



2302 Great N. Drive
Fargo, North Dakota 58102
(701) 241-8632
dave.sederquist@xcelenergy.com

April 18, 2017

VIA U. S. AND ELECTRONIC MAIL

Mr. Darrell Nitschke, Executive Secretary
North Dakota Public Service Commission
State Capitol Building – 12th Floor
Bismarck, North Dakota 58505

**RE: QUARTERLY UPDATE OF INVESTIGATION AND REMEDIATION OF FORMER
FARGO MANUFACTURED GAS PLANT SITE (CASE NO. PU-15-514)**

Dear Mr. Nitschke:

Northern States Power Company, doing business as Xcel Energy (“Xcel Energy”, or “the Company”), submits this 1st quarter 2017 update of progress made in the investigation and clean-up of a former manufactured gas plant (MGP) and surrounding properties (the “Project Site”). The MGP was previously operated by the Company and/or prior companies in the city of Fargo, North Dakota. This project was approved for deferred accounting, pursuant to the Commission’s motion on December 18, 2015. We provide further information below as to the status of project activities.

Investigation Results and Next Steps for Project Site Remediation

In our last update, we reported that in January 2017 the North Dakota Department of Health (NDDH) approved the remediation plan for the Project Site, which involves targeted source removal on discrete properties where MGP impacts have been identified, followed by restoration, post-removal groundwater and vapor monitoring, and the use of institutional controls¹ to address any residual impacts including those that are currently inaccessible. In addition, and as previously reported, we plan to install a vapor mitigation system for the apartment buildings on the Heartland property, once access is provided by the current property owner. In the event the property owner decides to construct new structures on the property or sell the property to the Company, we will instead perform additional demolition and removal activities at the Project Site.

¹ Institutional controls are legal restrictions that are placed on uses of the property to minimize the potential for human exposure. For example, an institutional control might provide that “any future occupied building on site must have a vapor mitigation system installed” or that “future construction must be slab on grade unless otherwise approved by the NDDH” etc.

Since our last update, we have also prepared a long-term monitoring plan that has been approved by the NDDH, which contemplates at least two years of groundwater monitoring post-remediation (See Exhibits A and B). We have also developed a remedial design and action work plan for the Historic Union and Culligan properties, which has been conditionally approved by the NDDH (See Exhibits C and D). We intend to perform remediation on those two properties in late spring or early summer. We have also requested permission from the City of Fargo to perform additional soil investigation under 12th St. to allow for a more complete remedial design and action work plan for the excavation work that will be performed in the City right-of-way. We anticipate the 12th St. soil investigation will occur in late spring or early summer and the excavation work will occur in 2018.

We are currently working with the property owners at the Project Site to negotiate access agreements that will allow us to perform remediation on their properties and to resolve any alleged claims for damages. It is anticipated that the proposed excavation, mitigation, and restoration work will occur in 2017 and 2018, depending on access negotiations, potential redevelopment activities and street upgrades that may be undertaken in the area, and the commercial process for retaining contractors to perform the work.

Ownership and Operational History

We continue to investigate whether other potentially responsible parties may have played an important role at the Project Site. We have initiated discussions with BNSF Railway (a successor to Northern Pacific Railway Company) about historic information they may have related to a rail system, and spur tracks that Northern Pacific Railway appears to have operated and that may have been used to transport feedstock and MGP byproducts to and from the Project Site.

Cost Summary

With respect to actual costs incurred, as of March 31, 2017, about \$5,608,708 has been spent on the initial investigation, remediation, insurance recovery, and related legal defense work. Our forecast of future costs remains essentially unchanged from our last report. We continue to project an additional \$11.2 to \$17.2 million in project costs, a range based on the proposed remediation approach described in our RI/FFS and the current status of the insurance litigation as further described below. This brings our projected total project costs to a range of \$16.8 to \$22.8 million.

The Commission should note that our current cost estimate is conceptual in nature and subject to change depending the result of: 1) negotiations with the property owners of the Project Site, 2) where access has been arranged, a detailed engineering design that will be developed for all affected properties given that the remediation approach has been approved, 3) receipt of formal bids to perform the work from potential contractors, and 4) negotiations and potential litigation with the Company's insurers. We are hopeful that we will be able to reach agreement soon with all property owners regarding access to their respective properties so that we can begin to refine and finalize the projected remediation budget.

