AVE W (010-4500-01900)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
118 S 59TH AVE W (010-4500-01910)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
121 S 59TH AVE W (010-4500-01920)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
126 S 59TH AVE W (010-4500-01950)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
122 S 60TH AVE W (010-4500-02450)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
126 S 60TH AVE W (010-4500-02470)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
29 S 60TH AVE W (010-4500-03300)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
18 S 60TH AVE W (010-4500-03430)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
20 S 60TH AVE W (010-4500-03440)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5702 CODY ST (010-4510-05060)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
621 N CENTRAL AVE (010-4510-06480)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
620 N 57TH AVE W (010-4510-06890)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
618 N 57TH AVE W (010-4510-06900)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
616 N 57TH AVE W (010-4510-06910)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
612 N 57TH AVE W (010-4510-06930)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
610 N 57TH AVE W (010-4510-06940)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
608 N 57TH AVE W (010-4510-06950)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
606 N 57TH AVE W (010-4510-06960)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5619 CODY ST (010-4510-06980)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5615 CODY ST (010-4510-07000)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5611 CODY ST (010-4510-07020)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
623 N 57TH AVE W (010-4510-07030)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
617 N 57TH AVE W (010-4510-07060)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Parcel Address (PIN)	Environmental Status	Recommendations
615 N 57TH AVE W (010-4510-07080)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
613 N 57TH AVE W (010-4510-07090)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
611 N 57TH AVE W (010-4510-07100)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
609 N 57TH AVE W (010-4510-07110)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
603 N 57TH AVE W (010-4510-07170)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
631 N 57TH AVE W (010-4520-11200)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
627 N 57TH AVE W (010-4520-11210)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
915 N CENTRAL AVE (010-4520-12980)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
911 N CENTRAL AVE (010-4520-13000)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
909 N CENTRAL AVE (010-4520-13020)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
5505 W 6TH ST (010-4520-13070)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
629 N CENTRAL AVE (010-4520-13690)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
625 N CENTRAL AVE (010-4520-13710)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
628 N CENTRAL AVE (010-4520-13740)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
626 N CENTRAL AVE (010-4520-13750)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
624 N CENTRAL AVE (010-4520-13760)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4809 W 4TH ST (010-4520-14800)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4817 W 4TH ST (010-4520-14850)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4819 W 4TH ST (010-4520-14854)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
423 N 48TH AVE W (010-4520-15020)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
415 N 48TH AVE W (010-4520-15050)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4806 W 5TH ST (010-4520-15070)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4824 W 5TH ST (010-4520-15170)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4828 W 5TH ST (010-4520-15190)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Parcel Address (PIN)	Environmental Status	Recommendations
4805 W 5TH ST (010-4520-15290)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4809 W 5TH ST (010-4520-15320)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4815 W 5TH ST (010-4520-15340)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4817 W 5TH ST (010-4520-15350)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4821 W 5TH ST (010-4520-15370)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4827 W 5TH ST (010-4520-15400)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
517 N 48TH AVE W (010-4520-15500)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4808 W 6TH ST (010-4520-15510)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4824 W 6TH ST (010-4520-15600)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4826 W 6TH ST (010-4520-15620)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4830 W 6TH ST (010-4520-15630)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4706 W 6TH ST (010-4520-15940)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4714 W 6TH ST (010-4520-15980)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4807 W 6TH ST (010-4520-16330)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4709 W 6TH ST (010-4520-16420)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4711 W 6TH ST (010-4520-16450)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4717 W 6TH ST (010-4520-16460)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4721 W 6TH ST (010-4520-16500)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4723 W 6TH ST (010-4520-16540)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4727 W 6TH ST (010-4520-16550)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4702 W 7TH ST (010-4520-16590)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4706 W 7TH ST (010-4520-16610)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
643 N 47TH AVE W (010-4520-16650)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4710 W 7TH ST (010-4520-16700)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Parcel Address (PIN)	Environmental Status	Recommendations
4627 W 6TH ST (010-4520-16860)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4629 W 6TH ST (010-4520-16880)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4715 W 7TH ST (010-4520-17090)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
4719 W 7TH ST (010-4520-17110)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
1202 N CENTRAL AVE (010-4520-17250)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
432 N 51ST AVE W (010-4530-02920)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
430 N 51ST AVE W (010-4530-03020)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
410 N 51ST AVE W (010-4530-03130)	No Known Release Identified	- Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.

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ATTACHMENTS

Table 1 - Environmental Parcel Summary

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1640-01260	13115 W 6TH ST	~ 6410 ft (SR0001016)	~ 2975 ft (SA0008707)	~ 240 ft (LS0019377) ~ 250 ft (LS0016547)	~ 7970 ft (207758)	~ 1495 ft (TS0005724)	~ 270 ft (010-1650-01340)	No known release or contamination identified	LS0016547 is located at 701 North 131st Avenue West, to the north of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in August 2006. Remedial actions consisted of the excavation and off-site disposal of 39 cubic yards of soil. Mulitple investigations were completed between Aoril 2008 and October 2009, and groundwater contamination was reported in connection with the release.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1640-01320	13101 W 6TH ST	~ 6305 ft (SR0000345)	~ 2930 ft (SA0008707)	~ 235 ft (LS0016547) ~ 240 ft (LS0019377)	~ 7870 ft (207758)	~ 1465 ft (TS0005724)	~ 160 ft (010-1650-00430)	No known release or contamination identified	LS0016547 is located at 701 North 131st Avenue West, to the north of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in August 2006. Remedial actions consisted of the excavation and off-site disposal of 39 cubic yards of soil. Mulitple investigations were completed between Aoril 2008 and October 2009, and groundwater contamination was reported in connection with the release.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1660-01340	804 131ST AVE W	~ 5835 ft (SR0000345)	~ 3435 ft (SA0008707)	~ 270 ft (LS0016547)	~ 7345 ft (207758)	~ 2040 ft (TS0005724)	~ 60 ft (010-1660-00410)	No known release or contamination identified	LS0016547 is located at 701 North 131st Avenue West, to the north of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in August 2006. Remedial actions consisted of the excavation and off-site disposal of 39 cubic yards of soil. Mulitple investigations were completed between Aoril 2008 and October 2009, and groundwater contamination was reported in connection with the release.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1670-00410	13022 W 9TH ST	~ 5825 ft (SR0000345)	~ 3565 ft (SA0008707)	~ 385 ft (LS0016547)	~ 7320 ft (207758)	~ 2160 ft (TS0005724)	~ 180 ft (010-1660-00410)	No known release or contamination identified		-

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-02540	1408 COMMONWEALTH AVE	~ 3765 ft (SR0000265)	~ 2800 ft (VP4600)	~ 130 ft (LS0017702) ~ 235 ft (LS0009599)	~ 505 ft (188676)	~ 130 ft (TS0125197)	~ 180 ft (010-1800-02210)	No known release or contamination identified	LS0017702 is located adjacent to 1426 Commonwealth Avenue in the right-of-way, to the northwest of the site. Three 500 gallon USTs were discovered and removed in August 2009. Approximately 35 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. Elevated PID soil headspace readings (up to 1,215 ppm) were reported in the base and sidewalls of the excavation area. Confirmation soil sample analytical results identified elevated detections of GRO and DRO exceeding MPCA UFC and arsenic exceeding the iSRV. Soil samples were analyzed for DRO, GRO, VOCs, SVOCs, and metals. No groundwater was encountered during the UST removal and no investigation or additional remedial activities were completed. LS0009599 is located at 1331 Commonwealth Avenue, to the southwest of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-02560	1412 COMMONWEALTH AVE	~ 3790 ft (SR0000265)	~ 2770 ft (BF0001503)	~ 80 ft (LS0017702) ~ 275 ft (LS0009599)	~ 555 ft (188676)	~ 80 ft (TS0125197)	~ 185 ft (010-1800-02210)	Possible release on parcel	LS0017702 is located adjacent to 1426 Commonwealth Avenue in the right-of-way, to the northwest of the site. Three 500 gallon USTs were discovered and removed in August 2009. Approximately 35 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. Elevated PID soil headspace readings (up to 1,215 ppm) were reported in the base and sidewalls of the excavation area. Confirmation soil sample analytical results identified elevated detections of GRO and DRO exceeding MPCA UFC and arsenic exceeding the iSRV. Soil samples were analyzed for DRO, GRO, VOCs, SVOCs, and metals. No groundwater was encountered during the UST removal and no investigation or additional remedial activities were completed. LS0009599 is located at 1331 Commonwealth Avenue, to the southwest of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Conduct environmental monitoring during excavation.
010-1800-02630	1426 COMMONWEALTH AVE	~ 3865 ft (SR0000265)	~ 2600 ft (BF0001503)	~ 70 ft (LS0017702) ~ 440 ft (LS0009599)	~ 725 ft (188676)	~ 70 ft (TS0125197)	~ 95 ft (010-1800-02690)	Possible release on parcel	LS0017702 is located adjacent to 1426 Commonwealth Avenue in the right-of-way, to the southwest of the site. Three 500 gallon USTs were discovered and removed in August 2009. Approximately 35 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. Elevated PID soil headspace readings (up to 1,215 ppm) were reported in the base and sidewalls of the excavation area. Confirmation soil sample analytical results identified elevated detections of GRO and DRO exceeding MPCA UFC and arsenic exceeding the iSRV. Soil samples were analyzed for DRO, GRO, VOCs, SVOCs, and metals. No groundwater was encountered during the UST removal and no investigation or additional remedial activities were completed.	Conduct environmental monitoring during excavation.
010-1800-02640	1430 COMMONWEALTH AVE	~ 3875 ft (SR0000265)	~ 2550 ft (BF0001503)	~ 95 ft (LS0017702) ~ 460 ft (LS0009599)	~ 750 ft (188676)	~ 95 ft (TS0125197)	~ 50 ft (010-1800-02690)	No known release or contamination identified	LS0017702 is located adjacent to 1426 Commonwealth Avenue in the right-of-way, to the southwest of the site. Three 500 gallon USTs were discovered and removed in August 2009. Approximately 35 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. Elevated PID soil headspace readings (up to 1,215 ppm) were reported in the base and sidewalls of the excavation area. Confirmation soil sample analytical results identified elevated detections of GRO and DRO exceeding MPCA UFC and arsenic exceeding the iSRV. Soil samples were analyzed for DRO, GRO, VOCs, SVOCs, and metals. No groundwater was encountered during the UST removal and no investigation or additional remedial activities were completed.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-03100	1415 COMMONWEALTH AVE	~ 3930 ft (SR0000265)	~ 2765 ft (BF0001503)	~ 75 ft (LS0017702) ~ 190 ft (LS0009599) ~ 490 ft (LS0009552) ~ 490 ft (LS0021673)	~ 490 ft (188676)	~ 75 ft (TS0125197)	~ 295 ft (010-1800-02690)	No known release or contamination identified	LS0017702 is located adjacent to 1426 Commonwealth Avenue in the right-of-way, to the northeast of the site. Three 500 gallon USTs were discovered and removed in August 2009. Approximately 35 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. Elevated PID soil headspace readings (up to 1,215 ppm) were reported in the base and sidewalls of the excavation area. Confirmation soil sample analytical results identified elevated detections of GRO and DRO exceeding MPCA UFC and arsenic exceeding the iSRV. Soil samples were analyzed for DRO, GRO, VOCs, SVOCs, and metals. No groundwater was encountered during the UST removal and no investigation or additional remedial activities were completed. LS0009599 is located at 1331 Commonwealth Avenue, to the south of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-05980	1331 COMMONWEALTH AVE	~ 3825 ft (SR0000265)	~ 2615 ft (VP4600)	~ 0 ft (LS0009599) ~ 200 ft (LS0009552) ~ 200 ft (LS0021673) ~ 305 ft (LS0017702)	~ 200 ft (188676)	~ 0 ft (TS0011176)	~ 370 ft (010-1800-02210)	Identified release on parcel - Undetermined Extent	LS0009599 is located at 1331 Commonwealth Avenue, on-site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed. LS0009552 is located at 1301 Commonwealth Avenue, to the south of the site. A release was discovered during the removal of four USTs in November 1996. Approximately 740 cubic yards of petroleum impacted soil was excavated for off-site disposal during the UST removals. Multiple investigations were completed at the site between August 1996 and June 2004, and consisted of the advancement of nineteen soil borings to maximum depths ranging between 10 and 25 feet bgs. Soils encountered generally consisted of clay and silty sand extending to 15 feet bgs, and undertlain by sand. Elevated PID soil headspace readings (up to 786 ppm) were reported between 0 and 18 feet bgs. Groundwater was encountered between 4.15 and 11.98 feet bgs during the investigations. Soil and groundwater sample analytical results identified elevated detections of DRO, GRO, and various PVOCs exceeding regulatory criteria. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, MTBE, and lead. Soil impacts were encountered throughout the site; however, all soil sample analytical results from the off-site borings were below their respective regulatory criteria. Groundwater impacts were identified throughout the site and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred between December 1999 and August 2006, and the plume was considered to be stable to receding. Groundwater flow was measured to the northeast throughout the monitoring period. No additional remedial activities were completed. LS0021673 is located at 1301 Commonwealth Avenue, to the south of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline was discovered in November 2021. Multiple investigations were completed between July 2022 and November 2025. Groundwater contamination was reported in connection with the release. No remedial actions were reported, the listing is still active.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-06050	1321 COMMONWEALTH AVE	~ 3795 ft (SR0000265)	~ 2530 ft (VP4600)	~ 100 ft (LS0009599) ~ 100 ft (LS0009552) ~ 100 ft (LS0021673) ~ 450 ft (LS0017702)	~ 100 ft (188676)	~ 100 ft (TS0011176)	~ 420 ft (010-1800-02210)	Identified release on parcel - Undetermined Extent	LS0009552 is located at 1301 Commonwealth Avenue, to the south of the site. A release was discovered during the removal of four USTs in November 1996. Approximately 740 cubic yards of petroleum impacted soil was excavated for off-site disposal during the UST removals. Multiple investigations were completed at the site between August 1996 and June 2004, and consisted of the advancement of nineteen soil borings to maximum depths ranging between 10 and 25 feet bgs. Soils encountered generally consisted of clay and silty sand extending to 15 feet bgs, and undertlain by sand. Elevated PID soil headspace readings (up to 786 ppm) were reported between 0 and 18 feet bgs. Groundwater was encountered between 4.15 and 11.98 feet bgs during the investigations. Soil and groundwater sample analytical results identified elevated detections of DRO, GRO, and various PVOCs exceeding regulatory criteria. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, MTBE, and lead. Soil impacts were encountered throughout the site; however, all soil sample analytical results from the off-site borings were below their respective regulatory criteria. Groundwater impacts were identified throughout the site and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred between December 1999 and August 2006, and the plume was considered to be stable to receding. Groundwater flow was measured to the northeast throughout the monitoring period. No additional remedial activities were completed. LS0021673 is located at 1301 Commonwealth Avenue, to the south of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline was discovered in November 2021. Multiple investigations were completed between July 2022 and November 2025. Groundwater contamination was reported in connection with the release. No remedial actions were reported, the listing is still active. LS0009599 is located at 1331 Commonwealth Avenue, adjacent to the north of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-06090	1313 COMMONWEALTH AVE	~ 3780 ft (SR0000265)	~ 2485 ft (VP4600)	~ 50 ft (LS0009552) ~ 50 ft (LS0021673) ~ 225 ft (LS0009599)	~ 50 ft (188676)	~ 50 ft (TS0005177)	~ 480 ft (010-1800-06720)	Possible release on parcel	LS0009552 is located at 1301 Commonwealth Avenue, to the south of the site. A release was discovered during the removal of four USTs in November 1996. Approximately 740 cubic yards of petroleum impacted soil was excavated for off-site disposal during the UST removals. Multiple investigations were completed at the site between August 1996 and June 2004, and consisted of the advancement of nineteen soil borings to maximum depths ranging between 10 and 25 feet bgs. Soils encountered generally consisted of clay and silty sand extending to 15 feet bgs, and undertlain by sand. Elevated PID soil headspace readings (up to 786 ppm) were reported between 0 and 18 feet bgs. Groundwater was encountered between 4.15 and 11.98 feet bgs during the investigations. Soil and groundwater sample analytical results identified elevated detections of DRO, GRO, and various PVOCs exceeding regulatory criteria. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, MTBE, and lead. Soil impacts were encountered throughout the site; however, all soil sample analytical results from the off-site borings were below their respective regulatory criteria. Groundwater impacts were identified throughout the site and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred between December 1999 and August 2006, and the plume was considered to be stable to receding. Groundwater flow was measured to the northeast throughout the monitoring period. No additional remedial activities were completed. LS0021673 is located at 1301 Commonwealth Avenue, to the south of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline was discovered in November 2021. Multiple investigations were completed between July 2022 and November 2025. Groundwater contamination was reported in connection with the release. No remedial actions were reported, the listing is still active. LS0009599 is located at 1331 Commonwealth Avenue, adjacent to the north of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.

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LSLR SPIRIT VALLEY
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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-06200	1302 COMMONWEALTH AVE	~ 3565 ft (SR0000265)	~ 2265 ft (VP4600)	~ 150 ft (LS0009552) ~ 150 ft (LS0021673) ~ 400 ft (LS0009599) ~ 495 ft (LS0006355)	~ 150 ft (188676)	~ 150 ft (TS0005177)	~ 335 ft (010-1800-06720)	Possible release on parcel	LS0009552 is located at 1301 Commonwealth Avenue, to the west of the site. A release was discovered during the removal of four USTs in November 1996. Approximately 740 cubic yards of petroleum impacted soil was excavated for off-site disposal during the UST removals. Multiple investigations were completed at the site between August 1996 and June 2004, and consisted of the advancement of nineteen soil borings to maximum depths ranging between 10 and 25 feet bgs. Soils encountered generally consisted of clay and silty sand extending to 15 feet bgs, and undertlain by sand. Elevated PID soil headspace readings (up to 786 ppm) were reported between 0 and 18 feet bgs. Groundwater was encountered between 4.15 and 11.98 feet bgs during the investigations. Soil and groundwater sample analytical results identified elevated detections of DRO, GRO, and various PVOCs exceeding regulatory criteria. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, MTBE, and lead. Soil impacts were encountered throughout the site; however, all soil sample analytical results from the off-site borings were below their respective regulatory criteria. Groundwater impacts were identified throughout the site and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred between December 1999 and August 2006, and the plume was considered to be stable to receding. Groundwater flow was measured to the northeast throughout the monitoring period. No additional remedial activities were completed. LS0021673 is located at 1301 Commonwealth Avenue, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline was discovered in November 2021. Multiple investigations were completed between July 2022 and November 2025. Groundwater contamination was reported in connection with the release. No remedial actions were reported, the listing is still active. LS0009599 is located at 1331 Commonwealth Avenue, to the northwest of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Conduct environmental monitoring during excavation.

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LSLR SPIRIT VALLEY
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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-06230	1306 COMMONWEALTH AVE	~ 3570 ft (SR0000265)	~ 2290 ft (VP4600)	~ 130 ft (LS0009552) ~ 130 ft (LS0021673) ~ 305 ft (LS0009599)	~ 130 ft (188676)	~ 130 ft (TS0005177)	~ 300 ft (010-1800-06720)	Possible release on parcel	LS0009552 is located at 1301 Commonwealth Avenue, to the west of the site. A release was discovered during the removal of four USTs in November 1996. Approximately 740 cubic yards of petroleum impacted soil was excavated for off-site disposal during the UST removals. Multiple investigations were completed at the site between August 1996 and June 2004, and consisted of the advancement of nineteen soil borings to maximum depths ranging between 10 and 25 feet bgs. Soils encountered generally consisted of clay and silty sand extending to 15 feet bgs, and undertlain by sand. Elevated PID soil headspace readings (up to 786 ppm) were reported between 0 and 18 feet bgs. Groundwater was encountered between 4.15 and 11.98 feet bgs during the investigations. Soil and groundwater sample analytical results identified elevated detections of DRO, GRO, and various PVOCs exceeding regulatory criteria. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, MTBE, and lead. Soil impacts were encountered throughout the site; however, all soil sample analytical results from the off-site borings were below their respective regulatory criteria. Groundwater impacts were identified throughout the site and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred between December 1999 and August 2006, and the plume was considered to be stable to receding. Groundwater flow was measured to the northeast throughout the monitoring period. No additional remedial activities were completed. LS0021673 is located at 1301 Commonwealth Avenue, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline was discovered in November 2021. Multiple investigations were completed between July 2022 and November 2025. Groundwater contamination was reported in connection with the release. No remedial actions were reported, the listing is still active. LS0009599 is located at 1331 Commonwealth Avenue, to the northwest of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Conduct environmental monitoring during excavation.

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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-06260	1314 COMMONWEALTH AVE	~ 3600 ft (SR0000265)	~ 2375 ft (VP4600)	~ 130 ft (LS0009552) ~ 130 ft (LS0021673) ~ 240 ft (LS0009599)	~ 130 ft (188676)	~ 130 ft (TS0005177)	~ 300 ft (010-1800-06720)	Possible release on parcel	LS0009552 is located at 1301 Commonwealth Avenue, to the west of the site. A release was discovered during the removal of four USTs in November 1996. Approximately 740 cubic yards of petroleum impacted soil was excavated for off-site disposal during the UST removals. Multiple investigations were completed at the site between August 1996 and June 2004, and consisted of the advancement of nineteen soil borings to maximum depths ranging between 10 and 25 feet bgs. Soils encountered generally consisted of clay and silty sand extending to 15 feet bgs, and undertlain by sand. Elevated PID soil headspace readings (up to 786 ppm) were reported between 0 and 18 feet bgs. Groundwater was encountered between 4.15 and 11.98 feet bgs during the investigations. Soil and groundwater sample analytical results identified elevated detections of DRO, GRO, and various PVOCs exceeding regulatory criteria. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, MTBE, and lead. Soil impacts were encountered throughout the site; however, all soil sample analytical results from the off-site borings were below their respective regulatory criteria. Groundwater impacts were identified throughout the site and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred between December 1999 and August 2006, and the plume was considered to be stable to receding. Groundwater flow was measured to the northeast throughout the monitoring period. No additional remedial activities were completed. LS0021673 is located at 1301 Commonwealth Avenue, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline was discovered in November 2021. Multiple investigations were completed between July 2022 and November 2025. Groundwater contamination was reported in connection with the release. No remedial actions were reported, the listing is still active. LS0009599 is located at 1331 Commonwealth Avenue, to the northwest of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Conduct environmental monitoring during excavation.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-06360	1334 COMMONWEALTH AVE	~ 3695 ft (SR0000265)	~ 2625 ft (VP4600)	~ 135 ft (LS0009599) ~ 320 ft (LS0017702) ~ 325 ft (LS0009552) ~ 325 ft (LS0021673)	~ 325 ft (188676)	~ 135 ft (TS0011176)	~ 205 ft (010-1800-02210)	Possible release on parcel	LS0009599 is located at 1331 Commonwealth Avenue, adjacent to the west of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.
010-1800-06370	1336 COMMONWEALTH AVE	~ 3590 ft (SR0000265)	~ 2595 ft (VP4600)	~ 135 ft (LS0009599) ~ 295 ft (LS0017702) ~ 350 ft (LS0009552) ~ 350 ft (LS0021673)	~ 350 ft (188676)	~ 135 ft (TS0011176)	~ 95 ft (010-1800-02210)	Possible release on parcel	LS0009599 is located at 1331 Commonwealth Avenue, adjacent to the west of the site. A release was discovered during the removal of three gasoline USTs and one fuel oil UST in October 1996. Approximately 495 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. In August 1996, an investigation consisting of the advancement of 15 soil borings to maximum depths ranging between 10 and 20 feet bgs was completed. Elevated PID soil headspace readings (up to >2,500 ppm) were reported between 4 and 12 feet bgs throughout the eastern portion of the site. Soil sample analytical results identified an elevated detection of GRO (120 mg/kg) exceeding MPCA UFC, east of the former tank basin between 4 and 6 feet bgs. Other low-level detections of various PVOCs and DRO were reported below their respective regulatory criteria. Groundwater was encountered between 3 and 13 feet bgs across the site. Groundwater sample analytical result identified elevated detections of DRO, GRO, and BTEX compounds along the eastern portion of the site, the northern poriton of the 1321 Commonwealth Avenue parcel, and extending into the Commonwealth Avenue right-of-way. Annual groundwater monitoring occurred through December 2004, and the plume was considered to be stable to receding. Groundwater flow direction was calculated to the east/southeast throughout the groundwater monitoring period. No additional remedial activities were completed.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1800-08630	1206 COMMONWEALTH AVE	~ 3460 ft (SR0000265)	~ 1815 ft (VP4600)	~ 0 ft (LS0006355) ~ 460 ft (LS0005810)	~ 570 ft (188676)	~ 0 ft (TS0014466)	~ 70 ft (010-1800-12620)	Identified release on parcel - Undetermined Extent	LS0006355 is located at 1206 Commonwealth Avenue, on-site. The MPCA digital file was limited to documents related to a soil vapor intrusion study that was completed in April 2016. Information related to the original release was not available for review. According to the MPCA WIMN website, the release was discovered in May 1993, and annual monitoring was completed through January 1997, when the Leak Site was closed. The Leak Site was reopened in September 2015, for the purpose of completing a vapor reassessment. The 2016 investigation consisted of the advancement of one soil boring to 13 feet bgs. Soils encountered consisted of silty clay and silty sand. Groundwater was encountered at 8.04 feet bgs. Elevated PID soil headspace readings (up to 1,442 ppm) were reported between 2 feet bgs and the termination depth of the boring. No soil analytical samples were collected. The groundwater analytical sample identified elevated detections of DRO, GRO, and various PVOCs exceeding regulatory criteria. Four soil vapor probes were completed on-site and downgradient of the site (east), and identified elevated detections of various PVOCs exceeding regulatory criteria. The results of the investigation were overlaid on a figure showing the previously identified extent of contamination which included the site and adjacent sites to the east.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.
010-1800-12400	1107 COMMONWEALTH AVE	~ 3615 ft (SR0000265)	~ 1600 ft (VP4600)	~ 130 ft (LS0005810) ~ 470 ft (LS0006355)	~ 1045 ft (188676)	~ 130 ft (TS0005345)	~ 300 ft (010-1800-12620)	No known release or contamination identified	LS0005810 is located at 1106 Commonwealth Avenue, to the east of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of diesel was discovered in October 1992. A site visit was conducted in May 1994. No remedial actions were reported.	-
010-1940-00010	4702 W 6TH ST	~ 4535 ft (SR0000179)	~ 1100 ft (BF0001086)	~ 905 ft (LS0002989)	~ 990 ft (16504)	~ 905 ft (TS0014075)	~ 0 ft (010-1940-00010)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00100	4717 W 5TH ST	~ 4320 ft (SR0000179)	~ 955 ft (BF0001086)	~ 860 ft (LS0004704)	~ 790 ft (16504)	~ 860 ft (TS0015382)	~ 15 ft (010-4520-15960)	No known release or contamination identified		-
010-1940-00120	4715 W 5TH ST	~ 4345 ft (SR0000179)	~ 955 ft (BF0001086)	~ 850 ft (LS0002989)	~ 805 ft (16504)	~ 850 ft (TS0014075)	~ 0 ft (010-1940-00130)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00130	4711 W 5TH ST	~ 4370 ft (SR0000179)	~ 950 ft (BF0001086)	~ 825 ft (LS0002989)	~ 820 ft (16504)	~ 825 ft (TS0014075)	~ 0 ft (010-1940-00140)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00140	513 N 47TH AVE W	~ 4475 ft (SR0000179)	~ 1055 ft (BF0001086)	~ 860 ft (LS0002989)	~ 930 ft (16504)	~ 860 ft (TS0014075)	~ 0 ft (010-1940-00140)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00160	509 N 47TH AVE W	~ 4450 ft (SR0000179)	~ 1020 ft (BF0001086)	~ 835 ft (LS0002989)	~ 895 ft (16504)	~ 835 ft (TS0014075)	~ 0 ft (010-1940-00140)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00180	4701 W 5TH ST	~ 4400 ft (SR0000179)	~ 950 ft (BF0001086)	~ 775 ft (LS0002989)	~ 835 ft (16504)	~ 775 ft (TS0014075)	~ 0 ft (010-1940-00130)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00220	4624 W 6TH ST	~ 4495 ft (SR0001641)	~ 1100 ft (BF0000986)	~ 840 ft (LS0002989)	~ 1075 ft (16504)	~ 840 ft (TS0014075)	~ 0 ft (010-1940-00220)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00230	4620 W 6TH ST	~ 4465 ft (SR0001641)	~ 1100 ft (BF0000986)	~ 825 ft (LS0002989)	~ 1100 ft (16504)	~ 825 ft (TS0014075)	~ 0 ft (010-1940-00220)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00240	4618 W 6TH ST	~ 4435 ft (SR0001641)	~ 1100 ft (BF0000986)	~ 820 ft (LS0002989)	~ 1120 ft (16504)	~ 820 ft (TS0014075)	~ 35 ft (010-1940-00390)	No known release or contamination identified		-
010-1940-00250	4616 W 6TH ST	~ 4405 ft (SR0001641)	~ 1100 ft (BF0000986)	~ 810 ft (LS0002989)	~ 1145 ft (16504)	~ 810 ft (TS0014075)	~ 70 ft (010-1940-00390)	No known release or contamination identified		-

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1940-00260	4614 W 6TH ST	~ 4375 ft (SR0001641)	~ 1090 ft (PB4011)	~ 805 ft (LS0002989)	~ 1160 ft (23784)	~ 805 ft (TS0014075)	~ 60 ft (010-1940-00320)	No known release or contamination identified		-
010-1940-00270	4610 W 6TH ST	~ 4345 ft (SR0001641)	~ 1075 ft (PB4011)	~ 805 ft (LS0002989)	~ 1170 ft (23784)	~ 805 ft (TS0014075)	~ 25 ft (010-1940-00320)	No known release or contamination identified		-
010-1940-00280	4606 W 6TH ST	~ 4320 ft (SR0001641)	~ 1065 ft (PB4011)	~ 805 ft (LS0002989)	~ 1185 ft (23784)	~ 805 ft (TS0014075)	~ 15 ft (010-1940-00320)	No known release or contamination identified		-
010-1940-00290	4602 W 6TH ST	~ 4285 ft (SR0001641)	~ 1055 ft (PB4011)	~ 805 ft (LS0002989)	~ 1200 ft (23784)	~ 790 ft (TS0055372)	~ 15 ft (010-1940-00320)	No known release or contamination identified		-
010-1940-00300	4601 W 5TH ST	~ 4185 ft (SR0001641)	~ 910 ft (PB4011)	~ 655 ft (LS0002989)	~ 1075 ft (23784)	~ 655 ft (TS0014075)	~ 0 ft (010-1940-00320)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00320	4603 W 5TH ST	~ 4210 ft (SR0001641)	~ 920 ft (PB4011)	~ 655 ft (LS0002989)	~ 1060 ft (23784)	~ 655 ft (TS0014075)	~ 0 ft (010-1940-00320)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00330	4605 W 5TH ST	~ 4235 ft (SR0001641)	~ 930 ft (PB4011)	~ 655 ft (LS0002989)	~ 1045 ft (23784)	~ 655 ft (TS0014075)	~ 0 ft (010-1940-00320)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00340	4607 W 5TH ST	~ 4260 ft (SR0001641)	~ 940 ft (PB4011)	~ 660 ft (LS0002989)	~ 1030 ft (23784)	~ 660 ft (TS0014075)	~ 35 ft (010-1940-00320)	No known release or contamination identified		-
010-1940-00350	4609 W 5TH ST	~ 4285 ft (SR0001641)	~ 950 ft (BF0000986)	~ 660 ft (LS0002989)	~ 1015 ft (23784)	~ 660 ft (TS0014075)	~ 70 ft (010-1940-00320)	No known release or contamination identified		-
010-1940-00360	4611 W 5TH ST	~ 4310 ft (SR0001641)	~ 950 ft (BF0000986)	~ 665 ft (LS0002989)	~ 1005 ft (23784)	~ 665 ft (TS0014075)	~ 70 ft (010-1940-00390)	No known release or contamination identified		-
010-1940-00370	4617 W 5TH ST	~ 4340 ft (SR0001641)	~ 950 ft (BF0000986)	~ 675 ft (LS0002989)	~ 995 ft (23784)	~ 675 ft (TS0014075)	~ 35 ft (010-1940-00390)	No known release or contamination identified		-
010-1940-00380	4619 W 5TH ST	~ 4365 ft (SR0001641)	~ 950 ft (BF0000986)	~ 685 ft (LS0002989)	~ 985 ft (23784)	~ 685 ft (TS0014075)	~ 0 ft (010-1940-00390)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00390	4621 W 5TH ST	~ 4395 ft (SR0001641)	~ 950 ft (BF0000986)	~ 695 ft (LS0002989)	~ 965 ft (16504)	~ 695 ft (TS0014075)	~ 0 ft (010-1940-00390)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-00410	4629 W 5TH ST	~ 4445 ft (SR0001641)	~ 955 ft (BF0000986)	~ 720 ft (LS0002989)	~ 920 ft (16504)	~ 720 ft (TS0014075)	~ 25 ft (010-1940-00220)	No known release or contamination identified		-
010-1940-00420	4631 W 5TH ST	~ 4475 ft (SR0001641)	~ 960 ft (BF0001086)	~ 735 ft (LS0002989)	~ 905 ft (16504)	~ 735 ft (TS0014075)	~ 50 ft (010-1940-00140)	No known release or contamination identified		-
010-1940-01660	330 N 46TH AVE W	~ 3720 ft (SR0001641)	~ 410 ft (PB4011) ~ 410 ft (VP27670) ~ 500 ft (VP20790)	~ 225 ft (LS0002989) ~ 410 ft (LS0018560)	~ 775 ft (23784)	~ 225 ft (TS0014075)	~ 65 ft (010-1940-01690)	No known release or contamination identified	LS0002989 is located at 4601 Grand Avenue, to the south of the site. The MPCA indicated that the digital file is missing. The MPCA WIMN website indicates that a release of gasoline occurred in June 1990. No groundwater contamination occurred from the release and cleanup actions consisted of the excavation and thermal treatment of 20 cubic yards of soil. The MPCA issued site closure in September 1995.	-
010-1940-01680	324 N 46TH AVE W	~ 3680 ft (SR0001641)	~ 345 ft (PB4011) ~ 345 ft (VP27670) ~ 430 ft (VP20790)	~ 175 ft (LS0002989) ~ 345 ft (LS0018560)	~ 735 ft (23784)	~ 175 ft (TS0014075)	~ 0 ft (010-1940-01690)	No known release or contamination identified	LS0002989 is located at 4601 Grand Avenue, to the south of the site. The MPCA indicated that the digital file is missing. The MPCA WIMN website indicates that a release of gasoline occurred in June 1990. No groundwater contamination occurred from the release and cleanup actions consisted of the excavation and thermal treatment of 20 cubic yards of soil. The MPCA issued site closure in September 1995. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-01690	318 N 46TH AVE W	~ 3660 ft (SR0001641)	~ 310 ft (PB4011) ~ 310 ft (VP27670) ~ 400 ft (VP20790) ~ 495 ft (BF0000986) ~ 495 ft (BF0001701) ~ 495 ft (VP33320) ~ 495 ft (BF0002934)	~ 155 ft (LS0002989) ~ 310 ft (LS0018560) ~ 495 ft (LS0006773)	~ 720 ft (23784)	~ 155 ft (TS0014075)	~ 0 ft (010-1940-01690)	No known release or contamination identified	LS0002989 is located at 4601 Grand Avenue, to the south of the site. The MPCA indicated that the digital file is missing. The MPCA WIMN website indicates that a release of gasoline occurred in June 1990. No groundwater contamination occurred from the release and cleanup actions consisted of the excavation and thermal treatment of 20 cubic yards of soil. The MPCA issued site closure in September 1995. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1940-01930	4612 W 4TH ST	~ 3935 ft (SR0001641)	~ 430 ft (BF0000986) ~ 430 ft (BF0001701) ~ 430 ft (VP33320) ~ 430 ft (BF0002934) ~ 490 ft (PB4011) ~ 490 ft (VP27670)	~ 140 ft (LS0002989) ~ 430 ft (LS0006773) ~ 490 ft (LS0018560)	~ 560 ft (23784)	~ 140 ft (TS0014075)	~ 5 ft (010-1940-01850)	No known release or contamination identified	LS0002989 is located at 4601 Grand Avenue, to the east of the site. The MPCA indicated that the digital file is missing. The MPCA WIMN website indicates that a release of gasoline occurred in June 1990. No groundwater contamination occurred from the release and cleanup actions consisted of the excavation and thermal treatment of 20 cubic yards of soil. The MPCA issued site closure in September 1995. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-01960	4616 W 4TH ST	~ 3960 ft (SR0001641)	~ 380 ft (BF0000986) ~ 380 ft (BF0001701) ~ 380 ft (VP33320) ~ 380 ft (BF0002934)	~ 145 ft (LS0002989) ~ 380 ft (LS0006773)	~ 505 ft (23784)	~ 145 ft (TS0014075)	~ 65 ft (010-1940-01850)	No known release or contamination identified	LS0002989 is located at 4601 Grand Avenue, to the east of the site. The MPCA indicated that the digital file is missing. The MPCA WIMN website indicates that a release of gasoline occurred in June 1990. No groundwater contamination occurred from the release and cleanup actions consisted of the excavation and thermal treatment of 20 cubic yards of soil. The MPCA issued site closure in September 1995.	-
010-1940-02000	430 N 47TH AVE W	~ 4340 ft (SR0001641)	~ 830 ft (BF0000986)	~ 595 ft (LS0002989)	~ 805 ft (16504)	~ 595 ft (TS0014075)	~ 80 ft (010-1940-00390)	No known release or contamination identified		-
010-1940-02030	426 N 47TH AVE W	~ 4315 ft (SR0001641)	~ 785 ft (BF0000986)	~ 555 ft (LS0002989)	~ 770 ft (16504)	~ 555 ft (TS0014075)	~ 60 ft (010-1940-02250)	No known release or contamination identified		-
010-1940-02060	418 N 47TH AVE W	~ 4290 ft (SR0001641)	~ 740 ft (BF0000986)	~ 515 ft (LS0002989)	~ 735 ft (16504)	~ 515 ft (TS0014075)	~ 15 ft (010-1940-02250)	No known release or contamination identified		-
010-1940-02090	4622 W 5TH ST	~ 4260 ft (SR0001641)	~ 740 ft (BF0000986)	~ 500 ft (LS0002989)	~ 770 ft (23784)	~ 500 ft (TS0014075)	~ 15 ft (010-1940-02250)	No known release or contamination identified		-
010-1940-02100	4620 W 5TH ST	~ 4235 ft (SR0001641)	~ 740 ft (BF0000986)	~ 485 ft (LS0002989)	~ 780 ft (23784)	~ 485 ft (TS0014075)	~ 15 ft (010-1940-02250)	No known release or contamination identified		-
010-1940-02110	4618 W 5TH ST	~ 4205 ft (SR0001641)	~ 740 ft (BF0000986)	~ 470 ft (LS0002989)	~ 795 ft (23784)	~ 470 ft (TS0014075)	~ 35 ft (010-1940-02130)	No known release or contamination identified		-
010-1940-02120	4616 W 5TH ST	~ 4180 ft (SR0001641)	~ 740 ft (BF0000986)	~ 460 ft (LS0002989)	~ 805 ft (23784)	~ 460 ft (TS0014075)	~ 0 ft (010-1940-02130)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-02130	4614 W 5TH ST	~ 4150 ft (SR0001641)	~ 740 ft (BF0000986)	~ 455 ft (LS0002989)	~ 820 ft (23784)	~ 450 ft (TS0014075)	~ 0 ft (010-1940-02130)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-02140	4612 W 5TH ST	~ 4125 ft (SR0001641)	~ 745 ft (BF0000986)	~ 445 ft (LS0002989)	~ 835 ft (23784)	~ 445 ft (TS0014075)	~ 0 ft (010-1940-02130)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-02150	4608 W 5TH ST	~ 4095 ft (SR0001641)	~ 730 ft (PB4011)	~ 445 ft (LS0002989)	~ 855 ft (23784)	~ 445 ft (TS0014075)	~ 15 ft (010-1940-02200)	No known release or contamination identified		-
010-1940-02180	4601 W 4TH ST	~ 3950 ft (SR0001641)	~ 570 ft (PB4011)	~ 295 ft (LS0002989)	~ 770 ft (23784)	~ 295 ft (TS0014075)	~ 40 ft (010-1940-02200)	No known release or contamination identified		-
010-1940-02190	4603 W 4TH ST	~ 3980 ft (SR0001641)	~ 585 ft (PB4011)	~ 295 ft (LS0002989)	~ 745 ft (23784)	~ 295 ft (TS0014075)	~ 0 ft (010-1940-02200)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-02200	4609 W 4TH ST	~ 4015 ft (SR0001641)	~ 600 ft (BF0000986)	~ 300 ft (LS0002989)	~ 720 ft (23784)	~ 300 ft (TS0014075)	~ 0 ft (010-1940-02200)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-02220	4615 W 4TH ST	~ 4080 ft (SR0001641)	~ 590 ft (BF0000986)	~ 315 ft (LS0002989)	~ 675 ft (23784)	~ 315 ft (TS0014075)	~ 0 ft (010-1940-02210)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-02230	4617 W 4TH ST	~ 4110 ft (SR0001641)	~ 590 ft (BF0000986)	~ 330 ft (LS0002989)	~ 660 ft (23784)	~ 330 ft (TS0014075)	~ 30 ft (010-1940-02130)	No known release or contamination identified		-
010-1940-02240	4619 W 4TH ST	~ 4140 ft (SR0001641)	~ 590 ft (BF0000986)	~ 350 ft (LS0002989)	~ 640 ft (23784)	~ 350 ft (TS0014075)	~ 0 ft (010-1940-02250)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-1940-02270	412 N 47TH AVE W	~ 4280 ft (SR0001641)	~ 670 ft (BF0001086)	~ 475 ft (LS0002989)	~ 670 ft (23784)	~ 475 ft (TS0014075)	~ 40 ft (010-1940-02250)	No known release or contamination identified		-

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-1940-02290	423 N 47TH AVE W	~ 4280 ft (SR0000179)	~ 785 ft (BF0001086)	~ 640 ft (LS0002989)	~ 690 ft (16504)	~ 640 ft (TS0014075)	~ 35 ft (010-3610-10350)	No known release or contamination identified		-
010-2420-05250	7009 PULASKI ST	~ 3030 ft (SR0000149)	~ 3030 ft (VP15650)	~ 835 ft (LS0019468)	~ 1175 ft (102708)	~ 940 ft (TS0014140)	~ 65 ft (010-2420-06770)	No known release or contamination identified		-
010-2420-06940	930 S 72ND AVE W	~ 3485 ft (SR0000149)	~ 3485 ft (VP15650)	~ 735 ft (LS0019468)	~ 1695 ft (102708)	~ 755 ft (TS0014584)	~ 345 ft (010-2420-06770)	No known release or contamination identified		-
010-2420-06980	924 S 72ND AVE W	~ 3475 ft (SR0000149)	~ 3475 ft (VP15650)	~ 695 ft (LS0019468)	~ 1650 ft (102708)	~ 735 ft (TS0014584)	~ 305 ft (010-2420-06770)	No known release or contamination identified		-
010-2420-07000	918 S 72ND AVE W	~ 3470 ft (SR0000149)	~ 3470 ft (VP15650)	~ 645 ft (LS0019468)	~ 1575 ft (102708)	~ 710 ft (TS0014584)	~ 255 ft (010-2420-06770)	No known release or contamination identified		-
010-2420-07240	931 S 72ND AVE W	~ 3680 ft (SR0000149)	~ 3680 ft (VP15650)	~ 540 ft (LS0007264)	~ 1800 ft (102708)	~ 540 ft (TS0014584)	~ 515 ft (010-2420-06770)	No known release or contamination identified		-
010-2420-08040	1002 S 72ND AVE W	~ 3500 ft (SR0000149)	~ 3500 ft (VP15650)	~ 845 ft (LS0007264)	~ 1855 ft (102708)	~ 845 ft (TS0014584)	~ 485 ft (010-2420-06770)	No known release or contamination identified		-
010-2420-08070	1006 S 72ND AVE W	~ 3515 ft (SR0000149)	~ 3515 ft (VP15650)	~ 865 ft (LS0007264)	~ 1900 ft (102708)	~ 865 ft (TS0014584)	~ 535 ft (010-2420-06770)	No known release or contamination identified		-
010-2600-00010	4614 W 7TH ST	~ 4690 ft (SR0001641)	~ 1460 ft (BF0000986)	~ 1175 ft (LS0002989)	~ 1425 ft (16504)	~ 1130 ft (TS0055372)	~ 15 ft (010-2600-00160)	No known release or contamination identified		-
010-2600-00020	4612 W 7TH ST	~ 4665 ft (SR0001641)	~ 1450 ft (PB4011)	~ 1170 ft (LS0002989)	~ 1440 ft (16504)	~ 1100 ft (TS0055372)	~ 15 ft (010-2600-00160)	No known release or contamination identified		-
010-2600-00030	4610 W 7TH ST	~ 4640 ft (SR0001641)	~ 1440 ft (PB4011)	~ 1165 ft (LS0002989)	~ 1460 ft (16504)	~ 1070 ft (TS0055372)	~ 40 ft (010-2600-00160)	No known release or contamination identified		-
010-2600-00040	4608 W 7TH ST	~ 4615 ft (SR0001641)	~ 1430 ft (PB4011)	~ 1165 ft (LS0002989)	~ 1475 ft (16504)	~ 1040 ft (TS0055372)	~ 70 ft (010-2600-00160)	No known release or contamination identified		-
010-2600-00060	625 N 46TH AVE W	~ 4585 ft (SR0001641)	~ 1470 ft (PB4011)	~ 1225 ft (LS0002989)	~ 1565 ft (16504)	~ 985 ft (TS0055372)	~ 65 ft (010-4520-17620)	No known release or contamination identified		-
010-2600-00080	621 N 46TH AVE W	~ 4540 ft (SR0001641)	~ 1405 ft (PB4011)	~ 1165 ft (LS0002989)	~ 1515 ft (16504)	~ 945 ft (TS0055372)	~ 120 ft (010-3960-00150)	No known release or contamination identified		-
010-2600-00100	4601 W 6TH ST	~ 4430 ft (SR0001641)	~ 1260 ft (PB4011)	~ 1015 ft (LS0002989)	~ 1390 ft (23784)	~ 870 ft (TS0055372)	~ 120 ft (010-3960-00150)	No known release or contamination identified		-
010-2600-00120	4605 W 6TH ST	~ 4485 ft (SR0001641)	~ 1275 ft (PB4011)	~ 1015 ft (LS0002989)	~ 1375 ft (16504)	~ 935 ft (TS0055372)	~ 105 ft (010-2600-00160)	No known release or contamination identified		-
010-2600-00140	4609 W 6TH ST	~ 4535 ft (SR0001641)	~ 1295 ft (PB4011)	~ 1020 ft (LS0002989)	~ 1335 ft (16504)	~ 1000 ft (TS0055372)	~ 35 ft (010-2600-00160)	No known release or contamination identified		-
010-2600-00150	4611 W 6TH ST	~ 4560 ft (SR0001641)	~ 1305 ft (PB4011)	~ 1025 ft (LS0002989)	~ 1315 ft (16504)	~ 1025 ft (TS0014075)	~ 0 ft (010-2600-00160)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-2600-00160	4613 W 6TH ST	~ 4585 ft (SR0001641)	~ 1310 ft (BF0000986)	~ 1030 ft (LS0002989)	~ 1295 ft (16504)	~ 1030 ft (TS0014075)	~ 0 ft (010-2600-00160)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-3430-00930	132 COMMONWEALTH AVE	~ 4145 ft (SR0001428)	~ 3005 ft (VP4600)	~ 130 ft (LS0020262)	~ 1185 ft (23512)	~ 1520 ft (TS0005365)	~ 215 ft (010-3430-02610)	Possible release on parcel	LS0020262 is located at 202 Commonwealth Avenue, to the north of the site. The release was discovered during the removal of a 560 gallon fuel oil UST in November 2016. Elevated PID soil headspace readings (up to 263.2 ppm) were reported during the UST removal and confirmation soil sample results identified detections of DRO (up to 729 mg/kg) exceeding MPCA UFC in the base of the excavation. An LSI was completed in Febuary 2017 and consisted of the advancement of eight soil borings to maximum depths of 3.5 and 24 feet bgs. Soils encountered generally consisted of clay extending to 13 feet bgs with sand below. Elevated PID soil headspace readings (up to 398.2 ppm) were reported between 2 and 12 feet bgs near the former UST only. Soil sample analytical results reported elevated detections of DRO and GRO exceeding MPCA UFC at 2 to 4 feet bgs near the former UST basin and other low-level detections of various PVOCs and GRO between 4 and 6 feet bgs in the western portion of the site. Soil samples were analyzed for DRO, GRO, and VOCs. Three soil vapor samples were collected and all analytical results were below their respective regulatory criteria. Groundwater was not encountered during the investigation. Additional remedial activities were not completed.	Conduct environmental monitoring during excavation.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3430-02740	202 COMMONWEALTH AVE	~ 4070 ft (SR0001428)	~ 2875 ft (VP4600)	~ 0 ft (LS0020262)	~ 1060 ft (23512)	~ 1380 ft (TS0005365)	~ 75 ft (010-3430-02610)	Identified release on parcel - Undetermined Extent	LS0020262 is located on-site (202 Commonwealth Avenue). The release was discovered during the removal of a 560 gallon fuel oil UST in November 2016. Elevated PID soil headspace readings (up to 263.2 ppm) were reported during the UST removal and confirmation soil sample results identified detections of DRO (up to 729 mg/kg) exceeding MPCA UFC in the base of the excavation. An LSI was completed in Febuary 2017 and consisted of the advancement of eight soil borings to maximum depths of 3.5 and 24 feet bgs. Soils encountered generally consisted of clay extending to 13 feet bgs with sand below. Elevated PID soil headspace readings (up to 398.2 ppm) were reported between 2 and 12 feet bgs near the former UST only. Soil sample analytical results reported elevated detections of DRO and GRO exceeding MPCA UFC at 2 to 4 feet bgs near the former UST basin and other low-level detections of various PVOCs and GRO between 4 and 6 feet bgs in the western portion of the site. Soil samples were analyzed for DRO, GRO, and VOCs. Three soil vapor samples were collected and all analytical results were below their respective regulatory criteria. Groundwater was not encountered during the investigation. Additional remedial activities were not completed.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.
010-3430-02840	226 COMMONWEALTH AVE	~ 3945 ft (SR0001428)	~ 2640 ft (VP4600)	~ 240 ft (LS0020262)	~ 850 ft (23512)	~ 1130 ft (TS0005365)	~ 30 ft (010-3430-02610)	No known release or contamination identified	LS0020262 is located at 202 Commonwealth Avenue, to the south of the site. The release was discovered during the removal of a 560 gallon fuel oil UST in November 2016. Elevated PID soil headspace readings (up to 263.2 ppm) were reported during the UST removal and confirmation soil sample results identified detections of DRO (up to 729 mg/kg) exceeding MPCA UFC in the base of the excavation. An LSI was completed in Febuary 2017 and consisted of the advancement of eight soil borings to maximum depths of 3.5 and 24 feet bgs. Soils encountered generally consisted of clay extending to 13 feet bgs with sand below. Elevated PID soil headspace readings (up to 398.2 ppm) were reported between 2 and 12 feet bgs near the former UST only. Soil sample analytical results reported elevated detections of DRO and GRO exceeding MPCA UFC at 2 to 4 feet bgs near the former UST basin and other low-level detections of various PVOCs and GRO between 4 and 6 feet bgs in the western portion of the site. Soil samples were analyzed for DRO, GRO, and VOCs. Three soil vapor samples were collected and all analytical results were below their respective regulatory criteria. Groundwater was not encountered during the investigation. Additional remedial activities were not completed.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-3430-04030	307 COMMONWEALTH AVE	~ 4025 ft (SR0001428)	~ 2500 ft (VP4600)	~ 450 ft (LS0020262)	~ 505 ft (23512)	~ 875 ft (TS0005365)	~ 100 ft (010-3430-04170)	No known release or contamination identified		-
010-3430-04410	302 COMMONWEALTH AVE	~ 3855 ft (SR0001428)	~ 2455 ft (VP4600)	~ 405 ft (LS0020262)	~ 700 ft (23512)	~ 930 ft (TS0005365)	~ 190 ft (010-3430-02610)	No known release or contamination identified		-

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3430-08480	505 COMMONWEALTH AVE	~ 3760 ft (SR0001428)	~ 1770 ft (VP4600)	~ 150 ft (LS0003282)	~ 515 ft (23512)	~ 150 ft (TS0005365)	~ 110 ft (010-3430-08920)	No known release or contamination identified	LS0003282 is located at 504 Commonwealth Avenue, adjacent to the east of the site. A release was discovered during the removal of two gasoline USTs in the fall of 1990. Approximately 400 cubic yards of petroleum impacted soil was removed from the site for off-site disposal during the UST removals. A remedial investigation was completed in November 1990 and consisted of the advancement of five soil borings to maximum depths of 10 and 26.5 feet bgs. Soil encountered generally consisted of 2 to 20 feet of sand with silt, underlain by clay. Elevated PID soil headspace readings (up to 320 ppm) were reported between 0 and 26 feet bgs along the southern boundary of the site and soil sample analytical results identified elevated detections of TPH as gasoline and several BTEX compounds near the former UST between 4 and 6 feet bgs. Several other low-level detections of TPH as gasoline and lead were also identified along the southern boundary of the site. No groundwater was encountered during the investigation. Additional remedial activities were not completed.	-
010-3430-18440	806 COMMONWEALTH AVE	~ 3505 ft (SR0000265)	~ 1025 ft (VP4600)	~ 520 ft (LS0001876)	~ 1005 ft (214325)	~ 260 ft (TS0018123)	~ 0 ft (010-3430-18440)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-3430-18530	814 COMMONWEALTH AVE	~ 3480 ft (SR0000265)	~ 1050 ft (VP4600)	~ 550 ft (LS0001876)	~ 1040 ft (214325)	~ 435 ft (TS0018123)	~ 50 ft (010-3430-18440)	No known release or contamination identified		-
010-3540-01930	1602 COMMONWEALTH AVE	~ 4225 ft (SR0000265)	~ 1940 ft (BF0001503)	~ 730 ft (LS0017702)	~ 1205 ft (23991)	~ 730 ft (TS0125197)	~ 165 ft (010-3540-02830)	No known release or contamination identified		-
010-3540-02560	1603 COMMONWEALTH AVE	~ 4355 ft (SR0000265)	~ 2035 ft (BF0001503)	~ 730 ft (LS0017702)	~ 1000 ft (23991)	~ 730 ft (TS0125197)	~ 230 ft (010-1800-00830)	No known release or contamination identified		-
010-3540-02770	1532 COMMONWEALTH AVE	~ 4150 ft (SR0000265)	~ 2060 ft (BF0001503)	~ 630 ft (LS0017702)	~ 1240 ft (23991)	~ 630 ft (TS0125197)	~ 45 ft (010-3540-02830)	No known release or contamination identified		-
010-3610-08380	318 N 48TH AVE W	~ 3755 ft (SR0000179)	~ 455 ft (BF0001086) ~ 455 ft (VP8090) ~ 455 ft (VP8091) ~ 455 ft (SA0001049)	~ 285 ft (LS0005076) ~ 290 ft (LS0006509) ~ 410 ft (LS0004704) ~ 455 ft (LS0000945) ~ 455 ft (LS0005966) ~ 455 ft (LS0008514) ~ 455 ft (LS0009407) ~ 455 ft (LS0008221)	~ 185 ft (16504)	~ 290 ft (TS0005078)	~ 130 ft (010-3610-10440)	No known release or contamination identified	LS0005076/LS0005966 is located at 4730 Grand Avenue with investigations extending into 4702 Grand Avenue, to the southeast of the site. Information on the removal of the former on-site USTs was not available. Investigations were completed at the property in April and May 1992. A total of eight soil borings were completed to maximum depths ranging between 20 and 25 feet bgs. Soils encountered generally consisted of clay with a 2-foot thick, wet, fine grained sand layer at depths of 10 feet to 14 feet bgs. Elevated PID soil headspace readings (up to 957 ppm) were reported between 14 and 22 feet bgs across the site. Soil samples identified elevated detections of THC as gas, THC as fuel oil, and BTEX compounds between 12 and 15 feet bgs in the southern and central portions of the site. Soil samples were analyzed for BTEX compounds and THC and gas and fuel oil. The report indicated that the on-site petroleum contamination appeared to be associated with an off-site source to the north. Groundwater samples were not collected. Remedial activities were not completed. LS0006509 is located at 4730 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of waste oil was discovered in July 1993. Remedial actions consisted of the excavation and thin-spreading of 8 cubic yards of soil. It is unknown where the soil was thin-spread. A subsequent investigation was not completed and no additional remedial actions were reported.	-

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3610-08420	4718 W 4TH ST	~ 3860 ft (SR0000179)	~ 410 ft (BF0001086) ~ 410 ft (VP8090) ~ 410 ft (VP8091) ~ 410 ft (SA0001049)	~ 295 ft (LS0005076) ~ 300 ft (LS0006509) ~ 410 ft (LS0000945) ~ 410 ft (LS0005966) ~ 410 ft (LS0008514) ~ 410 ft (LS0009407) ~ 410 ft (LS0008221)	~ 260 ft (16504)	~ 300 ft (TS0005078)	~ 50 ft (010-3610-08440)	No known release or contamination identified	LS0005076/LS0005966 is located at 4730 Grand Avenue with investigations extending into 4702 Grand Avenue, to the southeast of the site. Information on the removal of the former on-site USTs was not available. Investigations were completed at the property in April and May 1992. A total of eight soil borings were completed to maximum depths ranging between 20 and 25 feet bgs. Soils encountered generally consisted of clay with a 2-foot thick, wet, fine grained sand layer at depths of 10 feet to 14 feet bgs. Elevated PID soil headspace readings (up to 957 ppm) were reported between 14 and 22 feet bgs across the site. Soil samples identified elevated detections of THC as gas, THC as fuel oil, and BTEX compounds between 12 and 15 feet bgs in the southern and central portions of the site. Soil samples were analyzed for BTEX compounds and THC and gas and fuel oil. The report indicated that the on-site petroleum contamination appeared to be associated with an off-site source to the north. Groundwater samples were not collected. Remedial activities were not completed. LS0006509 is located at 4730 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of waste oil was discovered in July 1993. Remedial actions consisted of the excavation and thin-spreading of 8 cubic yards of soil. A subsequent investigation was not completed and no additional remedial actions were reported.	-
010-3610-08440	4710 W 4TH ST	~ 3930 ft (SR0000179)	~ 385 ft (BF0001086) ~ 385 ft (VP8090) ~ 385 ft (VP8091) ~ 385 ft (SA0001049)	~ 335 ft (LS0005076) ~ 340 ft (LS0006509) ~ 385 ft (LS0000945) ~ 385 ft (LS0005966) ~ 385 ft (LS0008514) ~ 385 ft (LS0009407) ~ 385 ft (LS0008221)	~ 340 ft (16504)	~ 340 ft (TS0005078)	~ 0 ft (010-3610-08500)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-3610-08460	329 N 47TH AVE W	~ 4035 ft (SR0000179)	~ 480 ft (BF0001086) ~ 480 ft (VP8090) ~ 480 ft (VP8091) ~ 480 ft (SA0001049)	~ 450 ft (LS0005076) ~ 450 ft (LS0006509) ~ 465 ft (LS0002989) ~ 480 ft (LS0000945) ~ 480 ft (LS0005966) ~ 480 ft (LS0008514) ~ 480 ft (LS0009407) ~ 480 ft (LS0008221)	~ 440 ft (16504)	~ 450 ft (TS0005078)	~ 0 ft (010-3610-08440)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
									LS0005076/LS0005966 is located at 4730 Grand Avenue with investigations extending into 4702 Grand Avenue, to the southeast of the site. Information on the removal of the former on-site USTs was not available. Investigations were completed at the property in April and May 1992. A total of eight soil borings were completed to maximum depths ranging between 20 and 25 feet bgs. Soils encountered generally consisted of clay with a 2-foot thick, wet, fine grained sand layer at depths of 10 feet to 14 feet bgs. Elevated PID soil headspace readings (up to 957 ppm) were reported between 14 and 22 feet bgs across the site. Soil samples identified elevated detections of THC as gas, THC as fuel oil, and BTEX compounds between 12 and 15 feet bgs in the southern and central portions of the site. Soil samples were analyzed for BTEX compounds and THC and gas and fuel oil. The report indicated that the on-site petroleum contamination appeared to be associated with an off-site source to the north. Groundwater samples were not collected. Remedial activities were not completed. LS0006509 is located at 4730 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of waste oil was discovered in July 1993. Remedial actions consisted of the excavation and thin-spreading of 8 cubic yards of soil. It is unknown where the soil	

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3610-08570	4715 Grand Ave	~ 3795 ft (SR0000179)	~ 255 ft (BF0001086) ~ 255 ft (VP8090) ~ 255 ft (VP8091) ~ 255 ft (SA0001049) ~ 455 ft (BF0000986) ~ 455 ft (BF0001701) ~ 455 ft (VP33320) ~ 455 ft (BF0002934)	~ 190 ft (LS0005076) ~ 190 ft (LS0006509) ~ 255 ft (LS0000945) ~ 255 ft (LS0005966) ~ 255 ft (LS0008514) ~ 255 ft (LS0009407) ~ 255 ft (LS0008221) ~ 455 ft (LS0006773)	~ 240 ft (16504)	~ 190 ft (TS0005078)	~ 15 ft (010-3610-08440)	Possible release on parcel	was thin-spread. A subsequent investigation was not completed and no additional remedial actions were reported. LS0009407/LS0008221/Spill ID 23784 include the 4602 Grand Avenue, 4702 Grand Avenue, and 220 North 48th Avenue West parcels, to the southeast of the site. Several investigations were completed between 1993 and 1997, in association with contamination related to the former site operations. The investigations identified three areas of petroleum contaminated soil above the water table, which were all assigned separate MPCA release IDs. LS0008221 is located on 4702 Grand Avenue parcel, LS0009407 is located on the western portion of the 4602 Grand Avenue parcel, and Spill ID 23784 is located in the southeastern corner of the 4602 Grand Avenue parcel. The areas of soil contamination located above the water table were limited to the parcel boundaries. Off-site soil contamination above the water table was not encountered. Petroleum and chlorinated solvent impacted groundwater was identified along the southern boundary of the site and extending south of the site. Groundwater was generally encountered below 14 feet bgs and groundwater flow was calculated to the south. A RAP was prepared for site redevelopment in July 1997. Response actions included management/disposal of impacted soil and groundwater, construction of a foundation venting system to mitigation intrusion of soil vapor, and implementation of site institutional controls. However, no information regarding implementation of the RAP was available for review. BF0001086/BF0000986/BF0002934/BF0001701 include the 4602 Grand Avenue, 4702 Grand Avenue, and 220 North 48th Avenue West parcels. In July 2016, exterior soil gas and sub-slab soil vapor samples were collected throughout a previously identified groundwater plume (LS0009407/LS0008221). The northern boundary of the plume intersected the 4602 and 4702 Grand Avenue properties and extended south to I-35. Soil vapor sample analytical results identified concentrations of TCE (up to 5,520 ug/m3) exceeding 33 times the MPCA EiISV (700 ug/m3). In January 2019, a bio barrier, consisting of several amendments was constructed at the southern edge of the plume, along the I-35 alignment. Performance monitoring of the bio barrier is on-going. This listing is associated with the ongoing investigation associated with VP8090. VP8090/VP8091 is located at 4602 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates the listings were opened in December 1979, and investigations are on-going. LS0008514 is located at 4702 Grand Avenue, to the southeast of the site. The listing is associated with the removal of a 20,000 gallon fuel oil UST in June 1995. Figures depicting the exact location of the former UST were not available for review. Approximately 268 cubic yards of petroleum contaminated soil was removed from the site during the UST removal. Elevated PID soil headspace readings (>700 ppm) were reported throughout the tank basin between 2.5 and 14 feet bgs. Soil sample analytical results identified elevated detections of DRO and BTEX compounds exceeding regulatory criteria in the southwest sidewall at 10 feet bgs. Soil samples were analyzed for DRO and BTEX compounds only. Additional remedial activities were not completed. VP33320 is located at 4602 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates the listing was opened in July 2015, and an investigation was	Conduct environmental monitoring during excavation.

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
									issued in September 2016. The listing was closed in March 2025. LS0006773 is located at 4602 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and waste oil was discovered in September 1993. A remedial investigation was compelted in January 1994, and no groundwater contamination was reported in connection with the release. No remedial actions were reported.	
010-3610-08680	4618 W 4TH ST	~ 3990 ft (SR0001641)	~ 380 ft (BF0000986) ~ 380 ft (BF0001701) ~ 380 ft (VP33320) ~ 380 ft (BF0002934) ~ 480 ft (BF0001086) ~ 480 ft (VP8090) ~ 480 ft (VP8091) ~ 480 ft (SA0001049)	~ 170 ft (LS0002989) ~ 380 ft (LS0006773) ~ 480 ft (LS0000945) ~ 480 ft (LS0005966) ~ 480 ft (LS0008514) ~ 480 ft (LS0009407) ~ 480 ft (LS0008221)	~ 480 ft (23784)	~ 170 ft (TS0014075)	~ 90 ft (010-1940-02210)	No known release or contamination identified	LS0002989 is located at 4601 Grand Avenue, to the east of the site. The MPCA indicated that the digital file is missing. The MPCA WIMN website indicates that a release of gasoline occurred in June 1990. No groundwater contamination occurred from the release and cleanup actions consisted of the excavation and thermal treatment of 20 cubic yards of soil. The MPCA issued site closure in September 1995.	-
010-3610-09570	4631 W 4TH ST	~ 4235 ft (SR0000179)	~ 605 ft (BF0001086)	~ 430 ft (LS0002989)	~ 605 ft (23784)	~ 430 ft (TS0014075)	~ 40 ft (010-1940-02250)	No known release or contamination identified		-
010-3610-09580	4625 W 4TH ST	~ 4205 ft (SR0001641)	~ 595 ft (BF0000986)	~ 400 ft (LS0002989)	~ 615 ft (23784)	~ 400 ft (TS0014075)	~ 0 ft (010-1940-02250)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-3610-10060	4814 W 4TH ST	~ 3565 ft (SR0000179)	~ 695 ft (BF0001086)	~ 130 ft (LS0004704) ~ 330 ft (LS0020520) ~ 415 ft (LS0005076) ~ 420 ft (LS0006509) ~ 475 ft (LS0001634)	~ 260 ft (16504)	~ 130 ft (TS0015382)	~ 30 ft (010-3610-10220)	No known release or contamination identified	LS0004704 is located at 4825 Grand Avenue, to the southwest of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed.	-

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3610-10090	327 N 48TH AVE W	~ 3705 ft (SR0000179)	~ 645 ft (BF0001086)	~ 260 ft (LS0004704) ~ 415 ft (LS0005076) ~ 415 ft (LS0006509) ~ 440 ft (LS0020520)	~ 280 ft (16504)	~ 260 ft (TS0015382)	~ 80 ft (010-3610-10270)	No known release or contamination identified	LS0004704 is located at 4825 Grand Avenue, to the southwest of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed.	-

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3610-10210	4811 GRAND AVE	~ 3490 ft (SR0000179)	~ 605 ft (BF0001086)	~ 180 ft (LS0004704) ~ 310 ft (LS0005076) ~ 310 ft (LS0006509) ~ 385 ft (LS0020520)	~ 170 ft (16504)	~ 180 ft (TS0015382)	~ 0 ft (010-3610-10220)	No known release or contamination identified	LS0004704 is located at 4825 Grand Avenue, to the southwest of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed. LS0005076/LS0005966 is located at 4730 Grand Avenue with investigations extending into 4702 Grand Avenue, to the southeast of the site. Information on the removal of the former on-site USTs was not available. Investigations were completed at the property in April and May 1992. A total of eight soil borings were completed to maximum depths ranging between 20 and 25 feet bgs. Soils encountered generally consisted of clay with a 2-foot thick, wet, fine grained sand layer at depths of 10 feet to 14 feet bgs. Elevated PID soil headspace readings (up to 957 ppm) were reported between 14 and 22 feet bgs across the site. Soil samples identified elevated detections of THC as gas, THC as fuel oil, and BTEX compounds between 12 and 15 feet bgs in the southern and central portions of the site. Soil samples were analyzed for BTEX compounds and THC and gas and fuel oil. The report indicated that the on-site petroleum contamination appeared to be associated with an off-site source to the north. Groundwater samples were not collected. Remedial activities were not completed. LS0006509 is located at 4730 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of waste oil was discovered in July 1993. Remedial actions consisted of the excavation and thin-spreading of 8 cubic yards of soil. It is unknown where the soil was thin-spread. A subsequent investigation was not completed and no additional remedial actions were reported. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3610-10220	4809 GRAND AVE	~ 3505 ft (SR0000179)	~ 580 ft (BF0001086)	~ 205 ft (LS0004704) ~ 290 ft (LS0005076) ~ 290 ft (LS0006509) ~ 410 ft (LS0020520)	~ 145 ft (16504)	~ 205 ft (TS0119539)	~ 0 ft (010-3610-10220)	No known release or contamination identified	LS0004704 is located at 4825 Grand Avenue, to the southwest of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed. LS0005076/LS0005966 is located at 4730 Grand Avenue with investigations extending into 4702 Grand Avenue, to the southeast of the site. Information on the removal of the former on-site USTs was not available. Investigations were completed at the property in April and May 1992. A total of eight soil borings were completed to maximum depths ranging between 20 and 25 feet bgs. Soils encountered generally consisted of clay with a 2-foot thick, wet, fine grained sand layer at depths of 10 feet to 14 feet bgs. Elevated PID soil headspace readings (up to 957 ppm) were reported between 14 and 22 feet bgs across the site. Soil samples identified elevated detections of THC as gas, THC as fuel oil, and BTEX compounds between 12 and 15 feet bgs in the southern and central portions of the site. Soil samples were analyzed for BTEX compounds and THC and gas and fuel oil. The report indicated that the on-site petroleum contamination appeared to be associated with an off-site source to the north. Groundwater samples were not collected. Remedial activities were not completed. LS0006509 is located at 4730 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of waste oil was discovered in July 1993. Remedial actions consisted of the excavation and thin-spreading of 8 cubic yards of soil. It is unknown where the soil was thin-spread. A subsequent investigation was not completed and no additional remedial actions were reported. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3610-10230	4807 GRAND AVE	~ 3525 ft (SR0000179)	~ 555 ft (BF0001086)	~ 230 ft (LS0004704) ~ 265 ft (LS0005076) ~ 270 ft (LS0006509) ~ 435 ft (LS0020520)	~ 120 ft (16504)	~ 195 ft (TS0119539)	~ 0 ft (010-3610-10220)	No known release or contamination identified	LS0004704 is located at 4825 Grand Avenue, to the southwest of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed. LS0005076/LS0005966 is located at 4730 Grand Avenue with investigations extending into 4702 Grand Avenue, to the southeast of the site. Information on the removal of the former on-site USTs was not available. Investigations were completed at the property in April and May 1992. A total of eight soil borings were completed to maximum depths ranging between 20 and 25 feet bgs. Soils encountered generally consisted of clay with a 2-foot thick, wet, fine grained sand layer at depths of 10 feet to 14 feet bgs. Elevated PID soil headspace readings (up to 957 ppm) were reported between 14 and 22 feet bgs across the site. Soil samples identified elevated detections of THC as gas, THC as fuel oil, and BTEX compounds between 12 and 15 feet bgs in the southern and central portions of the site. Soil samples were analyzed for BTEX compounds and THC and gas and fuel oil. The report indicated that the on-site petroleum contamination appeared to be associated with an off-site source to the north. Groundwater samples were not collected. Remedial activities were not completed. LS0006509 is located at 4730 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of waste oil was discovered in July 1993. Remedial actions consisted of the excavation and thin-spreading of 8 cubic yards of soil. It is unknown where the soil was thin-spread. A subsequent investigation was not completed and no additional remedial actions were reported. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3610-10250	4801 GRAND AVE	~ 3560 ft (SR0000179)	~ 490 ft (BF0001086) ~ 490 ft (VP8090) ~ 490 ft (VP8091) ~ 490 ft (SA0001049)	~ 205 ft (LS0005076) ~ 205 ft (LS0006509) ~ 280 ft (LS0004704) ~ 485 ft (LS0020520) ~ 490 ft (LS0000945) ~ 490 ft (LS0005966) ~ 490 ft (LS0008514) ~ 490 ft (LS0009407) ~ 490 ft (LS0008221)	~ 50 ft (16504)	~ 195 ft (TS0119539)	~ 25 ft (010-3610-10230)	No known release or contamination identified	A closed Spill consisting of an unspecified amount of an unspecified substance is registered for adjacent right-of-way. LS0005076/LS0005966 is located at 4730 Grand Avenue with investigations extending into 4702 Grand Avenue, to the southeast of the site. Information on the removal of the former on-site USTs was not available. Investigations were completed at the property in April and May 1992. A total of eight soil borings were completed to maximum depths ranging between 20 and 25 feet bgs. Soils encountered generally consisted of clay with a 2-foot thick, wet, fine grained sand layer at depths of 10 feet to 14 feet bgs. Elevated PID soil headspace readings (up to 957 ppm) were reported between 14 and 22 feet bgs across the site. Soil samples identified elevated detections of THC as gas, THC as fuel oil, and BTEX compounds between 12 and 15 feet bgs in the southern and central portions of the site. Soil samples were analyzed for BTEX compounds and THC and gas and fuel oil. The report indicated that the on-site petroleum contamination appeared to be associated with an off-site source to the north. Groundwater samples were not collected. Remedial activities were not completed. LS0006509 is located at 4730 Grand Avenue, to the southeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of waste oil was discovered in July 1993. Remedial actions consisted of the excavation and thin-spreading of 8 cubic yards of soil. It is unknown where the soil was thin-spread. A subsequent investigation was not completed and no additional remedial actions were reported. LS0004704 is located at 4825 Grand Avenue, to the southwest of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed.	Request additional information from the property owners; potential monitoring if no additional information regarding spill or if potential to encounter impacts.
010-3610-10260	4801 W 4TH ST	~ 3825 ft (SR0000179)	~ 735 ft (BF0001086)	~ 365 ft (LS0004704)	~ 395 ft (16504)	~ 365 ft (TS0015382)	~ 0 ft (010-4520-15050)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-3610-10320	4716 W 5TH ST	~ 4155 ft (SR0000179)	~ 750 ft (BF0001086)	~ 660 ft (LS0005076)	~ 590 ft (16504)	~ 660 ft (TS0005078)	~ 0 ft (010-3610-10320)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-3610-10340	4712 W 5TH ST	~ 4175 ft (SR0000179)	~ 745 ft (BF0001086)	~ 665 ft (LS0005076)	~ 605 ft (16504)	~ 665 ft (TS0005078)	~ 0 ft (010-3610-10320)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Print Date: 1/5/2026

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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-3610-10350	4710 W 5TH ST	~ 4200 ft (SR0000179)	~ 740 ft (BF0001086)	~ 675 ft (LS0005076)	~ 620 ft (16504)	~ 675 ft (TS0005078)	~ 0 ft (010-3610-10350)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-3610-10360	4706 W 5TH ST	~ 4220 ft (SR0000179)	~ 740 ft (BF0001086)	~ 665 ft (LS0002989)	~ 635 ft (16504)	~ 665 ft (TS0014075)	~ 0 ft (010-3610-10350)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-3610-10370	415 N 47TH AVE W	~ 4245 ft (SR0000179)	~ 740 ft (BF0001086)	~ 605 ft (LS0002989)	~ 655 ft (16504)	~ 605 ft (TS0014075)	~ 35 ft (010-3610-10350)	No known release or contamination identified		-
010-3610-10460	4715 W 4TH ST	~ 4045 ft (SR0000179)	~ 600 ft (BF0001086)	~ 515 ft (LS0005076)	~ 460 ft (16504)	~ 515 ft (TS0005078)	~ 15 ft (010-3610-10320)	No known release or contamination identified		-
010-3610-10480	4707 W 4TH ST	~ 4115 ft (SR0000179)	~ 595 ft (BF0001086)	~ 550 ft (LS0005076)	~ 515 ft (16504)	~ 550 ft (TS0005078)	~ 15 ft (010-3610-10350)	No known release or contamination identified		-
010-3610-10500	411 N 47TH AVE W	~ 4200 ft (SR0000179)	~ 680 ft (BF0001086)	~ 565 ft (LS0002989)	~ 605 ft (16504)	~ 565 ft (TS0014075)	~ 40 ft (010-3610-10350)	No known release or contamination identified		-
010-3610-10520	407 N 47TH AVE W	~ 4170 ft (SR0000179)	~ 635 ft (BF0001086)	~ 535 ft (LS0002989)	~ 570 ft (16504)	~ 535 ft (TS0014075)	~ 70 ft (010-3610-10350)	No known release or contamination identified		-
010-3610-10540	401 N 47TH AVE W	~ 4140 ft (SR0000179)	~ 590 ft (BF0001086)	~ 510 ft (LS0002989)	~ 540 ft (16504)	~ 510 ft (TS0014075)	~ 80 ft (010-3610-08460)	No known release or contamination identified		-

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-00170	509 N 53RD AVE W	~ 2385 ft (SR0000179)	~ 215 ft (BF002517) ~ 350 ft (BF0002778)	~ 385 ft (LS0002085) ~ 385 ft (LS0017591) ~ 435 ft (LS0008602)	~ 385 ft (211330)	~ 385 ft (TS0010135)	~ 50 ft (010-4470-00200)	Possible release on parcel	LS0002085/LS0017591 occupy both 5430 Grand Avenue and 428 North Central Avenue, to the west of the site. LS0002085 was reported in November 1989, during UST updates. Response actions included free product recovery, groundwater and vapor monitoring and sampling, and completion of a pilot test work plan. The work completed under LS0002085 identified several potential source areas and a petroleum impacted groundwater plume that extended 1,000 feet from the 5430 Grand Avenue parcel to the south/southeast. The extent of the groundwater plume was adjacent to this site. In May 2009, the MPCA closed LS0002085 and LS0017591 was opened for the off-site petroleum contamination that was previously identified. Investigations across both Leak Sites included the advancement of 91 soil borings to maximum depths ranging between 10 and 30 feet bgs and the completion of 38 monitoring wells. Soils encountered generally consist of clay extending up to 10 feet bgs, and underlain by a discontinuous sand unit that has varying thickness and is located between 10 and 22 feet bgs. Groundwater was encountered at depths ranging between 6 and 18 feet bgs. The groundwater and mobile LNAPL identified occupied the sand unit. Soil analytical samples identified elevated detections of DRO, GRO, and various petroleum VOCs between 2 and 16 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs and several chlorinated solvents. LNAPL recovery occurred in select wells between January 1997 and June 2017, and a total of 238 gallons was recovered. The investigations identified two source areas between North Central Avenue and North 54th Avenue West and between Grand Avenue and approximately 200 feet north of Ramsey Street. By the last LNAPL recovery event, the mobile LNAPL extent was calculated to be < 10,000 square feet and the recharge rate was less than 1 gallon per day. BF0002517 is located at 519 North 52nd Avenue West, adjacent to the east of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.