As stated in previous updates, approximately 12 percent of the project costs will be allocated to our Minnesota jurisdiction. In addition, project costs could potentially be offset by insurance recoveries, as discussed further below. Ultimately, the Company will consult with Commission staff to develop and file an amortization schedule and recovery plan with the Commission that will mitigate the rate impacts to North Dakota customers and be efficient to administrate and monitor.

Insurance Recovery

We continue to seek insurance recovery for our investigation, remediation, restoration, and related legal defense costs. In 2015, the Company initiated insurance recovery litigation in state court in North Dakota against Associated Electric and Gas Insurance Service, Ltd. (AEGIS). AEGIS subsequently removed the litigation to federal court, in the United States District Court, District of North Dakota and cross-claimed against multiple additional insurance companies. The United States District Court granted a stay of the litigation at the request of the parties, which is currently in effect until May 2, 2017. By May 2, we intend to seek another 90-day extension from the Court to allow time for potential settlement discussions.

As of March 31, we have expended \$416,680 on our insurance recovery efforts. Future costs will depend on how negotiations proceed and whether or not any issues are litigated.

Next Update

We will keep the Commission informed of the project status through quarterly reports like this report. If any material and significant events occur before the end of any quarter, we will provide additional, timely updates as necessary. If the Commission would like any further information about the project prior to our next quarterly update, please let me know. Thank you.

Sincerely,



David H. Sederquist
Sr. Regulatory Consultant
Northern States Power Company

Cc: Patrick Fahn
Sara Cardwell

Exhibit A
Long Term Groundwater Monitoring Plan

Long-Term Monitoring Plan Fargo Manufactured Gas Plant (MGP) and Vicinity

Fargo, Cass County, North Dakota

Prepared for
Northern States Power Co.
Minneapolis, MN

March 2017

Table of Contents

| | <u>Page</u> |
|--|-------------|
| 1 Introduction | 1 |
| 2 Objectives..... | 3 |
| 3 Groundwater Sampling and Analysis Plan | 4 |
| 3.1 Proposed Monitoring Locations..... | 4 |
| 3.2 Analysis Plan | 4 |
| 3.3 Frequency | 9 |
| 4 Soil Gas Sampling and Analysis Plan | 10 |
| 4.1 Proposed Monitoring Locations..... | 10 |
| 4.2 Analysis Plan | 10 |
| 4.3 Frequency | 10 |
| 5 Reporting and Analysis | 11 |
| 5.1 Data Validation | 11 |
| 5.2 Analysis | 11 |
| 6 References | 12 |

Attachment A Example Trend Analysis Plots

List of Tables

| | |
|---------|---|
| Table 1 | Future Use of Permanent Monitoring Points (<i>embedded in text</i>) |
| Table 2 | Groundwater Sampling and Analysis Plan (<i>embedded in text</i>) |
| Table 3 | Indicator Compounds – Groundwater (<i>embedded in text</i>) |
| Table 4 | Soil Gas Sampling and Analysis Plan (<i>embedded in text</i>) |

List of Figures

| | |
|----------|---------------------------------------|
| Figure 1 | Fargo Site Location Map |
| Figure 2 | Existing Monitoring Locations |
| Figure 3 | Proposed Long-Term Monitoring Network |

Abbreviations

| | |
|-----------|---|
| bgs | Below Ground Surface |
| CSM | Conceptual Site Model |
| DRO | Diesel Range Organics |
| FFS | Focused Feasibility Study |
| GRO | Gasoline Range Organics |
| Heartland | Heartland Apartments |
| LTM Plan | Long-Term Monitoring Plan |
| MAH | Monocyclic Aromatic Hydrocarbon |
| MGP | Manufactured Gas Plant |
| NAPL | Non-aqueous Phase Liquid |
| NDDH | North Dakota Department of Health |
| NP | Northern Pacific |
| NSP | Northern States Power Co. |
| ORP | Oxidation-Reduction Potential |
| PAH | Polycyclic Aromatic Hydrocarbon |
| QAPP | Quality Assurance Project Plan |
| RAO | Remedial Action Objective |
| RI | Remedial Investigation |
| ROWS | Rights of Way |
| URI | United Refrigeration, Inc. |
| US EPA | United States Environmental Protection Agency |

1 Introduction

This Long-Term Monitoring Plan (LTM Plan) was prepared on behalf of Northern States Power Co. (NSP) as a component of the North Dakota Department of Health (NDDH)-approved remediation approach¹ for the former manufactured gas plant (MGP) in Fargo, North Dakota (the Site; see Figure 1). The former MGP operated on the north side of Northern Pacific (NP) Avenue between 11th Street North and North University Drive from 1885 to 1960, after which it was demolished and the property sold.