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LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-00180	513 N 53RD AVE W	~ 2410 ft (SR0000179)	~ 200 ft (BF002517) ~ 315 ft (BF0002778)	~ 380 ft (LS0002085) ~ 380 ft (LS0017591) ~ 460 ft (LS0008602)	~ 380 ft (211330)	~ 380 ft (TS0010135)	~ 0 ft (010-4470-00200)	Possible release on parcel	LS0002085/LS0017591 occupy both 5430 Grand Avenue and 428 North Central Avenue, to the west of the site. LS0002085 was reported in November 1989, during UST updates. Response actions included free product recovery, groundwater and vapor monitoring and sampling, and completion of a pilot test work plan. The work completed under LS0002085 identified several potential source areas and a petroleum impacted groundwater plume that extended 1,000 feet from the 5430 Grand Avenue parcel to the south/southeast. In May 2009, the MPCA closed LS0002085 and LS0017591 was opened for the off-site petroleum contamination that was previously identified. Investigations across both Leak Sites included the advancement of 91 soil borings to maximum depths ranging between 10 and 30 feet bgs and the completion of 38 monitoring wells. Soils encountered generally consist of clay extending up to 10 feet bgs, and underlain by a discontinuous sand unit that has varying thickness and is located between 10 and 22 feet bgs. Groundwater was encountered at depths ranging between 6 and 18 feet bgs. The groundwater and mobile LNAPL identified occupied the sand unit. Soil analytical samples identified elevated detections of DRO, GRO, and various petroleum VOCs between 2 and 16 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs and several chlorinated solvents. LNAPL recovery occurred in select wells between January 1997 and June 2017, and a total of 238 gallons was recovered. The investigations identified two source areas between North Central Avenue and North 54th Avenue West and between Grand Avenue and approximately 200 feet north of Ramsey Street. By the last LNAPL recovery event, the mobile LNAPL extent was calculated to be < 10,000 square feet and the recharge rate was less than 1 gallon per day. BF0002517 is located at 519 North 52nd Avenue West, adjacent to the east of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-00200	515 N 53RD AVE W	~ 2455 ft (SR0000179)	~ 200 ft (BF002517) ~ 280 ft (BF0002778)	~ 380 ft (LS0002085) ~ 380 ft (LS0017591)	~ 380 ft (211330)	~ 380 ft (TS0010135)	~ 0 ft (010-4470-00200)	Possible release on parcel	BF0002517 is located at 519 North 52nd Avenue West, adjacent to the east of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. BF0002778 is located at 531 North 52nd Avenue West, to the northeast of the site. A Phase II ESA was completed in April 2024. The investigation consisted of eight soil brings advanced to maximum depths of 10 to 25 feet bgs. Soils encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal/cinder was encountered in the northern portion of the site between 0 and 12 feet bgs. No elevated soil PID headspace readings were reported and all soil sample analytical results were below their respective regulatory criteria. Groundwater was encountered at depths ranging between 2.57 and 12.23 feet bgs; however no samples were collected. The range in depths observed was attributed to the site's topography. A CCP was issued for site redevelopment in April 2024. The listing is currently active and no remedial activities were available for review. LS0002085/LS0017591 occupy both 5430 Grand Avenue and 428 North Central Avenue, to the west of the site. LS0002085 was reported in November 1989, during UST updates. Response actions included free product recovery, groundwater and vapor monitoring and sampling, and completion of a pilot test work plan. The work completed under LS0002085 identified several potential source areas and a petroleum impacted groundwater plume that extended 1,000 feet from the 5430 Grand Avenue parcel to the south/southeast. In May 2009, the MPCA closed LS0002085 and LS0017591 was opened for the off-site petroleum contamination that was previously identified. Investigations across both Leak Sites included the advancement of 91 soil borings to maximum depths ranging between 10 and 30 feet bgs and the completion of 38 monitoring wells. Soils encountered generally consist of clay extending up to 10 feet bgs, and underlain by a discontinuous sand unit that has varying thickness and is located between 10 and 22 feet bgs. Groundwater was encountered at depths ranging between 6 and 18 feet bgs. The groundwater and mobile LNAPL identified occupied the sand unit. Soil analytical samples identified elevated detections of DRO, GRO, and various petroleum VOCs between 2 and 16 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs and several chlorinated solvents. LNAPL recovery occurred in select wells between January 1997 and June 2017, and a total of 238 gallons was recovered. The investigations identified two source areas between North Central Avenue and North 54th Avenue West and between Grand Avenue and approximately 200 feet north of Ramsey Street. By the last LNAPL recovery event, the mobile LNAPL extent was calculated to be < 10,000 square feet and the recharge rate was less than 1 gallon per day. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-00320	512 N 54TH AVE W	~ 2420 ft (SR0000179)	~ 340 ft (BF002517) ~ 410 ft (BF0002778) ~ 500 ft (PB4586) ~ 500 ft (VP31320) ~ 500 ft (SA0004563) ~ 500 ft (SA0004563)	~ 300 ft (LS0002085) ~ 300 ft (LS0017591) ~ 500 ft (LS0008602)	~ 300 ft (211330)	~ 300 ft (TS0010135)	~ 15 ft (010-4470-00200)	Identified release on parcel - Undetermined Extent	LS0002085/LS0017591 occupy both 5430 Grand Avenue and 428 North Central Avenue, to the west of the site. LS0002085 was reported in November 1989, during UST updates. Response actions included free product recovery, groundwater and vapor monitoring and sampling, and completion of a pilot test work plan. The work completed under LS0002085 identified several potential source areas and a petroleum impacted groundwater plume that extended 1,000 feet from the 5430 Grand Avenue parcel to the south/southeast. The extent of the groundwater plume intersects this site. In May 2009, the MPCA closed LS0002085 and LS0017591 was opened for the off-site petroleum contamination that was previously identified. Investigations across both Leak Sites included the advancement of 91 soil borings to maximum depths ranging between 10 and 30 feet bgs and the completion of 38 monitoring wells. Soils encountered generally consist of clay extending up to 10 feet bgs, and underlain by a discontinuous sand unit that has varying thickness and is located between 10 and 22 feet bgs. Groundwater was encountered at depths ranging between 6 and 18 feet bgs. The groundwater and mobile LNAPL identified occupied the sand unit. Soil analytical samples identified elevated detections of DRO, GRO, and various petroleum VOCs between 2 and 16 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs and several chlorinated solvents. LNAPL recovery occurred in select wells between January 1997 and June 2017, and a total of 238 gallons was recovered. The investigations identified two source areas between North Central Avenue and North 54th Avenue West and between Grand Avenue and approximately 200 feet north of Ramsey Street. By the last LNAPL recovery event, the mobile LNAPL extent was calculated to be < 10,000 square feet and the recharge rate was less than 1 gallon per day. BF0002517 is located at 519 North 52nd Avenue West, to the east of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. BF0002778 is located at 531 North 52nd Avenue West, to the northeast of the site. A Phase II ESA was completed in April 2024. The investigation consisted of eight soil brings advanced to maximum depths of 10 to 25 feet bgs. Soils encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal/cinder was encountered in the northern portion of the site between 0 and 12 feet bgs. No elevated soil PID headspace readings were reported and all soil sample analytical results were below their respective regulatory criteria. Groundwater was encountered at depths ranging between 2.57 and 12.23 feet bgs; however no samples were collected. The range in depths observed was attributed to the site's topography. A CCP was issued for site redevelopment in April 2024. The listing is currently active and no remedial activities were available for review.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-00340	429 N 53RD AVE W	~ 2185 ft (SR0000179)	~ 335 ft (BF002517) ~ 370 ft (PB4586) ~ 370 ft (VP31320) ~ 370 ft (SA0004563) ~ 370 ft (SA0004563)	~ 250 ft (LS0008602) ~ 455 ft (LS0002085) ~ 455 ft (LS0017591) ~ 490 ft (LS0006440)	~ 455 ft (211330)	~ 250 ft (TS0005318)	~ 0 ft (010-4470-00340)	Identified release on parcel - Undetermined Extent	LS0002085/LS0017591 occupy both 5430 Grand Avenue and 428 North Central Avenue, to the west of the site. LS0002085 was reported in November 1989, during UST updates. Response actions included free product recovery, groundwater and vapor monitoring and sampling, and completion of a pilot test work plan. The work completed under LS0002085 identified several potential source areas and a petroleum impacted groundwater plume that extended 1,000 feet from the 5430 Grand Avenue parcel to the south/southeast. The extent of the groundwater plume intersects this site. In May 2009, the MPCA closed LS0002085 and LS0017591 was opened for the off-site petroleum contamination that was previously identified. Investigations across both Leak Sites included the advancement of 91 soil borings to maximum depths ranging between 10 and 30 feet bgs and the completion of 38 monitoring wells. Soils encountered generally consist of clay extending up to 10 feet bgs, and underlain by a discontinuous sand unit that has varying thickness and is located between 10 and 22 feet bgs. Groundwater was encountered at depths ranging between 6 and 18 feet bgs. The groundwater and mobile LNAPL identified occupied the sand unit. Soil analytical samples identified elevated detections of DRO, GRO, and various petroleum VOCs between 2 and 16 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs and several chlorinated solvents. LNAPL recovery occurred in select wells between January 1997 and June 2017, and a total of 238 gallons was recovered. The investigations identified two source areas between North Central Avenue and North 54th Avenue West and between Grand Avenue and approximately 200 feet north of Ramsey Street. By the last LNAPL recovery event, the mobile LNAPL extent was calculated to be < 10,000 square feet and the recharge rate was less than 1 gallon per day. LS0008602 is located at 400 North 53rd Avenue West, to the southeast of the site. The listing is associated with a UST that was removed in July 1995. A remedial investigation was completed in August 1995, and consisted of the advancement of five soil borings to maximum depths of 11.5 and 21.5 feet bgs. Soil encountered generally consisted of clay overlying sand. No elevated PID soil headspace readings were reported and only one low-level detection of DRO was identified from the soil sample analytical results. Soil samples were analyzed for DRO and BTEX compounds. Groundwater was encountered between 10.48 and 15.29 feet bgs. Groundwater samples were collected in August and November of 1995 and groundwater analytical results identified low level concentrations of bromomethane and chloromethane. A detection of DRO (115 ug/L) was identified during the initial round of sampling; however, a method blank detection of DRO (120 ug/L) was also reported. Groundwater flow was calculated to the northeast. The report estimated that less than 175 cubic yards of impacted soil remains on-site. Additional remedial activities were not completed. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.
									LS0016619 is located at 402 North Central Avenue, to the south of the site. A release was discovered during the removal of a 350 gallon UST in August 2006. The UST was located in the Ramsey Street right-of-way. Approximately 10 cubic yards of petroleum impacted soil was removed from the site for off-site disposal during the UST removal. An investigation was completed in December 2009, and consisted of the advancement of 5 soil borings to maximum depths ranging between 12 and 20 feet bgs. Soils encountered generally consisted of clay to approximately 12 feet bgs and underlain by sand with silt. No elevated PID soil headspace readings	

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01030	406 N CENTRAL AVE	~ 2095 ft (SR0000179)	~ 135 ft (PB4586) ~ 135 ft (VP31320) ~ 135 ft (SA0004563) ~ 135 ft (SA0004563)	~ 30 ft (LS0016619) ~ 220 ft (LS0006695) ~ 355 ft (LS0006440) ~ 425 ft (LS0006078)	~ 210 ft (15636)	~ 205 ft (TS0014256)	~ 490 ft (010-4470-00340)	Possible release on parcel	were reported. Soil sample analytical results identified low-level detections of DRO and lead below regulatory criteria. Soil samples were analyzed for DRO, GRO, MTBE, BTEX compounds, and lead. Groundwater was encountered between 5 and 14 feet bgs. Groundwater sample analytical results identified elevated detections of DRO (up to 295 ug/L) exceeding regulatory criteria along the southern boundary of the site. Groundwater samples were analyzed for DRO, GRO, VOCs, and lead. No additional remedial activities were completed. LS0002085/LS0017591 occupy both 5430 Grand Avenue and 428 North Central Avenue, to the north of the site. LS0002085 was reported in November 1989, during UST updates. Response actions included free product recovery, groundwater and vapor monitoring and sampling, and completion of a pilot test work plan. The work completed under LS0002085 identified several potential source areas and a petroleum impacted groundwater plume that extended 1,000 feet from the 5430 Grand Avenue parcel to the south/southeast. In May 2009, the MPCA closed LS0002085 and LS0017591 was opened for the off-site petroleum contamination that was previously identified. Investigations across both Leak Sites included the advancement of 91 soil borings to maximum depths ranging between 10 and 30 feet bgs and the completion of 38 monitoring wells. Soils encountered generally consist of clay extending up to 10 feet bgs, and underlain by a discontinuous sand unit that has varying thickness and is located between 10 and 22 feet bgs. Groundwater was encountered at depths ranging between 6 and 18 feet bgs. The groundwater and mobile LNAPL identified occupied the sand unit. Soil analytical samples identified elevated detections of DRO, GRO, and various petroleum VOCs between 2 and 16 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs and several chlorinated solvents. LNAPL recovery occurred in select wells between January 1997 and June 2017, and a total of 238 gallons was recovered. The investigations identified two source areas between North Central Avenue and North 54th Avenue West and between Grand Avenue and approximately 200 feet north of Ramsey Street. By the last LNAPL recovery event, the mobile LNAPL extent was calculated to be < 10,000 square feet and the recharge rate was less than 1 gallon per day. SA0004563/VP31320/PB4586 occupies 5409 Ramsey Street and 409 and 413 North 54th Avenue West, to the east of the site. A Phase II ESA was completed for the site in March 2013, and an area wide Phase II ESA was completed in the vicinity of the site in December 2012. The area wide investigation was completed to assess the extent of chlorinated solvent impacts identified during a nearby petroleum investigation (LS0002085/LS0017591). The investigation consisted of the advancement of 24 soil boring borings advanced to maximum depths ranging between 16 and 20 feet bgs. Soils encountered generally consisted of clay/silty clay extending to 9 to 12 feet bgs, and underlain by sand/sand with silt. Groundwater was encountered between 6.3 and 14.35 feet bgs. Soil sample analytical results identified low-level detections of PVOCs below their regulatory criteria and elevated detections of PCE and TCE between 10 and 14 feet bgs. Soil samples were analyzed for DRO, GRO, PVOCs, TCE, and PCE. Groundwater sample analytical results identified elevated detections of PCE and TCE throughout the area. Groundwater sample analytical results were analyzed for PCE and TCE only. Numerous soil vapor samples were collected throughout the area and identified elevated detections of PCE, TCE, and various PVOCs exceeding regulatory criteria. A RAP/CCP was issued for redevelopment of the site in June 2014. No	Conduct environmental monitoring during excavation.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
									implementation report was issued; however, email correspondence states that no impacted soils were encountered during construction and the structures were constructed with SSDSs.	
010-4470-01350	327 N CENTRAL AVE	~ 2030 ft (SR0000179)	~ 345 ft (PB4586) ~ 345 ft (VP31320) ~ 345 ft (SA0004563) ~ 345 ft (SA0004563)	~ 165 ft (LS0016619) ~ 295 ft (LS0006695) ~ 480 ft (LS0000977) ~ 480 ft (LS0006988) ~ 480 ft (LS0010041) ~ 480 ft (LS0019975) ~ 480 ft (LS0006440) ~ 495 ft (LS0005431)	~ 0 ft (15636)	~ 0 ft (TS0014256)	~ 635 ft (010-4510-05420)	Possible release on parcel	A closed Spill consisting of 30 gallons of diesel fuel is registered for the site. LS0016619 is located at 402 North Central Avenue, to the northeast of the site. A release was discovered during the removal of a 350 gallon UST in August 2006. The UST was located in the Ramsey Street right-of-way. Approximately 10 cubic yards of petroleum impacted soil was removed from the site for off-site disposal during the UST removal. An investigation was completed in December 2009, and consisted of the advancement of 5 soil borings to maximum depths ranging between 12 and 20 feet bgs. Soils encountered generally consisted of clay to approximately 12 feet bgs and underlain by sand with silt. No elevated PID soil headspace readings were reported. Soil sample analytical results identified low-level detections of DRO and lead below regulatory criteria. Soil samples were analyzed for DRO, GRO, MTBE, BTEX compounds, and lead. Groundwater was encountered between 5 and 14 feet bgs. Groundwater sample analytical results identified elevated detections of DRO (up to 295 ug/L) exceeding regulatory criteria along the southern boundary of the site. Groundwater samples were analyzed for DRO, GRO, VOCs, and lead. No additional remedial activities were completed. SA0004563/VP31320/PB4586 occupies 5409 Ramsey Street and 409 and 413 North 54th Avenue West, to the northeast of the site. A Phase II ESA was completed for the site in March 2013, and an area wide Phase II ESA was completed in the vicinity of the site in December 2012. The area wide investigation was completed to assess the extent of chlorinated solvent impacts identified during a nearby petroleum investigation (LS0002085/LS0017591). The investigation consisted of the advancement of 24 soil boring borings advanced to maximum depths ranging between 16 and 20 feet bgs. Soils encountered generally consisted of clay/silty clay extending to 9 to 12 feet bgs, and underlain by sand/sand with silt. Groundwater was encountered between 6.3 and 14.35 feet bgs. Soil sample analytical results identified low-level detections of PVOCs below their regulatory criteria and elevated detections of PCE and TCE between 10 and 14 feet bgs. Soil samples were analyzed for DRO, GRO, PVOCs, TCE, and PCE. Groundwater sample analytical results identified elevated detections of PCE and TCE throughout the area. Groundwater sample analytical results were analyzed for PCE and TCE only. Numerous soil vapor samples were collected throughout the area and identified elevated detections of PCE, TCE, and various PVOCs exceeding regulatory criteria. A RAP/CCP was issued for redevelopment of the site in June 2014. No implementation report was issued; however, email correspondence states that no impacted soils were encountered during construction and the structures were constructed with SSDSs.	Conduct environmental monitoring during excavation.

Table 1 - Environmental Parcel Summary
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01390	323 N CENTRAL AVE	~ 1990 ft (SR0000179)	~ 390 ft (PB4586) ~ 390 ft (VP31320) ~ 390 ft (SA0004563) ~ 390 ft (SA0004563)	~ 215 ft (LS0016619) ~ 295 ft (LS0006695) ~ 430 ft (LS0000977) ~ 430 ft (LS0006988) ~ 430 ft (LS0010041) ~ 430 ft (LS0019975) ~ 485 ft (LS0006440)	~ 40 ft (15636)	~ 40 ft (TS0014256)	~ 700 ft (010-4510-05420)	Possible release on parcel	LS0016619 is located at 402 North Central Avenue, to the north of the site. A release was discovered during the removal of a 350 gallon UST in August 2006. The UST was located in the Ramsey Street right-of-way. Approximately 10 cubic yards of petroleum impacted soil was removed from the site for off-site disposal during the UST removal. An investigation was completed in December 2009, and consisted of the advancement of 5 soil borings to maximum depths ranging between 12 and 20 feet bgs. Soils encountered generally consisted of clay to approximately 12 feet bgs and underlain by sand with silt. No elevated PID soil headspace readings were reported. Soil sample analytical results identified low-level detections of DRO and lead below regulatory criteria. Soil samples were analyzed for DRO, GRO, MTBE, BTEX compounds, and lead. Groundwater was encountered between 5 and 14 feet bgs. Groundwater sample analytical results identified elevated detections of DRO (up to 295 ug/L) exceeding regulatory criteria along the southern boundary of the site. Groundwater samples were analyzed for DRO, GRO, VOCs, and lead. No additional remedial activities were completed. SA0004563/VP31320/PB4586 occupies 5409 Ramsey Street and 409 and 413 North 54th Avenue West, to the northeast of the site. A Phase II ESA was completed for the site in March 2013, and an area wide Phase II ESA was completed in the vicinity of the site in December 2012. The area wide investigation was completed to assess the extent of chlorinated solvent impacts identified during a nearby petroleum investigation (LS0002085/LS0017591). The investigation consisted of the advancement of 24 soil boring borings advanced to maximum depths ranging between 16 and 20 feet bgs. Soils encountered generally consisted of clay/silty clay extending to 9 to 12 feet bgs, and underlain by sand/sand with silt. Groundwater was encountered between 6.3 and 14.35 feet bgs. Soil sample analytical results identified low-level detections of PVOCs below their regulatory criteria and elevated detections of PCE and TCE between 10 and 14 feet bgs. Soil samples were analyzed for DRO, GRO, PVOCs, TCE, and PCE. Groundwater sample analytical results identified elevated detections of PCE and TCE throughout the area. Groundwater sample analytical results were analyzed for PCE and TCE only. Numerous soil vapor samples were collected throughout the area and identified elevated detections of PCE, TCE, and various PVOCs exceeding regulatory criteria. A RAP/CCP was issued for redevelopment of the site in June 2014. No implementation report was issued; however, email correspondence states that no impacted soils were encountered during construction and the structures were constructed with SSDSs.	Conduct environmental monitoring during excavation.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01420	321 N CENTRAL AVE	~ 1970 ft (SR0000179)	~ 420 ft (PB4586) ~ 420 ft (VP31320) ~ 420 ft (SA0004563) ~ 420 ft (SA0004563)	~ 255 ft (LS0016619) ~ 300 ft (LS0006695) ~ 405 ft (LS0000977) ~ 405 ft (LS0006988) ~ 405 ft (LS0010041) ~ 405 ft (LS0019975) ~ 490 ft (LS0006440)	~ 90 ft (15636)	~ 90 ft (TS0014256)	~ 730 ft (010-4510-03790)	No known release or contamination identified	SA0004563/VP31320/PB4586 occupies 5409 Ramsey Street and 409 and 413 North 54th Avenue West, to the northeast of the site. A Phase II ESA was completed for the site in March 2013, and an area wide Phase II ESA was completed in the vicinity of the site in December 2012. The area wide investigation was completed to assess the extent of chlorinated solvent impacts identified during a nearby petroleum investigation (LS0002085/LS0017591). The investigation consisted of the advancement of 24 soil boring borings advanced to maximum depths ranging between 16 and 20 feet bgs. Soils encountered generally consisted of clay/silty clay extending to 9 to 12 feet bgs, and underlain by sand/sand with silt. Groundwater was encountered between 6.3 and 14.35 feet bgs. Soil sample analytical results identified low-level detections of PVOCs below their regulatory criteria and elevated detections of PCE and TCE between 10 and 14 feet bgs. Soil samples were analyzed for DRO, GRO, PVOCs, TCE, and PCE. Groundwater sample analytical results identified elevated detections of PCE and TCE throughout the area. Groundwater sample analytical results were analyzed for PCE and TCE only. Numerous soil vapor samples were collected throughout the area and identified elevated detections of PCE, TCE, and various PVOCs exceeding regulatory criteria. A RAP/CCP was issued for redevelopment of the site in June 2014. No implementation report was issued; however, email correspondence states that no impacted soils were encountered during construction and the structures were constructed with SSDSs.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4470-01430	315 N CENTRAL AVE	~ 1910 ft (SR0000179)	~ 475 ft (PB4586) ~ 475 ft (VP31320) ~ 475 ft (SA0004563) ~ 475 ft (SA0004563)	~ 320 ft (LS0016619) ~ 325 ft (LS0006695) ~ 330 ft (LS0000977) ~ 330 ft (LS0006988) ~ 330 ft (LS0010041) ~ 330 ft (LS0019975)	~ 165 ft (15636)	~ 165 ft (TS0014256)	~ 755 ft (010-4510-03790)	No known release or contamination identified	SA0004563/VP31320/PB4586 occupies 5409 Ramsey Street and 409 and 413 North 54th Avenue West, to the northeast of the site. A Phase II ESA was completed for the site in March 2013, and an area wide Phase II ESA was completed in the vicinity of the site in December 2012. The area wide investigation was completed to assess the extent of chlorinated solvent impacts identified during a nearby petroleum investigation (LS0002085/LS0017591). The investigation consisted of the advancement of 24 soil boring borings advanced to maximum depths ranging between 16 and 20 feet bgs. Soils encountered generally consisted of clay/silty clay extending to 9 to 12 feet bgs, and underlain by sand/sand with silt. Groundwater was encountered between 6.3 and 14.35 feet bgs. Soil sample analytical results identified low-level detections of PVOCs below their regulatory criteria and elevated detections of PCE and TCE between 10 and 14 feet bgs. Soil samples were analyzed for DRO, GRO, PVOCs, TCE, and PCE. Groundwater sample analytical results identified elevated detections of PCE and TCE throughout the area. Groundwater sample analytical results were analyzed for PCE and TCE only. Numerous soil vapor samples were collected throughout the area and identified elevated detections of PCE, TCE, and various PVOCs exceeding regulatory criteria. A RAP/CCP was issued for redevelopment of the site in June 2014. No implementation report was issued; however, email correspondence states that no impacted soils were encountered during construction and the structures were constructed with SSDSs.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01450	311 N CENTRAL AVE	~ 1875 ft (SR0000179)	~ 515 ft (PB4586)	~ 280 ft (LS0000977) ~ 280 ft (LS0006988) ~ 280 ft (LS0010041) ~ 280 ft (LS0019975) ~ 345 ft (LS0006695) ~ 365 ft (LS0016619)	~ 215 ft (15636)	~ 215 ft (TS0014256)	~ 765 ft (010-4490-01940)	No known release or contamination identified	SA0004563/VP31320/PB4586 occupies 5409 Ramsey Street and 409 and 413 North 54th Avenue West, to the northeast of the site. A Phase II ESA was completed for the site in March 2013, and an area wide Phase II ESA was completed in the vicinity of the site in December 2012. The area wide investigation was completed to assess the extent of chlorinated solvent impacts identified during a nearby petroleum investigation (LS0002085/LS0017591). The investigation consisted of the advancement of 24 soil boring borings advanced to maximum depths ranging between 16 and 20 feet bgs. Soils encountered generally consisted of clay/silty clay extending to 9 to 12 feet bgs, and underlain by sand/sand with silt. Groundwater was encountered between 6.3 and 14.35 feet bgs. Soil sample analytical results identified low-level detections of PVOCs below their regulatory criteria and elevated detections of PCE and TCE between 10 and 14 feet bgs. Soil samples were analyzed for DRO, GRO, PVOCs, TCE, and PCE. Groundwater sample analytical results identified elevated detections of PCE and TCE throughout the area. Groundwater sample analytical results were analyzed for PCE and TCE only. Numerous soil vapor samples were collected throughout the area and identified elevated detections of PCE, TCE, and various PVOCs exceeding regulatory criteria. A RAP/CCP was issued for redevelopment of the site in June 2014. No implementation report was issued; however, email correspondence states that no impacted soils were encountered during construction and the structures were constructed with SSDSs.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01460	309 N CENTRAL AVE	~ 1855 ft (SR0000179)	~ 535 ft (PB4586)	~ 255 ft (LS0000977) ~ 255 ft (LS0006988) ~ 255 ft (LS0010041) ~ 255 ft (LS0019975) ~ 360 ft (LS0006695) ~ 390 ft (LS0016619)	~ 240 ft (15636)	~ 240 ft (TS0014256)	~ 760 ft (010-4490-01940)	No known release or contamination identified	LS0019975/LS0000977/LS0010041 is located at 231 North Central Avenue, to the south of the site. A release occurred as the result of the overfilling of a gasoline UST during bulk filling activities December 2015. Pooled product, initially observed at approximately two-inches thick, was identified in the riser probe sump. An LSI was completed in March 2015 and consisted of the advancement of five soil borings to maximum depths of 25 to 40 feet bgs. Soils encountered generally consisted of clay/clayey sand extending to 10 feet bgs with sand below. One elevated PID soil headspace reading (297 ppm) was reported between 10 and 12.5 feet bgs in the central portion of the site. All soil and groundwater samples were below their respective method detection limits. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, and MTBE. Groundwater was encountered between 13 and 14 feet bgs. Additional remedial activities were not completed. LS0006988 is located at 231 North Central Avenue, to the south of the site. A release was identified in November 1993, during the removal of a 1,000 gallon fuel oil UST. Approximately 70 cubic yards of petroleum impacted soil was removed from the site during the UST removal. PID soil headspace readings (greater than 1,000 ppm) were reported during the UST removal and soil sample analytical results identified a detection of DRO (520 mg/kg) exceeding MPCA UFC (100 mg/kg) at 12 feet bgs near the east end of former tank basin. All other confirmation sample results were non-detect. Soil samples were analyzed for DRO, GRO, lead, BTEX compounds, and MTBE. A remedial investigation was completed in June 1996, and consisted of four soil borings advanced to maximum depths of 15 to 17 feet bgs. Soils encountered generally consisted of clay overlying sand. An elevated soil PID headspace reading (50 ppm) was reported at 4 to 6 feet bgs near the former tank basin and soil sample analytical results identified a detection of DRO (549 mg/kg) exceeding MPCA UFC, and low-level concentrations of PVOCs near the former tank basin at 4 to 6 feet bgs. Soil samples were analyzed for DRO, GRO, lead, BTEX compounds, and MTBE. Groundwater was encountered at 12 feet bgs. No groundwater analytical samples were collected.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01470	305 N CENTRAL AVE	~ 1815 ft (SR0000179)	~ 555 ft (PB4586)	~ 205 ft (LS0000977) ~ 205 ft (LS0006988) ~ 205 ft (LS0010041) ~ 205 ft (LS0019975) ~ 375 ft (LS0006695) ~ 410 ft (LS0016619)	~ 205 ft (191922)	~ 205 ft (TS0005005)	~ 760 ft (010-4490-01940)	No known release or contamination identified	LS0019975/LS0000977/LS0010041 is located at 231 North Central Avenue, to the south of the site. A release occurred as the result of the overfilling of a gasoline UST during bulk filling activities December 2015. Pooled product, initially observed at approximately two-inches thick, was identified in the riser probe sump. An LSI was completed in March 2015 and consisted of the advancement of five soil borings to maximum depths of 25 to 40 feet bgs. Soils encountered generally consisted of clay/clayey sand extending to 10 feet bgs with sand below. One elevated PID soil headspace reading (297 ppm) was reported between 10 and 12.5 feet bgs in the central portion of the site. All soil and groundwater samples were below their respective method detection limits. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, and MTBE. Groundwater was encountered between 13 and 14 feet bgs. Additional remedial activities were not completed. LS0006988 is located at 231 North Central Avenue, to the south of the site. A release was identified in November 1993, during the removal of a 1,000 gallon fuel oil UST. Approximately 70 cubic yards of petroleum impacted soil was removed from the site during the UST removal. PID soil headspace readings (greater than 1,000 ppm) were reported during the UST removal and soil sample analytical results identified a detection of DRO (520 mg/kg) exceeding MPCA UFC (100 mg/kg) at 12 feet bgs near the east end of former tank basin. All other confirmation sample results were non-detect. Soil samples were analyzed for DRO, GRO, lead, BTEX compounds, and MTBE. A remedial investigation was completed in June 1996, and consisted of four soil borings advanced to maximum depths of 15 to 17 feet bgs. Soils encountered generally consisted of clay overlying sand. An elevated soil PID headspace reading (50 ppm) was reported at 4 to 6 feet bgs near the former tank basin and soil sample analytical results identified a detection of DRO (549 mg/kg) exceeding MPCA UFC, and low-level concentrations of PVOCs near the former tank basin at 4 to 6 feet bgs. Soil samples were analyzed for DRO, GRO, lead, BTEX compounds, and MTBE. Groundwater was encountered at 12 feet bgs. No groundwater analytical samples were collected.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01535	326 N CENTRAL AVE	~ 1890 ft (SR0000179)	~ 255 ft (PB4586) ~ 255 ft (VP31320) ~ 255 ft (SA0004563) ~ 255 ft (SA0004563)	~ 90 ft (LS0006695) ~ 155 ft (LS0016619) ~ 280 ft (LS0006440) ~ 475 ft (LS0000977) ~ 475 ft (LS0006988) ~ 475 ft (LS0010041) ~ 475 ft (LS0019975)	~ 150 ft (15636)	~ 90 ft (TS0018337)	~ 615 ft (010-4470-00340)	Possible release on parcel	LS0006695 is located at 5402 Ramsey Street, to the east of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in August 1993. Remedial actions consisted of the excavation and off-site disposal of 400 cubic yards of soil. Groundwater contamination was reported in connection with the release and up to 1 foot of free product was identified. A vapor reassessment was completed for the site in September 2015 and a no action letter was issued. LS0016619 is located at 402 North Central Avenue, to the north of the site. A release was discovered during the removal of a 350 gallon UST in August 2006. The UST was located in the Ramsey Street right-of-way. Approximately 10 cubic yards of petroleum impacted soil was removed from the site for off-site disposal during the UST removal. An investigation was completed in December 2009, and consisted of the advancement of 5 soil borings to maximum depths ranging between 12 and 20 feet bgs. Soils encountered generally consisted of clay to approximately 12 feet bgs and underlain by sand with silt. No elevated PID soil headspace readings were reported. Soil sample analytical results identified low-level detections of DRO and lead below regulatory criteria. Soil samples were analyzed for DRO, GRO, MTBE, BTEX compounds, and lead. Groundwater was encountered between 5 and 14 feet bgs. Groundwater sample analytical results identified elevated detections of DRO (up to 295 ug/L) exceeding regulatory criteria along the southern boundary of the site. Groundwater samples were analyzed for DRO, GRO, VOCs, and lead. No additional remedial activities were completed. SA0004563/VP31320/PB4586 occupies 5409 Ramsey Street and 409 and 413 North 54th Avenue West, to the northeast of the site. A Phase II ESA was completed for the site in March 2013, and an area wide Phase II ESA was completed in the vicinity of the site in December 2012. The area wide investigation was completed to assess the extent of chlorinated solvent impacts identified during a nearby petroleum investigation (LS0002085/LS0017591). The investigation consisted of the advancement of 24 soil boring borings advanced to maximum depths ranging between 16 and 20 feet bgs. Soils encountered generally consisted of clay/silty clay extending to 9 to 12 feet bgs, and underlain by sand/sand with silt. Groundwater was encountered between 6.3 and 14.35 feet bgs. Soil sample analytical results identified low-level detections of PVOCs below their regulatory criteria and elevated detections of PCE and TCE between 10 and 14 feet bgs. Soil samples were analyzed for DRO, GRO, PVOCs, TCE, and PCE. Groundwater sample analytical results identified elevated detections of PCE and TCE throughout the area. Groundwater sample analytical results were analyzed for PCE and TCE only. Numerous soil vapor samples were collected throughout the area and identified elevated detections of PCE, TCE, and various PVOCs exceeding regulatory criteria. A RAP/CCP was issued for redevelopment of the site in June 2014. No implementation report was issued; however, email correspondence states that no impacted soils were encountered during construction and the structures were constructed with SSDSs.	Conduct environmental monitoring during excavation.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01550	324 N CENTRAL AVE	~ 1870 ft (SR0000179)	~ 285 ft (PB4586) ~ 285 ft (VP31320) ~ 285 ft (SA0004563) ~ 285 ft (SA0004563)	~ 95 ft (LS0006695) ~ 185 ft (LS0016619) ~ 280 ft (LS0006440) ~ 455 ft (LS0000977) ~ 455 ft (LS0006988) ~ 455 ft (LS0010041) ~ 455 ft (LS0019975)	~ 160 ft (15636)	~ 95 ft (TS0018337)	~ 605 ft (010-4490-01940)	Possible release on parcel	LS0006695 is located at 5402 Ramsey Street, to the east of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in August 1993. Remedial actions consisted of the excavation and off-site disposal of 400 cubic yards of soil. Groundwater contamination was reported in connection with the release and up to 1 foot of free product was identified. A vapor reassessment was completed for the site in September 2015 and a no action letter was issued. LS0016619 is located at 402 North Central Avenue, to the north of the site. A release was discovered during the removal of a 350 gallon UST in August 2006. The UST was located in the Ramsey Street right-of-way. Approximately 10 cubic yards of petroleum impacted soil was removed from the site for off-site disposal during the UST removal. An investigation was completed in December 2009, and consisted of the advancement of 5 soil borings to maximum depths ranging between 12 and 20 feet bgs. Soils encountered generally consisted of clay to approximately 12 feet bgs and underlain by sand with silt. No elevated PID soil headspace readings were reported. Soil sample analytical results identified low-level detections of DRO and lead below regulatory criteria. Soil samples were analyzed for DRO, GRO, MTBE, BTEX compounds, and lead. Groundwater was encountered between 5 and 14 feet bgs. Groundwater sample analytical results identified elevated detections of DRO (up to 295 ug/L) exceeding regulatory criteria along the southern boundary of the site. Groundwater samples were analyzed for DRO, GRO, VOCs, and lead. No additional remedial activities were completed. SA0004563/VP31320/PB4586 occupies 5409 Ramsey Street and 409 and 413 North 54th Avenue West, to the northeast of the site. A Phase II ESA was completed for the site in March 2013, and an area wide Phase II ESA was completed in the vicinity of the site in December 2012. The area wide investigation was completed to assess the extent of chlorinated solvent impacts identified during a nearby petroleum investigation (LS0002085/LS0017591). The investigation consisted of the advancement of 24 soil boring borings advanced to maximum depths ranging between 16 and 20 feet bgs. Soils encountered generally consisted of clay/silty clay extending to 9 to 12 feet bgs, and underlain by sand/sand with silt. Groundwater was encountered between 6.3 and 14.35 feet bgs. Soil sample analytical results identified low-level detections of PVOCs below their regulatory criteria and elevated detections of PCE and TCE between 10 and 14 feet bgs. Soil samples were analyzed for DRO, GRO, PVOCs, TCE, and PCE. Groundwater sample analytical results identified elevated detections of PCE and TCE throughout the area. Groundwater sample analytical results were analyzed for PCE and TCE only. Numerous soil vapor samples were collected throughout the area and identified elevated detections of PCE, TCE, and various PVOCs exceeding regulatory criteria. A RAP/CCP was issued for redevelopment of the site in June 2014. No implementation report was issued; however, email correspondence states that no impacted soils were encountered during construction and the structures were constructed with SSDSs.	Conduct environmental monitoring during excavation.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01560	318 N CENTRAL AVE	~ 1810 ft (SR0000179)	~ 310 ft (PB4586) ~ 310 ft (VP31320) ~ 310 ft (SA0004563) ~ 310 ft (SA0004563)	~ 105 ft (LS0006695) ~ 210 ft (LS0016619) ~ 285 ft (LS0006440) ~ 385 ft (LS0000977) ~ 385 ft (LS0006988) ~ 385 ft (LS0010041) ~ 385 ft (LS0019975)	~ 170 ft (15636)	~ 105 ft (TS0018337)	~ 580 ft (010-4490-01940)	Possible release on parcel	LS0006695 is located at 5402 Ramsey Street, to the northeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in August 1993. Remedial actions consisted of the excavation and off-site disposal of 400 cubic yards of soil. Groundwater contamination was reported in connection with the release and up to 1 foot of free product was identified. A vapor reassessment was completed for the site in September 2015 and a no action letter was issued. LS0016619 is located at 402 North Central Avenue, to the north of the site. A release was discovered during the removal of a 350 gallon UST in August 2006. The UST was located in the Ramsey Street right-of-way. Approximately 10 cubic yards of petroleum impacted soil was removed from the site for off-site disposal during the UST removal. An investigation was completed in December 2009, and consisted of the advancement of 5 soil borings to maximum depths ranging between 12 and 20 feet bgs. Soils encountered generally consisted of clay to approximately 12 feet bgs and underlain by sand with silt. No elevated PID soil headspace readings were reported. Soil sample analytical results identified low-level detections of DRO and lead below regulatory criteria. Soil samples were analyzed for DRO, GRO, MTBE, BTEX compounds, and lead. Groundwater was encountered between 5 and 14 feet bgs. Groundwater sample analytical results identified elevated detections of DRO (up to 295 ug/L) exceeding regulatory criteria along the southern boundary of the site. Groundwater samples were analyzed for DRO, GRO, VOCs, and lead. No additional remedial activities were completed. SA0004563/VP31320/PB4586 occupies 5409 Ramsey Street and 409 and 413 North 54th Avenue West, to the northeast of the site. A Phase II ESA was completed for the site in March 2013, and an area wide Phase II ESA was completed in the vicinity of the site in December 2012. The area wide investigation was completed to assess the extent of chlorinated solvent impacts identified during a nearby petroleum investigation (LS0002085/LS0017591). The investigation consisted of the advancement of 24 soil boring borings advanced to maximum depths ranging between 16 and 20 feet bgs. Soils encountered generally consisted of clay/silty clay extending to 9 to 12 feet bgs, and underlain by sand/sand with silt. Groundwater was encountered between 6.3 and 14.35 feet bgs. Soil sample analytical results identified low-level detections of PVOCs below their regulatory criteria and elevated detections of PCE and TCE between 10 and 14 feet bgs. Soil samples were analyzed for DRO, GRO, PVOCs, TCE, and PCE. Groundwater sample analytical results identified elevated detections of PCE and TCE throughout the area. Groundwater sample analytical results were analyzed for PCE and TCE only. Numerous soil vapor samples were collected throughout the area and identified elevated detections of PCE, TCE, and various PVOCs exceeding regulatory criteria. A RAP/CCP was issued for redevelopment of the site in June 2014. No implementation report was issued; however, email correspondence states that no impacted soils were encountered during construction and the structures were constructed with SSDSs.	Conduct environmental monitoring during excavation.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01590	316 N CENTRAL AVE	~ 1785 ft (SR0000179)	~ 380 ft (PB4586) ~ 380 ft (VP31320) ~ 380 ft (SA0004563) ~ 380 ft (SA0004563)	~ 160 ft (LS0006695) ~ 285 ft (LS0016619) ~ 315 ft (LS0006440) ~ 360 ft (LS0000977) ~ 360 ft (LS0006988) ~ 360 ft (LS0010041) ~ 360 ft (LS0019975)	~ 220 ft (15636)	~ 160 ft (TS0018337)	~ 570 ft (010-4490-01940)	No known release or contamination identified	LS0006695 is located at 5402 Ramsey Street, to the northeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in August 1993. Remedial actions consisted of the excavation and off-site disposal of 400 cubic yards of soil. Groundwater contamination was reported in connection with the release and up to 1 foot of free product was identified. A vapor reassessment was completed for the site in September 2015 and a no action letter was issued. LS0016619 is located at 402 North Central Avenue, to the north of the site. A release was discovered during the removal of a 350 gallon UST in August 2006. The UST was located in the Ramsey Street right-of-way. Approximately 10 cubic yards of petroleum impacted soil was removed from the site for off-site disposal during the UST removal. An investigation was completed in December 2009, and consisted of the advancement of 5 soil borings to maximum depths ranging between 12 and 20 feet bgs. Soils encountered generally consisted of clay to approximately 12 feet bgs and underlain by sand with silt. No elevated PID soil headspace readings were reported. Soil sample analytical results identified low-level detections of DRO and lead below regulatory criteria. Soil samples were analyzed for DRO, GRO, MTBE, BTEX compounds, and lead. Groundwater was encountered between 5 and 14 feet bgs. Groundwater sample analytical results identified elevated detections of DRO (up to 295 ug/L) exceeding regulatory criteria along the southern boundary of the site. Groundwater samples were analyzed for DRO, GRO, VOCs, and lead. No additional remedial activities were completed.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4470-01600	314 N CENTRAL AVE	~ 1765 ft (SR0000179)	~ 405 ft (PB4586) ~ 405 ft (VP31320) ~ 405 ft (SA0004563) ~ 405 ft (SA0004563)	~ 180 ft (LS0006695) ~ 310 ft (LS0016619) ~ 325 ft (LS0006440) ~ 335 ft (LS0000977) ~ 335 ft (LS0006988) ~ 335 ft (LS0010041) ~ 335 ft (LS0019975)	~ 240 ft (15636)	~ 180 ft (TS0018337)	~ 565 ft (010-4490-01940)	No known release or contamination identified	LS0006695 is located at 5402 Ramsey Street, to the northeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in August 1993. Remedial actions consisted of the excavation and off-site disposal of 400 cubic yards of soil. Groundwater contamination was reported in connection with the release and up to 1 foot of free product was identified. A vapor reassessment was completed for the site in September 2015 and a no action letter was issued.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-01610	312 N CENTRAL AVE	~ 1685 ft (SR0000179)	~ 430 ft (PB4586) ~ 430 ft (VP31320) ~ 430 ft (SA0004563) ~ 430 ft (SA0004563)	~ 205 ft (LS0006695) ~ 250 ft (LS0000977) ~ 250 ft (LS0006988) ~ 250 ft (LS0010041) ~ 250 ft (LS0019975) ~ 335 ft (LS0016619) ~ 340 ft (LS0006440)	~ 250 ft (191922)	~ 205 ft (TS0018337)	~ 555 ft (010-4490-01940)	No known release or contamination identified	LS0006695 is located at 5402 Ramsey Street, to the northeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in August 1993. Remedial actions consisted of the excavation and off-site disposal of 400 cubic yards of soil. Groundwater contamination was reported in connection with the release and up to 1 foot of free product was identified. A vapor reassessment was completed for the site in September 2015 and a no action letter was issued. LS0019975/LS0000977/LS0010041 is located at 231 North Central Avenue, to the south of the site. A release occurred as the result of the overfilling of a gasoline UST during bulk filling activities December 2015. Pooled product, initially observed at approximately two-inches thick, was identified in the riser probe sump. An LSI was completed in March 2015 and consisted of the advancement of five soil borings to maximum depths of 25 to 40 feet bgs. Soils encountered generally consisted of clay/clayey sand extending to 10 feet bgs with sand below. One elevated PID soil headspace reading (297 ppm) was reported between 10 and 12.5 feet bgs in the central portion of the site. All soil and groundwater samples were below their respective method detection limits. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, and MTBE. Groundwater was encountered between 13 and 14 feet bgs. Additional remedial activities were not completed. LS0006988 is located at 231 North Central Avenue, to the south of the site. A release was identified in November 1993, during the removal of a 1,000 gallon fuel oil UST. Approximately 70 cubic yards of petroleum impacted soil was removed from the site during the UST removal. PID soil headspace readings (greater than 1,000 ppm) were reported during the UST removal and soil sample analytical results identified a detection of DRO (520 mg/kg) exceeding MPCA UFC (100 mg/kg) at 12 feet bgs near the east end of former tank basin. All other confirmation sample results were non-detect. Soil samples were analyzed for DRO, GRO, lead, BTEX compounds, and MTBE. A remedial investigation was completed in June 1996, and consisted of four soil borings advanced to maximum depths of 15 to 17 feet bgs. Soils encountered generally consisted of clay overlying sand. An elevated soil PID headspace reading (50 ppm) was reported at 4 to 6 feet bgs near the former tank basin and soil sample analytical results identified a detection of DRO (549 mg/kg) exceeding MPCA UFC, and low-level concentrations of PVOCs near the former tank basin at 4 to 6 feet bgs. Soil samples were analyzed for DRO, GRO, lead, BTEX compounds, and MTBE. Groundwater was encountered at 12 feet bgs. No groundwater analytical samples were collected.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-02110	5302 RAMSEY ST	~ 1630 ft (SR0000179)	~ 370 ft (PB4586) ~ 370 ft (VP31320) ~ 370 ft (SA0004563) ~ 370 ft (SA0004563)	~ 150 ft (LS0006440) ~ 260 ft (LS0008602) ~ 340 ft (LS0006695) ~ 500 ft (LS0016619)	~ 700 ft (15636)	~ 150 ft (TS0018199)	~ 230 ft (010-4490-01940)	Possible release on parcel	LS0006440 is located at 5316 Ramsey Street, to the east of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline was discovered in June 1993. A remedial investigation was completed in September 1994 and remedial actions consisted of the excavation and off-site disposal of 490 cubic yards of soil. LS0008602 is located at 400 North 53rd Avenue West, to the northeast of the site. The listing is associated with a UST that was removed in July 1995. A remedial investigation was completed in August 1995, and consisted of the advancement of five soil borings to maximum depths of 11.5 and 21.5 feet bgs. Soil encountered generally consisted of clay overlying sand. No elevated PID soil headspace readings were reported and only one low-level detection of DRO was identified from the soil sample analytical results. Soil samples were analyzed for DRO and BTEX compounds. Groundwater was encountered between 10.48 and 15.29 feet bgs. Groundwater samples were collected in August and November of 1995 and groundwater analytical results identified low level concentrations of bromomethane and chloromethane. A detection of DRO (115 ug/L) was identified during the initial round of sampling; however, a method blank detection of DRO (120 ug/L) was also reported. Groundwater flow was calculated to the northeast. The report estimated that less than 175 cubic yards of impacted soil remains on-site. Additional remedial activities were not completed.	Conduct environmental monitoring during excavation.
010-4470-02900	226 N CENTRAL AVE	~ 1520 ft (SR0000179)	~ 715 ft (PB4586)	~ 140 ft (LS0000977) ~ 140 ft (LS0006988) ~ 140 ft (LS0010041) ~ 140 ft (LS0019975) ~ 485 ft (LS0006695)	~ 140 ft (191922)	~ 140 ft (TS0005005)	~ 570 ft (010-4490-01940)	Possible release on parcel	LS0019975/LS0000977/LS0010041 is located at 231 North Central Avenue, to the east of the site. A release occurred as the result of the overfilling of a gasoline UST during bulk filling activities December 2015. Pooled product, initially observed at approximately two-inches thick, was identified in the riser probe sump. An LSI was completed in March 2015 and consisted of the advancement of five soil borings to maximum depths of 25 to 40 feet bgs. Soils encountered generally consisted of clay/clayey sand extending to 10 feet bgs with sand below. One elevated PID soil headspace reading (297 ppm) was reported between 10 and 12.5 feet bgs in the central portion of the site. All soil and groundwater samples were below their respective method detection limits. Soil and groundwater samples were analyzed for DRO, GRO, BTEX compounds, and MTBE. Groundwater was encountered between 13 and 14 feet bgs. Additional remedial activities were not completed. LS0006988 is located at 231 North Central Avenue, adjacent to the west of the site. A release was identified in November 1993, during the removal of a 1,000 gallon fuel oil UST. Approximately 70 cubic yards of petroleum impacted soil was removed from the site during the UST removal. PID soil headspace readings (greater than 1,000 ppm) were reported during the UST removal and soil sample analytical results identified a detection of DRO (520 mg/kg) exceeding MPCA UFC (100 mg/kg) at 12 feet bgs near the east end of former tank basin. All other confirmation sample results were non-detect. Soil samples were analyzed for DRO, GRO, lead, BTEX compounds, and MTBE. A remedial investigation was completed in June 1996, and consisted of four soil borings advanced to maximum depths of 15 to 17 feet bgs. Soils encountered generally consisted of clay overlying sand. An elevated soil PID headspace reading (50 ppm) was reported at 4 to 6 feet bgs near the former tank basin and soil sample analytical results identified a detection of DRO (549 mg/kg) exceeding MPCA UFC, and low-level concentrations of PVOCs near the former tank basin at 4 to 6 feet bgs. Soil samples were analyzed for DRO, GRO, lead, BTEX compounds, and MTBE. Groundwater was encountered at 12 feet bgs. No groundwater analytical samples were collected.	Conduct environmental monitoring during excavation.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-04060	108 N 56TH AVE W	~ 1435 ft (SR0000179)	~ 1025 ft (BF0002912)	~ 200 ft (LS0008124)	~ 250 ft (15620)	~ 200 ft (TS0017487)	~ 0 ft (010-4470-04080)	Possible release on parcel	LS0008124 is located at 101 North 56th Avenue West, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in April 1992. No investigations or remedial actions were reported in connection with the listing. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4470-04090	102 N 56TH AVE W	~ 1410 ft (SR0000179)	~ 1080 ft (BF0002912)	~ 210 ft (LS0008124)	~ 310 ft (15620)	~ 210 ft (TS0017487)	~ 0 ft (010-4470-04080)	Possible release on parcel	LS0008124 is located at 101 North 56th Avenue West, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in April 1992. No investigations or remedial actions were reported in connection with the listing. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4470-05810	30 N 56TH AVE W	~ 1380 ft (SR0000179)	~ 1190 ft (BF0002912)	~ 285 ft (LS0008124)	~ 455 ft (15620)	~ 285 ft (TS0017487)	~ 140 ft (010-4470-04080)	No known release or contamination identified	LS0008124 is located at 101 North 56th Avenue West, to the northwest of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in April 1992. No investigations or remedial actions were reported in connection with the listing.	-
010-4470-05830	5520 NICOLLET ST	~ 1385 ft (SR0000179)	~ 1215 ft (BF0002912)	~ 320 ft (LS0008124)	~ 410 ft (15620)	~ 320 ft (TS0017487)	~ 115 ft (010-4470-04080)	No known release or contamination identified	LS0008124 is located at 101 North 56th Avenue West, to the northwest of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in April 1992. No investigations or remedial actions were reported in connection with the listing.	-
010-4470-05890	24 N 56TH AVE W	~ 1370 ft (SR0000179)	~ 1175 ft (BF0002448)	~ 335 ft (LS0008124)	~ 500 ft (15620)	~ 335 ft (TS0017487)	~ 210 ft (010-4470-04080)	No known release or contamination identified		-
010-4470-06060	23 N 56TH AVE W	~ 1560 ft (SR0000179)	~ 1010 ft (BF0002448)	~ 275 ft (LS0008124)	~ 595 ft (15620)	~ 275 ft (TS0017487)	~ 225 ft (010-4470-04080)	No known release or contamination identified	LS0008124 is located at 101 North 56th Avenue West, to the north of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in April 1992. No investigations or remedial actions were reported in connection with the listing.	-
010-4470-06090	17 N 56TH AVE W	~ 1560 ft (SR0000179)	~ 980 ft (BF0002448)	~ 350 ft (LS0008124) ~ 460 ft (LS0019603)	~ 655 ft (15620)	~ 350 ft (TS0017487)	~ 255 ft (010-4470-06420)	No known release or contamination identified		-
010-4470-06150	7 N 56TH AVE W	~ 1555 ft (SR0000179)	~ 920 ft (BF0002448)	~ 340 ft (LS0019603) ~ 450 ft (LS0008124)	~ 740 ft (15620)	~ 450 ft (TS0017487)	~ 130 ft (010-4470-06420)	No known release or contamination identified		-
010-4470-06220	24 N 57TH AVE W	~ 1705 ft (SR0000179)	~ 930 ft (BF0002448)	~ 275 ft (LS0008124)	~ 690 ft (15620)	~ 275 ft (TS0017487)	~ 235 ft (010-4480-04150)	No known release or contamination identified	LS0008124 is located at 101 North 56th Avenue West, to the north of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in April 1992. No investigations or remedial actions were reported in connection with the listing.	-
010-4470-06230	22 N 57TH AVE W	~ 1700 ft (SR0000179)	~ 895 ft (BF0002448)	~ 300 ft (LS0008124)	~ 705 ft (15620)	~ 300 ft (TS0017487)	~ 220 ft (010-4480-04150)	No known release or contamination identified	LS0008124 is located at 101 North 56th Avenue West, to the north of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in April 1992. No investigations or remedial actions were reported in connection with the listing.	-
010-4470-06250	18 N 57TH AVE W	~ 1695 ft (SR0000179)	~ 835 ft (BF0002448)	~ 350 ft (LS0008124) ~ 410 ft (LS0019603)	~ 740 ft (15620)	~ 350 ft (TS0017487)	~ 205 ft (010-4470-06420)	No known release or contamination identified		-

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-06420	5612 MAIN ST	~ 1705 ft (SR0000179)	~ 795 ft (BF0002448)	~ 130 ft (LS0019603)	~ 895 ft (215649)	~ 655 ft (TS0017487)	~ 0 ft (010-4470-06420)	Possible release on parcel	LS0019603 is located at 20 South 57th Avenue West, to the south of the site. A fuel oil UST was reportedly removed from the site in 1974; however, piping was encountered during redevelopment activities in 2014. An investigation was completed in August 2015, and consisted of the advancement of 5 soil borings to maximum depths ranging between 20 and 28 feet bgs. Soils encountered generally consisted of sand/clay fill to approximately 6 feet bgs and were underlain by clay. No elevated PID soil headspace readings were reported. Soil sample analytical results identified an elevated detection of DRO (370 mg/kg) exceeding MPCA UFC in the northwestern portion of the site at 4 to 5 feet bgs, within the assumed location of the former UST. Other low-level detections of petroleum VOCs below their respective regulatory criteria were reported. Soil samples were analyzed for DRO, GRO, and VOCs. Groundwater was encountered at 14 feet bgs in one soil boring. Groundwater sample analytical results identified elevated detections of DRO (up to 205 ug/L) and several PVOCs exceeding regulatory criteria in the northwestern portion of the site. Groundwater samples were analyzed for DRO, GRO, and VOCs. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4470-06450	5616 MAIN ST	~ 1745 ft (SR0000179)	~ 755 ft (BF0002448)	~ 130 ft (LS0019603)	~ 920 ft (215649)	~ 660 ft (TS0017487)	~ 0 ft (010-4470-06420)	Possible release on parcel	LS0019603 is located at 20 South 57th Avenue West, to the south of the site. A fuel oil UST was reportedly removed from the site in 1974; however, piping was encountered during redevelopment activities in 2014. An investigation was completed in August 2015, and consisted of the advancement of 5 soil borings to maximum depths ranging between 20 and 28 feet bgs. Soils encountered generally consisted of sand/clay fill to approximately 6 feet bgs and were underlain by clay. No elevated PID soil headspace readings were reported. Soil sample analytical results identified an elevated detection of DRO (370 mg/kg) exceeding MPCA UFC in the northwestern portion of the site at 4 to 5 feet bgs, within the assumed location of the former UST. Other low-level detections of petroleum VOCs below their respective regulatory criteria were reported. Soil samples were analyzed for DRO, GRO, and VOCs. Groundwater was encountered at 14 feet bgs in one soil boring. Groundwater sample analytical results identified elevated detections of DRO (up to 205 ug/L) and several PVOCs exceeding regulatory criteria in the northwestern portion of the site. Groundwater samples were analyzed for DRO, GRO, and VOCs. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4470-06480	5620 MAIN ST	~ 1790 ft (SR0000179)	~ 715 ft (BF0002448)	~ 145 ft (LS0019603)	~ 950 ft (215649)	~ 665 ft (TS0017487)	~ 0 ft (010-4470-06480)	Possible release on parcel	LS0019603 is located at 20 South 57th Avenue West, to the south of the site. A fuel oil UST was reportedly removed from the site in 1974; however, piping was encountered during redevelopment activities in 2014. An investigation was completed in August 2015, and consisted of the advancement of 5 soil borings to maximum depths ranging between 20 and 28 feet bgs. Soils encountered generally consisted of sand/clay fill to approximately 6 feet bgs and were underlain by clay. No elevated PID soil headspace readings were reported. Soil sample analytical results identified an elevated detection of DRO (370 mg/kg) exceeding MPCA UFC in the northwestern portion of the site at 4 to 5 feet bgs, within the assumed location of the former UST. Other low-level detections of petroleum VOCs below their respective regulatory criteria were reported. Soil samples were analyzed for DRO, GRO, and VOCs. Groundwater was encountered at 14 feet bgs in one soil boring. Groundwater sample analytical results identified elevated detections of DRO (up to 205 ug/L) and several PVOCs exceeding regulatory criteria in the northwestern portion of the site. Groundwater samples were analyzed for DRO, GRO, and VOCs. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4470-09180	5619 RALEIGH ST	~ 1935 ft (SR0000179)	~ 680 ft (BF0001330)	~ 535 ft (LS0019603)	~ 500 ft (211008)	~ 620 ft (TS0125607)	~ 0 ft (010-4470-09240)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4470-09240	5613 RALEIGH ST	~ 1955 ft (SR0000179)	~ 745 ft (BF0001330)	~ 580 ft (LS0018301)	~ 510 ft (211008)	~ 580 ft (TS0125607)	~ 0 ft (010-4470-09240)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-00100	220 S 57TH AVE W	~ 2165 ft (SR0000179)	~ 615 ft (BF0001330)	~ 420 ft (LS0018301)	~ 190 ft (211008)	~ 420 ft (TS0125607)	~ 80 ft (010-4480-02560)	No known release or contamination identified		-
010-4480-00110	222 S 57TH AVE W	~ 2180 ft (SR0000179)	~ 615 ft (BF0001330)	~ 410 ft (LS0018301)	~ 140 ft (211008)	~ 410 ft (TS0125607)	~ 85 ft (010-4480-02560)	No known release or contamination identified		-
010-4480-00562	226 S 56TH AVE W	~ 1960 ft (SR0000179)	~ 920 ft (VP16120)	~ 80 ft (LS0018301) ~ 440 ft (LS0004440) ~ 440 ft (LS0008083)	~ 380 ft (211008)	~ 80 ft (TS0125607)	~ 365 ft (010-4470-08990)	Possible release on parcel	LS0018301 is located at 225 South Central Avenue, to the east of the site. A release was discovered during the removal of a UST with unknown contents in January 2011. Soil encountered during the UST removal generally consisted of 11.5 feet of clay underlain by sand. Approximately 210 cubic yards of petroleum impacted soil was excavated for off-site disposal. Groundwater was not encountered; however was measured at 17.6 to 24.4 feet bgs during previously completed geotechnical borings. Elevated PID soil headspace readings (up to 326 ppm) were reported between 2 and 11.5 feet bgs. Confirmation soil sample analytical results identified low-level detections of xylene and lead in the excavation. Soil samples were analyzed for GRO, DRO, BTEX compounds, MTBE, and lead. Additional remedial activities were not completed.	Conduct environmental monitoring during excavation.
010-4480-00600	5511 REDRUTH ST	~ 1985 ft (SR0000179)	~ 875 ft (VP16120)	~ 75 ft (LS0018301) ~ 380 ft (LS0004440) ~ 380 ft (LS0008083)	~ 365 ft (211008)	~ 75 ft (TS0125607)	~ 395 ft (010-4470-08990)	Possible release on parcel	LS0018301 is located at 225 South Central Avenue, to the east of the site. A release was discovered during the removal of a UST with unknown contents in January 2011. Soil encountered during the UST removal generally consisted of 11.5 feet of clay underlain by sand. Approximately 210 cubic yards of petroleum impacted soil was excavated for off-site disposal. Groundwater was not encountered; however was measured at 17.6 to 24.4 feet bgs during previously completed geotechnical borings. Elevated PID soil headspace readings (up to 326 ppm) were reported between 2 and 11.5 feet bgs. Confirmation soil sample analytical results identified low-level detections of xylene and lead in the excavation. Soil samples were analyzed for GRO, DRO, BTEX compounds, MTBE, and lead. Additional remedial activities were not completed.	Conduct environmental monitoring during excavation.

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LSLR SPIRIT VALLEY
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4480-01040	5512 REDRUTH ST	~ 2090 ft (SR0000179)	~ 755 ft (VP16120)	~ 135 ft (LS0018301) ~ 310 ft (LS0004440) ~ 310 ft (LS0008083)	~ 365 ft (211008)	~ 135 ft (TS0125607)	~ 475 ft (010-4480-02560)	No known release or contamination identified	LS0018301 is located at 225 South Central Avenue, to the northeast of the site. A release was discovered during the removal of a UST with unknown contents in January 2011. Soil encountered during the UST removal generally consisted of 11.5 feet of clay underlain by sand. Approximately 210 cubic yards of petroleum impacted soil was excavated for off-site disposal. Groundwater was not encountered; however was measured at 17.6 to 24.4 feet bgs during previously completed geotechnical borings. Elevated PID soil headspace readings (up to 326 ppm) were reported between 2 and 11.5 feet bgs. Confirmation soil sample analytical results identified low-level detections of xylene and lead in the excavation. Soil samples were analyzed for GRO, DRO, BTEX compounds, MTBE, and lead. Additional remedial activities were not completed. LS0008083 is located at 310 South Central Avenue, to the southeast of the site. A remedial investigation was completed in February 1995, to define the extent and magnitude of contamination identified during the removal of an on-site AST. The investigation consisted of four soil borings advanced to maximum depths of 6.5 to 11 feet bgs. Soils encountered generally consisted of 6 feet of clay overlying sand. The maximum PID soil headspace reading reported was 7 ppm, near the former AST at 0 to 2 feet bgs. Soil sample analytical results identified low-level detections of lead only. Soil samples were analyzed for DRO, GRO, and lead. Groundwater was not encountered during the investigation and no additional remedial actions were completed. LS0004440 is located at 310 South Central Avenue, to the southeast of the site. A release was discovered during the removal of two 10,000 gallon gasoline USTs and a 5,000 gallon gasoline UST. Approximately 350 cubic yards of petroleum impacted soil was removed from the excavations for off-site disposal during the UST removals. Elevated PID soil headspace readings (>1,000 ppm) were reported between 1 and 18 feet bgs during the UST removals. Soil sample analytical results identified low-level detections of THC as gas, BTEX compounds, and lead. Soil samples were analyzed for THC as gas, BTEX compounds, MTBE, and lead. Perched waster was observed at 2 feet bgs in only one of the excavation areas. Groundwater samples were not collected. No investigation or additional remedial activities were completed.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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LSLR SPIRIT VALLEY
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4480-01090	312 S 56TH AVE W	~ 2165 ft (SR0000179)	~ 660 ft (VP16120)	~ 230 ft (LS0018301) ~ 265 ft (LS0004440) ~ 265 ft (LS0008083)	~ 385 ft (211008)	~ 230 ft (TS0125607)	~ 535 ft (010-4480-02560)	No known release or contamination identified	LS0018301 is located at 225 South Central Avenue, to the northeast of the site. A release was discovered during the removal of a UST with unknown contents in January 2011. Soil encountered during the UST removal generally consisted of 11.5 feet of clay underlain by sand. Approximately 210 cubic yards of petroleum impacted soil was excavated for off-site disposal. Groundwater was not encountered; however was measured at 17.6 to 24.4 feet bgs during previously completed geotechnical borings. Elevated PID soil headspace readings (up to 326 ppm) were reported between 2 and 11.5 feet bgs. Confirmation soil sample analytical results identified low-level detections of xylene and lead in the excavation. Soil samples were analyzed for GRO, DRO, BTEX compounds, MTBE, and lead. Additional remedial activities were not completed. LS0008083 is located at 310 South Central Avenue, to the southeast of the site. A remedial investigation was completed in February 1995, to define the extent and magnitude of contamination identified during the removal of an on-site AST. The investigation consisted of four soil borings advanced to maximum depths of 6.5 to 11 feet bgs. Soils encountered generally consisted of 6 feet of clay overlying sand. The maximum PID soil headspace reading reported was 7 ppm, near the former AST at 0 to 2 feet bgs. Soil sample analytical results identified low-level detections of lead only. Soil samples were analyzed for DRO, GRO, and lead. Groundwater was not encountered during the investigation and no additional remedial actions were completed. LS0004440 is located at 310 South Central Avenue, to the east of the site. A release was discovered during the removal of two 10,000 gallon gasoline USTs and a 5,000 gallon gasoline UST. Approximately 350 cubic yards of petroleum impacted soil was removed from the excavations for off-site disposal during the UST removals. Elevated PID soil headspace readings (up to >1,000 ppm) were reported between 1 and 18 feet bgs during the UST removals. Soil sample analytical results identified low-level detections of THC as gas, BTEX compounds, and lead. Soil samples were analyzed for THC as gas, BTEX compounds, MTBE, and lead. Perched waster was observed at 2 feet bgs in only one of the excavation areas. Groundwater samples were not collected. No investigation or additional remedial activities were completed.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-01210	307 S 56TH AVE W	~ 2220 ft (SR0000179)	~ 570 ft (VP16120)	~ 290 ft (LS0018301) ~ 460 ft (LS0004440) ~ 460 ft (LS0008083)	~ 175 ft (211008)	~ 290 ft (TS0125607)	~ 325 ft (010-4480-02560)	No known release or contamination identified		-
010-4480-01490	318 S 57TH AVE W	~ 2445 ft (SR0000179)	~ 450 ft (VP16120) ~ 450 ft (VP16121) ~ 450 ft (VP16122)	~ 450 ft (LS0006774) ~ 500 ft (LS0018301)	~ 205 ft (211008)	~ 450 ft (TS0122652)	~ 220 ft (010-4480-01820)	No known release or contamination identified		-

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LSLR SPIRIT VALLEY
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4480-01560	332 S 57TH AVE W	~ 2585 ft (SR0000179)	~ 285 ft (VP16120) ~ 285 ft (VP16121) ~ 285 ft (VP16122)	~ 285 ft (LS0006774)	~ 400 ft (211008)	~ 285 ft (TS0122652)	~ 260 ft (010-4480-01820)	No known release or contamination identified	VP16120/VP16121/VP16122 is located at 500 South 59th Avenue West, to the south of the site. A Phase II Investigation consisting of five soil borings advanced to maximum depths ranging between 12 and 20 feet bgs was completed in March 2013. Soils encountered generally consisted of clay extending to 6 to 10 feet bgs, and underlain by sand. No field indications of contamination were reported and groundwater was encountered between 10.1 and 14.5 feet bgs across the site. Soil sample analytical results identified low-level detections of VOCs, PAHs, and metals below their respective regulatory criteria. Groundwater sample analytical results identified elevated detections of several PVOCs exceeding regulatory criteria along the eastern boundary of the site. Soil and groundwater samples were analyzed for VOCs, PAHs, and RCRA metals. No additional investigation or remedial activities were completed. LS0006774 is located at 500 South 59th Avenue West, to the south of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of diesel was discovered in September 1993. A Remedial Investigation was completed in January 1994, and groundwater contamination was reported in connection with the release. No remedial actions were reported.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-01600	305 S 57TH AVE W	~ 2505 ft (SR0000179)	~ 505 ft (BF0001330)	~ 565 ft (LS0006774)	~ 95 ft (211008)	~ 565 ft (TS0122652)	~ 100 ft (010-4480-01820)	No known release or contamination identified		-
010-4480-01620	309 S 57TH AVE W	~ 2540 ft (SR0000179)	~ 535 ft (BF0001330)	~ 540 ft (LS0006774)	~ 140 ft (211008)	~ 540 ft (TS0122652)	~ 75 ft (010-4480-01820)	No known release or contamination identified		-
010-4480-01630	311 S 57TH AVE W	~ 2555 ft (SR0000179)	~ 515 ft (VP16120)	~ 515 ft (LS0006774)	~ 165 ft (211008)	~ 515 ft (TS0122652)	~ 50 ft (010-4480-01820)	No known release or contamination identified		-
010-4480-01770	308 S 58TH AVE W	~ 2615 ft (SR0000179)	~ 400 ft (BF0001330)	~ 575 ft (LS0006774)	~ 205 ft (211008)	~ 575 ft (TS0122652)	~ 100 ft (010-4480-01820)	No known release or contamination identified		-
010-4480-01780	310 S 58TH AVE W	~ 2645 ft (SR0000179)	~ 435 ft (BF0001330)	~ 550 ft (LS0006774)	~ 230 ft (211008)	~ 550 ft (TS0122652)	~ 75 ft (010-4480-01820)	No known release or contamination identified		-
010-4480-01820	318 S 58TH AVE W	~ 2660 ft (SR0000149)	~ 415 ft (VP25800) ~ 440 ft (VP16120) ~ 440 ft (VP16121) ~ 440 ft (VP16122)	~ 440 ft (LS0006774)	~ 300 ft (211008)	~ 440 ft (TS0122652)	~ 0 ft (010-4480-01820)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-01920	303 S 58TH AVE W	~ 2750 ft (SR0000179)	~ 280 ft (BF0001330)	~ 685 ft (LS0006774)	~ 385 ft (211008)	~ 685 ft (TS0122652)	~ 165 ft (010-4480-01820)	No known release or contamination identified		-
010-4480-01970	313 S 58TH AVE W	~ 2645 ft (SR0000149)	~ 400 ft (BF0001330) ~ 420 ft (VP25800)	~ 575 ft (LS0006774)	~ 420 ft (211008)	~ 575 ft (TS0122652)	~ 70 ft (010-4480-01820)	No known release or contamination identified		-
010-4480-02120	209 S 58TH AVE W	~ 2495 ft (SR0000179)	~ 105 ft (BF0001330)	~ 350 ft (LS0020823)	~ 475 ft (211008)	~ 350 ft (TS0130379)	~ 50 ft (010-4500-01670)	No known release or contamination identified	BF0001330 is located at 218 South 59th Avenue West, to the southwest of the site. A RAP/CCP was completed for development of the site in May 2019, and described the results of several test pit investigations that were completed at the site in 2018 and 2019. Soils encountered during the investigations consisted of silty clay with organic material. Debris including brick, concrete, glass, ceramic, and metal was encountered in select test pit excavations at depths ranging between 2 and 5 feet bgs. Soil analytical results identified a concentration of arsenic (11 mg/kg), exceeding the SRV (9 mg/kg). However, the concentration was considered to be consistent with naturally occurring levels. PAHs were detected in the southwestern portion of the site between 2 and 5 feet bgs. BaP equivalents (up to 13.51 mg/kg), exceeding the MPCA Commercial/Industrial SRV were calculated. In October 2021, an additional 11 test pit excavations were completed across the site to assess the debris for presence of asbestos. Debris including concrete, bricks, glass, miscellaneous household trash, and automobile tires was identified in all test pits extending to depths of up to 7 feet bgs. All sample analytical results were reported as non-detect for asbestos. Groundwater was not encountered during the investigative activities. The listing is currently active and no remedial activities were available for review.	-

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4480-02400	216 S 58TH AVE W	~ 2405 ft (SR0000179)	~ 270 ft (BF0001330)	~ 590 ft (LS0020823)	~ 265 ft (211008)	~ 590 ft (TS0130379)	~ 15 ft (010-4480-02560)	No known release or contamination identified		-
010-4480-02430	224 S 58TH AVE W	~ 2460 ft (SR0000179)	~ 270 ft (BF0001330)	~ 650 ft (LS0020823)	~ 220 ft (211008)	~ 650 ft (TS0130379)	~ 30 ft (010-4480-02560)	No known release or contamination identified		-
010-4480-02510	207 S 57TH AVE W	~ 2240 ft (SR0000179)	~ 430 ft (BF0001330)	~ 660 ft (LS0018301)	~ 340 ft (211008)	~ 660 ft (TS0125607)	~ 75 ft (010-4480-02560)	No known release or contamination identified		-
010-4480-02560	215 S 57TH AVE W	~ 2300 ft (SR0000179)	~ 410 ft (BF0001330)	~ 625 ft (LS0018301)	~ 215 ft (211008)	~ 625 ft (TS0125607)	~ 0 ft (010-4480-02560)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-02590	221 S 57TH AVE W	~ 2340 ft (SR0000179)	~ 410 ft (BF0001330)	~ 615 ft (LS0018301)	~ 170 ft (211008)	~ 615 ft (TS0125607)	~ 25 ft (010-4480-02560)	No known release or contamination identified		-
010-4480-02600	223 S 57TH AVE W	~ 2355 ft (SR0000179)	~ 415 ft (BF0001330)	~ 615 ft (LS0018301)	~ 145 ft (211008)	~ 615 ft (TS0125607)	~ 50 ft (010-4480-02560)	No known release or contamination identified		-
010-4480-02610	225 S 57TH AVE W	~ 2370 ft (SR0000179)	~ 420 ft (BF0001330)	~ 610 ft (LS0018301)	~ 60 ft (211008)	~ 610 ft (TS0125607)	~ 75 ft (010-4480-02560)	No known release or contamination identified		-
010-4480-02740	119 S 57TH AVE W	~ 2095 ft (SR0000179)	~ 580 ft (BF0001330)	~ 520 ft (LS0019603)	~ 630 ft (211008)	~ 640 ft (TS0130379)	~ 160 ft (010-4470-09240)	No known release or contamination identified		-
010-4480-02800	5701 RALEIGH ST	~ 2135 ft (SR0000179)	~ 500 ft (BF0001330)	~ 610 ft (LS0019603)	~ 505 ft (211008)	~ 640 ft (TS0130379)	~ 150 ft (010-4470-09240)	No known release or contamination identified		-
010-4480-02900	116 S 58TH AVE W	~ 2195 ft (SR0000179)	~ 490 ft (BF0002448)	~ 505 ft (LS0020823)	~ 725 ft (211008)	~ 505 ft (TS0130379)	~ 65 ft (010-4480-03040)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the north of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the remaining detections were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review.	-
010-4480-02974	5719 RALEIGH ST	~ 2340 ft (SR0000179)	~ 395 ft (BF0001330)	~ 500 ft (LS0020823)	~ 570 ft (211008)	~ 495 ft (TS0130379)	~ 85 ft (010-4480-03100)	No known release or contamination identified		-
010-4480-02978	5717 RALEIGH ST	~ 2300 ft (SR0000179)	~ 425 ft (BF0001330)	~ 540 ft (LS0020823)	~ 555 ft (211008)	~ 540 ft (TS0130379)	~ 120 ft (010-4480-03100)	No known release or contamination identified		-
010-4480-03000	105 S 58TH AVE W	~ 2325 ft (SR0000179)	~ 250 ft (BF0002448)	~ 365 ft (LS0020823)	~ 885 ft (211008)	~ 365 ft (TS0130379)	~ 0 ft (010-4480-03040)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the north of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the remaining detections were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4480-03040	109 S 58TH AVE W	~ 2355 ft (SR0000179)	~ 335 ft (BF0002448)	~ 340 ft (LS0020823)	~ 845 ft (211008)	~ 340 ft (TS0130379)	~ 0 ft (010-4480-03040)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the north of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the remaining detections were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-03100	121 S 58TH AVE W	~ 2410 ft (SR0000179)	~ 420 ft (BF0001330) ~ 470 ft (BF0002448)	~ 305 ft (LS0020823)	~ 735 ft (211008)	~ 305 ft (TS0130379)	~ 0 ft (010-4480-03100)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-03110	123 S 58TH AVE W	~ 2420 ft (SR0000179)	~ 300 ft (BF0001330) ~ 495 ft (BF0002448)	~ 305 ft (LS0020823)	~ 630 ft (211008)	~ 305 ft (TS0130379)	~ 0 ft (010-4480-03100)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-03180	5810 MAIN ST	~ 2320 ft (SR0000179)	~ 245 ft (BF0002448) ~ 460 ft (BF0002447)	~ 610 ft (LS0019603)	~ 980 ft (75152)	~ 755 ft (TS0130379)	~ 230 ft (010-4480-04320)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the south of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the reamining detetions were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review.	-
010-4480-03210	5 S 58TH AVE W	~ 2245 ft (SR0000179)	~ 275 ft (BF0002448)	~ 530 ft (LS0019603)	~ 1040 ft (75152)	~ 775 ft (TS0130379)	~ 280 ft (010-4480-04320)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the south of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the reamining detetions were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review.	-

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4480-03390	5718 MAIN ST	~ 2145 ft (SR0000179)	~ 395 ft (BF0002448)	~ 440 ft (LS0019603)	~ 1165 ft (75152)	~ 795 ft (TS0017487)	~ 240 ft (010-4480-04320)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the south of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the reamining detetions were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review.	-
010-4480-03490	10 S 58TH AVE W	~ 2060 ft (SR0000179)	~ 350 ft (BF0002448)	~ 325 ft (LS0019603)	~ 1055 ft (215649)	~ 750 ft (TS0130379)	~ 220 ft (010-4470-06480)	No known release or contamination identified	LS0019603 is located at 20 South 57th Avenue West, to the east of the site. A fuel oil UST was reportedly removed from the site in 1974; however, piping was encountered during redevelopment activities in 2014. An investigation was completed in August 2015, and consisted of the advancement of 5 soil borings to maximum depths ranging between 20 and 28 feet bgs. Soils encountered generally consisted of sand/clay fill to approximately 6 feet bgs and were underlain by clay. No elevated PID soil headspace readings were reported. Soil sample analytical results identified an elevated detection of DRO (370 mg/kg) exceeding MPCA UFC in the northwestern portion of the site at 4 to 5 feet bgs, within the assumed location of the former UST. Other low-level detections of petroleum VOCs below their respective regulatory criteria were reported. Soil samples were analyzed for DRO, GRO, and VOCs. Groundwater was encountered at 14 feet bgs in one soil boring. Groundwater sample analytical results identified elevated detections of DRO (up to 205 ug/L) and several PVOCs exceeding regulatory criteria in the northwestern portion of the site. Groundwater samples were analyzed for DRO, GRO, and VOCs. No additional remedial activities were completed.	-
010-4480-03810	31 N 57TH AVE W	~ 1915 ft (SR0000179)	~ 790 ft (BF0002447)	~ 275 ft (LS0008124)	~ 795 ft (15620)	~ 275 ft (TS0017487)	~ 135 ft (010-4480-04150)	No known release or contamination identified	LS0008124 is located at 101 North 56th Avenue West, to the northeast of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of gasoline and kerosene was discovered in April 1992. No investigations or remedial actions were reported in connection with the listing.	-
010-4480-03930	9 N 57TH AVE W	~ 1900 ft (SR0000179)	~ 675 ft (BF0002448)	~ 450 ft (LS0019603) ~ 475 ft (LS0008124)	~ 940 ft (15620)	~ 475 ft (TS0017487)	~ 30 ft (010-4480-04150)	No known release or contamination identified		-
010-4480-04040	3 N 57TH AVE W	~ 1900 ft (SR0000179)	~ 635 ft (BF0002448)	~ 340 ft (LS0019603)	~ 990 ft (15620)	~ 545 ft (TS0017487)	~ 115 ft (010-4470-06480)	No known release or contamination identified		-
010-4480-04050	30 N 58TH AVE W	~ 2060 ft (SR0000179)	~ 630 ft (BF0002447)	~ 395 ft (LS0008124)	~ 925 ft (15620)	~ 395 ft (TS0017487)	~ 120 ft (010-4480-04290)	No known release or contamination identified		-
010-4480-04090	28 N 58TH AVE W	~ 2050 ft (SR0000179)	~ 615 ft (BF0002447)	~ 420 ft (LS0008124)	~ 945 ft (15620)	~ 420 ft (TS0017487)	~ 85 ft (010-4480-04290)	No known release or contamination identified		-
010-4480-04130	20 N 58TH AVE W	~ 2045 ft (SR0000179)	~ 600 ft (BF0002447)	~ 480 ft (LS0008124)	~ 995 ft (15620)	~ 480 ft (TS0017487)	~ 25 ft (010-4480-04150)	No known release or contamination identified		-
010-4480-04190	10 N 58TH AVE W	~ 2045 ft (SR0000179)	~ 545 ft (BF0002448)	~ 485 ft (LS0019603)	~ 1065 ft (15620)	~ 575 ft (TS0017487)	~ 50 ft (010-4480-04150)	No known release or contamination identified		-
010-4480-04200	6 N 58TH AVE W	~ 2045 ft (SR0000179)	~ 505 ft (BF0002448)	~ 450 ft (LS0019603)	~ 1095 ft (15620)	~ 615 ft (TS0017487)	~ 100 ft (010-4480-04320)	No known release or contamination identified		-
010-4480-04220	2 N 58TH AVE W	~ 2045 ft (SR0000179)	~ 490 ft (BF0002448)	~ 430 ft (LS0019603)	~ 1130 ft (15620)	~ 655 ft (TS0017487)	~ 140 ft (010-4480-04320)	No known release or contamination identified		-
010-4480-04230	27 N 58TH AVE W	~ 2245 ft (SR0000179)	~ 440 ft (BF0002447)	~ 575 ft (LS0008124)	~ 940 ft (75152)	~ 575 ft (TS0017487)	~ 75 ft (010-4480-04290)	No known release or contamination identified		-

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4480-04270	23 N 58TH AVE W	~ 2240 ft (SR0000179)	~ 415 ft (BF0002447)	~ 610 ft (LS0008124)	~ 935 ft (75152)	~ 610 ft (TS0017487)	~ 0 ft (010-4480-04290)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-04290	19 N 58TH AVE W	~ 2235 ft (SR0000179)	~ 410 ft (BF0002447)	~ 635 ft (LS0008124)	~ 935 ft (75152)	~ 635 ft (TS0017487)	~ 0 ft (010-4480-04290)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-04300	17 N 58TH AVE W	~ 2235 ft (SR0000179)	~ 405 ft (BF0002447)	~ 650 ft (LS0008124)	~ 935 ft (75152)	~ 650 ft (TS0017487)	~ 0 ft (010-4480-04290)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-04320	13 N 58TH AVE W	~ 2235 ft (SR0000179)	~ 400 ft (BF0002447)	~ 675 ft (LS0019603)	~ 935 ft (75152)	~ 675 ft (TS0017487)	~ 0 ft (010-4480-04320)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4480-04390	1 N 58TH AVE W	~ 2235 ft (SR0000179)	~ 380 ft (BF0002448) ~ 415 ft (BF0002447)	~ 590 ft (LS0019603)	~ 950 ft (75152)	~ 760 ft (TS0017487)	~ 105 ft (010-4480-04320)	No known release or contamination identified		-
010-4490-01050	324 N 52ND AVE W	~ 1540 ft (SR0000179)	~ 830 ft (PB4586)	~ 410 ft (LS0008602)	~ 815 ft (25262)	~ 410 ft (TS0005318)	~ 0 ft (010-4490-01050)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4490-01070	320 N 52ND AVE W	~ 1515 ft (SR0000179)	~ 850 ft (PB4586)	~ 450 ft (LS0008602)	~ 815 ft (25262)	~ 450 ft (TS0005318)	~ 0 ft (010-4490-01050)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4490-01080	318 N 52ND AVE W	~ 1490 ft (SR0000179)	~ 855 ft (PB4586)	~ 470 ft (LS0008602)	~ 810 ft (25262)	~ 470 ft (TS0005318)	~ 0 ft (010-4490-01070)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4490-01090	316 N 52ND AVE W	~ 1465 ft (SR0000179)	~ 865 ft (PB4586)	~ 490 ft (LS0008602)	~ 810 ft (25262)	~ 490 ft (TS0005318)	~ 25 ft (010-4490-01070)	No known release or contamination identified		-
010-4490-01100	314 N 52ND AVE W	~ 1440 ft (SR0000179)	~ 880 ft (PB4586)	~ 515 ft (LS0008602)	~ 810 ft (25262)	~ 515 ft (TS0005318)	~ 50 ft (010-4490-01070)	No known release or contamination identified		-
010-4490-01560	303 N 52ND AVE W	~ 1310 ft (SR0000179)	~ 790 ft (PB4586)	~ 510 ft (LS0006440)	~ 970 ft (191922)	~ 510 ft (TS0018199)	~ 15 ft (010-4490-01940)	No known release or contamination identified		-
010-4490-01890	304 N 53RD AVE W	~ 1365 ft (SR0000179)	~ 675 ft (PB4586)	~ 395 ft (LS0006440)	~ 840 ft (191922)	~ 395 ft (TS0018199)	~ 0 ft (010-4490-01940)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4490-01940	302 N 53RD AVE W	~ 1335 ft (SR0000179)	~ 705 ft (PB4586)	~ 420 ft (LS0006440)	~ 835 ft (191922)	~ 420 ft (TS0018199)	~ 0 ft (010-4490-01940)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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LSLR SPIRIT VALLEY
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-00170	301 S 59TH AVE W	~ 2685 ft (SR0000149)	~ 295 ft (BF0001330)	~ 630 ft (LS0020823)	~ 465 ft (216477)	~ 630 ft (TS0130379)	~ 100 ft (010-4500-00220)	No known release or contamination identified	BF0001330 is located at 218 South 59th Avenue West, to the northeast of the site. A RAP/CCP was completed for development of the site in May 2019, and described the results of several test pit investigations that were completed at the site in 2018 and 2019. Soils encountered during the investigations consisted of silty clay with organic material. Debris including brick, concrete, glass, ceramic, and metal was encountered in select test pit excavations at depths ranging between 2 and 5 feet bgs. Soil analytical results identified a concentration of arsenic (11 mg/kg), exceeding the SRV (9 mg/kg). However, the concentration was considered to be consistent with naturally occurring levels. PAHs were detected in the southwestern portion of the site between 2 and 5 feet bgs. BaP equivalents (up to 13.51 mg/kg), exceeding the MPCA Commercial/Industrial SRV were calculated. In October 2021, an additional 11 test pit excavations were completed across the site to assess the debris for presence of asbestos. Debris including concrete, bricks, glass, miscellaneous household trash, and automobile tires was identified in all test pits extending to depths of up to 7 feet bgs. All sample analytical results were reported as non-detect for asbestos. Groundwater was not encountered during the investigative activities. The listing is currently active and no remedial activities were available for review.	-
010-4500-00210	309 S 59TH AVE W	~ 2585 ft (SR0000149)	~ 380 ft (BF0001330)	~ 730 ft (LS0020823)	~ 445 ft (216477)	~ 730 ft (TS0130379)	~ 0 ft (010-4500-00220)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-00300	327 S 59TH AVE W	~ 2320 ft (SR0000149)	~ 295 ft (VP25800) ~ 375 ft (VP26150)	~ 715 ft (LS0006774)	~ 315 ft (16526)	~ 715 ft (TS0122652)	~ 175 ft (010-4500-00220)	No known release or contamination identified		-
010-4500-00450	326 S 60TH AVE W	~ 2360 ft (SR0000149)	~ 370 ft (VP26150) ~ 455 ft (VP25800)	~ 825 ft (LS0017015)	~ 310 ft (216477)	~ 825 ft (TS0013211)	~ 125 ft (010-4500-00220)	No known release or contamination identified		-
010-4500-00460	328 S 60TH AVE W	~ 2290 ft (SR0000149)	~ 300 ft (VP26150) ~ 415 ft (VP25800)	~ 755 ft (LS0017015)	~ 330 ft (216477)	~ 755 ft (TS0013211)	~ 175 ft (010-4500-00220)	No known release or contamination identified		-
010-4500-00500	305 S 60TH AVE W	~ 2585 ft (SR0000149)	~ 550 ft (BF0001330)	~ 685 ft (LS0020823)	~ 155 ft (216477)	~ 685 ft (TS0130379)	~ 100 ft (010-4500-00720)	No known release or contamination identified		-
010-4500-00540	311 S 60TH AVE W	~ 2485 ft (SR0000149)	~ 500 ft (VP26150)	~ 805 ft (LS0020823)	~ 105 ft (216477)	~ 805 ft (TS0130379)	~ 15 ft (010-4500-00720)	No known release or contamination identified		-
010-4500-01090	215 S 60TH AVE W	~ 2925 ft (SR0000149)	~ 495 ft (BF0001330)	~ 395 ft (LS0020823)	~ 465 ft (216477)	~ 395 ft (TS0130379)	~ 150 ft (010-4500-01210)	No known release or contamination identified		-
010-4500-01130	219 S 60TH AVE W	~ 2850 ft (SR0000149)	~ 495 ft (BF0001330)	~ 475 ft (LS0020823)	~ 390 ft (216477)	~ 475 ft (TS0130379)	~ 205 ft (010-4500-01210)	No known release or contamination identified		-
010-4500-01170	225 S 60TH AVE W	~ 2775 ft (SR0000149)	~ 495 ft (BF0001330)	~ 515 ft (LS0020823)	~ 320 ft (216477)	~ 515 ft (TS0130379)	~ 245 ft (010-4500-01210)	No known release or contamination identified		-
010-4500-01190	231 S 60TH AVE W	~ 2725 ft (SR0000149)	~ 515 ft (BF0001330)	~ 605 ft (LS0020823)	~ 275 ft (216477)	~ 605 ft (TS0130379)	~ 240 ft (010-4500-00720)	No known release or contamination identified		-
010-4500-01330	5917 REDRUTH ST	~ 2750 ft (SR0000149)	~ 305 ft (BF0001330)	~ 425 ft (LS0020823)	~ 390 ft (216477)	~ 425 ft (TS0130379)	~ 175 ft (010-4500-01210)	No known release or contamination identified		-
010-4500-01380	5915 REDRUTH ST	~ 2760 ft (SR0000149)	~ 310 ft (BF0001330)	~ 450 ft (LS0020823)	~ 460 ft (216477)	~ 450 ft (TS0130379)	~ 190 ft (010-4500-00220)	No known release or contamination identified		-