The Remedial Investigation/Focused Feasibility Study (RI/FFS) Report (Gradient, 2016) documented the findings of the environmental site investigations, human health risk assessment, and focused feasibility analysis of remediation alternatives for the Site, as summarized below.

- Between July 2015 and October 2016, NSP performed a multi-media investigation of the former MGP Site and its vicinity. The investigation concluded that MGP residuals, such as drip oils and tars, in the subsurface as non-aqueous phase liquids (NAPL) impacted the surrounding soil. The more soluble and volatile NAPL constituents leached into groundwater and volatilized into the soil vapor phase.
- Due to the very low hydraulic conductivity of the native clays at the Site, migration of the shallow groundwater is extremely limited both horizontally and vertically (less than 1 cm per year). The extent of the impacts from the former MGP were well defined and found to be located only in the subsurface above the groundwater aquifer (*i.e.*, in areas that are not generally accessible to the public).
- A risk evaluation performed using well-established, conservative (*i.e.*, protective) United States Environmental Protection Agency (US EPA) guidance and protocols concluded that there are no unacceptable risks to human health based on current conditions, as determined by the data collected in the investigations.² There are, however, elevated risks associated with future potential exposures for a Utility Worker at the Heartland Apartments (Heartland) property and a Construction Worker at the Heartland, United Refrigeration, Inc. (URI), City Rights of Way (ROWS), and Historic Union properties.
- Remedial action for the MGP Site and vicinity was recommended to protect human health and the environment from exposure to potential MGP constituents. Remedial Action Objectives (RAOs) were developed based on relevant US EPA and NDDH guidance, along with the results of the comprehensive Site investigation and human health risk evaluation.
- Targeted source removal was selected as the preferred remedial approach for the Fargo MGP Site. As part of the remedial approach, a monitoring program was proposed at permanent groundwater and soil gas monitoring points to assess the stability and attenuation of impacts during and after remedy implementation.

This LTM Plan was developed as the monitoring program component of the NDDH-approved remediation approach. The plan was established based on the current understanding of the Site and land use and assumes that property access has been or will be granted by the property owners at the Site. In

¹ As further described in the November 29, 2016, Remedial Investigation and Focused Feasibility Study report (RI/FFS Report; Gradient, 2016) and approved by NDDH on January 20, 2017 (Erickson, 2017).

² A preemptive vapor mitigation system is required to be installed at Heartland.

cases in which revisions to the monitoring plan locations are warranted based on changing Site conditions, the need to replace a monitoring location will be further evaluated before a replacement location is proposed. The following report sections describe the LTM Plan objectives (Section 2), the sampling and analysis plans for groundwater and soil gas (Sections 3 and 4, respectively), and data reporting and analysis (Section 5).

2 Objectives

Consistent with the RI/FFS RAOs, the objectives of this LTM Plan are as follows:

- Evaluate the attenuation and stability of impacted groundwater associated with MGP source material; and
- Evaluate the attenuation and stability of impacted soil gas associated with potential MGP source material and impacted groundwater.

The scope of the LTM Plan includes collecting data to evaluate temporal trends in:

- groundwater elevations and flow paths;
- groundwater geochemistry;
- groundwater quality (for certain potential MGP constituents); and
- soil gas quality (for certain potential MGP constituents).

Specific sampling and analysis plans for groundwater and soil gas were developed in accordance with these objectives and are discussed in Sections 3 and 4, respectively.

3 Groundwater Sampling and Analysis Plan

3.1 Proposed Monitoring Locations

The existing groundwater monitoring network at the Site, as shown in Figure 2, will be modified for the purpose of long-term monitoring. Existing groundwater monitoring points/wells were installed as part of the RI/FFS to adequately investigate and delineate MGP-related impacts to groundwater at the Site and its vicinity. However, not all of these monitoring wells are needed for long-term monitoring (*e.g.*, monitoring wells MW-HLA-05 and MW-HLA-05M will be abandoned since MW-HLA-06 and MW-HLA-06M will be sufficient to evaluate groundwater quality on the Heartland property) and some of the monitoring wells will be abandoned/replaced to facilitate remedial action (*e.g.*, monitoring well MW-HLA-04, located within the source removal excavation footprint will be removed and replaced). In total, eight monitoring wells are proposed for abandonment, subject to NDDH approval. Three of the abandoned monitoring wells will be replaced with new wells. Table 1 summarizes which wells will be retained, abandoned, or replaced.