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-01600	219 S 59TH AVE W	~ 2920 ft (SR0000149)	~ 160 ft (BF0001330)	~ 390 ft (LS0020823)	~ 595 ft (216477)	~ 390 ft (TS0130379)	~ 155 ft (010-4500-01210)	No known release or contamination identified	BF0001330 is located at 218 South 59th Avenue West, adjacent to the east of the site. A RAP/CCP was completed for development of the site in May 2019, and described the results of several test pit investigations that were completed at the site in 2018 and 2019. Soils encountered during the investigations consisted of silty clay with organic material. Debris including brick, concrete, glass, ceramic, and metal was encountered in select test pit excavations at depths ranging between 2 and 5 feet bgs. Soil analytical results identified a concentration of arsenic (11 mg/kg), exceeding the SRV (9 mg/kg). However, the concentration was considered to be consistent with naturally occurring levels. PAHs were detected in the southwestern portion of the site between 2 and 5 feet bgs. BaP equivalents (up to 13.51 mg/kg), exceeding the MPCA Commercial/Industrial SRV were calculated. In October 2021, an additional 11 test pit excavations were completed across the site to assess the debris for presence of asbestos. Debris including concrete, bricks, glass, miscellaneous household trash, and automobile tires was identified in all test pits extending to depths of up to 7 feet bgs. All sample analytical results were reported as non-detect for asbestos. Groundwater was not encountered during the investigative activities. The listing is currently active and no remedial activities were available for review.	-
010-4500-01650	231 S 59TH AVE W	~ 2775 ft (SR0000149)	~ 180 ft (BF0001330)	~ 465 ft (LS0020823)	~ 505 ft (216477)	~ 465 ft (TS0130379)	~ 190 ft (010-4500-00220)	No known release or contamination identified	BF0001330 is located at 218 South 59th Avenue West, to the northeast of the site. A RAP/CCP was completed for development of the site in May 2019, and described the results of several test pit investigations that were completed at the site in 2018 and 2019. Soils encountered during the investigations consisted of silty clay with organic material. Debris including brick, concrete, glass, ceramic, and metal was encountered in select test pit excavations at depths ranging between 2 and 5 feet bgs. Soil analytical results identified a concentration of arsenic (11 mg/kg), exceeding the SRV (9 mg/kg). However, the concentration was considered to be consistent with naturally occurring levels. PAHs were detected in the southwestern portion of the site between 2 and 5 feet bgs. BaP equivalents (up to 13.51 mg/kg), exceeding the MPCA Commercial/Industrial SRV were calculated. In October 2021, an additional 11 test pit excavations were completed across the site to assess the debris for presence of asbestos. Debris including concrete, bricks, glass, miscellaneous household trash, and automobile tires was identified in all test pits extending to depths of up to 7 feet bgs. All sample analytical results were reported as non-detect for asbestos. Groundwater was not encountered during the investigative activities. The listing is currently active and no remedial activities were available for review.	-

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-01670	5814 RALEIGH ST	~ 2655 ft (SR0000179)	~ 145 ft (BF0001330)	~ 235 ft (LS0020823)	~ 660 ft (211008)	~ 235 ft (TS0130379)	~ 0 ft (010-4500-01670)	No known release or contamination identified	LS0020823 is located at 5905 Raleigh Street, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of fuel oil was discovered in October 2018. Investigations were completed in December 2018 and February 2019, and groundwater contamination was identified in connection with the release. No remedial actions were reported in connection with the listing. BF0001330 is located at 218 South 59th Avenue West, to the south of the site. A RAP/CCP was completed for development of the site in May 2019, and described the results of several test pit investigations that were completed at the site in 2018 and 2019. Soils encountered during the investigations consisted of silty clay with organic material. Debris including brick, concrete, glass, ceramic, and metal was encountered in select test pit excavations at depths ranging between 2 and 5 feet bgs. Soil analytical results identified a concentration of arsenic (11 mg/kg), exceeding the SRV (9 mg/kg). However, the concentration was considered to be consistent with naturally occurring levels. PAHs were detected in the southwestern portion of the site between 2 and 5 feet bgs. BaP equivalents (up to 13.51 mg/kg), exceeding the MPCA Commercial/Industrial SRV were calculated. In October 2021, an additional 11 test pit excavations were completed across the site to assess the debris for presence of asbestos. Debris including concrete, bricks, glass, miscellaneous household trash, and automobile tires was identified in all test pits extending to depths of up to 7 feet bgs. All sample analytical results were reported as non-detect for asbestos. Groundwater was not encountered during the investigative activities. The listing is currently active and no remedial activities were available for review. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-01680	5812 RALEIGH ST	~ 2625 ft (SR0000179)	~ 150 ft (BF0001330)	~ 305 ft (LS0020823)	~ 635 ft (211008)	~ 305 ft (TS0130379)	~ 0 ft (010-4500-01670)	No known release or contamination identified	BF0001330 is located at 218 South 59th Avenue West, to the south of the site. A RAP/CCP was completed for development of the site in May 2019, and described the results of several test pit investigations that were completed at the site in 2018 and 2019. Soils encountered during the investigations consisted of silty clay with organic material. Debris including brick, concrete, glass, ceramic, and metal was encountered in select test pit excavations at depths ranging between 2 and 5 feet bgs. Soil analytical results identified a concentration of arsenic (11 mg/kg), exceeding the SRV (9 mg/kg). However, the concentration was considered to be consistent with naturally occurring levels. PAHs were detected in the southwestern portion of the site between 2 and 5 feet bgs. BaP equivalents (up to 13.51 mg/kg), exceeding the MPCA Commercial/Industrial SRV were calculated. In October 2021, an additional 11 test pit excavations were completed across the site to assess the debris for presence of asbestos. Debris including concrete, bricks, glass, miscellaneous household trash, and automobile tires was identified in all test pits extending to depths of up to 7 feet bgs. All sample analytical results were reported as non-detect for asbestos. Groundwater was not encountered during the investigative activities. The listing is currently active and no remedial activities were available for review. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-01700	208 S 59TH AVE W	~ 2655 ft (SR0000179)	~ 95 ft (BF0001330)	~ 290 ft (LS0020823)	~ 610 ft (211008)	~ 290 ft (TS0130379)	~ 50 ft (010-4500-01670)	No known release or contamination identified	BF0001330 is located at 218 South 59th Avenue West, to the south of the site. A RAP/CCP was completed for development of the site in May 2019, and described the results of several test pit investigations that were completed at the site in 2018 and 2019. Soils encountered during the investigations consisted of silty clay with organic material. Debris including brick, concrete, glass, ceramic, and metal was encountered in select test pit excavations at depths ranging between 2 and 5 feet bgs. Soil analytical results identified a concentration of arsenic (11 mg/kg), exceeding the SRV (9 mg/kg). However, the concentration was considered to be consistent with naturally occurring levels. PAHs were detected in the southwestern portion of the site between 2 and 5 feet bgs. BaP equivalents (up to 13.51 mg/kg), exceeding the MPCA Commercial/Industrial SRV were calculated. In October 2021, an additional 11 test pit excavations were completed across the site to assess the debris for presence of asbestos. Debris including concrete, bricks, glass, miscellaneous household trash, and automobile tires was identified in all test pits extending to depths of up to 7 feet bgs. All sample analytical results were reported as non-detect for asbestos. Groundwater was not encountered during the investigative activities. The listing is currently active and no remedial activities were available for review.	-
010-4500-01720	212 S 59TH AVE W	~ 2680 ft (SR0000179)	~ 70 ft (BF0001330)	~ 335 ft (LS0020823)	~ 595 ft (211008)	~ 335 ft (TS0130379)	~ 100 ft (010-4500-01670)	No known release or contamination identified	BF0001330 is located at 218 South 59th Avenue West, to the south of the site. A RAP/CCP was completed for development of the site in May 2019, and described the results of several test pit investigations that were completed at the site in 2018 and 2019. Soils encountered during the investigations consisted of silty clay with organic material. Debris including brick, concrete, glass, ceramic, and metal was encountered in select test pit excavations at depths ranging between 2 and 5 feet bgs. Soil analytical results identified a concentration of arsenic (11 mg/kg), exceeding the SRV (9 mg/kg). However, the concentration was considered to be consistent with naturally occurring levels. PAHs were detected in the southwestern portion of the site between 2 and 5 feet bgs. BaP equivalents (up to 13.51 mg/kg), exceeding the MPCA Commercial/Industrial SRV were calculated. In October 2021, an additional 11 test pit excavations were completed across the site to assess the debris for presence of asbestos. Debris including concrete, bricks, glass, miscellaneous household trash, and automobile tires was identified in all test pits extending to depths of up to 7 feet bgs. All sample analytical results were reported as non-detect for asbestos. Groundwater was not encountered during the investigative activities. The listing is currently active and no remedial activities were available for review.	-

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-01770	222 S 59TH AVE W	~ 2740 ft (SR0000179)	~ 30 ft (BF0001330)	~ 450 ft (LS0020823)	~ 535 ft (211008)	~ 450 ft (TS0130379)	~ 225 ft (010-4500-01670)	Possible release on parcel	BF0001330 is located at 218 South 59th Avenue West, adjacent to the north of the site. A RAP/CCP was completed for development of the site in May 2019, and described the results of several test pit investigations that were completed at the site in 2018 and 2019. Soils encountered during the investigations consisted of silty clay with organic material. Debris including brick, concrete, glass, ceramic, and metal was encountered in select test pit excavations at depths ranging between 2 and 5 feet bgs. Soil analytical results identified a concentration of arsenic (11 mg/kg), exceeding the SRV (9 mg/kg). However, the concentration was considered to be consistent with naturally occurring levels. PAHs were detected in the southwestern portion of the site between 2 and 5 feet bgs. BaP equivalents (up to 13.51 mg/kg), exceeding the MPCA Commercial/Industrial SRV were calculated. In October 2021, an additional 11 test pit excavations were completed across the site to assess the debris for presence of asbestos. Debris including concrete, bricks, glass, miscellaneous household trash, and automobile tires was identified in all test pits extending to depths of up to 7 feet bgs. All sample analytical results were reported as non-detect for asbestos. Groundwater was not encountered during the investigative activities. The listing is currently active and no remedial activities were available for review.	Conduct environmental monitoring during excavation.
010-4500-01900	116 S 59TH AVE W	~ 2515 ft (SR0000179)	~ 375 ft (BF0002448) ~ 490 ft (BF0001330)	~ 190 ft (LS0020823)	~ 875 ft (211008)	~ 190 ft (TS0130379)	~ 0 ft (010-4500-01910)	No known release or contamination identified	LS0020823 is located at 5905 Raleigh Street, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of fuel oil was discovered in October 2018. Investigations were completed in December 2018 and February 2019, and groundwater contamination was identified in connection with the release. No remedial actions were reported in connection with the listing. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-01910	118 S 59TH AVE W	~ 2525 ft (SR0000179)	~ 400 ft (BF0002448) ~ 465 ft (BF0001330)	~ 180 ft (LS0020823)	~ 855 ft (211008)	~ 180 ft (TS0130379)	~ 0 ft (010-4500-01910)	No known release or contamination identified	LS0020823 is located at 5905 Raleigh Street, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of fuel oil was discovered in October 2018. Investigations were completed in December 2018 and February 2019, and groundwater contamination was identified in connection with the release. No remedial actions were reported in connection with the listing. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-01920	121 S 59TH AVE W	~ 2400 ft (SR0000179)	~ 415 ft (BF0001330) ~ 425 ft (BF0002448)	~ 165 ft (LS0020823)	~ 755 ft (211008)	~ 165 ft (TS0130379)	~ 0 ft (010-4480-03100)	No known release or contamination identified	LS0020823 is located at 5905 Raleigh Street, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of fuel oil was discovered in October 2018. Investigations were completed in December 2018 and February 2019, and groundwater contamination was identified in connection with the release. No remedial actions were reported in connection with the listing. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-01950	126 S 59TH AVE W	~ 2560 ft (SR0000179)	~ 365 ft (BF0001330) ~ 495 ft (BF0002448)	~ 165 ft (LS0020823)	~ 780 ft (211008)	~ 165 ft (TS0130379)	~ 30 ft (010-4480-03100)	No known release or contamination identified	LS0020823 is located at 5905 Raleigh Street, to the west of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of fuel oil was discovered in October 2018. Investigations were completed in December 2018 and February 2019, and groundwater contamination was identified in connection with the release. No remedial actions were reported in connection with the listing.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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LSLR SPIRIT VALLEY
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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-01990	101 S 59th Ave W	~ 2680 ft (SR0000179)	~ 215 ft (BF0002448)	~ 275 ft (LS0020823) ~ 475 ft (LS0015992)	~ 950 ft (75152)	~ 275 ft (TS0130379)	~ 70 ft (010-4500-03500)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the north of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the remaining detections were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review.	-
010-4500-02450	122 S 60TH AVE W	~ 2885 ft (SR0000179)	~ 505 ft (BF0002448)	~ 80 ft (LS0020823)	~ 890 ft (216477)	~ 80 ft (TS0130379)	~ 185 ft (010-4500-01210)	No known release or contamination identified	LS0020823 is located at 5905 Raleigh Street, to the east of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of fuel oil was discovered in October 2018. Investigations were completed in December 2018 and February 2019, and groundwater contamination was identified in connection with the release. No remedial actions were reported in connection with the listing.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-02470	126 S 60TH AVE W	~ 2895 ft (SR0000179)	~ 475 ft (BF0001330)	~ 75 ft (LS0020823)	~ 845 ft (216477)	~ 75 ft (TS0130379)	~ 140 ft (010-4500-01210)	No known release or contamination identified	LS0020823 is located at 5905 Raleigh Street, to the east of the site. The MPCA digital file was not received as of the issuance of this report. The WIMN dashboard indicates that a release of fuel oil was discovered in October 2018. Investigations were completed in December 2018 and February 2019, and groundwater contamination was identified in connection with the release. No remedial actions were reported in connection with the listing.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-02650	103 S 60TH AVE W	~ 3010 ft (SR0000179)	~ 475 ft (BF0002448)	~ 265 ft (LS0015992) ~ 365 ft (LS0020823)	~ 820 ft (75152)	~ 365 ft (TS0130379)	~ 90 ft (010-4500-03300)	No known release or contamination identified	LS0015992 is located at 18 South 61st Avenue West, to the northwest of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered. Fuel tank on/adjacent to parcel	-
010-4500-02670	107 S 60TH AVE W	~ 3020 ft (SR0000179)	~ 500 ft (BF0002448)	~ 315 ft (LS0015992) ~ 335 ft (LS0020823)	~ 865 ft (75152)	~ 335 ft (TS0130379)	~ 140 ft (010-4500-03300)	No known release or contamination identified		-
010-4500-02720	117 S 60TH AVE W	~ 3055 ft (SR0000179)	~ 580 ft (BF0002448)	~ 270 ft (LS0020823) ~ 435 ft (LS0015992)	~ 875 ft (216477)	~ 270 ft (TS0130379)	~ 220 ft (010-4540-03720)	No known release or contamination identified		-
010-4500-02740	121 S 60TH AVE W	~ 3065 ft (SR0000179)	~ 615 ft (BF0002448)	~ 265 ft (LS0020823) ~ 485 ft (LS0015992)	~ 825 ft (216477)	~ 265 ft (TS0130379)	~ 220 ft (010-4500-01210)	No known release or contamination identified		-
010-4500-03140	1 S 60TH AVE W	~ 2940 ft (SR0000179)	~ 280 ft (BF0002447) ~ 475 ft (BF0002448)	~ 205 ft (LS0015992)	~ 375 ft (75152)	~ 390 ft (TS0005718)	~ 50 ft (010-4500-03020)	No known release or contamination identified	LS0015992 is located at 18 South 61st Avenue West, to the southwest of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered.	-
010-4500-03160	5 S 60TH AVE W	~ 2940 ft (SR0000179)	~ 320 ft (BF0002447) ~ 460 ft (BF0002448)	~ 180 ft (LS0015992)	~ 415 ft (75152)	~ 430 ft (TS0005718)	~ 25 ft (010-4500-03020)	No known release or contamination identified	LS0015992 is located at 18 South 61st Avenue West, to the southwest of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered.	-

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LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-03180	7 S 60TH AVE W	~ 2945 ft (SR0000179)	~ 345 ft (BF0002447) ~ 445 ft (BF0002448)	~ 145 ft (LS0015992)	~ 440 ft (75152)	~ 455 ft (TS0005718)	~ 15 ft (010-4500-03020)	No known release or contamination identified	LS0015992 is located at 18 South 61st Avenue West, to the southwest of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered.	-
010-4500-03230	15 S 60TH AVE W	~ 2955 ft (SR0000179)	~ 425 ft (BF0002448) ~ 430 ft (BF0002447)	~ 85 ft (LS0015992)	~ 525 ft (75152)	~ 535 ft (TS0005718)	~ 30 ft (010-4500-03020)	Possible release on parcel	BF0002448 is located along an abandoned rail spur to the east of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the reamining detetions were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. LS0015992 is located at 18 South 61st Avenue West, to the west of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered.	Conduct environmental monitoring during excavation.
010-4500-03250	17 S 60TH AVE W	~ 2960 ft (SR0000179)	~ 420 ft (BF0002448) ~ 480 ft (BF0002447)	~ 85 ft (LS0015992)	~ 570 ft (75152)	~ 580 ft (TS0005718)	~ 65 ft (010-4500-03430)	Possible release on parcel	BF0002448 is located along an abandoned rail spur to the east of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the reamining detetions were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. LS0015992 is located at 18 South 61st Avenue West, to the west of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered.	Conduct environmental monitoring during excavation.

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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-03280	27 S 60TH AVE W	~ 2970 ft (SR0000179)	~ 425 ft (BF0002448)	~ 105 ft (LS0015992) ~ 495 ft (LS0020823)	~ 640 ft (75152)	~ 495 ft (TS0130379)	~ 0 ft (010-4500-03300)	Possible release on parcel	LS0015992 is located at 18 South 61st Avenue West, to the northwest of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-03300	29 S 60TH AVE W	~ 2980 ft (SR0000179)	~ 430 ft (BF0002448)	~ 140 ft (LS0015992) ~ 450 ft (LS0020823)	~ 685 ft (75152)	~ 450 ft (TS0130379)	~ 0 ft (010-4500-03300)	No known release or contamination identified	LS0015992 is located at 18 South 61st Avenue West, to the northwest of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-03430	18 S 60TH AVE W	~ 2770 ft (SR0000179)	~ 235 ft (BF0002448) ~ 420 ft (BF0002447)	~ 280 ft (LS0015992)	~ 655 ft (75152)	~ 545 ft (TS0130379)	~ 0 ft (010-4500-03430)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the east of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the reamining detetions were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. LS0015992 is located at 18 South 61st Avenue West, to the west of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Print Date: 1/5/2026

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-03440	20 S 60TH AVE W	~ 2770 ft (SR0000179)	~ 230 ft (BF0002448) ~ 445 ft (BF0002447)	~ 275 ft (LS0015992) ~ 495 ft (LS0020823)	~ 670 ft (75152)	~ 495 ft (TS0130379)	~ 0 ft (010-4500-03430)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the east of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the reamining detetions were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. LS0015992 is located at 18 South 61st Avenue West, to the west of the site. In 2005, approximately 25-30 gallons of fuel oil released from an AST located on the south side of the garage and onto the adjacent property south. Impacted soil was excavated and removed from the site. Confirmation soil samples were collected from the base of the excavation and analyzed for GRO, DRO, and BTEX. Analytes were detected below UFC or SRVs. Groundwater was not encountered. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4500-03720	12 S 59TH AVE W	~ 2390 ft (SR0000179)	~ 145 ft (BF0002448) ~ 415 ft (BF0002447)	~ 655 ft (LS0015992)	~ 885 ft (75152)	~ 660 ft (TS0130379)	~ 250 ft (010-4500-03430)	No known release or contamination identified	BF0002448 is located along an abandoned rail spur to the south of the site. Investigations were completed in April 2024 and November 2024. Soils encountered consisted of clay and sandy clay with concrete debris. Elevated PID soil headspace readings were not reported. The investigations identified detections of DRO (up to 238 mg/kg) exceeding the MPCA UFC (100 mg/kg) between 4 and 5 feet bgs, lead (up to 646 mg/kg) exceeding the Residential/Recreational SRV (200 mg/kg) between 0 and 1 foot bgs, and BaP equivalents (up to 9.9 mg/kg) exceeding the Residential/Recreational SRV (2 mg/kg) between 0 and 5 feet bgs. The DRO detection was located where the railroad spur intersects South 57th Avenue West and the reamining detetions were located along the alignment, west of South 58th Avenue West. Groundwater was not encountered during the investigations. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review.	-
010-4500-03930	26 N 59TH AVE W	~ 2380 ft (SR0000179)	~ 295 ft (BF0002447)	~ 730 ft (LS0008124)	~ 795 ft (75152)	~ 730 ft (TS0017487)	~ 30 ft (010-4480-04290)	No known release or contamination identified	BF0002447 is located at 5900 Main Street, to the west of the site. Investigations were completed in January 2023 and June 2024. The investigations consisted of the advancement of 8 borings extending to maximum depths ranging between 15 and 25 feet bgs. Eleven shallow delineation borings were also completed. Soil encountered generally consisted of fill with debris including coal, coal slag, and concrete debris extending to 7.5 feet bgs. Elevated PID soil headspace readings (up to 225.8 ppm) were reported between 0 and 17 feet bgs across the site. Soil sample analytical results identified elevated detections of lead, arsenic and chromium. Groundwater was encountered between 3 and 8 feet bgs across the site. Groundwater analytical sample results identified elevated detections of cadmium and PAHs exceeding regulatory criteria. Soil and groundwater samples were analyzed for VOCs, metals, and PAHs. Soil vapor samples identified detections of PVOCs below 33x the iISVs. The listing is currently active. A RAP was issued in April 2025 and information related to the implementation was available for review.	-

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-03950	22 N 59TH AVE W	~ 2380 ft (SR0000179)	~ 280 ft (BF0002447)	~ 750 ft (LS0008124)	~ 795 ft (75152)	~ 750 ft (TS0017487)	~ 15 ft (010-4480-04290)	No known release or contamination identified	BF0002447 is located at 5900 Main Street, to the west of the site. Investigations were completed in January 2023 and June 2024. The investigations consisted of the advancement of 8 borings extending to maximum depths ranging between 15 and 25 feet bgs. Eleven shallow delineation borings were also completed. Soil encountered generally consisted of fill with debris including coal, coal slag, and concrete debris extending to 7.5 feet bgs. Elevated PID soil headspace readings (up to 225.8 ppm) were reported between 0 and 17 feet bgs across the site. Soil sample analytical results identified elevated detections of lead, arsenic and chromium. Groundwater was encountered between 3 and 8 feet bgs across the site. Groundwater analytical sample results identified elevated detections of cadmium and PAHs exceeding regulatory criteria. Soil and groundwater samples were analyzed for VOCs, metals, and PAHs. Soil vapor samples identified detections of PVOCs below 33x the ilSVs. The listing is currently active. A RAP was issued in April 2025 and information related to the implementation was available for review.	-
010-4500-04000	14 N 59TH AVE W	~ 2375 ft (SR0000179)	~ 260 ft (BF0002447) ~ 475 ft (BF0002448)	~ 775 ft (LS0019603)	~ 795 ft (75152)	~ 795 ft (TS0017487)	~ 15 ft (010-4480-04320)	No known release or contamination identified	BF0002447 is located at 5900 Main Street, to the west of the site. Investigations were completed in January 2023 and June 2024. The investigations consisted of the advancement of 8 borings extending to maximum depths ranging between 15 and 25 feet bgs. Eleven shallow delineation borings were also completed. Soil encountered generally consisted of fill with debris including coal, coal slag, and concrete debris extending to 7.5 feet bgs. Elevated PID soil headspace readings (up to 225.8 ppm) were reported between 0 and 17 feet bgs across the site. Soil sample analytical results identified elevated detections of lead, arsenic and chromium. Groundwater was encountered between 3 and 8 feet bgs across the site. Groundwater analytical sample results identified elevated detections of cadmium and PAHs exceeding regulatory criteria. Soil and groundwater samples were analyzed for VOCs, metals, and PAHs. Soil vapor samples identified detections of PVOCs below 33x the ilSVs. The listing is currently active. A RAP was issued in April 2025 and information related to the implementation was available for review.	-
010-4500-04020	10 N 59TH AVE W	~ 2375 ft (SR0000179)	~ 260 ft (BF0002447) ~ 450 ft (BF0002448)	~ 760 ft (LS0019603)	~ 800 ft (75152)	~ 815 ft (TS0005718)	~ 30 ft (010-4480-04320)	No known release or contamination identified	BF0002447 is located at 5900 Main Street, to the west of the site. Investigations were completed in January 2023 and June 2024. The investigations consisted of the advancement of 8 borings extending to maximum depths ranging between 15 and 25 feet bgs. Eleven shallow delineation borings were also completed. Soil encountered generally consisted of fill with debris including coal, coal slag, and concrete debris extending to 7.5 feet bgs. Elevated PID soil headspace readings (up to 225.8 ppm) were reported between 0 and 17 feet bgs across the site. Soil sample analytical results identified elevated detections of lead, arsenic and chromium. Groundwater was encountered between 3 and 8 feet bgs across the site. Groundwater analytical sample results identified elevated detections of cadmium and PAHs exceeding regulatory criteria. Soil and groundwater samples were analyzed for VOCs, metals, and PAHs. Soil vapor samples identified detections of PVOCs below 33x the ilSVs. The listing is currently active. A RAP was issued in April 2025 and information related to the implementation was available for review.	-

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-04030	8 N 59TH AVE W	~ 2375 ft (SR0000179)	~ 265 ft (BF0002447) ~ 425 ft (BF0002448)	~ 750 ft (LS0019603)	~ 800 ft (75152)	~ 815 ft (TS0005718)	~ 55 ft (010-4480-04320)	No known release or contamination identified	BF0002447 is located at 5900 Main Street, to the west of the site. Investigations were completed in January 2023 and June 2024. The investigations consisted of the advancement of 8 borings extending to maximum depths ranging between 15 and 25 feet bgs. Eleven shallow delineation borings were also completed. Soil encountered generally consisted of fill with debris including coal, coal slag, and concrete debris extending to 7.5 feet bgs. Elevated PID soil headspace readings (up to 225.8 ppm) were reported between 0 and 17 feet bgs across the site. Soil sample analytical results identified elevated detections of lead, arsenic and chromium. Groundwater was encountered between 3 and 8 feet bgs across the site. Groundwater analytical sample results identified elevated detections of cadmium and PAHs exceeding regulatory criteria. Soil and groundwater samples were analyzed for VOCs, metals, and PAHs. Soil vapor samples identified detections of PVOCs below 33x the ilSVs. The listing is currently active. A RAP was issued in April 2025 and information related to the implementation was available for review.	-
010-4500-04040	4 N 59TH AVE W	~ 2375 ft (SR0000179)	~ 270 ft (BF0002447) ~ 375 ft (BF0002448)	~ 725 ft (LS0019603)	~ 805 ft (75152)	~ 820 ft (TS0005718)	~ 75 ft (010-4480-04320)	No known release or contamination identified	BF0002447 is located at 5900 Main Street, to the west of the site. Investigations were completed in January 2023 and June 2024. The investigations consisted of the advancement of 8 borings extending to maximum depths ranging between 15 and 25 feet bgs. Eleven shallow delineation borings were also completed. Soil encountered generally consisted of fill with debris including coal, coal slag, and concrete debris extending to 7.5 feet bgs. Elevated PID soil headspace readings (up to 225.8 ppm) were reported between 0 and 17 feet bgs across the site. Soil sample analytical results identified elevated detections of lead, arsenic and chromium. Groundwater was encountered between 3 and 8 feet bgs across the site. Groundwater analytical sample results identified elevated detections of cadmium and PAHs exceeding regulatory criteria. Soil and groundwater samples were analyzed for VOCs, metals, and PAHs. Soil vapor samples identified detections of PVOCs below 33x the ilSVs. The listing is currently active. A RAP was issued in April 2025 and information related to the implementation was available for review.	-
010-4500-04060	2 N 59TH AVE W	~ 2375 ft (SR0000179)	~ 285 ft (BF0002447) ~ 350 ft (BF0002448)	~ 715 ft (LS0019603)	~ 815 ft (75152)	~ 830 ft (TS0005718)	~ 125 ft (010-4480-04320)	No known release or contamination identified	BF0002447 is located at 5900 Main Street, to the west of the site. Investigations were completed in January 2023 and June 2024. The investigations consisted of the advancement of 8 borings extending to maximum depths ranging between 15 and 25 feet bgs. Eleven shallow delineation borings were also completed. Soil encountered generally consisted of fill with debris including coal, coal slag, and concrete debris extending to 7.5 feet bgs. Elevated PID soil headspace readings (up to 225.8 ppm) were reported between 0 and 17 feet bgs across the site. Soil sample analytical results identified elevated detections of lead, arsenic and chromium. Groundwater was encountered between 3 and 8 feet bgs across the site. Groundwater analytical sample results identified elevated detections of cadmium and PAHs exceeding regulatory criteria. Soil and groundwater samples were analyzed for VOCs, metals, and PAHs. Soil vapor samples identified detections of PVOCs below 33x the ilSVs. The listing is currently active. A RAP was issued in April 2025 and information related to the implementation was available for review.	-

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LSLR SPIRIT VALLEY
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4500-04070	29 N 59TH AVE W	~ 2605 ft (SR0000179)	~ 165 ft (BF0002447)	~ 705 ft (LS0001113)	~ 575 ft (75152)	~ 590 ft (TS0005718)	~ 245 ft (010-4480-04290)	Possible release on parcel	BF0002447 is located at 5900 Main Street, to the southwest of the site. Investigations were completed in January 2023 and June 2024. The investigations consisted of the advancement of 8 borings extending to maximum depths ranging between 15 and 25 feet bgs. Eleven shallow delineation borings were also completed. Soil encountered generally consisted of fill with debris including coal, coal slag, and concrete debris extending to 7.5 feet bgs. Elevated PID soil headspace readings (up to 225.8 ppm) were reported between 0 and 17 feet bgs across the site. Soil sample analytical results identified elevated detections of lead, arsenic and chromium. Groundwater was encountered between 3 and 8 feet bgs across the site. Groundwater analytical sample results identified elevated detections of cadmium and PAHs exceeding regulatory criteria. Soil and groundwater samples were analyzed for VOCs, metals, and PAHs. Soil vapor samples identified detections of PVOCs below 33x the iISVs. The listing is currently active. A RAP was issued in April 2025 and information related to the implementation was available for review.	Conduct environmental monitoring during excavation.
010-4500-04670	5815 NICOLLET ST	~ 2400 ft (SR0000179)	~ 465 ft (BF0002447)	~ 545 ft (LS0001113)	~ 905 ft (75152)	~ 685 ft (TS0017487)	~ 215 ft (010-4480-04290)	No known release or contamination identified		-
010-4510-03260	330 N 57TH AVE W	~ 2370 ft (SR0000179)	~ 305 ft (VP3290) ~ 330 ft (BF0000261)	~ 260 ft (LS0005431) ~ 305 ft (LS0004129) ~ 330 ft (LS0006629)	~ 465 ft (15636)	~ 260 ft (TS0017024)	~ 230 ft (010-4510-03790)	Possible release on parcel	LS0004129 is located at 5704 Grand Avenue, to the southwest of the site and is associated with petroleum impacts that were identified during site redevelopment in 1991. Remedial excavations were completed in the northwestern, north-central, and northeastern portions of the site and removed approximately 1,207 cubic yards of petroleum impacted soil for off-site disposal. Contaminated soil below 15 feet bgs was left in place in the northwestern portion of the site and in the north-central portion of the site near the building's structural components. The contaminated soil that was left in place was covered with clay soils and two layers of six-mil plastic sheeting. No contaminated soil was left in place in the northeastern portion of the site. Investigations were completed in June and July 1991 and identified petroleum impacted soil throughout the northern half of the site, generally between 8 and 10 feet bgs, and petroleum impacted groundwater in the northeastern portion of the site. The identified impacts were limited to the site, with exception of petroleum impacted groundwater, which extended into the Grand Avenue right-of-way. Groundwater was generally encountered around 10 feet bgs throughout the site and flows to the southeast, towards Lake Superior. VP3290 is located at 5704 Grand Avenue, to the southwest of the site. The MPCA digital file for this site was not received by the issuance of this report. The MPCA WIMN website indicates the site was opened in December 1992, an NAD was issued in February 1994, and the site was closed in November 1996.	Conduct environmental monitoring during excavation.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4510-03460	5705 GRAND AVE	~ 2575 ft (SR0000179)	~ 250 ft (BF0000261) ~ 285 ft (VP3290) ~ 500 ft (BF0002912)	~ 230 ft (LS0005431) ~ 250 ft (LS0006629) ~ 285 ft (LS0004129) ~ 425 ft (LS0015876) ~ 500 ft (LS0004029)	~ 630 ft (15636)	~ 230 ft (TS0017024)	~ 15 ft (010-4510-03790)	No known release or contamination identified	BF0000261 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with proposed redevelopment of the site. Investigations completed in March and April 2017, and identified elevated soil PID headspace readings (up to 124.7 ppm) between 8 and 12 feet bgs in the central and west central portions of the site. Soil analytical samples identified a detection of lead (313 mg/kg) exceeding the MPCA rSRV in soil at 0-5 feet bgs in the west-central portion of the site. Various detections of GRO, PAHs, RCRA metals, and VOCs were identified below their respective regulatory criteria in soil. Groundwater was encountered at 11 feet bgs in the central portion of the site. Groundwater sample analytical results identified detections of GRO (up to 1130 ug/L). Various detections of VOCs were also identified below their respective MDH HRLs. No analytical detections were identified in the sub-slab soil vapor samples. A CCP and a No Action Determination was issued in June 2017; however, no indication of remedial activities was documented in the MPCA digital file. LS0006629 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with the removal of a hydraulic hoist tank, located within the footprint of the facility in August 1993. No soils were removed for off-site disposal and two borings were completed adjacent to the former tank. No field indications of contamination were observed. Soil sample analytical results identified a concentration of DRO (210 mg/kg) at 8 feet bgs. All other soil sample analytical results were below their respective RLs. No groundwater was encountered during the investigation. Soil analytical samples were analyzed for BTEX compounds and DRO.	-
010-4510-03500	5707 GRAND AVE	~ 2580 ft (SR0000179)	~ 225 ft (BF0000261) ~ 265 ft (VP3290) ~ 475 ft (BF0002912)	~ 225 ft (LS0006629) ~ 265 ft (LS0004129) ~ 290 ft (LS0005431) ~ 445 ft (LS0015876) ~ 475 ft (LS0004029)	~ 665 ft (15636)	~ 290 ft (TS0017024)	~ 15 ft (010-4510-03800)	No known release or contamination identified	BF0000261 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with proposed redevelopment of the site. Investigations completed in March and April 2017, and identified elevated soil PID headspace readings (up to 124.7 ppm) between 8 and 12 feet bgs in the central and west central portions of the site. Soil analytical samples identified a detection of lead (313 mg/kg) exceeding the MPCA rSRV in soil at 0-5 feet bgs in the west-central portion of the site. Various detections of GRO, PAHs, RCRA metals, and VOCs were identified below their respective regulatory criteria in soil. Groundwater was encountered at 11 feet bgs in the central portion of the site. Groundwater sample analytical results identified detections of GRO (up to 1130 ug/L). Various detections of VOCs were also identified below their respective MDH HRLs. No analytical detections were identified in the sub-slab soil vapor samples. A CCP and a No Action Determination was issued in June 2017; however, no indication of remedial activities was documented in the MPCA digital file. LS0006629 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with the removal of a hydraulic hoist tank, located within the footprint of the facility in August 1993. No soils were removed for off-site disposal and two borings were completed adjacent to the former tank. No field indications of contamination were observed. Soil sample analytical results identified a concentration of DRO (210 mg/kg) at 8 feet bgs. All other soil sample analytical results were below their respective RLs. No groundwater was encountered during the investigation. Soil analytical samples were analyzed for BTEX compounds and DRO.	-

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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4510-03510	5709 GRAND AVE	~ 2580 ft (SR0000179)	~ 200 ft (BF0000261) ~ 245 ft (VP3290) ~ 450 ft (BF0002912)	~ 200 ft (LS0006629) ~ 245 ft (LS0004129) ~ 315 ft (LS0005431) ~ 450 ft (LS0004029) ~ 450 ft (LS0015876)	~ 685 ft (15636)	~ 315 ft (TS0017024)	~ 15 ft (010-4510-03800)	No known release or contamination identified	BF0000261 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with proposed redevelopment of the site. Investigations completed in March and April 2017, and identified elevated soil PID headspace readings (up to 124.7 ppm) between 8 and 12 feet bgs in the central and west central portions of the site. Soil analytical samples identified a detection of lead (313 mg/kg) exceeding the MPCA rSRV in soil at 0-5 feet bgs in the west-central portion of the site. Various detections of GRO, PAHs, RCRA metals, and VOCs were identified below their respective regulatory criteria in soil. Groundwater was encountered at 11 feet bgs in the central portion of the site. Groundwater sample analytical results identified detections of GRO (up to 1130 ug/L). Various detections of VOCs were also identified below their respective MDH HRLs. No analytical detections were identified in the sub-slab soil vapor samples. A CCP and a No Action Determination was issued in June 2017; however, no indication of remedial activities was documented in the MPCA digital file. LS0006629 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with the removal of a hydraulic hoist tank, located within the footprint of the facility in August 1993. No soils were removed for off-site disposal and two borings were completed adjacent to the former tank. No field indications of contamination were observed. Soil sample analytical results identified a concentration of DRO (210 mg/kg) at 8 feet bgs. All other soil sample analytical results were below their respective RLs. No groundwater was encountered during the investigation. Soil analytical samples were analyzed for BTEX compounds and DRO.	-
010-4510-03520	5711 GRAND AVE	~ 2580 ft (SR0000179)	~ 175 ft (BF0000261) ~ 225 ft (VP3290) ~ 425 ft (BF0002912)	~ 175 ft (LS0006629) ~ 225 ft (LS0004129) ~ 340 ft (LS0005431) ~ 425 ft (LS0004029) ~ 460 ft (LS0015876)	~ 700 ft (15636)	~ 340 ft (TS0017024)	~ 15 ft (010-4510-03820)	No known release or contamination identified	BF0000261 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with proposed redevelopment of the site. Investigations completed in March and April 2017, and identified elevated soil PID headspace readings (up to 124.7 ppm) between 8 and 12 feet bgs in the central and west central portions of the site. Soil analytical samples identified a detection of lead (313 mg/kg) exceeding the MPCA rSRV in soil at 0-5 feet bgs in the west-central portion of the site. Various detections of GRO, PAHs, RCRA metals, and VOCs were identified below their respective regulatory criteria in soil. Groundwater was encountered at 11 feet bgs in the central portion of the site. Groundwater sample analytical results identified detections of GRO (up to 1130 ug/L). Various detections of VOCs were also identified below their respective MDH HRLs. No analytical detections were identified in the sub-slab soil vapor samples. A CCP and a No Action Determination was issued in June 2017; however, no indication of remedial activities was documented in the MPCA digital file. LS0006629 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with the removal of a hydraulic hoist tank, located within the footprint of the facility in August 1993. No soils were removed for off-site disposal and two borings were completed adjacent to the former tank. No field indications of contamination were observed. Soil sample analytical results identified a concentration of DRO (210 mg/kg) at 8 feet bgs. All other soil sample analytical results were below their respective RLs. No groundwater was encountered during the investigation. Soil analytical samples were analyzed for BTEX compounds and DRO.	-

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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4510-03565	5719 GRAND AVE	~ 2590 ft (SR0000179)	~ 75 ft (BF0000261) ~ 160 ft (VP3290) ~ 335 ft (BF0002912)	~ 75 ft (LS0006629) ~ 160 ft (LS0004129) ~ 335 ft (LS0004029) ~ 440 ft (LS0005431)	~ 775 ft (15636)	~ 335 ft (TS0015069)	~ 65 ft (010-4510-03820)	No known release or contamination identified	BF0000261 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with proposed redevelopment of the site. Investigations completed in March and April 2017, and identified elevated soil PID headspace readings (up to 124.7 ppm) between 8 and 12 feet bgs in the central and west central portions of the site. Soil analytical samples identified a detection of lead (313 mg/kg) exceeding the MPCA rSRV in soil at 0-5 feet bgs in the west-central portion of the site. Various detections of GRO, PAHs, RCRA metals, and VOCs were identified below their respective regulatory criteria in soil. Groundwater was encountered at 11 feet bgs in the central portion of the site. Groundwater sample analytical results identified detections of GRO (up to 1130 ug/L). Various detections of VOCs were also identified below their respective MDH HRLs. No analytical detections were identified in the sub-slab soil vapor samples. A CCP and a No Action Determination was issued in June 2017; however, no indication of remedial activities was documented in the MPCA digital file. LS0006629 is located at 332 North 58th Avenue West, to the southwest of the site. The listing is associated with the removal of a hydraulic hoist tank, located within the footprint of the facility in August 1993. No soils were removed for off-site disposal and two borings were completed adjacent to the former tank. No field indications of contamination were observed. Soil sample analytical results identified a concentration of DRO (210 mg/kg) at 8 feet bgs. All other soil sample analytical results were below their respective RLs. No groundwater was encountered during the investigation. Soil analytical samples were analyzed for BTEX compounds and DRO.	-
010-4510-05060	5702 CODY ST	~ 3200 ft (SR0000179)	~ 1075 ft (BF0000261)	~ 160 ft (LS0015314) ~ 285 ft (LS0007386)	~ 880 ft (211330)	~ 285 ft (TS0011186)	~ 0 ft (010-4510-05060)	No known release or contamination identified	LS0015314 is located at 5718 Cody Avenue, to the west of the site. The listing is associated with previous use of the facility as a gas station; petroleum impacts were detected in the northern portion of the former filling station near the dispensers and to the south the building. Investigations were completed in July and December 2003. Elevated soil PID headspace readings (up to 380 ppm) were reported between 0 and 10 feet bgs in the north-central and western portions of the site. Soil sample analytical results identified elevated detections of GRO, DRO, and BTEX compounds between 0 and 8 feet bgs in the northwestern and central portions of the site. Groundwater was encountered at 3 feet bgs in the former UST basin, and groundwater sample analytical results identified elevated detections of DRO, GRO, and various petroleum related VOCs. Soil analytical samples were analyzed for DRO, GRO, BTEX compounds and MTBE, and the groundwater analytical sample were analyzed for DRO, GRO, and full VOCs. Groundwater sampling data indicated the petroelum impacts did not extend offsite. No indication of additional remedial activities was documented in the MPCA digital file. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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LSLR SPIRIT VALLEY
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4510-05080	5704 CODY ST	~ 3225 ft (SR0000179)	~ 1070 ft (BF0000261)	~ 120 ft (LS0015314) ~ 325 ft (LS0007386)	~ 920 ft (211330)	~ 325 ft (TS0011186)	~ 0 ft (010-4510-05060)	Possible release on parcel	LS0015314 is located at 5718 Cody Avenue, to the west of the site. The listing is associated with previous use of the facility as a gas station; petroleum impacts were detected in the northern portion of the former filling station near the dispensers and to the south the building. Investigations were completed in July and December 2003. Elevated soil PID headspace readings (up to 380 ppm) were reported between 0 and 10 feet bgs in the north-central and western portions of the site. Soil sample analytical results identified elevated detections of GRO, DRO, and BTEX compounds between 0 and 8 feet bgs in the northwestern and central portions of the site. Groundwater was encountered at 3 feet bgs in the former UST basin, and groundwater sample analytical results identified elevated detections of DRO, GRO, and various petroleum related VOCs. Soil analytical samples were analyzed for DRO, GRO, BTEX compounds and MTBE, and the groundwater analytical sample were analyzed for DRO, GRO, and full VOCs. Groundwater sampling data indicated the petroleum impacts did not extend offsite. No indication of additional remedial activities was documented in the MPCA digital file. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-05100	5708 CODY ST	~ 3225 ft (SR0000179)	~ 1035 ft (BF0000261)	~ 75 ft (LS0015314) ~ 370 ft (LS0007386) ~ 495 ft (LS0015876)	~ 960 ft (211330)	~ 365 ft (TS0011186)	~ 40 ft (010-4510-05060)	Possible release on parcel	LS0015314 is located at 5718 Cody Avenue, to the west of the site. The listing is associated with previous use of the facility as a gas station; petroleum impacts were detected in the northern portion of the former filling station near the dispensers and to the south the building. Investigations were completed in July and December 2003. Elevated soil PID headspace readings (up to 380 ppm) were reported between 0 and 10 feet bgs in the north-central and western portions of the site. Soil sample analytical results identified elevated detections of GRO, DRO, and BTEX compounds between 0 and 8 feet bgs in the northwestern and central portions of the site. Groundwater was encountered at 3 feet bgs in the former UST basin, and groundwater sample analytical results identified elevated detections of DRO, GRO, and various petroleum related VOCs. Soil analytical samples were analyzed for DRO, GRO, BTEX compounds and MTBE, and the groundwater analytical sample were analyzed for DRO, GRO, and full VOCs. Groundwater sampling data indicated the petroleum impacts did not extend offsite. No indication of additional remedial activities was documented in the MPCA digital file.	Conduct environmental monitoring during excavation.
010-4510-05780	5615 GRAND AVE	~ 2585 ft (SR0000179)	~ 625 ft (BF0000261)	~ 85 ft (LS0005431)	~ 495 ft (15636)	~ 85 ft (TS0017024)	~ 170 ft (010-4510-05420)	No known release or contamination identified	LS0005431 is located at 5629 Grand Avenue, to the southwest of the site. One soil boring was completed along the western boundary of the site to a maximum depth of 21.5 feet bgs in February 1993. Elevated PID soil headspace readings (up to 89 ppm) were reported between 10 and 15 feet bgs. Soil samples analytical results identified elevated detections of DRO (2,600 mg/kg) exceeding MPCA UFC and BTYEX compounds exceeding their respective SRVs at 14 feet bgs. Groundwater was not encountered. No additional investigation or remedial activities were completed.	-

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4510-06480	621 N CENTRAL AVE	~ 3185 ft (SR0000179)	~ 950 ft (BF0002778)	~ 225 ft (LS0004694) ~ 345 ft (LS0015929) ~ 435 ft (LS0007314) ~ 435 ft (LS0007386) ~ 500 ft (LS0017860)	~ 570 ft (211330)	~ 225 ft (TS0005344)	~ 0 ft (010-4520-13710)	No known release or contamination identified	LS0004694 is located at 601 North Central Avenue, to the south of the site. A release was discovered during the removal of a 550 gallon diesel UST in October 1991. Approximately 10 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. Multiple investigations were completed between December 1994 and March 2000. A total of 13 soil borings were advanced to maximum depths ranging between 13 and 28 feet bgs. Elevated PID soil headspace readings (up to 1,895 ppm) were reported between 2 and 16 feet bgs in the eastern portion of the site. Groundwater was encountered between and 13 feet bgs across the site. Soil and groundwater sample analytical results identified elevated detections of GRO, DRO, and BTEX compounds between 9.5 and 20 feet bgs in the eastern portion of the site and extending into both the North Central Street and Cody Street right-of-way. Annual groundwater monitoring occurred between August 1995 and April 2000. Groundwater flow was measured to the south/southeast throughout the monitoring period. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-06580	601 N CENTRAL AVE	~ 2955 ft (SR0000179)	~ 885 ft (PB4586)	~ 0 ft (LS0004694) ~ 95 ft (LS0015929) ~ 285 ft (LS0007386) ~ 340 ft (LS0002085) ~ 340 ft (LS0017591) ~ 445 ft (LS0006078)	~ 340 ft (211330)	~ 0 ft (TS0005344)	~ 75 ft (010-4510-06670)	Identified release on parcel - Undetermined Extent	LS0004694 is located on-site. A release was discovered during the removal of a 550 gallon diesel UST in October 1991. Approximately 10 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. Multiple investigations were completed between December 1994 and March 2000. A total of 13 soil borings were advanced to maximum depths ranging between 13 and 28 feet bgs. Elevated PID soil headspace readings (up to 1,895 ppm) were reported between 2 and 16 feet bgs in the eastern portion of the site. Groundwater was encountered between and 13 feet bgs across the site. Soil and groundwater sample analytical results identified elevated detections of GRO, DRO, and BTEX compounds between 9.5 and 20 feet bgs in the eastern portion of the site and extending into both the North Central Street and Cody Street right-of-way. Annual groundwater monitoring occurred between August 1995 and April 2000. Groundwater flow was measured to the south/southeast throughout the monitoring period. No additional remedial activities were completed. LS0015929 is located at 531 North Central Avenue, to the south of the site. A release was discovered during the removal of two 500 gallon USTs in October 2004. No soil was excavated for off-site disposal during the UST removals. Multiple investigations were completed between May 2005 and November 2006, and consisted of the advancement of 12 soil borings to maximum depths ranging between 16 and 24 feet bgs. Soils encountered generally consisted of clay with sand layers between 11 and 14 feet bgs and between 18 and 24 feet bgs. Elevated PID soil headspace readings (up to 269.3 ppm) were reported between 0 and 20 feet bgs throughout the site and in the Cody Street right-of-way, north of the site. Soil sample analytical results identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria. The elevated soil detections were generally between 8 and 20 feet bgs in the northern portion of the site. Low-level detections were also reported throughout the site at varying depths. Soil samples were analyzed for DRO, GRO, MTBE and BTEX compounds. Groundwater was encountered between 8 and 20 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, and various PVOCs exceeding regulatory criteria. Groundwater samples were analyzed for DRO, GRO, and VOCs. No additional remedial activities were completed.	Conduct environmental monitoring during excavation. Use copper service line piping rather than HDPE.
010-4510-06870	628 N 57TH AVE W	~ 3415 ft (SR0000179)	~ 1350 ft (PB4586)	~ 375 ft (LS0007386) ~ 460 ft (LS0015314) ~ 485 ft (LS0004694)	~ 865 ft (211330)	~ 375 ft (TS0011186)	~ 15 ft (010-4510-06760)	No known release or contamination identified		-

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4510-06890	620 N 57TH AVE W	~ 3375 ft (SR0000179)	~ 1310 ft (PB4586)	~ 330 ft (LS0007386) ~ 420 ft (LS0015314) ~ 460 ft (LS0004694)	~ 835 ft (211330)	~ 325 ft (TS0011186)	~ 0 ft (010-4510-06900)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-06900	618 N 57TH AVE W	~ 3350 ft (SR0000179)	~ 1290 ft (PB4586)	~ 305 ft (LS0007386) ~ 405 ft (LS0015314) ~ 450 ft (LS0004694)	~ 820 ft (211330)	~ 305 ft (TS0011186)	~ 0 ft (010-4510-06900)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-06910	616 N 57TH AVE W	~ 3310 ft (SR0000179)	~ 1250 ft (PB4586)	~ 255 ft (LS0007386) ~ 370 ft (LS0015314) ~ 430 ft (LS0004694) ~ 480 ft (LS0015929)	~ 790 ft (211330)	~ 255 ft (TS0011186)	~ 0 ft (010-4510-06900)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-06930	612 N 57TH AVE W	~ 3285 ft (SR0000179)	~ 1230 ft (PB4586)	~ 230 ft (LS0007386) ~ 355 ft (LS0015314) ~ 425 ft (LS0004694) ~ 465 ft (LS0015929)	~ 775 ft (211330)	~ 230 ft (TS0011186)	~ 0 ft (010-4510-06940)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-06940	610 N 57TH AVE W	~ 3265 ft (SR0000179)	~ 1210 ft (PB4586)	~ 210 ft (LS0007386) ~ 340 ft (LS0015314) ~ 420 ft (LS0004694) ~ 455 ft (LS0015929)	~ 765 ft (211330)	~ 210 ft (TS0011186)	~ 0 ft (010-4510-06950)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-06950	608 N 57TH AVE W	~ 3245 ft (SR0000179)	~ 1195 ft (PB4586)	~ 185 ft (LS0007386) ~ 325 ft (LS0015314) ~ 415 ft (LS0004694) ~ 445 ft (LS0015929)	~ 750 ft (211330)	~ 185 ft (TS0011186)	~ 0 ft (010-4510-06950)	No known release or contamination identified	LS0007386 is located at 7386 Cody Street, to the southeast of the site. A release was discovered during the removal of four USTs in May 1995. Soil confirmation samples collected from the UST basin sidewalls identified elevated detections of GRO (up to 7,640 mg/kg) exceeding MPCA UFC. A remedial investigation consisting of the advancement of seven borings to maximum depths ranging between 14 and 21 feet bgs was completed in June 1995. Elevated PID soil headspace readings (up to 261 ppm) were reported between 0 and 16 feet bgs in the eastern portion of the site. Soil sample analytical results identified low-level detections of DRO, GRO, BTEX compounds, and lead below their respective regulatory criteria. Groundwater was encountered between 4.81 and 9.72 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs, and lead exceeding regulatory criteria in the eastern portion of the site. Groundwater monitoring occurred through February 1997. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-06960	606 N 57TH AVE W	~ 3225 ft (SR0000179)	~ 1175 ft (PB4586)	~ 165 ft (LS0007386) ~ 315 ft (LS0015314) ~ 415 ft (LS0004694) ~ 435 ft (LS0015929)	~ 740 ft (211330)	~ 165 ft (TS0011186)	~ 0 ft (010-4510-07020)	No known release or contamination identified	LS0007386 is located at 7386 Cody Street, to the southeast of the site. A release was discovered during the removal of four USTs in May 1995. Soil confirmation samples collected from the UST basin sidewalls identified elevated detections of GRO (up to 7,640 mg/kg) exceeding MPCA UFC. A remedial investigation consisting of the advancement of seven borings to maximum depths ranging between 14 and 21 feet bgs was completed in June 1995. Elevated PID soil headspace readings (up to 261 ppm) were reported between 0 and 16 feet bgs in the eastern portion of the site. Soil sample analytical results identified low-level detections of DRO, GRO, BTEX compounds, and lead below their respective regulatory criteria. Groundwater was encountered between 4.81 and 9.72 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs, and lead exceeding regulatory criteria in the eastern portion of the site. Groundwater monitoring occurred through February 1997. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4510-06980	5619 CODY ST	~ 3225 ft (SR0000179)	~ 1195 ft (PB4586)	~ 185 ft (LS0007386) ~ 295 ft (LS0015314) ~ 495 ft (LS0004694)	~ 795 ft (211330)	~ 185 ft (TS0011186)	~ 0 ft (010-4510-07000)	No known release or contamination identified	LS0007386 is located at 7386 Cody Street, to the southeast of the site. A release was discovered during the removal of four USTs in May 1995. Soil confirmation samples collected from the UST basin sidewalls identified elevated detections of GRO (up to 7,640 mg/kg) exceeding MPCA UFC. A remedial investigation consisting of the advancement of seven borings to maximum depths ranging between 14 and 21 feet bgs was completed in June 1995. Elevated PID soil headspace readings (up to 261 ppm) were reported between 0 and 16 feet bgs in the eastern portion of the site. Soil sample analytical results identified low-level detections of DRO, GRO, BTEX compounds, and lead below their respective regulatory criteria. Groundwater was encountered between 4.81 and 9.72 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs, and lead exceeding regulatory criteria in the eastern portion of the site. Groundwater monitoring occurred through February 1997. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-07000	5615 CODY ST	~ 3205 ft (SR0000179)	~ 1165 ft (PB4586)	~ 150 ft (LS0007386) ~ 335 ft (LS0015314) ~ 455 ft (LS0004694) ~ 465 ft (LS0015929)	~ 755 ft (211330)	~ 150 ft (TS0011186)	~ 0 ft (010-4510-07020)	No known release or contamination identified	LS0007386 is located at 7386 Cody Street, to the southeast of the site. A release was discovered during the removal of four USTs in May 1995. Soil confirmation samples collected from the UST basin sidewalls identified elevated detections of GRO (up to 7,640 mg/kg) exceeding MPCA UFC. A remedial investigation consisting of the advancement of seven borings to maximum depths ranging between 14 and 21 feet bgs was completed in June 1995. Elevated PID soil headspace readings (up to 261 ppm) were reported between 0 and 16 feet bgs in the eastern portion of the site. Soil sample analytical results identified low-level detections of DRO, GRO, BTEX compounds, and lead below their respective regulatory criteria. Groundwater was encountered between 4.81 and 9.72 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs, and lead exceeding regulatory criteria in the eastern portion of the site. Groundwater monitoring occurred through February 1997. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-07020	5611 CODY ST	~ 3180 ft (SR0000179)	~ 1135 ft (PB4586)	~ 120 ft (LS0007386) ~ 375 ft (LS0015314) ~ 415 ft (LS0004694) ~ 425 ft (LS0015929)	~ 720 ft (211330)	~ 120 ft (TS0011186)	~ 0 ft (010-4510-07020)	No known release or contamination identified	LS0007386 is located at 7386 Cody Street, to the southeast of the site. A release was discovered during the removal of four USTs in May 1995. Soil confirmation samples collected from the UST basin sidewalls identified elevated detections of GRO (up to 7,640 mg/kg) exceeding MPCA UFC. A remedial investigation consisting of the advancement of seven borings to maximum depths ranging between 14 and 21 feet bgs was completed in June 1995. Elevated PID soil headspace readings (up to 261 ppm) were reported between 0 and 16 feet bgs in the eastern portion of the site. Soil sample analytical results identified low-level detections of DRO, GRO, BTEX compounds, and lead below their respective regulatory criteria. Groundwater was encountered between 4.81 and 9.72 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs, and lead exceeding regulatory criteria in the eastern portion of the site. Groundwater monitoring occurred through February 1997. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-07030	623 N 57TH AVE W	~ 3520 ft (SR0000179)	~ 1450 ft (BF0000261)	~ 370 ft (LS0015314) ~ 465 ft (LS0007386)	~ 1030 ft (211330)	~ 415 ft (TS0019328)	~ 0 ft (010-4520-11210)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-07050	621 N 57TH AVE W	~ 3500 ft (SR0000179)	~ 1425 ft (BF0000261)	~ 345 ft (LS0015314) ~ 445 ft (LS0007386)	~ 1015 ft (211330)	~ 445 ft (TS0011186)	~ 40 ft (010-4520-11210)	No known release or contamination identified		-

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LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4510-07060	617 N 57TH AVE W	~ 3460 ft (SR0000179)	~ 1375 ft (BF0000261)	~ 300 ft (LS0015314) ~ 410 ft (LS0007386)	~ 990 ft (211330)	~ 410 ft (TS0011186)	~ 0 ft (010-4510-07080)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-07080	615 N 57TH AVE W	~ 3440 ft (SR0000179)	~ 1350 ft (BF0000261)	~ 275 ft (LS0015314) ~ 390 ft (LS0007386)	~ 980 ft (211330)	~ 390 ft (TS0011186)	~ 0 ft (010-4510-07080)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-07090	613 N 57TH AVE W	~ 3420 ft (SR0000179)	~ 1325 ft (BF0000261)	~ 250 ft (LS0015314) ~ 375 ft (LS0007386)	~ 970 ft (211330)	~ 375 ft (TS0011186)	~ 0 ft (010-4510-07080)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-07100	611 N 57TH AVE W	~ 3395 ft (SR0000179)	~ 1305 ft (BF0000261)	~ 225 ft (LS0015314) ~ 360 ft (LS0007386)	~ 955 ft (211330)	~ 360 ft (TS0011186)	~ 0 ft (010-4510-07100)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-07110	609 N 57TH AVE W	~ 3365 ft (SR0000179)	~ 1265 ft (BF0000261)	~ 190 ft (LS0015314) ~ 335 ft (LS0007386)	~ 940 ft (211330)	~ 335 ft (TS0011186)	~ 0 ft (010-4510-07100)	No known release or contamination identified	LS0015314 is located at 5718 Cody Avenue, to the southwest of the site. The listing is associated with previous use of the facility as a gas station; petroleum impacts were detected in the northern portion of the former filling station near the dispensers and to the south the building. Investigations were completed in July and December 2003. Elevated soil PID headspace readings (up to 380 ppm) were reported between 0 and 10 feet bgs in the north-central and western portions of the site. Soil sample analytical results identified elevated detections of GRO, DRO, and BTEX compounds between 0 and 8 feet bgs in the northwestern and central portions of the site. Groundwater was encountered at 3 feet bgs in the former UST basin, and groundwater sample analytical results identified elevated detections of DRO, GRO, and various petroleum related VOCs. Soil analytical samples were analyzed for DRO, GRO, BTEX compounds and MTBE, and the groundwater analytical sample were analyzed for DRO, GRO, and full VOCs. Groundwater sampling data indicated the petroleum impacts did not extend offsite. No indication of additional remedial activities was documented in the MPCA digital file. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4510-07170	603 N 57TH AVE W	~ 3295 ft (SR0000179)	~ 1180 ft (BF0000261)	~ 115 ft (LS0015314) ~ 300 ft (LS0007386)	~ 910 ft (211330)	~ 300 ft (TS0011186)	~ 35 ft (010-4510-07110)	No known release or contamination identified	LS0015314 is located at 5718 Cody Avenue, to the southwest of the site. The listing is associated with previous use of the facility as a gas station; petroleum impacts were detected in the northern portion of the former filling station near the dispensers and to the south the building. Investigations were completed in July and December 2003. Elevated soil PID headspace readings (up to 380 ppm) were reported between 0 and 10 feet bgs in the north-central and western portions of the site. Soil sample analytical results identified elevated detections of GRO, DRO, and BTEX compounds between 0 and 8 feet bgs in the northwestern and central portions of the site. Groundwater was encountered at 3 feet bgs in the former UST basin, and groundwater sample analytical results identified elevated detections of DRO, GRO, and various petroleum related VOCs. Soil analytical samples were analyzed for DRO, GRO, BTEX compounds and MTBE, and the groundwater analytical sample were analyzed for DRO, GRO, and full VOCs. Groundwater sampling data indicated the petroleum impacts did not extend offsite. No indication of additional remedial activities was documented in the MPCA digital file.	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-11200	631 N 57TH AVE W	~ 3590 ft (SR0000179)	~ 1535 ft (BF0000261)	~ 450 ft (LS0015314)	~ 1075 ft (211330)	~ 325 ft (TS0019328)	~ 0 ft (010-4520-11210)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-11210	627 N 57TH AVE W	~ 3555 ft (SR0000179)	~ 1495 ft (BF0000261)	~ 410 ft (LS0015314) ~ 495 ft (LS0007386)	~ 1055 ft (211330)	~ 375 ft (TS0019328)	~ 0 ft (010-4520-11210)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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LSLR SPIRIT VALLEY
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4520-11220	636 N 57TH AVE W	~ 3530 ft (SR0000179)	~ 1450 ft (BF0002778)	~ 455 ft (LS0007314)	~ 955 ft (211330)	~ 340 ft (TS0019328)	~ 95 ft (010-4520-11210)	No known release or contamination identified		-
010-4520-11260	630 N 57TH AVE W	~ 3450 ft (SR0000179)	~ 1385 ft (PB4586)	~ 415 ft (LS0007386) ~ 490 ft (LS0015314)	~ 890 ft (211330)	~ 415 ft (TS0011186)	~ 40 ft (010-4510-06760)	No known release or contamination identified		-
010-4520-12370	5518 W 8TH ST	~ 4845 ft (SR0000179)	~ 1875 ft (BF0001086)	~ 945 ft (LS0016180)	~ 1575 ft (197060)	~ 1250 ft (TS0005249)	~ 180 ft (010-4520-12490)	No known release or contamination identified		-
010-4520-12400	5522 W 8TH ST	~ 4825 ft (SR0000179)	~ 1880 ft (BF0001086)	~ 910 ft (LS0016180)	~ 1565 ft (197060)	~ 1220 ft (TS0005249)	~ 145 ft (010-4520-12490)	No known release or contamination identified		-
010-4520-12630	1105 N CENTRAL AVE	~ 4750 ft (SR0000179)	~ 1815 ft (BF0001086)	~ 840 ft (LS0016180)	~ 1545 ft (16504)	~ 1155 ft (TS0005249)	~ 70 ft (010-4520-12490)	No known release or contamination identified		-
010-4520-12690	1019 N CENTRAL AVE	~ 4655 ft (SR0000179)	~ 1770 ft (BF0001086)	~ 735 ft (LS0016180)	~ 1485 ft (16504)	~ 1055 ft (TS0005249)	~ 15 ft (010-4520-12490)	No known release or contamination identified		-
010-4520-12700	1015 N CENTRAL AVE	~ 4605 ft (SR0000179)	~ 1745 ft (BF0001086)	~ 685 ft (LS0016180)	~ 1455 ft (16504)	~ 1005 ft (TS0005249)	~ 20 ft (010-4520-12490)	No known release or contamination identified		-
010-4520-12730	1011 N CENTRAL AVE	~ 4575 ft (SR0000179)	~ 1735 ft (BF0001086)	~ 655 ft (LS0016180)	~ 1435 ft (16504)	~ 970 ft (TS0005249)	~ 15 ft (010-4520-12550)	No known release or contamination identified		-
010-4520-12770	1007 N CENTRAL AVE	~ 4510 ft (SR0000179)	~ 1710 ft (BF0001086)	~ 595 ft (LS0016180)	~ 1400 ft (16504)	~ 905 ft (TS0005249)	~ 25 ft (010-4520-12550)	No known release or contamination identified		-
010-4520-12780	1003 N CENTRAL AVE	~ 4435 ft (SR0000179)	~ 1685 ft (BF0001086)	~ 530 ft (LS0016180)	~ 1360 ft (16504)	~ 830 ft (TS0005249)	~ 15 ft (010-4520-12610)	No known release or contamination identified		-
010-4520-12940	921 N CENTRAL AVE	~ 4340 ft (SR0000179)	~ 1655 ft (BF0001086)	~ 450 ft (LS0016180) ~ 450 ft (LS0018335)	~ 1315 ft (16504)	~ 730 ft (TS0005249)	~ 50 ft (010-4520-12610)	No known release or contamination identified		-
010-4520-12960	917 N CENTRAL AVE	~ 4295 ft (SR0000179)	~ 1645 ft (BF0001086)	~ 410 ft (LS0016180) ~ 410 ft (LS0018335)	~ 1295 ft (16504)	~ 680 ft (TS0005249)	~ 40 ft (010-4520-13000)	No known release or contamination identified		-
010-4520-12980	915 N CENTRAL AVE	~ 4255 ft (SR0000179)	~ 1635 ft (BF0001086)	~ 380 ft (LS0016180) ~ 380 ft (LS0018335)	~ 1275 ft (16504)	~ 640 ft (TS0005249)	~ 0 ft (010-4520-13000)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-13000	911 N CENTRAL AVE	~ 4220 ft (SR0000179)	~ 1630 ft (BF0001086)	~ 360 ft (LS0016180) ~ 360 ft (LS0018335)	~ 1265 ft (16504)	~ 605 ft (TS0005249)	~ 0 ft (010-4520-13000)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-13020	909 N CENTRAL AVE	~ 4195 ft (SR0000179)	~ 1625 ft (BF0001086)	~ 340 ft (LS0016180) ~ 340 ft (LS0018335)	~ 1255 ft (16504)	~ 580 ft (TS0005249)	~ 0 ft (010-4520-13000)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-13070	5505 W 6TH ST	~ 4095 ft (SR0000179)	~ 1590 ft (BF0002778)	~ 270 ft (LS0016180) ~ 270 ft (LS0018335) ~ 445 ft (LS0007314)	~ 1255 ft (16504)	~ 440 ft (TS0005249)	~ 0 ft (010-4520-13090)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-13680	631 N CENTRAL AVE	~ 3330 ft (SR0000179)	~ 1015 ft (BF0002778)	~ 290 ft (LS0007314) ~ 375 ft (LS0017860) ~ 380 ft (LS0004694)	~ 720 ft (211330)	~ 290 ft (TS0005249)	~ 0 ft (010-4520-13680)	Possible release on parcel	LS0007314 is located at 727 Central Avenue, to the north of the site. The listing is associated with the former school structure, which are currently tennis courts. The MPCA digital file was limited to a Minnesota Duty Officer Incident Report. A release was discovered in March 1994 during the removal of a 2,000 gallon fuel oil UST. Approximately 40 cubic yards of petroleum contaminated soil was removed during the UST removal and groundwater was not encountered. No further information was available for review. The exact location of the former UST is unknown. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-13690	629 N CENTRAL AVE	~ 3285 ft (SR0000179)	~ 990 ft (BF0002778)	~ 330 ft (LS0004694) ~ 340 ft (LS0007314) ~ 415 ft (LS0017860) ~ 450 ft (LS0015929)	~ 670 ft (211330)	~ 330 ft (TS0005344)	~ 0 ft (010-4520-13710)	No known release or contamination identified	LS0007314 is located at 727 Central Avenue, to the north of the site. The listing is associated with the former school structure, which are currently tennis courts. The MPCA digital file was limited to a Minnesota Duty Officer Incident Report. A release was discovered in March 1994 during the removal of a 2,000 gallon fuel oil UST. Approximately 40 cubic yards of petroleum contaminated soil was removed during the UST removal and groundwater was not encountered. No further information was available for review. The exact location of the former UST is unknown. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4520-13710	625 N CENTRAL AVE	~ 3240 ft (SR0000179)	~ 975 ft (BF0002778)	~ 285 ft (LS0004694) ~ 390 ft (LS0007314) ~ 405 ft (LS0015929) ~ 460 ft (LS0017860) ~ 485 ft (LS0007386)	~ 625 ft (211330)	~ 285 ft (TS0005344)	~ 0 ft (010-4520-13710)	No known release or contamination identified	LS0004694 is located at 601 North Central Avenue, to the south of the site. A release was discovered during the removal of a 550 gallon diesel UST in October 1991. Approximately 10 cubic yards of petroleum impacted soil was removed from the excavation for off-site disposal during the UST removals. Multiple investigations were completed between December 1994 and March 2000. A total of 13 soil borings were advanced to maximum depths ranging between 13 and 28 feet bgs. Elevated PID soil headspace readings (up to 1,895 ppm) were reported between 2 and 16 feet bgs in the eastern portion of the site. Groundwater was encountered between and 13 feet bgs across the site. Soil and groundwater sample analytical results identified elevated detections of GRO, DRO, and BTEX compounds between 9.5 and 20 feet bgs in the eastern portion of the site and extending into both the North Central Street and Cody Street right-of-way. Annual groundwater monitoring occurred between August 1995 and April 2000. Groundwater flow was measured to the south/southeast throughout the monitoring period. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-13730	634 N CENTRAL AVE	~ 3260 ft (SR0000179)	~ 835 ft (BF0002778)	~ 300 ft (LS0017860) ~ 330 ft (LS0001634) ~ 355 ft (LS0007314) ~ 405 ft (LS0004694) ~ 475 ft (LS0020520)	~ 695 ft (211330)	~ 355 ft (TS0005249)	~ 0 ft (010-4520-13740)	Possible release on parcel	LS0007314 is located at 727 Central Avenue, to the northwest of the site. The listing is associated with the former school structure, which are currently tennis courts. The MPCA digital file was limited to a Minnesota Duty Officer Incident Report. A release was discovered in March 1994 during the removal of a 2,000 gallon fuel oil UST. Approximately 40 cubic yards of petroleum contaminated soil was removed during the UST removal and groundwater was not encountered. No further information was available for review. The exact location of the former UST is unknown. LS0017860 Is located at 720 Central Avenue, to the north of the site. A release was identified during the removal of a 2,000 gallon fuel oil UST in December 2009. Approximately 164 cubic yards of petroleum impacted soil was removed from the site during the UST removal. Approximately 2-3 cubic yards of the impacted soil was saturated with free product. Slightly elevated PID soil headspace readings (up to 15.6 ppm) were recorded along the western sidewall of the excavation between 10 and 12 feet bgs. Confirmation soil analytical samples identified an elevated detection of DRO (151 mg/kg) exceeding MPCA UFC in the western sidewall of the excavation at 10 feet bgs. All other detections were below their respective regulatory criteria. No groundwater was encountered during the UST removal and no investigation or additional remedial activities were completed. Fuel tank on/adjacent to parcel	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4520-13740	628 N CENTRAL AVE	~ 3235 ft (SR0000179)	~ 825 ft (BF0002778)	~ 350 ft (LS0001634) ~ 350 ft (LS0017860) ~ 380 ft (LS0004694) ~ 400 ft (LS0007314) ~ 495 ft (LS0015929) ~ 495 ft (LS0020520)	~ 670 ft (211330)	~ 380 ft (TS0005344)	~ 0 ft (010-4520-13740)	No known release or contamination identified	LS0007314 is located at 727 Central Avenue, to the northwest of the site. The listing is associated with the former school structure, which are currently tennis courts. The MPCA digital file was limited to a Minnesota Duty Officer Incident Report. A release was discovered in March 1994 during the removal of a 2,000 gallon fuel oil UST. Approximately 40 cubic yards of petroleum contaminated soil was removed during the UST removal and groundwater was not encountered. No further information was available for review. The exact location of the former UST is unknown. LS0017860 Is located at 720 Central Avenue, to the north of the site. A release was identified during the removal of a 2,000 gallon fuel oil UST in December 2009. Approximately 164 cubic yards of petroleum impacted soil was removed from the site during the UST removal. Approximately 2-3 cubic yards of the impacted soil was saturated with free product. Slightly elevated PID soil headspace readings (up to 15.6 ppm) were recorded along the western sidewall of the excavation between 10 and 12 feet bgs. Confirmation soil analytical samples identified an elevated detection of DRO (151 mg/kg) exceeding MPCA UFC in the western sidewall of the excavation at 10 feet bgs. All other detections were below their respective regulatory criteria. No groundwater was encountered during the UST removal and no investigation or additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-13750	626 N CENTRAL AVE	~ 3210 ft (SR0000179)	~ 810 ft (BF0002778)	~ 360 ft (LS0004694) ~ 360 ft (LS0001634) ~ 375 ft (LS0017860) ~ 420 ft (LS0007314) ~ 475 ft (LS0015929)	~ 645 ft (211330)	~ 360 ft (TS0005344)	~ 0 ft (010-4520-13740)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-13760	624 N CENTRAL AVE	~ 3170 ft (SR0000179)	~ 790 ft (BF0002778)	~ 320 ft (LS0004694) ~ 375 ft (LS0001634) ~ 400 ft (LS0017860) ~ 430 ft (LS0015929) ~ 440 ft (LS0007314)	~ 595 ft (211330)	~ 320 ft (TS0005344)	~ 0 ft (010-4520-13750)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-14800	4809 W 4TH ST	~ 3765 ft (SR0000179)	~ 795 ft (BF0001086)	~ 295 ft (LS0004704) ~ 430 ft (LS0020520)	~ 415 ft (16504)	~ 295 ft (TS0015382)	~ 0 ft (010-4520-14830)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-14850	4817 W 4TH ST	~ 3700 ft (SR0000179)	~ 865 ft (BF0001086)	~ 245 ft (LS0004704) ~ 340 ft (LS0020520) ~ 450 ft (LS0001634) ~ 500 ft (LS0017860)	~ 460 ft (16504)	~ 245 ft (TS0015382)	~ 0 ft (010-4520-14830)	No known release or contamination identified	LS0004704 is located at 4825 Grand Avenue, to the southeast of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4520-14854	4819 W 4TH ST	~ 3765 ft (SR0000179)	~ 925 ft (BF0001086)	~ 330 ft (LS0004704) ~ 395 ft (LS0020520) ~ 485 ft (LS0001634) ~ 490 ft (LS0017860)	~ 535 ft (16504)	~ 330 ft (TS0015382)	~ 0 ft (010-4520-14830)	No known release or contamination identified	LS0004704 is located at 4825 Grand Avenue, to the southeast of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-14860	4821 W 4TH ST	~ 3685 ft (SR0000179)	~ 905 ft (BF0001086)	~ 240 ft (LS0004704) ~ 320 ft (LS0020520) ~ 425 ft (LS0001634) ~ 465 ft (LS0017860)	~ 485 ft (16504)	~ 240 ft (TS0015382)	~ 40 ft (010-4520-15190)	No known release or contamination identified	LS0004704 is located at 4825 Grand Avenue, to the southeast of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed.	-

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LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4520-14880	4823 W 4TH ST	~ 3635 ft (SR0000179)	~ 920 ft (BF0001086)	~ 230 ft (LS0004704) ~ 265 ft (LS0020520) ~ 355 ft (LS0001634) ~ 390 ft (LS0017860)	~ 505 ft (16504)	~ 230 ft (TS0015382)	~ 15 ft (010-4520-15190)	No known release or contamination identified	LS0004704 is located at 4825 Grand Avenue, to the southeast of the site. A release was discovered during the removal of a 2,000 gallon fuel oil UST in October 1991. Approximately 340 cubic yards of petroleum impacted soil was removed rom the excavation for off-site disposal during the UST removal. Soils encountered generally consisted of silty clay fill with brick, concrete, and glass debris extending to a maximum depth of approximately 20 feet bgs. Elevated PID soil headspace readings (up to 68 ppm) were reported in the sidewall of the excavation between 10 and 13 feet bgs. Confirmation soil sample analytical results identified elevated detections of TPH as fuel oil (up to 592 mg/kg) in the northern portion of the excavation basin. An investigation consisting of the advancement of three soil borings to maximum depths ranging between 21.5 and 24 feet bgs was completed in March 1992. No elevated PID soil headspace readings were reported. Soil and groundwater sample analytical results identified low-level detections of BTEX and TPH as fuel oil. Small, discontinuous perched water lenses were encountered throughout the site. Groundwater was measured between 9.1 and 23.6 feet bgs during the investigation. Soil and groundwater samples were analyzed for BTEX and TPH as fuel oil only. No additional remedial activities were completed.	-
010-4520-15020	423 N 48TH AVE W	~ 3980 ft (SR0000179)	~ 915 ft (BF0001086)	~ 520 ft (LS0004704)	~ 605 ft (16504)	~ 520 ft (TS0015382)	~ 0 ft (010-4520-15050)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15050	415 N 48TH AVE W	~ 3940 ft (SR0000179)	~ 865 ft (BF0001086)	~ 470 ft (LS0004704)	~ 540 ft (16504)	~ 470 ft (TS0015382)	~ 0 ft (010-4520-15050)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15070	4806 W 5TH ST	~ 3905 ft (SR0000179)	~ 890 ft (BF0001086)	~ 445 ft (LS0004704)	~ 550 ft (16504)	~ 445 ft (TS0015382)	~ 10 ft (010-4520-15050)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15090	4810 W 5TH ST	~ 3875 ft (SR0000179)	~ 910 ft (BF0001086)	~ 420 ft (LS0004704)	~ 555 ft (16504)	~ 420 ft (TS0015382)	~ 15 ft (010-4520-14830)	No known release or contamination identified		-
010-4520-15110	4812 W 5TH ST	~ 3845 ft (SR0000179)	~ 940 ft (BF0001086)	~ 400 ft (LS0004704) ~ 475 ft (LS0020520)	~ 570 ft (16504)	~ 400 ft (TS0015382)	~ 15 ft (010-4520-14830)	No known release or contamination identified		-
010-4520-15140	4818 W 5TH ST	~ 3825 ft (SR0000179)	~ 975 ft (BF0001086)	~ 390 ft (LS0004704) ~ 450 ft (LS0020520) ~ 500 ft (LS0017860)	~ 590 ft (16504)	~ 390 ft (TS0015382)	~ 15 ft (010-4520-14830)	No known release or contamination identified		-
010-4520-15160	4822 W 5TH ST	~ 3800 ft (SR0000179)	~ 995 ft (BF0001086)	~ 385 ft (LS0004704) ~ 425 ft (LS0020520) ~ 460 ft (LS0017860) ~ 495 ft (LS0001634)	~ 605 ft (16504)	~ 385 ft (TS0015382)	~ 35 ft (010-4520-15190)	No known release or contamination identified		-
010-4520-15170	4824 W 5TH ST	~ 3780 ft (SR0000179)	~ 1025 ft (BF0001086)	~ 380 ft (LS0004704) ~ 405 ft (LS0020520) ~ 425 ft (LS0017860) ~ 470 ft (LS0001634)	~ 625 ft (16504)	~ 380 ft (TS0015382)	~ 0 ft (010-4520-15190)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15190	4828 W 5TH ST	~ 3755 ft (SR0000179)	~ 1050 ft (BF0001086)	~ 380 ft (LS0004704) ~ 385 ft (LS0017860) ~ 385 ft (LS0020520) ~ 440 ft (LS0001634)	~ 645 ft (16504)	~ 380 ft (TS0015382)	~ 0 ft (010-4520-15190)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15280	4801 W 5TH ST	~ 4105 ft (SR0000179)	~ 1045 ft (BF0001086)	~ 655 ft (LS0004704)	~ 750 ft (16504)	~ 655 ft (TS0015382)	~ 15 ft (010-4520-15500)	No known release or contamination identified		-
010-4520-15290	4805 W 5TH ST	~ 4075 ft (SR0000179)	~ 1065 ft (BF0001086)	~ 635 ft (LS0004704)	~ 755 ft (16504)	~ 635 ft (TS0015382)	~ 0 ft (010-4520-15320)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15320	4809 W 5TH ST	~ 4045 ft (SR0000179)	~ 1090 ft (BF0001086)	~ 610 ft (LS0017860)	~ 765 ft (16504)	~ 620 ft (TS0015382)	~ 0 ft (010-4520-15320)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4520-15340	4815 W 5TH ST	~ 4015 ft (SR0000179)	~ 1130 ft (BF0001086)	~ 560 ft (LS0017860)	~ 780 ft (16504)	~ 605 ft (TS0015382)	~ 0 ft (010-4520-15350)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15350	4817 W 5TH ST	~ 3985 ft (SR0000179)	~ 1140 ft (BF0001086)	~ 510 ft (LS0017860)	~ 790 ft (16504)	~ 595 ft (TS0015382)	~ 0 ft (010-4520-15350)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15370	4821 W 5TH ST	~ 3960 ft (SR0000179)	~ 1170 ft (BF0001086)	~ 465 ft (LS0017860)	~ 805 ft (16504)	~ 590 ft (TS0015382)	~ 0 ft (010-4520-15400)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15400	4827 W 5TH ST	~ 3930 ft (SR0000179)	~ 1200 ft (BF0001086)	~ 420 ft (LS0017860)	~ 825 ft (16504)	~ 580 ft (TS0005738)	~ 0 ft (010-4520-15400)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15500	517 N 48TH AVE W	~ 4205 ft (SR0000179)	~ 1180 ft (BF0001086)	~ 720 ft (LS0017860)	~ 900 ft (16504)	~ 780 ft (TS0015382)	~ 0 ft (010-4520-15500)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15510	4808 W 6TH ST	~ 4165 ft (SR0000179)	~ 1215 ft (BF0001086)	~ 665 ft (LS0017860)	~ 905 ft (16504)	~ 760 ft (TS0015382)	~ 0 ft (010-4520-15500)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15512	4814 W 6TH ST	~ 4145 ft (SR0000179)	~ 1245 ft (BF0001086)	~ 635 ft (LS0017860)	~ 920 ft (16504)	~ 755 ft (TS0015382)	~ 15 ft (010-4520-15320)	No known release or contamination identified		-
010-4520-15560	4818 W 6TH ST	~ 4110 ft (SR0000179)	~ 1270 ft (BF0001086)	~ 580 ft (LS0017860)	~ 930 ft (16504)	~ 740 ft (TS0005249)	~ 15 ft (010-4520-15350)	No known release or contamination identified		-
010-4520-15600	4824 W 6TH ST	~ 4080 ft (SR0000179)	~ 1310 ft (BF0001086)	~ 530 ft (LS0017860)	~ 955 ft (16504)	~ 680 ft (TS0005249)	~ 0 ft (010-4520-15620)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15620	4826 W 6TH ST	~ 4050 ft (SR0000179)	~ 1325 ft (BF0001086)	~ 490 ft (LS0017860)	~ 965 ft (16504)	~ 630 ft (TS0005249)	~ 0 ft (010-4520-15620)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15630	4830 W 6TH ST	~ 4030 ft (SR0000179)	~ 1355 ft (BF0001086)	~ 460 ft (LS0017860)	~ 985 ft (16504)	~ 595 ft (TS0005249)	~ 0 ft (010-4520-15620)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15670	4836 W 6TH ST	~ 3995 ft (SR0000179)	~ 1400 ft (BF0001086)	~ 415 ft (LS0017860)	~ 1015 ft (16504)	~ 530 ft (TS0005249)	~ 75 ft (010-4520-15620)	No known release or contamination identified		-
010-4520-15700	822 N CENTRAL AVE	~ 3970 ft (SR0000179)	~ 1390 ft (BF0002778)	~ 390 ft (LS0017860) ~ 450 ft (LS0007314) ~ 480 ft (LS0016180) ~ 480 ft (LS0018335)	~ 1010 ft (16504)	~ 450 ft (TS0005249)	~ 90 ft (010-4520-15620)	No known release or contamination identified		-
010-4520-15730	820 N CENTRAL AVE	~ 3935 ft (SR0000179)	~ 1360 ft (BF0002778)	~ 350 ft (LS0017860) ~ 415 ft (LS0007314) ~ 480 ft (LS0016180) ~ 480 ft (LS0018335)	~ 1000 ft (16504)	~ 415 ft (TS0005249)	~ 115 ft (010-4520-15620)	No known release or contamination identified		-
010-4520-15810	4721 W 5TH ST	~ 4250 ft (SR0000179)	~ 920 ft (BF0001086)	~ 790 ft (LS0004704)	~ 735 ft (16504)	~ 790 ft (TS0015382)	~ 40 ft (010-4520-15960)	No known release or contamination identified		-
010-4520-15830	4723 W 5TH ST	~ 4250 ft (SR0000179)	~ 980 ft (BF0001086)	~ 780 ft (LS0004704)	~ 765 ft (16504)	~ 780 ft (TS0015382)	~ 80 ft (010-3610-10292)	No known release or contamination identified		-
010-4520-15940	4706 W 6TH ST	~ 4490 ft (SR0000179)	~ 1100 ft (BF0001086)	~ 945 ft (LS0002989)	~ 960 ft (16504)	~ 945 ft (TS0014075)	~ 0 ft (010-4520-15960)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15980	4714 W 6TH ST	~ 4440 ft (SR0000179)	~ 1105 ft (BF0001086)	~ 975 ft (LS0004704)	~ 935 ft (16504)	~ 975 ft (TS0015382)	~ 0 ft (010-4520-15960)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-15990	4718 W 6TH ST	~ 4395 ft (SR0000179)	~ 1105 ft (BF0001086)	~ 925 ft (LS0004704)	~ 920 ft (16504)	~ 925 ft (TS0015382)	~ 25 ft (010-4520-15960)	No known release or contamination identified		-