Prior to abandonment and remedy implementation, an additional round of pre-remedy ("baseline") data will be collected at wells with less than three rounds of samples, as indicated in Table 1. Groundwater samples collected from shallow and intermediate wells as part of the additional baseline sampling event will be analyzed for monocyclic aromatic hydrocarbons (MAHs), polycyclic aromatic hydrocarbons (PAHs), free cyanide, diesel range organics (DRO), and gasoline range organics (GRO). Groundwater from deep wells will only be analyzed for MAHs, because no other potential MGP constituents have been detected in prior sampling events,³ and the slow groundwater recovery rates make collecting sufficient sample volumes for other analytes challenging.

The remaining monitoring well locations that will comprise the proposed long-term groundwater monitoring network are listed in Table 2 and shown in Figure 3.

3.2 Analysis Plan

Groundwater monitoring locations will be measured and sampled post-remedy implementation for the parameters listed in Table 2 and described below. Samples will be collected in accordance with previously approved work plans.

Chemical Parameters

Groundwater quality at the Site and its vicinity will be assessed by collecting and submitting samples from shallow and intermediate monitoring wells for laboratory analysis of selected potential MGP constituents,⁴ as described in Table 3.

³ As described in the RI/FFS Report (Gradient, 2016), total cyanide detected at MW-HLA-01D was likely due to matrix interference issues, and ammonia detected in deep groundwater wells is not believed to be indicative of impacts from the former MGP, given the general absence of other MGP constituents.

⁴ As defined in the RI/FFS Report (Gradient, 2016).

Samples for laboratory analysis will not be collected from deep groundwater wells, because concentrations in prior samples have been low to non-detectable, and groundwater recovery rates for these wells are extremely slow.

Geochemical/Field Parameters

Groundwater geochemistry will be evaluated by taking field measurements during sampling for pH, specific conductance, turbidity, oxidation-reduction potential (ORP), and dissolved oxygen.

Groundwater Elevation Monitoring

The depth to water at each monitoring point will be measured and used in combination with the monitoring point reference elevation to determine the elevation of groundwater at each point. The groundwater elevation data will be used to evaluate groundwater flow patterns.