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LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4520-16020	4722 W 6TH ST	~ 4380 ft (SR0000179)	~ 1120 ft (BF0001086)	~ 910 ft (LS0004704)	~ 915 ft (16504)	~ 910 ft (TS0015382)	~ 80 ft (010-4520-16540)	No known release or contamination identified		-
010-4520-16040	4724 W 6TH ST	~ 4360 ft (SR0000179)	~ 1125 ft (BF0001086)	~ 895 ft (LS0004704)	~ 910 ft (16504)	~ 895 ft (TS0015382)	~ 80 ft (010-4520-16540)	No known release or contamination identified		-
010-4520-16060	4726 W 6TH ST	~ 4330 ft (SR0000179)	~ 1130 ft (BF0001086)	~ 870 ft (LS0004704)	~ 900 ft (16504)	~ 870 ft (TS0015382)	~ 80 ft (010-4520-16540)	No known release or contamination identified		-
010-4520-16100	4806 W 7TH ST	~ 4545 ft (SR0000179)	~ 1555 ft (BF0001086)	~ 805 ft (LS0016180)	~ 1285 ft (16504)	~ 1040 ft (TS0005249)	~ 100 ft (010-4520-16340)	No known release or contamination identified		-
010-4520-16140	1012 N CENTRAL AVE	~ 4485 ft (SR0000179)	~ 1530 ft (BF0001086)	~ 735 ft (LS0016180)	~ 1245 ft (16504)	~ 955 ft (TS0005249)	~ 40 ft (010-4520-16340)	No known release or contamination identified		-
010-4520-16190	1006 N CENTRAL AVE	~ 4405 ft (SR0000179)	~ 1500 ft (BF0001086)	~ 675 ft (LS0016180)	~ 1195 ft (16504)	~ 875 ft (TS0005249)	~ 15 ft (010-4520-16340)	No known release or contamination identified		-
010-4520-16225	926 N CENTRAL AVE	~ 4320 ft (SR0000179)	~ 1470 ft (BF0001086)	~ 615 ft (LS0016180)	~ 1150 ft (16504)	~ 790 ft (TS0005249)	~ 15 ft (010-4520-16340)	No known release or contamination identified		-
010-4520-16270	902 N CENTRAL AVE	~ 4215 ft (SR0000179)	~ 1480 ft (BF0001086)	~ 540 ft (LS0016180)	~ 1150 ft (16504)	~ 655 ft (TS0005249)	~ 60 ft (010-4520-16340)	No known release or contamination identified		-
010-4520-16300	4803 W 6TH ST	~ 4395 ft (SR0000179)	~ 1380 ft (BF0001086)	~ 855 ft (LS0016180)	~ 1110 ft (16504)	~ 975 ft (TS0005249)	~ 50 ft (010-4520-16340)	No known release or contamination identified		-
010-4520-16320	4805 W 6TH ST	~ 4385 ft (SR0000179)	~ 1395 ft (BF0001086)	~ 835 ft (LS0016180)	~ 1115 ft (16504)	~ 950 ft (TS0005249)	~ 25 ft (010-4520-16340)	No known release or contamination identified		-
010-4520-16330	4807 W 6TH ST	~ 4370 ft (SR0000179)	~ 1405 ft (BF0001086)	~ 810 ft (LS0016180)	~ 1115 ft (16504)	~ 930 ft (TS0005249)	~ 0 ft (010-4520-16340)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16380	4701 W 6TH ST	~ 4675 ft (SR0000179)	~ 1310 ft (BF0001086)	~ 1100 ft (LS0002989)	~ 1170 ft (16504)	~ 1100 ft (TS0014075)	~ 35 ft (010-4520-16420)	No known release or contamination identified		-
010-4520-16420	4709 W 6TH ST	~ 4630 ft (SR0000179)	~ 1315 ft (BF0001086)	~ 1145 ft (LS0002989)	~ 1150 ft (16504)	~ 1145 ft (TS0014075)	~ 0 ft (010-4520-16420)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16450	4711 W 6TH ST	~ 4605 ft (SR0000179)	~ 1315 ft (BF0001086)	~ 1145 ft (LS0004704)	~ 1140 ft (16504)	~ 1145 ft (TS0015382)	~ 0 ft (010-4520-16420)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16460	4717 W 6TH ST	~ 4585 ft (SR0000179)	~ 1320 ft (BF0001086)	~ 1125 ft (LS0004704)	~ 1135 ft (16504)	~ 1125 ft (TS0015382)	~ 0 ft (010-4520-16460)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16500	4721 W 6TH ST	~ 4545 ft (SR0000179)	~ 1325 ft (BF0001086)	~ 1075 ft (LS0017860)	~ 1120 ft (16504)	~ 1090 ft (TS0015382)	~ 0 ft (010-4520-16540)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16540	4723 W 6TH ST	~ 4515 ft (SR0000179)	~ 1330 ft (BF0001086)	~ 1030 ft (LS0017860)	~ 1115 ft (16504)	~ 1065 ft (TS0015382)	~ 0 ft (010-4520-16540)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16550	4727 W 6TH ST	~ 4500 ft (SR0000179)	~ 1340 ft (BF0001086)	~ 1010 ft (LS0017860)	~ 1115 ft (16504)	~ 1055 ft (TS0015382)	~ 0 ft (010-4520-16540)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16590	4702 W 7TH ST	~ 4845 ft (SR0000179)	~ 1520 ft (BF0001086)	~ 1295 ft (LS0002989)	~ 1375 ft (16504)	~ 1295 ft (TS0014075)	~ 0 ft (010-4520-16610)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16610	4706 W 7TH ST	~ 4815 ft (SR0000179)	~ 1520 ft (BF0001086)	~ 1285 ft (LS0016180)	~ 1360 ft (16504)	~ 1315 ft (TS0014075)	~ 0 ft (010-4520-16610)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16650	643 N 47TH AVE W	~ 4795 ft (SR0000179)	~ 1490 ft (BF0001086)	~ 1270 ft (LS0002989)	~ 1330 ft (16504)	~ 1270 ft (TS0014075)	~ 0 ft (010-4520-16610)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16690	641 N 47TH AVE W	~ 4770 ft (SR0000179)	~ 1460 ft (BF0001086)	~ 1240 ft (LS0002989)	~ 1305 ft (16504)	~ 1240 ft (TS0014075)	~ 15 ft (010-4520-16420)	No known release or contamination identified		-

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LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4520-16700	4710 W 7TH ST	~ 4745 ft (SR0000179)	~ 1460 ft (BF0001086)	~ 1250 ft (LS0016180)	~ 1295 ft (16504)	~ 1280 ft (TS0014075)	~ 0 ft (010-4520-16610)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16800	4724 W 7TH ST	~ 4645 ft (SR0000179)	~ 1475 ft (BF0001086)	~ 1075 ft (LS0016180)	~ 1265 ft (16504)	~ 1205 ft (TS0015382)	~ 15 ft (010-4520-16540)	No known release or contamination identified		-
010-4520-16820	4728 W 7TH ST	~ 4620 ft (SR0000179)	~ 1485 ft (BF0001086)	~ 1035 ft (LS0016180)	~ 1260 ft (16504)	~ 1190 ft (TS0015382)	~ 15 ft (010-4520-16540)	No known release or contamination identified		-
010-4520-16860	4627 W 6TH ST	~ 4610 ft (SR0001641)	~ 1310 ft (BF0000986)	~ 1035 ft (LS0002989)	~ 1275 ft (16504)	~ 1035 ft (TS0014075)	~ 0 ft (010-2600-00160)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-16880	4629 W 6TH ST	~ 4635 ft (SR0001641)	~ 1310 ft (BF0000986)	~ 1040 ft (LS0002989)	~ 1260 ft (16504)	~ 1040 ft (TS0014075)	~ 0 ft (010-4520-16910)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-17020	4701 W 7TH ST	~ 4960 ft (SR0000179)	~ 1670 ft (BF0001086)	~ 1335 ft (LS0016180)	~ 1515 ft (16504)	~ 1440 ft (TS0014075)	~ 55 ft (010-4520-17180)	No known release or contamination identified		-
010-4520-17060	4707 W 7TH ST	~ 4940 ft (SR0000179)	~ 1670 ft (BF0001086)	~ 1300 ft (LS0016180)	~ 1510 ft (16504)	~ 1460 ft (TS0014075)	~ 20 ft (010-4520-17180)	No known release or contamination identified		-
010-4520-17070	4709 W 7TH ST	~ 4910 ft (SR0000179)	~ 1670 ft (BF0001086)	~ 1250 ft (LS0016180)	~ 1500 ft (16504)	~ 1460 ft (TS0005249)	~ 15 ft (010-4520-17180)	No known release or contamination identified		-
010-4520-17090	4715 W 7TH ST	~ 4880 ft (SR0000179)	~ 1675 ft (BF0001086)	~ 1200 ft (LS0016180)	~ 1490 ft (16504)	~ 1415 ft (TS0005249)	~ 0 ft (010-4520-17110)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-17110	4719 W 7TH ST	~ 4865 ft (SR0000179)	~ 1680 ft (BF0001086)	~ 1175 ft (LS0016180)	~ 1485 ft (16504)	~ 1395 ft (TS0005249)	~ 0 ft (010-4520-17110)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-17250	1202 N CENTRAL AVE	~ 4980 ft (SR0000179)	~ 1800 ft (BF0001086)	~ 1165 ft (LS0016180)	~ 1610 ft (16504)	~ 1450 ft (TS0005249)	~ 0 ft (010-4520-17230)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4520-17270	1126 N CENTRAL AVE	~ 4930 ft (SR0000179)	~ 1770 ft (BF0001086)	~ 1120 ft (LS0016180)	~ 1570 ft (16504)	~ 1405 ft (TS0005249)	~ 15 ft (010-4520-17110)	No known release or contamination identified		-
010-4520-17290	1122 N CENTRAL AVE	~ 4895 ft (SR0000179)	~ 1745 ft (BF0001086)	~ 1090 ft (LS0016180)	~ 1540 ft (16504)	~ 1365 ft (TS0005249)	~ 15 ft (010-4520-17110)	No known release or contamination identified		-
010-4520-17330	1116 N CENTRAL AVE	~ 4835 ft (SR0000179)	~ 1710 ft (BF0001086)	~ 1035 ft (LS0016180)	~ 1490 ft (16504)	~ 1305 ft (TS0005249)	~ 65 ft (010-4520-17110)	No known release or contamination identified		-
010-4520-17350	1112 N CENTRAL AVE	~ 4720 ft (SR0000179)	~ 1695 ft (BF0001086)	~ 910 ft (LS0016180)	~ 1470 ft (16504)	~ 1160 ft (TS0005249)	~ 100 ft (010-4520-17110)	No known release or contamination identified		-
010-4520-17670	4611 W 7TH ST	~ 4785 ft (SR0001641)	~ 1640 ft (PB4011)	~ 1380 ft (LS0002989)	~ 1650 ft (16504)	~ 1185 ft (TS0055372)	~ 30 ft (010-4520-17420)	No known release or contamination identified		-
010-4520-17690	4615 W 7TH ST	~ 4815 ft (SR0001641)	~ 1650 ft (PB4011)	~ 1380 ft (LS0002989)	~ 1635 ft (16504)	~ 1215 ft (TS0055372)	~ 65 ft (010-4520-17420)	No known release or contamination identified		-
010-4520-17710	4617 W 7TH ST	~ 4835 ft (SR0001641)	~ 1660 ft (PB4011)	~ 1385 ft (LS0002989)	~ 1620 ft (16504)	~ 1240 ft (TS0055372)	~ 40 ft (010-4520-17540)	No known release or contamination identified		-
010-4520-17730	4619 W 7TH ST	~ 4855 ft (SR0001641)	~ 1665 ft (PB4011)	~ 1390 ft (LS0002989)	~ 1605 ft (16504)	~ 1265 ft (TS0055372)	~ 15 ft (010-4520-17540)	No known release or contamination identified		-
010-4520-17750	4623 W 7TH ST	~ 4880 ft (SR0001641)	~ 1670 ft (BF0000986)	~ 1395 ft (LS0002989)	~ 1595 ft (16504)	~ 1295 ft (TS0055372)	~ 15 ft (010-4520-17540)	No known release or contamination identified		-
010-4520-17760	4625 W 7TH ST	~ 4900 ft (SR0001641)	~ 1670 ft (BF0000986)	~ 1400 ft (LS0002989)	~ 1575 ft (16504)	~ 1315 ft (TS0055372)	~ 15 ft (010-4520-17560)	No known release or contamination identified		-
010-4520-17780	4631 W 7TH ST	~ 4935 ft (SR0001641)	~ 1675 ft (BF0000986)	~ 1410 ft (LS0002989)	~ 1560 ft (16504)	~ 1355 ft (TS0055372)	~ 15 ft (010-4520-17560)	No known release or contamination identified		-

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-00190	5219 WADENA ST	~ 2265 ft (SR0000179)	~ 150 ft (BF002517) ~ 330 ft (BF0002778)	~ 315 ft (LS0008602)	~ 575 ft (211330)	~ 315 ft (TS0005318)	~ 95 ft (010-4470-00340)	Possible release on parcel	BF0002517 is located at 519 North 52nd Avenue West, adjacent to the north of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. LS0002085/LS0017591 occupy both 5430 Grand Avenue and 428 North Central Avenue, to the west of the site. LS0002085 was reported in November 1989, during UST updates. Response actions included free product recovery, groundwater and vapor monitoring and sampling, and completion of a pilot test work plan. The work completed under LS0002085 identified several potential source areas and a petroleum impacted groundwater plume that extended 1,000 feet from the 5430 Grand Avenue parcel to the south/southeast. In May 2009, the MPCA closed LS0002085 and LS0017591 was opened for the off-site petroleum contamination that was previously identified. Investigations across both Leak Sites included the advancement of 91 soil borings to maximum depths ranging between 10 and 30 feet bgs and the completion of 38 monitoring wells. Soils encountered generally consist of clay extending up to 10 feet bgs, and underlain by a discontinuous sand unit that has varying thickness and is located between 10 and 22 feet bgs. Groundwater was encountered at depths ranging between 6 and 18 feet bgs. The groundwater and mobile LNAPL identified occupied the sand unit. Soil analytical samples identified elevated detections of DRO, GRO, and various petroleum VOCs between 2 and 16 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs and several chlorinated solvents. LNAPL recovery occurred in select wells between January 1997 and June 2017, and a total of 238 gallons was recovered. The investigations identified two source areas between North Central Avenue and North 54th Avenue West and between Grand Avenue and approximately 200 feet north of Ramsey Street. By the last LNAPL recovery event, the mobile LNAPL extent was calculated to be < 10,000 square feet and the recharge rate was less than 1 gallon per day.	Conduct environmental monitoring during excavation.

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-00620	524 N 52ND AVE W	~ 2460 ft (SR0000179)	~ 200 ft (BF002517) ~ 215 ft (BF0002778) ~ 390 ft (VP17170)	~ 390 ft (LS0015052) ~ 390 ft (LS0004897)	~ 390 ft (208954)	~ 390 ft (TS0054012)	~ 0 ft (010-4530-00620)	Possible release on parcel	BF0002517 is located at 519 North 52nd Avenue West, adjacent to the west of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for site redevelopment in May 2024. The listing is currently active and no remedial activities were available for review. BF0002778 is located at 531 North 52nd Avenue West, to the northwest of the site. A Phase II ESA was completed in April 2024. The investigation consisted of eight soil brings advanced to maximum depths of 10 to 25 feet bgs. Soils encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal/cinder was encountered in the northern portion of the site between 0 and 12 feet bgs. No elevated soil PID headspace readings were reported and all soil sample analytical results were below their respective regulatory criteria. Groundwater was encountered at depths ranging between 2.57 and 12.23 feet bgs; however no samples were collected. The range in depths observed was attributed to the site's topography. A CCP was issued for site redevelopment in April 2024. The listing is currently active and no remedial activities were available for review. LS0015052/LS0004897 is located at 503 North 50th Avenue West, to the northeast of the site. A Phase II ESA consisting of the advancement of 11 soil borings to maximum depths ranging between 10 and 24 feet bgs was completed in December 1991. Soil encountered generally consisted of clay and silty clay with occasional silty sand/silt stringers less than 1 foot thick. Elevated PID soil headspace readings (up to 401 ppm) were reported in the northwestern and southwestern portions of the site between 6 and 16 feet bgs. Soil sample analytical results identified low level detections of THC as gasoline and BTEX compounds between 6 and 10 feet bgs in the southwestern portion of the site. Soil samples were analyzed or BTEX compounds and THC as gasoline. Groundwater was generally encountered at 6 feet bgs across the site. Groundwater analytical samples identified elevated detections of THC as gasoline and several PVOCs exceeding regulatory criteria in the southwestern portion of the site. Groundwater samples were analyzed for THC as gasoline and VOCs. In June 2003, impacted soil was encountered in the western portion of the site during storm sewer construction. Approximately 495 cubic yards of petroleum impacted soil was excavated for off-site disposal. Soil confirmation samples identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria in the southwestern portion of the site, between 5 and 7 feet bgs. No additional investigation or remedial activities were completed. VP17170 is located at 503 North 50th Avenue West, to the northeast of the site. Impacted soils were encountered during construction activities in November 2002. A test pit investigation was completed and soil analytical samples were collected from on-site stockpiled soils. Soils encountered generally consisted of silty clay with occasional sand and peat layers. An apparent petroleum odor was observed in	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
									connection with the organic soils and PID soil headspace readings (up to 13 ppm) were reported. Soil analytical results identified generally low-level detections of various PVOCs, PAHs, solvents, and metals. TCLP analysis was competed for select samples and identified a detection of cadmium exceeding the hazardous limit. Approximatley 563 cubic yards of impacted soil was removed from the site for off-site disposal in May 2003. Fuel tank on/adjacent to parcel	

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-00640	514 N 52ND AVE W	~ 2370 ft (SR0000179)	~ 200 ft (BF002517) ~ 255 ft (BF0002778) ~ 375 ft (VP17170)	~ 375 ft (LS0015052) ~ 375 ft (LS0004897)	~ 370 ft (208954)	~ 375 ft (TS0054012)	~ 0 ft (010-4530-00620)	Possible release on parcel	BF0002517 is located at 519 North 52nd Avenue West, adjacent to the west of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. BF0002778 is located at 531 North 52nd Avenue West, to the northwest of the site. A Phase II ESA was completed in April 2024. The investigation consisted of eight soil brings advanced to maximum depths of 10 to 25 feet bgs. Soils encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal/cinder was encountered in the northern portion of the site between 0 and 12 feet bgs. No elevated soil PID headspace readings were reported and all soil sample analytical results were below their respective regulatory criteria. Groundwater was encountered at depths ranging between 2.57 and 12.23 feet bgs; however no samples were collected. The range in depths observed was attributed to the site's topography. A CCP was issued for site redevelopment in April 2024. The listing is currently active and no remedial activities were available for review. LS0015052/LS0004897 is located at 503 North 50th Avenue West, to the northeast of the site. A Phase II ESA consisting of the advancement of 11 soil borings to maximum depths ranging between 10 and 24 feet bgs was completed in December 1991. Soil encountered generally consisted of clay and silty clay with occasional silty sand/silt stringers less than 1 foot thick. Elevated PID soil headspace readings (up to 401 ppm) were reported in the northwestern and southwestern portions of the site between 6 and 16 feet bgs. Soil sample analytical results identified low level detections of THC as gasoline and BTEX compounds between 6 and 10 feet bgs in the southwestern portion of the site. Soil samples were analyzed or BTEX compounds and THC as gasoline. Groundwater was generally encountered at 6 feet bgs across the site. Groundwater analytical samples identified elevated detections of THC as gasoline and several PVOCs exceeding regulatory criteria in the southwestern portion of the site. Groundwater samples were analyzed for THC as gasoline and VOCs. In June 2003, impacted soil was encountered in the western portion of the site during storm sewer construction. Approximately 495 cubic yards of petroleum impacted soil was excavated for off-site disposal. Soil confirmation samples identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria in the southwestern portion of the site, between 5 and 7 feet bgs. No additional investigation or remedial activities were completed. VP17170 is located at 503 North 50th Avenue West, to the northeast of the site. Impacted soils were encountered during construction activities in November 2002. A test pit investigation was completed and soil analytical samples were collected from on-site stockpiled soils. Soils encountered generally consisted of silty clay with occasional sand and peat layers. An apparent petroleum odor was observed in	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
									connection with the organic soils and PID soil headspace readings (up to 13 ppm) were reported. Soil analytical results identified generally low-level detections of various PVOCs, PAHs, solvents, and metals. TCLP analysis was competed for select samples and identified a detection of cadmium exceeding the hazardous limit. Approximatley 563 cubic yards of impacted soil was removed from the site for off-site disposal in May 2003. Fuel tank on/adjacent to parcel	

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		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-00680	510 N 52ND AVE W	~ 2335 ft (SR0000179)	~ 205 ft (BF002517) ~ 320 ft (BF0002778) ~ 440 ft (VP17170)	~ 440 ft (LS0015052) ~ 440 ft (LS0004897) ~ 495 ft (LS0008602)	~ 430 ft (208954)	~ 440 ft (TS0054012)	~ 0 ft (010-4530-00640)	Possible release on parcel	BF0002517 is located at 519 North 52nd Avenue West, adjacent to the west of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. BF0002778 is located at 531 North 52nd Avenue West, to the northwest of the site. A Phase II ESA was completed in April 2024. The investigation consisted of eight soil brings advanced to maximum depths of 10 to 25 feet bgs. Soils encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal/cinder was encountered in the northern portion of the site between 0 and 12 feet bgs. No elevated soil PID headspace readings were reported and all soil sample analytical results were below their respective regulatory criteria. Groundwater was encountered at depths ranging between 2.57 and 12.23 feet bgs; however no samples were collected. The range in depths observed was attributed to the site's topography. A CCP was issued for site redevelopment in April 2024. The listing is currently active and no remedial activities were available for review. LS0015052/LS0004897 is located at 503 North 50th Avenue West, to the northeast of the site. A Phase II ESA consisting of the advancement of 11 soil borings to maximum depths ranging between 10 and 24 feet bgs was completed in December 1991. Soil encountered generally consisted of clay and silty clay with occasional silty sand/silt stringers less than 1 foot thick. Elevated PID soil headspace readings (up to 401 ppm) were reported in the northwestern and southwestern portions of the site between 6 and 16 feet bgs. Soil sample analytical results identified low level detections of THC as gasoline and BTEX compounds between 6 and 10 feet bgs in the southwestern portion of the site. Soil samples were analyzed or BTEX compounds and THC as gasoline. Groundwater was generally encountered at 6 feet bgs across the site. Groundwater analytical samples identified elevated detections of THC as gasoline and several PVOCs exceeding regulatory criteria in the southwestern portion of the site. Groundwater samples were analyzed for THC as gasoline and VOCs. In June 2003, impacted soil was encountered in the western portion of the site during storm sewer construction. Approximately 495 cubic yards of petroleum impacted soil was excavated for off-site disposal. Soil confirmation samples identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria in the southwestern portion of the site, between 5 and 7 feet bgs. No additional investigation or remedial activities were completed. VP17170 is located at 503 North 50th Avenue West, to the northeast of the site. Impacted soils were encountered during construction activities in November 2002. A test pit investigation was completed and soil analytical samples were collected from on-site stockpiled soils. Soils encountered generally consisted of silty clay with occasional sand and peat layers. An apparent petroleum odor was observed in	Conduct environmental monitoring during excavation. Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
									connection with the organic soils and PID soil headspace readings (up to 13 ppm) were reported. Soil analytical results identified generally low-level detections of various PVOCs, PAHs, solvents, and metals. TCLP analysis was competed for select samples and identified a detection of cadmium exceeding the hazardous limit. Approximatley 563 cubic yards of impacted soil was removed from the site for off-site disposal in May 2003. Fuel tank on/adjacent to parcel	

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-00750	5111 WADENA ST	~ 2225 ft (SR0000179)	~ 315 ft (BF002517) ~ 420 ft (BF0002778) ~ 475 ft (VP17170)	~ 475 ft (LS0015052) ~ 475 ft (LS0004897) ~ 475 ft (LS0008602)	~ 470 ft (208954)	~ 475 ft (TS0054012)	~ 45 ft (010-4530-00640)	Possible release on parcel	BF0002517 is located at 519 North 52nd Avenue West, to the west of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. BF0002778 is located at 531 North 52nd Avenue West, to the northwest of the site. A Phase II ESA was completed in April 2024. The investigation consisted of eight soil brings advanced to maximum depths of 10 to 25 feet bgs. Soils encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal/cinder was encountered in the northern portion of the site between 0 and 12 feet bgs. No elevated soil PID headspace readings were reported and all soil sample analytical results were below their respective regulatory criteria. Groundwater was encountered at depths ranging between 2.57 and 12.23 feet bgs; however no samples were collected. The range in depths observed was attributed to the site's topography. A CCP was issued for site redevelopment in April 2024. The listing is currently active and no remedial activities were available for review. LS0015052/LS0004897 is located at 503 North 50th Avenue West, to the northeast of the site. A Phase II ESA consisting of the advancement of 11 soil borings to maximum depths ranging between 10 and 24 feet bgs was completed in December 1991. Soil encountered generally consisted of clay and silty clay with occasional silty sand/silt stringers less than 1 foot thick. Elevated PID soil headspace readings (up to 401 ppm) were reported in the northwestern and southwestern portions of the site between 6 and 16 feet bgs. Soil sample analytical results identified low level detections of THC as gasoline and BTEX compounds between 6 and 10 feet bgs in the southwestern portion of the site. Soil samples were analyzed or BTEX compounds and THC as gasoline. Groundwater was generally encountered at 6 feet bgs across the site. Groundwater analytical samples identified elevated detections of THC as gasoline and several PVOCs exceeding regulatory criteria in the southwestern portion of the site. Groundwater samples were analyzed for THC as gasoline and VOCs. In June 2003, impacted soil was encountered in the western portion of the site during storm sewer construction. Approximately 495 cubic yards of petroleum impacted soil was excavated for off-site disposal. Soil confirmation samples identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria in the southwestern portion of the site, between 5 and 7 feet bgs. No additional investigation or remedial activities were completed. VP17170 is located at 503 North 50th Avenue West, to the northeast of the site. Impacted soils were encountered during construction activities in November 2002. A test pit investigation was completed and soil analytical samples were collected from on-site stockpiled soils. Soils encountered generally consisted of silty clay with occasional sand and peat layers. An apparent petroleum odor was observed in connection with the organic soils and PID soil headspace	Conduct environmental monitoring during excavation.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
									readings (up to 13 ppm) were reported. Soil analytical results identified generally low-level detections of various PVOCs, PAHs, solvents, and metals. TCLP analysis was competed for select samples and identified a detection of cadmium exceeding the hazardous limit. Approximatley 563 cubic yards of impacted soil was removed from the site for off-site disposal in May 2003.	
010-4530-02790	415 N 50TH AVE W	~ 1975 ft (SR0000179)	~ 610 ft (SA0004492)	~ 610 ft (LS0011658)	~ 590 ft (25262)	~ 590 ft (TS0055483)	~ 30 ft (010-4530-03130)	No known release or contamination identified		-
010-4530-02920	432 N 51ST AVE W	~ 2140 ft (SR0000179)	~ 545 ft (VP17170)	~ 545 ft (LS0015052)	~ 540 ft (208954)	~ 545 ft (TS0054012)	~ 0 ft (010-4530-02920)	No known release or contamination identified	LS0015052/LS0004897 is located at 503 North 50th Avenue West, to the north of the site. A Phase II ESA consisting of the advancement of 11 soil borings to maximum depths ranging between 10 and 24 feet bgs was completed in December 1991. Soil encountered generally consisted of clay and silty clay with occasional silty sand/silt stringers less than 1 foot thick. Elevated PID soil headspace readings (up to 401 ppm) were reported in the northwestern and southwestern portions of the site between 6 and 16 feet bgs. Soil sample analytical results identified low level detections of THC as gasoline and BTEX compounds between 6 and 10 feet bgs in the southwestern portion of the site. Soil samples were analyzed or BTEX compounds and THC as gasoline. Groundwater was generally encountered at 6 feet bgs across the site. Groundwater analytical samples identified elevated detections of THC as gasoline and several PVOCs exceeding regulatory criteria in the southwestern portion of the site. Groundwater samples were analyzed for THC as gasoline and VOCs. In June 2003, impacted soil was encountered in the western portion of the site during storm sewer construction. Approximately 495 cubic yards of petroleum impacted soil was excavated for off-site disposal. Soil confirmation samples identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria in the southwestern portion of the site, between 5 and 7 feet bgs. No additional investigation or remedial activities were completed. VP17170 is located at 503 North 50th Avenue West, to the north of the site. Impacted soils were encountered during construction activities in November 2002. A test pit investigation was completed and soil analytical samples were collected from on-site stockpiled soils. Soils encountered generally consisted of silty clay with occasional sand and peat layers. An apparent petroleum odor was observed in connection with the organic soils and PID soil headspace readings (up to 13 ppm) were reported. Soil analytical results identified generally low-level detections of various PVOCs, PAHs, solvents, and metals. TCLP analysis was competed for select samples and identified a detection of cadmium exceeding the hazardous limit. Approximatley 563 cubic yards of impacted soil was removed from the site for off-site disposal in May 2003. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-02970	428 N 51ST AVE W	~ 2090 ft (SR0000179)	~ 595 ft (VP17170)	~ 595 ft (LS0015052)	~ 590 ft (208954)	~ 595 ft (TS0054012)	~ 25 ft (010-4530-02920)	No known release or contamination identified	LS0015052/LS0004897 is located at 503 North 50th Avenue West, to the north of the site. A Phase II ESA consisting of the advancement of 11 soil borings to maximum depths ranging between 10 and 24 feet bgs was completed in December 1991. Soil encountered generally consisted of clay and silty clay with occasional silty sand/silt stringers less than 1 foot thick. Elevated PID soil headspace readings (up to 401 ppm) were reported in the northwestern and southwestern portions of the site between 6 and 16 feet bgs. Soil sample analytical results identified low level detections of THC as gasoline and BTEX compounds between 6 and 10 feet bgs in the southwestern portion of the site. Soil samples were analyzed or BTEX compounds and THC as gasoline. Groundwater was generally encountered at 6 feet bgs across the site. Groundwater analytical samples identified elevated detections of THC as gasoline and several PVOCs exceeding regulatory criteria in the southwestern portion of the site. Groundwater samples were analyzed for THC as gasoline and VOCs. In June 2003, impacted soil was encountered in the western portion of the site during storm sewer construction. Approximately 495 cubic yards of petroleum impacted soil was excavated for off-site disposal. Soil confirmation samples identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria in the southwestern portion of the site, between 5 and 7 feet bgs. No additional investigation or remedial activities were completed. VP17170 is located at 503 North 50th Avenue West, to the north of the site. Impacted soils were encountered during construction activities in November 2002. A test pit investigation was completed and soil analytical samples were collected from on-site stockpiled soils. Soils encountered generally consisted of silty clay with occasional sand and peat layers. An apparent petroleum odor was observed in connection with the organic soils and PID soil headspace readings (up to 13 ppm) were reported. Soil analytical results identified generally low-level detections of various PVOCs, PAHs, solvents, and metals. TCLP analysis was competed for select samples and identified a detection of cadmium exceeding the hazardous limit. Approximatley 563 cubic yards of impacted soil was removed from the site for off-site disposal in May 2003.	-

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-03020	430 N 51ST AVE W	~ 2115 ft (SR0000179)	~ 570 ft (VP17170)	~ 570 ft (LS0015052)	~ 565 ft (208954)	~ 570 ft (TS0054012)	~ 0 ft (010-4530-02920)	No known release or contamination identified	LS0015052/LS0004897 is located at 503 North 50th Avenue West, to the north of the site. A Phase II ESA consisting of the advancement of 11 soil borings to maximum depths ranging between 10 and 24 feet bgs was completed in December 1991. Soil encountered generally consisted of clay and silty clay with occasional silty sand/silt stringers less than 1 foot thick. Elevated PID soil headspace readings (up to 401 ppm) were reported in the northwestern and southwestern portions of the site between 6 and 16 feet bgs. Soil sample analytical results identified low level detections of THC as gasoline and BTEX compounds between 6 and 10 feet bgs in the southwestern portion of the site. Soil samples were analyzed or BTEX compounds and THC as gasoline. Groundwater was generally encountered at 6 feet bgs across the site. Groundwater analytical samples identified elevated detections of THC as gasoline and several PVOCs exceeding regulatory criteria in the southwestern portion of the site. Groundwater samples were analyzed for THC as gasoline and VOCs. In June 2003, impacted soil was encountered in the western portion of the site during storm sewer construction. Approximately 495 cubic yards of petroleum impacted soil was excavated for off-site disposal. Soil confirmation samples identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria in the southwestern portion of the site, between 5 and 7 feet bgs. No additional investigation or remedial activities were completed. VP17170 is located at 503 North 50th Avenue West, to the north of the site. Impacted soils were encountered during construction activities in November 2002. A test pit investigation was completed and soil analytical samples were collected from on-site stockpiled soils. Soils encountered generally consisted of silty clay with occasional sand and peat layers. An apparent petroleum odor was observed in connection with the organic soils and PID soil headspace readings (up to 13 ppm) were reported. Soil analytical results identified generally low-level detections of various PVOCs, PAHs, solvents, and metals. TCLP analysis was competed for select samples and identified a detection of cadmium exceeding the hazardous limit. Approximatley 563 cubic yards of impacted soil was removed from the site for off-site disposal in May 2003. Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.
010-4530-03080	422 N 51ST AVE W	~ 2030 ft (SR0000179)	~ 655 ft (BF002517)	~ 600 ft (LS0008602)	~ 650 ft (208954)	~ 600 ft (TS0005318)	~ 85 ft (010-4530-02920)	No known release or contamination identified		-
010-4530-03090	420 N 51ST AVE W	~ 2005 ft (SR0000179)	~ 670 ft (BF002517)	~ 595 ft (LS0008602)	~ 675 ft (208954)	~ 595 ft (TS0005318)	~ 75 ft (010-4530-03130)	No known release or contamination identified		-
010-4530-03130	410 N 51ST AVE W	~ 1880 ft (SR0000179)	~ 735 ft (BF002517)	~ 590 ft (LS0008602)	~ 625 ft (25262)	~ 590 ft (TS0005318)	~ 0 ft (010-4530-03130)	No known release or contamination identified	Fuel tank on/adjacent to parcel	Notify contractor of potential for contamination to be present from either fuel oil tank or spill.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-03240	431 N 51ST AVE W	~ 2110 ft (SR0000179)	~ 435 ft (BF002517)	~ 445 ft (LS0008602)	~ 560 ft (208954)	~ 445 ft (TS0005318)	~ 65 ft (010-4530-02920)	No known release or contamination identified	LS0015052/LS0004897 is located at 503 North 50th Avenue West, to the north of the site. A Phase II ESA consisting of the advancement of 11 soil borings to maximum depths ranging between 10 and 24 feet bgs was completed in December 1991. Soil encountered generally consisted of clay and silty clay with occasional silty sand/silt stringers less than 1 foot thick. Elevated PID soil headspace readings (up to 401 ppm) were reported in the northwestern and southwestern portions of the site between 6 and 16 feet bgs. Soil sample analytical results identified low level detections of THC as gasoline and BTEX compounds between 6 and 10 feet bgs in the southwestern portion of the site. Soil samples were analyzed or BTEX compounds and THC as gasoline. Groundwater was generally encountered at 6 feet bgs across the site. Groundwater analytical samples identified elevated detections of THC as gasoline and several PVOCs exceeding regulatory criteria in the southwestern portion of the site. Groundwater samples were analyzed for THC as gasoline and VOCs. In June 2003, impacted soil was encountered in the western portion of the site during storm sewer construction. Approximately 495 cubic yards of petroleum impacted soil was excavated for off-site disposal. Soil confirmation samples identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria in the southwestern portion of the site, between 5 and 7 feet bgs. No additional investigation or remedial activities were completed. VP17170 is located at 503 North 50th Avenue West, to the north of the site. Impacted soils were encountered during construction activities in November 2002. A test pit investigation was completed and soil analytical samples were collected from on-site stockpiled soils. Soils encountered generally consisted of silty clay with occasional sand and peat layers. An apparent petroleum odor was observed in connection with the organic soils and PID soil headspace readings (up to 13 ppm) were reported. Soil analytical results identified generally low-level detections of various PVOCs, PAHs, solvents, and metals. TCLP analysis was competed for select samples and identified a detection of cadmium exceeding the hazardous limit. Approximatley 563 cubic yards of impacted soil was removed from the site for off-site disposal in May 2003.	-
010-4530-03430	415 N 51ST AVE W	~ 1920 ft (SR0000179)	~ 570 ft (BF002517)	~ 400 ft (LS0008602)	~ 740 ft (208954)	~ 400 ft (TS0005318)	~ 65 ft (010-4530-03130)	No known release or contamination identified		-
010-4530-03460	409 N 51ST AVE W	~ 1870 ft (SR0000179)	~ 635 ft (BF002517)	~ 400 ft (LS0008602)	~ 785 ft (25262)	~ 400 ft (TS0005318)	~ 65 ft (010-4530-03130)	No known release or contamination identified		-
010-4530-03480	5103 RAMSEY ST	~ 1760 ft (SR0000179)	~ 705 ft (BF002517)	~ 480 ft (LS0008602)	~ 755 ft (25262)	~ 480 ft (TS0005318)	~ 90 ft (010-4530-03130)	No known release or contamination identified		-

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-03560	430 N 52ND AVE W	~ 2120 ft (SR0000179)	~ 335 ft (BF002517)	~ 330 ft (LS0008602)	~ 610 ft (208954)	~ 330 ft (TS0005318)	~ 205 ft (010-4530-02920)	No known release or contamination identified	LS0015052/LS0004897 is located at 503 North 50th Avenue West, to the northeast of the site. A Phase II ESA consisting of the advancement of 11 soil borings to maximum depths ranging between 10 and 24 feet bgs was completed in December 1991. Soil encountered generally consisted of clay and silty clay with occasional silty sand/silt stringers less than 1 foot thick. Elevated PID soil headspace readings (up to 401 ppm) were reported in the northwestern and southwestern portions of the site between 6 and 16 feet bgs. Soil sample analytical results identified low level detections of THC as gasoline and BTEX compounds between 6 and 10 feet bgs in the southwestern portion of the site. Soil samples were analyzed or BTEX compounds and THC as gasoline. Groundwater was generally encountered at 6 feet bgs across the site. Groundwater analytical samples identified elevated detections of THC as gasoline and several PVOCs exceeding regulatory criteria in the southwestern portion of the site. Groundwater samples were analyzed for THC as gasoline and VOCs. In June 2003, impacted soil was encountered in the western portion of the site during storm sewer construction. Approximately 495 cubic yards of petroleum impacted soil was excavated for off-site disposal. Soil confirmation samples identified elevated detections of DRO, GRO, and BTEX compounds exceeding regulatory criteria in the southwestern portion of the site, between 5 and 7 feet bgs. No additional investigation or remedial activities were completed. VP17170 is located at 503 North 50th Avenue West, to the northeast of the site. Impacted soils were encountered during construction activities in November 2002. A test pit investigation was completed and soil analytical samples were collected from on-site stockpiled soils. Soils encountered generally consisted of silty clay with occasional sand and peat layers. An apparent petroleum odor was observed in connection with the organic soils and PID soil headspace readings (up to 13 ppm) were reported. Soil analytical results identified generally low-level detections of various PVOCs, PAHs, solvents, and metals. TCLP analysis was competed for select samples and identified a detection of cadmium exceeding the hazardous limit. Approximatley 563 cubic yards of impacted soil was removed from the site for off-site disposal in May 2003. BF0002517 is located at 519 North 52nd Avenue West, to the northwest of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review.	-
010-4530-03670	422 N 52ND AVE W	~ 2020 ft (SR0000179)	~ 430 ft (BF002517)	~ 280 ft (LS0008602)	~ 710 ft (208954)	~ 280 ft (TS0005318)	~ 225 ft (010-4530-02920)	No known release or contamination identified		-
010-4530-03720	412 N 52ND AVE W	~ 1895 ft (SR0000179)	~ 545 ft (BF002517)	~ 260 ft (LS0008602)	~ 825 ft (208954)	~ 260 ft (TS0005318)	~ 205 ft (010-4530-03130)	No known release or contamination identified		-
010-4530-03730	410 N 52ND AVE W	~ 1870 ft (SR0000179)	~ 570 ft (BF002517)	~ 260 ft (LS0008602)	~ 850 ft (208954)	~ 260 ft (TS0005318)	~ 205 ft (010-4530-03130)	No known release or contamination identified		-

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LSLR SPIRIT VALLEY
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Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-03790	5210 WADENA ST	~ 2075 ft (SR0000179)	~ 270 ft (BF002517) ~ 475 ft (BF0002778)	~ 160 ft (LS0008602)	~ 755 ft (211330)	~ 160 ft (TS0005318)	~ 205 ft (010-4470-00340)	No known release or contamination identified	BF0002517 is located at 519 North 52nd Avenue West, to the north of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. LS0008602 is located at 400 North 53rd Avenue West, adjacent to the south of the site. The listing is associated with a UST that was removed in July 1995. A remedial investigation was completed in August 1995, and consisted of the advancement of five soil borings to maximum depths of 11.5 and 21.5 feet bgs. Soil encountered generally consisted of clay overlying sand. No elevated PID soil headspace readings were reported and only one low-level detection of DRO was identified from the soil sample analytical results. Soil samples were analyzed for DRO and BTEX compounds. Groundwater was encountered between 10.48 and 15.29 feet bgs. Groundwater samples were collected in August and November of 1995 and groundwater analytical results identified low level concentrations of bromomethane and chloromethane. A detection of DRO (115 ug/L) was identified during the initial round of sampling; however, a method blank detection of DRO (120 ug/L) was also reported. Groundwater flow was calculated to the northeast. The report estimated that less than 175 cubic yards of impacted soil remains on-site. Additional remedial activities were not completed.	-
010-4530-03830	425 N 52ND AVE W	~ 2070 ft (SR0000179)	~ 350 ft (BF002517)	~ 190 ft (LS0008602)	~ 775 ft (208954)	~ 190 ft (TS0005318)	~ 260 ft (010-4470-00340)	No known release or contamination identified	LS0008602 is located at 400 North 53rd Avenue West, adjacent to the south of the site. The listing is associated with a UST that was removed in July 1995. A remedial investigation was completed in August 1995, and consisted of the advancement of five soil borings to maximum depths of 11.5 and 21.5 feet bgs. Soil encountered generally consisted of clay overlying sand. No elevated PID soil headspace readings were reported and only one low-level detection of DRO was identified from the soil sample analytical results. Soil samples were analyzed for DRO and BTEX compounds. Groundwater was encountered between 10.48 and 15.29 feet bgs. Groundwater samples were collected in August and November of 1995 and groundwater analytical results identified low level concentrations of bromomethane and chloromethane. A detection of DRO (115 ug/L) was identified during the initial round of sampling; however, a method blank detection of DRO (120 ug/L) was also reported. Groundwater flow was calculated to the northeast. The report estimated that less than 175 cubic yards of impacted soil remains on-site. Additional remedial activities were not completed.	-

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-03870	421 N 52ND AVE W	~ 2030 ft (SR0000179)	~ 380 ft (BF002517)	~ 130 ft (LS0008602)	~ 795 ft (211330)	~ 130 ft (TS0005318)	~ 220 ft (010-4470-00340)	No known release or contamination identified	LS0008602 is located at 400 North 53rd Avenue West, adjacent to the west of the site. The listing is associated with a UST that was removed in July 1995. A remedial investigation was completed in August 1995, and consisted of the advancement of five soil borings to maximum depths of 11.5 and 21.5 feet bgs. Soil encountered generally consisted of clay overlying sand. No elevated PID soil headspace readings were reported and only one low-level detection of DRO was identified from the soil sample analytical results. Soil samples were analyzed for DRO and BTEX compounds. Groundwater was encountered between 10.48 and 15.29 feet bgs. Groundwater samples were collected in August and November of 1995 and groundwater analytical results identified low level concentrations of bromomethane and chloromethane. A detection of DRO (115 ug/L) was identified during the initial round of sampling; however, a method blank detection of DRO (120 ug/L) was also reported. Groundwater flow was calculated to the northeast. The report estimated that less than 175 cubic yards of impacted soil remains on-site. Additional remedial activities were not completed.	-
010-4530-03910	411 N 52ND AVE W	~ 1880 ft (SR0000179)	~ 460 ft (BF002517)	~ 70 ft (LS0008602) ~ 475 ft (LS0006440)	~ 835 ft (211330)	~ 70 ft (TS0005318)	~ 255 ft (010-4470-00340)	Possible release on parcel	LS0008602 is located at 400 North 53rd Avenue West, adjacent to the west of the site. The listing is associated with a UST that was removed in July 1995. A remedial investigation was completed in August 1995, and consisted of the advancement of five soil borings to maximum depths of 11.5 and 21.5 feet bgs. Soil encountered generally consisted of clay overlying sand. No elevated PID soil headspace readings were reported and only one low-level detection of DRO was identified from the soil sample analytical results. Soil samples were analyzed for DRO and BTEX compounds. Groundwater was encountered between 10.48 and 15.29 feet bgs. Groundwater samples were collected in August and November of 1995 and groundwater analytical results identified low level concentrations of bromomethane and chloromethane. A detection of DRO (115 ug/L) was identified during the initial round of sampling; however, a method blank detection of DRO (120 ug/L) was also reported. Groundwater flow was calculated to the northeast. The report estimated that less than 175 cubic yards of impacted soil remains on-site. Additional remedial activities were not completed.	Conduct environmental monitoring during excavation.

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Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
010-4530-03990	5220 WADENA ST	~ 2105 ft (SR0000179)	~ 295 ft (BF002517) ~ 490 ft (BF0002778) ~ 495 ft (PB4586) ~ 495 ft (VP31320) ~ 495 ft (SA0004563) ~ 495 ft (SA0004563)	~ 155 ft (LS0008602)	~ 620 ft (211330)	~ 155 ft (TS0005318)	~ 65 ft (010-4470-00340)	Possible release on parcel	LS0002085/LS0017591 occupy both 5430 Grand Avenue and 428 North Central Avenue, to the west of the site. LS0002085 was reported in November 1989, during UST updates. Response actions included free product recovery, groundwater and vapor monitoring and sampling, and completion of a pilot test work plan. The work completed under LS0002085 identified several potential source areas and a petroleum impacted groundwater plume that extended 1,000 feet from the 5430 Grand Avenue parcel to the south/southeast. In May 2009, the MPCA closed LS0002085 and LS0017591 was opened for the off-site petroleum contamination that was previously identified. Investigations across both Leak Sites included the advancement of 91 soil borings to maximum depths ranging between 10 and 30 feet bgs and the completion of 38 monitoring wells. Soils encountered generally consist of clay extending up to 10 feet bgs, and underlain by a discontinuous sand unit that has varying thickness and is located between 10 and 22 feet bgs. Groundwater was encountered at depths ranging between 6 and 18 feet bgs. The groundwater and mobile LNAPL identified occupied the sand unit. Soil analytical samples identified elevated detections of DRO, GRO, and various petroleum VOCs between 2 and 16 feet bgs. Groundwater sample analytical results identified elevated detections of DRO, GRO, various PVOCs and several chlorinated solvents. LNAPL recovery occurred in select wells between January 1997 and June 2017, and a total of 238 gallons was recovered. The investigations identified two source areas between North Central Avenue and North 54th Avenue West and between Grand Avenue and approximately 200 feet north of Ramsey Street. By the last LNAPL recovery event, the mobile LNAPL extent was calculated to be < 10,000 square feet and the recharge rate was less than 1 gallon per day. BF0002517 is located at 519 North 52nd Avenue West, to the north of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. LS0008602 is located at 400 North 53rd Avenue West, adjacent to the south of the site. The listing is associated with a UST that was removed in July 1995. A remedial investigation was completed in August 1995, and consisted of the advancement of five soil borings to maximum depths of 11.5 and 21.5 feet bgs. Soil encountered generally consisted of clay overlying sand. No elevated PID soil headspace readings were reported and only one low-level detection of DRO was identified from the soil sample analytical results. Soil samples were analyzed for DRO and BTEX compounds. Groundwater was encountered between 10.48 and 15.29 feet bgs. Groundwater samples were collected in August and November of 1995 and groundwater analytical results identified low level concentrations of bromomethane and chloromethane. A detection of DRO (115 ug/L) was identified during the initial round of sampling; however, a method blank detection of DRO (120 ug/L) was also reported. Groundwater flow was calculated to the northeast. The report estimated	Conduct environmental monitoring during excavation.

Table 1 - Environmental Parcel Summary
LSLR SPIRIT VALLEY
2026 City-Wide Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

Parcel ID	Street Address	Closest Potential Contamination Sources						Environmental Status based on Regulatory Review	Environmental Note	Recommendations
		Superfund	Investigation / Cleanup Site	Petroleum Leak Site	Spill Site	Commercial Tank	Heating Fuel Tank			
									that less than 175 cubic yards of impacted soil remains on-site. Additional remedial activities were not completed.	
010-4530-04030	5212 WADENA ST	~ 2085 ft (SR0000179)	~ 270 ft (BF002517) ~ 475 ft (BF0002778)	~ 150 ft (LS0008602)	~ 715 ft (211330)	~ 150 ft (TS0005318)	~ 165 ft (010-4470-00340)	No known release or contamination identified	BF0002517 is located at 519 North 52nd Avenue West, to the north of the site. A Phase II ESA was completed in March 2023. The investigation consisted of four soil brings advanced to maximum depths of 10 to 20 feet bgs and collection of one soil vapor sample. Soil encountered consisted of sand and sandy silt overlaying clay. Debris consisting of coal and glass was encountered in the western portion of the site at 1 to 1.5 feet bgs. No elevated soil PID headspace readings were reported. Soil sample analytical results identified a detection of lead (283 mg/kg) exceeding the rSRV (200 mg/kg) between 5 and 7.5 feet bgs. Groundwater was encountered in the western portion of the site at a depth of 6 to 8 feet bgs. All groundwater and soil vapor sample analytical results were below their respective regulatory levels. A CCP was issued for trail construction in June 2024. The listing is currently active and no remedial activities were available for review. LS0008602 is located at 400 North 53rd Avenue West, adjacent to the south of the site. The listing is associated with a UST that was removed in July 1995. A remedial investigation was completed in August 1995, and consisted of the advancement of five soil borings to maximum depths of 11.5 and 21.5 feet bgs. Soil encountered generally consisted of clay overlying sand. No elevated PID soil headspace readings were reported and only one low-level detection of DRO was identified from the soil sample analytical results. Soil samples were analyzed for DRO and BTEX compounds. Groundwater was encountered between 10.48 and 15.29 feet bgs. Groundwater samples were collected in August and November of 1995 and groundwater analytical results identified low level concentrations of bromomethane and chloromethane. A detection of DRO (115 ug/L) was identified during the initial round of sampling; however, a method blank detection of DRO (120 ug/L) was also reported. Groundwater flow was calculated to the northeast. The report estimated that less than 175 cubic yards of impacted soil remains on-site. Additional remedial activities were not completed.	-

Construction Contingency Plan

Duluth Lead Service Line Replacement Projects

Duluth, St. Louis County, Minnesota

DULUT 183604 | January 7, 2026

SEH

Building a Better World for All of Us®

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January 7, 2026

RE: Construction Contingency Plan
Duluth Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota
SEH No. DULUT 183604

Jon Maruska, Senior Engineering Specialist
City of Duluth
Engineering Division
411 West First Street, City Hall Room 240
Duluth, MN 55802

Dear Mr. Maruska:

Please find enclosed the Contingency Plan for the Duluth Lead Service Line Replacement Projects in Duluth, St. Louis County, Minnesota. Please feel free to contact me directly at 651.262.6715 or msherrill@sehinc.com if you have any questions or comments.

Sincerely,

Mark Sherrill

Mark Sherrill, PG (MN, WI)
Project Manager

Certification

Construction Contingency Plan
Duluth Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

SEH No. DULUT 183604

January 7, 2026

Mark Sherrill, PG (MN, WI)
Project Manager

Robert Hawkins, PG (MN, WI)
Environmental Scientist

Short Elliott Hendrickson Inc.
3535 Vadnais Center Drive
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Distribution

No. of Copies	Sent to
1	Jon Maruska, Senior Engineering Specialist City of Duluth Engineering Division 411 West First Street, City Hall Room 240 Duluth, MN 55802

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Construction Contingency Plan

Duluth Lead Service Line Replacement Projects

Prepared for the City of Duluth

1 Introduction

Short Elliott Hendrickson Inc. (SEH®) was retained by the City of Duluth (herein referred to as the "City") to develop a Construction Contingency Plan (CCP) that will be implemented during the Duluth Lead Service Line Replacement (LSLR) projects (herein referred to as the "LSLR Projects").

The City is anticipating to complete LSLRs for five separate neighborhoods during the 2025 construction season. Additional neighborhoods will receive LSLRs in the 2026 construction season and beyond. This CCP is intended to be used for LSLR Projects for the 2025 construction season and beyond.

For the purposes of this CCP, the responsibility of deciding whether environmental oversight and/or implementation of engineering controls will be completed is that of the Designated Environmental Specialist (DES). The DES may be a project engineer, an environmental consultant, or another individual deemed acceptable by the City. For the 2025 LSLR Projects, the City has formally identified an engineering representative to fulfill the role of DES.

1.1 Background

The City is planning for the replacement of lead service lines (LSLs) using funding from the Minnesota Department of Health (MDH) Minnesota Drinking Water Revolving Fund (DWRF) Program. LSLs are the primary source of lead exposure in drinking water and were the most common material used for water services within the City through 1929 and in the early 1940s. The recently proposed Lead and Copper Rule Improvements (LCRI) is expected to require the vast majority of water systems to replace LSLs within a period of 10 years. The City's current water service inventory indicates that there are approximately 31,200 water services in Duluth. The City's current estimate of LSLs and galvanized requiring replacement (GRR) is 10,700 services.

In accordance with the MDH DWRF Program funding requirements, plans and specifications are to be provided to the MDH for review along with an Environmental Review and Section 106 exemption checklists. Prior to the implementation of the LSLR projects, the City will have completed an Environmental Due Diligence Review. The Environetmnal Due Diligence Reviews generally consisted of evaluating the potential that contaminated soil and/or groundwater may be encountered during the project through a review of reasonably ascertainable records from standard government databases including the following:

- MPCA Groundwater Contamination Atlas
- MPCA Institutional Control Sites

- MPCA's What's in my Neighborhood (WIMN)
- MPCA's Incident Reports (Spill Sites)
- Minnesota Department of Agriculture's (MDA's) WIMN
- St Louis County's parcel database for residences with a fuel tank on-site.

The Environmental Due Diligence Review includes recommendations where a potential release or documented release was identified. Recommendations include:

- Conducting environmental monitoring during installation of the new service line;
- Use of a copper service line rather than high-density polyurethane (HDPE);
- Notifying the contractor of the potential for contamination to be present.

The Environmental Due Diligence Review completed for the LSLR projects are included under separate cover.

1.2 Construction Contingency Plan Scope and Objectives

The objective of the CCP is to manage regulated material (defined below) if encountered, in a manner that protects human health, welfare and the environment from releases or threatened releases of hazardous substances, pollutants, or contaminants.

Regulated materials refer to any materials on the project that do not satisfy the Minnesota Pollution Control Agency (MPCA) Unregulated Fill Criteria, as outlined in the MPCA Best Management Practices for Off-site Reuse of Unregulated Fill (guidance document c-rem1-01 - MPCA, February 2012). Any regulated materials encountered during construction will be evaluated using the MPCA's risk-based approach. See **Section 3** for more details

The CCP is limited to construction-related actions and is not intended to remediate the entirety of the project areas (although, as with any construction project, beneficial remediation will occur through the excavation and disposal of contaminated materials as part of the construction process). Contaminated materials that are not disturbed by the project because they are outside project excavation areas will remain in-place.

1.3 Responsibilities

The following parties and their representatives are those currently involved in the LSLR Projects:

Project Owner and Occupant:
City of Duluth
411 West First Street, City Hall Room 240
Duluth, MN 55802
Contact: Jon Maruska
(218) 730-5093
jmaruska@DuluthMN.gov

City's Designated Environmental Specialist:
The City has formerly designated an engineering representative to perform the duties described in this CCP.

General Contractor
To be determined

Disposal Facility
To be determined

2 Construction Contingency Plan

The DES will be prepared to respond if suspect contamination or regulated materials are unexpectedly encountered during excavation. In the event that unforeseen regulated materials are encountered during construction, appropriate notifications will be made, and regulations followed. Previously unidentified releases to the environment, as determined by the DES, will be reported to the MPCA. This CCP will be used in managing suspect or identified regulated materials unless conditions under which there is an immediate threat to human health, or the environment is encountered, in which case a release will be reported immediately to the State Duty Officer.

The following sections outline the CCP procedures and methods that will be instituted during completion of the current and proposed LSLR Projects.

2.1 Proposed Project

The current and proposed LSLR Projects include water service line replacement or abandonment of the existing water service line at select parcels.

The existing service lines are anticipated to be replaced with a 1 inch high density polyethylene (HDPE) standard dimension ratio (SDR) 9 service pipe. The service line replacements may be limited to only the private or public portions of the service line or include both private and public portions.

A majority of the service line replacements will be completed using horizontal directional drilling methods; however, excavations are anticipated where connections to the corporation stop at the water main and/or curb stop are made. Excavations to make connections to the water main are anticipated to be 8 feet by 10 feet by the depth of the watermain; smaller excavations will be made to connect to curb stops. Excavations to connect the new water service to existing indoor plumbing will be completed by hand digging below the floor slab.

In areas where the depth of the water service line is limited by shallow bedrock, a rigid polystyrene insulation will be added to protect the utility from freezing.

2.2 Engineering controls

In the event that regulated materials are encountered the use of engineering controls may be implemented to prevent the migration of petroleum-impacted soil vapor and/or maintain the integrity of the service line piping.

The DES will be responsible for implementation of the engineering controls.

2.2.1 Vapor Migration Along Utility Corridors

In the event photoionization detector (PID) readings above 10 parts per million (ppm), as determined by the DES, are observed in the base or sidewalls of the trench/excavation, the use of a vapor barrier or clay dam will is recommended to prevent migration of impacted soil vapor along utility corridors and into homes.

To line the trench, a layer of 10 millimeter (mil) polyethylene sheeting will be draped over the sidewalls and base of the excavation. Between 1 to 2 feet of clean fill will be placed at the base as pipe bedding, followed by the new utility pipe, and an additional 1 to 2 feet of clean fill on top of the pipe, creating a buffer of clean backfill around the pipe. The polyethylene sheeting will then be wrapped over the top of the fill and piping. Clay dams or similar will be constructed across the utility trench to prevent vapors from migrating into nearby structures.

2.2.2 Use of Copper Service Lines

It is anticipated that HDPE service lines will be used for a majority of the replacements. In areas where petroleum impacts are observed (PID readings above 10 ppm as determined by the DES), it is recommended that the service line be replaced with copper to avoid potential future degradation of the HDPE service piping.

2.3 Soil Disposition

The following sections summarize reusability of soil in the event that anticipated or unforeseen regulated materials are encountered during construction, as determined by the DES or otherwise identified individual authorized by the City in writing.

2.3.1 Onsite Reuse

Soil to be re-used on the LSLR Projects will have the following characteristics:

- Meets geotechnical requirements
- No asbestos containing material (ACM) and less than 5 percent (%) by volume of debris.
- Field headspace readings using a PID below 10 ppm in greenspace and in utility corridors.
- Contains contaminants below the MPCA's residential Soil Reference Values (rSRVs) based on existing analytical data.

2.3.2 Offsite Reuse for Unregulated Fill

Soil to be exported from the LSLR Projects as unregulated fill soil as outlined in the MPCA's Best Management Practices for the Off-Site Reuse of Unregulated Fill dated March 2024 will have the following characteristics:

- Free of solid waste, debris, ACM, visual staining, and chemical odors;
- No organic vapors above 10 ppm, as measured by a PID;
- Less than 100 milligrams per kilogram (mg/kg) diesel range organics (DRO)/gasoline range organics (GRO); and
- Contaminant concentrations less than the MPCA's rSRVs and Screening Soil Leaching Values (SLVs). Naturally occurring concentrations of some metals, including arsenic, selenium or copper, can exceed SRVs or SLVs. Such soils are not considered impacted in the absence of a contaminant source or other field or laboratory indications of contamination.

The number of samples required to evaluate contaminant concentrations in soil will follow MPCA guidance (see **Section 4.3.4**) and additional sampling may be required based on the volume of soil.

2.3.3 Off-site Disposal

Soil not meeting the above criteria will be transported offsite for disposal at a Minnesota permitted landfill.

3 Standard Operating Procedures and Methods

The following sections outline the SOPs and methods that will be instituted during the LSLR Projects in the event that anticipated or unexpected regulated material are encountered.

3.1 Project Coordination

The DES will coordinate with the project team, general contractor, and excavation contractor regarding the construction schedule and logistics related to implementing this CCP.

3.2 Site Health and Safety

Project representatives involved in monitoring and sampling activities will be required to meet the training requirements of 29 Code of Federal Regulations (CFR) 1920.120. Specifically, each person will have completed an Occupational Safety & Health Administration (OSHA) certified 40 Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) safety course. In addition, they will have experience in directing regulated material excavation and be competent in proper screening and sampling procedures.

A Site Health and Safety Plan (HASP) will be prepared for use by personnel involved with the project. The HASP will assign responsibilities, establish personal protection standards and safety practices and procedures, and provide for contingencies that may arise during site operations. The HASP procedures will be based on the site conditions and chemical hazards known or expected to be present at the site using site data available at the time it is written. The HASP is subject to revision when deemed necessary by actual site conditions encountered during field activities.

The contractors selected for the LSLR Projects will be provided with the previously completed environmental reports. The contractors will be required to comply with all applicable safety regulations imposed by federal and state law for handling pollutants, contaminants, hazardous substances, wastes or materials. Contractor personnel involved with contaminated materials will be expected to be familiar with and to meet applicable Minnesota OSHA requirements.

If encountered, asbestos-related work will be conducted by a Minnesota Department of Health (MDH) certified personnel operating under State and Federal regulations. When asbestos-related work is being conducted, the project staff will be required to have their valid MDH Asbestos Inspector certification (or higher-level credentials) on-site and available when completing monitoring and sampling activities.

3.3 Excavation, Hauling and Disposal

At a minimum, requirements for excavation, hauling, and disposal will be as follows:

The contractor will be responsible for controlling fugitive dust and minimizing noise, odors, and off-site tracking to the extent possible.

- When applicable, excess impacted soil or waste materials will be removed from trucks prior to leaving the site. If necessary, trucks used to transport contaminated soil may require decontamination prior to leaving the site, in order to minimize the tracking of contaminants off-site. If so, a decontamination pad will be constructed at a designated location, just prior to exiting a specific property. Prior to demobilization from the project area, all on-site equipment used for excavation will be decontaminated.
- Designated truck routes will be used, so as to minimize the disruption of the site and limit exposure to the public.
- The contractor will be responsible for properly manifesting all waste or regulated material that leaves the project. See **Section 5.5** for manifesting requirements
- The contractor will be responsible for taking the appropriate measures to ensure excavations are appropriately secured at the end of work each day.
- All activities will be conducted in compliance with Local, State and/or Federal Laws.

In the event that ACM or asbestos containing waste material (ACWM) is identified, those materials will be segregated, placed on and covered with plastic sheeting. While general procedures will be conducted as described above, the following is required for areas with ACM/ACWM:

- A designated exclusion zone will be established, and all personnel will be required to wear Level C personal protective equipment (PPE), including Tyvek suits and respiratory protection.
- Excavation, loading and transport of ACM/ACWM must be completed under the direction of a Minnesota MDH certified asbestos supervisor, after the appropriate MDH notifications have been filed with the MDH.
- The excavation contractor will be required to use wet dry material with water as it is removed to prevent visible emissions.
- Trucks or roll off boxes must be lined with plastic sheeting, before wrapping and sealing them, prior to transport to the landfill for disposal.

3.3.1 Field Screening of Excavated Material

The DES will travel to the site to conduct screening should anticipated or unexpected suspect regulated materials be encountered. A certified asbestos inspector will be on call for sampling of suspect ACM, if observed.

Soils will be observed for the presence of visual and olfactory indications of contamination. Soil from excavations will be field screened with a PID as well as visual inspections for potential ACM, debris, staining, petroleum odors, etc. As the soil is excavated, it will be placed at the surface adjacent to the excavation for screening. The DES will screen excavated soil for contaminants using a combination of techniques:

- Headspace monitoring will be completed in accordance with MPCA methodology using a PID equipped with a 10.6 electron-volt lamp to monitor soil for the presence of organic vapors. The frequency of samples collected for headspace analysis will be based on the type of soil being excavated. The DES will determine the frequency of PID headspace sampling throughout the project area based on the homogeneity of the material being

excavated and the volume and type of debris encountered. A minimum of one sample for headspace analysis will be collected for approximately every 10 cubic yards of soil removed.

- Visual observation for suspect ACM and debris during excavation tasks and screening of graded surface soil. If soil or free product is visually observed, the soil will be considered contaminated and treated as regulated fill.
- Screening results will be documented.

3.3.2 Soil Staging

To the extent possible and when applicable, soil designated for disposal will be direct loaded and hauled to a Minnesota permitted solid waste or industrial landfill facility (see **Section 5.5** for additional information on disposal requirements). Soil that cannot be immediately hauled to the landfill will be stockpiled as detailed below.

Soil designated for reuse that cannot be immediately reused will be segregated and stockpiled on-site.

Excess unregulated fill that cannot be immediately reused will be stockpiled on or off-site for unrestricted reuse on or off-site.

3.3.3 Laboratory Testing

If additional characterization is required by the landfill for disposal approval, samples will be collected and analyzed for the parameters required by the receiving landfill.

Sampling procedures will follow MPCA guidelines. The samples will be analyzed for contaminants of concern as determined by the DES utilizing field observations, potentially including, but not limited to the following parameters:

- DRO (Wisconsin Method DRO)
- GRO (Wisconsin Method GRO)
- DRO silica gel cleanup (Wisconsin Method DRO)
- Volatile organic compounds (VOCs - United States Environmental Protection Agency [EPA] Method 8260D)
- Polycyclic aromatic hydrocarbons (PAHs) (EPA Method 8270)
- Priority Pollutant Metals or 8 Resource Conservation and Recovery Act (RCRA) Metals (EPA 6010D/7471)
- Polychlorinated Biphenyls (PCBs) (EPA Method 8082A)
- Asbestos (by Polarized Light Microscopy [PLM])

3.3.4 Soil Stockpile Management

Excavated material that is determined to have potential chemical impacts based on field screening results will be placed in a temporary stockpile on the property. Soils with suspected different contaminants, soils exhibiting different visual or olfactory characteristics, or soils with substantially different PID readings will be placed in separate stockpiles. Regulated materials will be covered with minimum 10 mil poly plastic sheeting as soon as work on the stockpile has been completed during the day or at a minimum at the end of each working day. The poly will be

adequately secured in place. If the contaminated material is not stockpiled on pavement, the stockpiles will be constructed on a minimum 10 mil poly plastic placed over smooth debris free ground. The stockpile(s) will be bermed, if necessary, to prevent storm water run-on and/or runoff.

Stockpiles will be managed either immediately adjacent to the excavation or within the LSLR Projects.

If laboratory analysis of stockpiled soil is required to either evaluate if chemical impacts are present or to profile the material for offsite disposal, sample frequency will be determined based on the homogeneity of the stockpile and contaminant type.

The number of stockpile samples will follow MPCA's recommended frequency provided in the *Brownfield Program Response Action Plan, Guidance Document c-rem4-43* (April 2024), as summarized below:

Cubic yards of soil in pile	Number of samples
0 to 500	1 per 100 cubic yards
501 to 1,000	1 per 250 cubic yards
1,001 or more	1 per 500 cubic yards

If the soil is not reasonably homogeneous, the number of samples will be adjusted to sufficiently represent the material and/or meet additional disposal requirements of the landfill.

3.3.5 Excavation Base and Sidewall Samples

If collection of base and sidewall samples is proposed, the number of base samples will follow MPCA's recommended frequency provided in the *Brownfield Program Response Action Plan, Guidance Document c-rem4-43* (April 2024), as summarized below:

Excavation Base Confirmation Sampling Rates	
Area of Floor (square feet)	**Number of samples**
0-500	2
501-1,000	3
1,001 -1,500	4
1,501-2,500	5
2,501 – 4,000	6
4,001 – 6,000	7
6,001 – 8,500	8
8,501 – 10,890 (0.25-acre)	9
0.25 to 3.0 acres	1 sample every 15 to 30 feet
Greater than 3.0 acres	1 every 30 feet

Excavation Sidewall Confirmation Sampling Rates	
Area of Sidewall (square feet)	**Number of samples**
0-500	4
501-1,000	5
1,001 -1,500	6
1,501-2,000	7
2,001 – 3,000	8
3,000 – 4,000	9
Greater than 4,000	1 sample every 45 lineal feet

3.3.6 Imported Fill Material

Any imported fill material must meet the MPCA qualifications for unrestricted reuse material. Material sourced from a pit or undisturbed native deposit with no indications of past sources of contamination is considered unrestricted reuse material. Material from any other source must be evaluated for potential impacts prior to import to the site. The contractor must provide sufficient evidence that material meets the unrestricted reuse criteria. Sufficient evidence includes at least one of the following, but may not be limited to the following:

- Evidence that the property is not suspect for impacts based on sufficient knowledge of past use of the property and surrounding properties.
- Analytical results that indicate that soil meets unrestricted reuse criteria established by the MPCA.
- Analytical results that indicate that soil meets restricted reuse criteria established by the MPCA and that reuse has been site-specifically and formally approved by MPCA and local authorities.

3.3.7 Site Controls

3.3.7.1 Street Sweepings

The streets will be swept as directed by engineer and whenever necessary to prevent the production of dust in amounts damaging to property, vegetation, animals, or persons in the vicinity of construction activity. Street sweepings will be managed appropriately: contaminated street sweepings will be disposed at a permitted industrial or solid waste landfill facility, and non-contaminated street sweepings will be reused on or off-site as determined by the LSLR Project contractor. If water is employed for equipment decontamination, it will be collected, tested and properly disposed.

3.3.7.2 Site Security

The contractor will be responsible for securing the site as described in the project specifications.

3.3.7.3 Dust Control

Methods will be employed to prevent fugitive dust emissions. Methods will include keeping exposed working areas as small as practicable during excavation and grading. Watering will be

employed, as necessary, to control emissions from exposed work areas, access roads and working stockpiles. A balance will be maintained between effective dust control and making the area muddy, causing off-site tracking of contaminants.

3.3.7.4 Air Criteria

Air monitoring criteria will be outlined in the Site HASP prepared for the project.

3.3.7.5 Storm Water Pollution Prevention Plan and National Pollutant Discharge Elimination System Permits

The construction contractor selected for project construction will be required to obtain a Storm Water Pollution Prevention Plan (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit for management of storm water. The contractor is required to follow the Best Management Practices (BMPs) required by these permits.

4 Additional Considerations

4.1 Contamination Indicators

Indicators of potentially contaminated soil, regulated material, groundwater or surface water include, but are not limited to the following:

- Odor including gasoline, diesel, creosote (odor of railroad ties), mothballs, or other chemical-like odors in soil excavation areas.
- Soil with unusual staining (such as black or green staining not associated with organic content), or with an oily appearance, or any unusual soil texture or color.
- A rainbow sheen on the surface of water (groundwater or ponded rainwater) or soil.
- Indications of a release through the use of a PID or another field screening instrument.
- Indicators of regulated wastes include, but are not limited to the following:
  - Unexpected presence of buried cans, bottles, scrap metal, wood, glass (indicates dumping/burial of solid waste and a possible dump with associated chemical contamination).
  - Unexpected presence of asphalt and concrete rubble (indicates dumping/burial of demolition waste with associated chemical contamination).
  - Shingles, roofing materials, vermiculite, transite siding, floor tiles, insulation, or any fibrous material (demolition debris that could be associated with ACM or associated contamination).
  - In-place intact active or inactive transite pipes (steam or water pipes) or conduit (contains ACM).
  - Culverts or other pipes with tar-like coating (potentially contains ACM).
  - Wood Ash (potentially contains lead, asbestos, or other chemicals) or coal ash or slag (potentially contains metals).
  - Sandblast or foundry sand residue (potentially contains lead or other metals).
  - Treated wood, including, but not limited to products referred to as brown-or green-treat, and creosote (potentially contains arsenic, chromium, copper, or PAHs).

- Chemical containers such as drums and other containers (potential source of chemical contaminants within intact containers, or surrounding damaged containers)
- Underground storage tanks (USTs)/aboveground storage tanks (ASTs) (potential source of petroleum or other chemical contaminants within intact USTs/ASTs or surrounding damaged USTs/ASTs).
- Intact filled-in basement or buried concrete slab from demolished building with insulation or intact floor tiles (potential ACM), waste traps (potentially contains oily waste), cesspools (potentially contains chemical or oil wastes) and sumps (potentially contains chemical waste).

4.2 Notification

The contractor will proceed with the following notifications in the order listed:

Contact #1: 911 (if the incident/release represents an immediate danger to life or health)

Contact #2: Project owner and DES (to conduct and document a detailed inspection and evaluation of the unexpected material)

In the event of a new release, the project owner or DES will report the release to the Minnesota State Duty Officer (651.649.5451).

4.3 Incident Response

If unexpected contaminated soil, water, debris, or potentially contaminated waste materials are encountered during construction, the contractor will immediately stop work in the vicinity and notify the project owner.

The contractor will not resume work in the suspect area until approved by the DES. Work outside the vicinity of the suspect area may continue if the DES determines that the extent of the contamination has been defined.

The DES will investigate and characterize all unexpected contaminated soil, water, or regulated waste materials. Field screening activities will not proceed until the situation is analyzed, and health and safety considerations resolved in accordance with the project's HASP. Visual and olfactory indications of contamination will be documented. Samples of the potentially impacted soil or regulated materials will be collected from excavation base and sidewalls (if accessible) or stockpiles for PID screening and laboratory analysis. Potential impacted water will be collected from excavations. Soil and/or regulated material sample analytical parameters will be determined based on field observations, site history, and MPCA guidelines. Laboratory analytical results typically take 10 working days to obtain.

The results of the preliminary screening will be evaluated by the DES. The contractor will not be allowed to continue work in the area until the type and magnitude of contamination is documented, and an appropriate response action is determined.

4.4 Potential Contaminated Soil / Regulated Materials

4.4.1 Asbestos

Asbestos may be encountered in three different forms:

Isolated ACM - The ACM occurs as isolated fragments that can be segregated by hand and containerized (such as a fragment of roofing paper),

ACWM - The ACM occurs in larger quantities that cannot be segregated by hand (such as numerous fragments of transite buried with other demolition material), and

Inactive Intact ACM - The ACM is still intact as part of an inactive utility (such as asbestos-wrapped steam pipe, an asbestos water pipe or asbestos conduit).

All ACM/ACWM will be abated by a licensed asbestos contractor who will complete all required notifications and obtain all required approvals from the MPCA and/or MDH prior to completing ACM/ACWM abatement. The asbestos abatement contractor will manage removal (excavation/disposal/abatement) of all ACM and ACWM such that all removal activities will result in no visible dust emissions. Excavation, containerization, loading and hauling of ACM/ACWM will be completed in accordance with all applicable laws, rules, and regulations. Prior to abatement, an Emission Control Plan will be prepared.

4.4.2 Underground Storage Tanks

In the event an unknown petroleum UST is encountered, the following actions will be taken:

An MPCA-certified UST supervisor that is also a certified contractor or in the employ of a certified contractor will oversee the removal of the tank.

The MPCA tank removal forms will be submitted.

The tank removal will be completed in accordance with all safety and environmental protection precautions as required by law including, but not limited to: drain all connecting pipes, remove fuel and fuel/water mixture from the tank to the extent practicable, purge all explosive vapors from the tank, inspect the removed tank for evidence of leaks, and document the condition of the tank.

Soil samples in the tank excavation cavity will be screened with a PID, and soil samples (and water samples if encountered) collected for laboratory analysis in accordance with the MPCA requirements.

Metal tanks dismantled and cleaned on-site will be disposed by recycling them as metal scrap; fiberglass tanks will be disposed in a permitted solid waste or industrial landfill.

Removed petroleum product will be recycled at a permitted facility and removed tank bottom/sludge will be managed as a hazardous waste for disposal/recycling at a permitted fuel recycling facility.

4.4.3 Free Product

In the event that free product is encountered, work will stop in the area until appropriate collection measures can be brought to the site and the State Duty Officer notified. The DES, in consultation with the MCPA as necessary, will determine appropriate handing, testing, and disposal requirements.

4.4.4 Buried Containers

In the event that drums, or other storage containers are unearthed during excavation activities, they will be removed, and their condition evaluated by appropriately trained personnel. If the containers are established to be in poor condition, the contents will be transferred to Department of Transportation (DOT) approved overpack drums. The drums will be placed in a secure location. The contents of the containers will be sampled and characterized for disposal in accordance with appropriate state and federal requirements.

Soil from the area around the container will be screened for indications of contamination and potentially impacted soil will be properly managed.

4.4.5 Creosote Timbers/Railroad Ties

In the event that materials such as treated wood are encountered, the treated wood will be segregated and properly disposed.

4.4.6 Waste Tires

In the event that waste tires are encountered, the tires will be segregated. When a sufficient number of tires are accumulated, they will be collected by an approved vendor and hauled off-site for recycling. Documentation regarding the recycling will be obtained by the contractor and provided to the DES.

4.4.7 Batteries

In the event that batteries are encountered, the batteries will be segregated and placed in a labeled corrosion-resistant box. Any recovered batteries will be collected by an approved vendor and hauled off-site for recycling. Documentation regarding the recycling will be obtained by the contractor and provided to the DES.

4.4.8 Oil Filters

In the event that oil filters are encountered, the oil filters will be segregated and placed into a labeled steel drum. When a sufficient number of filters are accumulated, they will be collected by an approved vendor and hauled off-site for recycling. Documentation regarding the recycling will be obtained by the contractor and provided to the DES.

4.4.9 Dewatering

If dewatering of potentially contaminated water needs to occur, the DES will observe and document the dewatering activities in the contaminated area. Contractor will be prepared to containerize the water if required.

The DES will collect all water samples necessary to apply for the appropriate permit(s) to coordinate with the City of Duluth and Western Lake Superior Sanitary District to identify an appropriate discharge location. The contractor will be responsible for obtaining all necessary permits and completing all required documentation reports for discharge of contaminated water.

If analytical samples indicate that pre-treatment is necessary due to contamination concentrations prior to discharge of water, then the contractor shall supply a portable water treatment system. The system will need to be designed by a registered Professional Engineer

licensed in the State of Minnesota and include components that will treat and discharge water that meets permit requirements. Components may include, but not be limited to: flow equalizer, suspended solids removal, oil/water separator, and activated carbon filtration. The portable water treatment system shall have a treatment capacity equal to or greater than the rate of temporary construction dewatering.

Uncontaminated water will be managed in accordance with the project's SWPPP.

4.4.10 Spills

If a spill occurs, the spill and impacted materials will be cleaned up immediately if safe to do so. If the spill is not safe to clean up or too large for the contractor to handle, an emergency spill responder will be contacted immediately, and the spill addressed upon their arrival. State Duty Officer reporting will be completed as required by Minnesota Statute §115.061.

State Duty Officer phone number: 651.649.5451

Impacted materials will be stockpiled and/or containerized, labeled, and sampled as required by the landfill for disposal.

4.5 Disposal

In the event that contaminated and/or regulated materials need to be disposed, the contractor will use a Minnesota permitted landfill that will to accept the regulated materials that need to be properly disposed. The contractor will provide a waste profile from the landfill and the DES will review it prior to it being submitted to the landfill. No material can be hauled to the landfill without an approval (email is acceptable) from the landfill.

The Generator for the contaminated and/or regulated materials encountered during excavation will be City of Duluth. The City's authorized representative or designee will sign as the Generator. Copies of the final signed manifests and weigh tickets will be provided to the Project engineer daily, or as approved by the Project engineer or otherwise authorized representative by the City.

4.6 Reporting

Any incidents managed in accordance with the CCP will be documented as part of a CCP Implementation Report. The report will document the following:

- Documentation of field activities;
- Site plan showing pertinent site features;
- Illustration showing sample locations, if applicable;
- Analytical laboratory results, if applicable;
- Data evaluation and presentation of findings; and
- Recommendations concerning further action, if necessary

5 Limitations

Although no future LSLR Projects have been identified prior to the completion of this CCP, the actions described above shall be implemented in the event that unexpected contaminated materials are encountered.

Plan sets were not available for review during the preparation of the previously completed Environmental Due Diligence Review and this CCP. The potential exists for the scope of work to vary across specific parcels. We recommend the City seek further consultation if the scope of work for a specific parcel or project is outside that of which was described above.

This CCP references current federal and state regulatory limits for regulated materials. We recommend this CCP be amended to reflect updated values as they become available.

An archeological study was completed for the active 2025 LSLR Projects and was provided under separate cover. This CCP does not pertain to items of historical significance. We recommend a licensed archeologist be contacted as future project areas are designated.

6 References

MPCA, June 2013, Remediation Division Soil Leaching Pathway Spreadsheet, c-r1-03.xls (live.com)

MPCA, January 2021, *Petroleum Remediation Program Soil Sample Collection and Analysis Procedures, Guidance Document c-prp4-04*

MPCA, March 2024, Soil Reference Value Spreadsheet, Guidance Document c-r1-06, https://www.pca.state.mn.us/document/c-r1-06xlsx

MPCA, March 2024, *Best Management Practices for the Off-Site Reuse of Unregulated Fill*, Guidance Document c-rem1-01, https://www.pca.state.mn.us/sites/default/files/c-rem1-01.pdf

MPCA, April 2024, *Brownfield Program Response Action Plans*, Guidance Document c-rem4-43, Brownfield Program Response Action Plans (state.mn.us)



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