Table 1 Future Use of Permanent Monitoring Points

| Property | Sample ID | Matrix | Additional Baseline Sample Locations ^a | Prior Sampling Dates | | | | Retain for Post-remedy Monitoring ^b | Abandon and Replace (Replacing Well Listed) | Abandon | New Monitoring Location |
|----------|-------------------------|--------|--|----------------------|-----------|-----------|-----------|--|--|---------|-------------------------------|
| | | | | | | | | | | | |
| CUL | MW-CUL-01 | W | X | 6/28/2016 | 9/28/2016 | | | X | | | |
| CUL | MW-CUL-02 | W | | | N/A | | | | | X | |
| HLA | MW-HLA-01 | W | X | 6/28/2016 | 9/27/2016 | | | X | | | |
| HLA | MW-HLA-01D | W | X | 6/29/2016 | 9/28/2016 | | | X | | | |
| HLA | MW-HLA-02 | W | X | 6/29/2016 | 9/29/2016 | | | X | | | |
| HLA | MW-HLA-03 | W | X | 6/28/2016 | 9/28/2016 | | | | X | | |
| HLA | MW-HLA-04 | W | X | 6/28/2016 | 9/27/2016 | | | | MW-HLA-04R | | |
| HLA | MW-HLA-04R ^c | W | | | N/A | | | | | X | |
| HLA | MW-HLA-04M | W | X | 6/28/2016 | 9/27/2016 | | | | X | | |
| HLA | MW-HLA-05 | W | X | 6/29/2016 | 9/27/2016 | | | | X | | |
| HLA | MW-HLA-05M | W | X | 6/29/2016 | 9/27/2016 | | | | X | | |
| HLA | MW-HLA-06 | W | X | 6/29/2016 | 9/27/2016 | | | X | | | |
| HLA | MW-HLA-06M | W | X | 6/29/2016 | 9/27/2016 | | | X | | | |
| HLA | MW-HLA-07 | W | X | 6/28/2016 | 9/27/2016 | | | X | | | |
| ROWS | MW-ROW-01S | W | | 11/12/2015 | 2/1/2016 | 6/28/2016 | 9/28/2016 | X | | | |
| ROWS | MW-ROW-02D | W | X | 6/29/2016 | 9/29/2016 | | | X | | | |
| ROWS | MW-ROW-02S | W | | 11/12/2015 | 2/2/2016 | 6/28/2016 | 9/29/2016 | X | | | |
| ROWS | MW-ROW-03S | W | | 11/12/2015 | 2/2/2016 | 6/28/2016 | 9/28/2016 | X | | | |
| ROWS | MW-ROW-04 | W | X | 6/28/2016 | 9/28/2016 | | | X | | | |
| ROWS | MW-ROW-05 | W | | | N/A | | | | | X | |
| UB | MW-UB-01S | W | | 9/11/2015 | 2/2/2016 | 6/28/2016 | 9/28/2016 | | MW-CUL-02 | | |
| UB | MW-UB-02S | W | | 9/11/2015 | 2/1/2016 | 6/28/2016 | 9/28/2016 | | X | | |
| UB | MW-UB-03S | W | | 9/11/2015 | 2/2/2016 | 6/28/2016 | 9/28/2016 | X | | | |
| URI | MW-URI-01D | W | X | 6/29/2016 | 9/29/2016 | | | X | | | |
| URI | MW-URI-04S | W | | 11/12/2015 | 2/2/2016 | 6/28/2016 | 9/29/2016 | | MW-ROW-05 | | |
| CUL | SS-CUL-01 | A | X | 6/3/2016 | 1/2017 | | | | | X | |
| CUL | SS-CUL-02 | A | X | 5/20/2016 | 1/2017 | | | X | | | |
| CUL | SS-CUL-03 | A | X | 5/18/2016 | 1/2017 | | | | | X | |
| CUL | SS-CUL-04 | A | X | 5/18/2016 | 1/2017 | | | | | X | |
| HLA | SS-HLA-02 | A | | 2/8/2016 | | | | | | X | |
| HLA | SS-HLA-03 | A | | 2/8/2016 | | | | | | X | |

Table 1 Future Use of Permanent Monitoring Points (continued)

| Property | Sample ID | Matrix | Additional Baseline Sample Locations ^a | Prior Sampling Dates | | | Retain for Post-remedy Monitoring ^b | Abandon and Replace (Replacing Well Listed) | Abandon | New Monitoring Location |
|----------|-----------|--------|---|----------------------|-----------|-----------|--|---|---------|-------------------------|
| | | | | | | | | | | |
| HLA | SS-HLA-04 | A | | 2/8/2016 | | | | | | X |
| HLA | SS-HLA-05 | A | | 2/8/2016 | | | | | | X |
| HLA | SS-HLA-07 | A | | 8/31/2016 | 9/30/2016 | | | | | X |
| HLA | SS-HLA-08 | A | | 8/31/2016 | 9/30/2016 | | | | | X |
| HLA | SS-HLA-09 | A | | 7/29/2016 | | | | | | X |
| HLA | SS-HLA-10 | A | | 8/30/2016 | | | | | | X |
| HLA | SS-HLA-11 | A | | 8/30/2016 | | | | | | X |
| HLA | SS-HLA-12 | A | | 8/30/2016 | | | | | | X |
| UB | SS-UB01 | A | | 9/1/2015 | 2/2/2016 | 5/18/2016 | X | | | |
| UB | SS-UB04 | A | | 9/1/2015 | 2/1/2016 | 5/18/2016 | | | | X |
| UB | SS-UB06 | A | | 9/1/2015 | 2/1/2016 | 5/20/2016 | | | | X |
| UB | SS-UB08 | A | | 9/1/2015 | 2/1/2016 | 5/20/2016 | | | | X |
| UB | SS-UB11 | A | | 8/31/2015 | 2/2/2016 | 5/21/2016 | X | | | |
| UB | SS-UB12 | A | | 8/31/2015 | 2/2/2016 | 5/21/2016 | | | | X |
| UB | SS-UB14 | A | | 8/31/2015 | 2/2/2016 | 5/21/2016 | | | | X |
| UB | SS-UB15 | A | | 9/1/2015 | 2/1/2016 | 5/20/2016 | | | | X |
| UB | SS-UB16 | A | | 8/31/2015 | 2/2/2016 | 5/21/2016 | | | | X |
| UB | SS-UB17 | A | | 8/31/2015 | 2/2/2016 | 5/21/2016 | | | | X |
| URI | SS-URI-01 | A | | 10/20/2015 | 2/1/2016 | 5/19/2016 | | | | X |
| URI | SS-URI-02 | A | | 10/20/2015 | 2/1/2016 | 5/19/2016 | | | | X |
| URI | SS-URI-03 | A | | 10/20/2015 | 2/1/2016 | 5/19/2016 | X | | | |
| URI | SS-URI-04 | A | | 10/20/2015 | 2/1/2016 | 5/19/2016 | | | | X |
| URI | SS-URI-05 | A | | 10/20/2015 | 2/1/2016 | 5/19/2016 | | | | X |

Notes:

A = Air; CUL = Culligan; HLA = Heartland Apartments; ROWs = City Rights of Way; UB = Historic Union; URI = United Refrigeration, Inc.; W = Water.

(a) Contingent upon property access.

(b) Deep monitoring wells will only be retained for post-remedy groundwater elevation monitoring.

(c) Location of MW-HLA-04R to be determined based on Site conditions.

Table 2 Groundwater Sampling and Analysis Plan

| Groundwater Depth Zone | Property | Monitoring Locations | Objective | Parameters | Analytical Method | Frequency |
|------------------------------|----------------------------|--|--------------------------------------|--|--------------------------------|-------------|
| Shallow (13 locations) | Heartland Apartments | MW-HLA-01 MW-HLA-02 MW-HLA-04R MW-HLA-06 MW-HLA-07 | Groundwater Quality | Benzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene | 8260B | Semi-annual |
| | City Rights of Way | MW-ROW-01S MW-ROW-02S MW-ROW-03S MW-ROW-04 MW-ROW-05 | | Naphthalene | 8270B | |
| | Culligan | MW-CUL-01 MW-CUL-02 | | | | |
| | Historic Union | MW-UB-03S | | | | |
| Intermediate (1 location) | Heartland Apartments | MW-HLA-06M | | Diesel range organics (DRO) and gasoline range organics (GRO) | 8015D, with silica gel cleanup | |
| | | | Groundwater Geochemistry | pH, specific conductance, turbidity, oxidation-reduction potential (ORP), dissolved oxygen | Field measurements | |
| | | | Groundwater Elevation and Flow Paths | Depth to water | Not applicable | |
| Deep (3 locations) | Heartland Apartments | MW-HLA-01D | Groundwater Elevation and Flow Paths | Depth to water | Not applicable | |
| | United Refrigeration, Inc. | MW-URI-01D | | | | |
| | City Rights of Way | MW-ROW-02D | | | | |

Table 3 Indicator Compounds – Groundwater

| Compounds | Rationale |
|---|---|
| Benzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene | Indicator compounds for monocyclic aromatic hydrocarbons (MAHs). Benzene in soil and groundwater is a risk-driver. High water solubility and high mass fraction in source material. |
| Naphthalene | Indicator compound for polycyclic aromatic hydrocarbons (PAHs). Naphthalene in soil is a risk-driver. High water solubility (relative to other PAHs) and high mass fraction in source material. |
| Diesel range organics (DRO) | Indicator for diesel range fraction of total petroleum hydrocarbons. DRO in soil is a risk-driver. Moderate water solubility and high mass fraction in source material. |
| Gasoline range organics (GRO) | Indicator for gasoline range fraction of total petroleum hydrocarbons. GRO in soil and groundwater is a risk-driver. High water solubility and high mass fraction in source material. |

3.3 Frequency

The Site is locally underlain by fill material for up to 7 ft below ground surface (bgs), under which silt and clay is present. Due to the limited transport capacity of the silt and clay, migration of shallow groundwater is extremely limited both horizontally and vertically (Gradient, 2016) and the rate of change of groundwater conditions is expected to be slow. Groundwater chemistry, geochemistry, and depth to water will be assessed on a semi-annual basis for two years after the targeted source removal has been completed.

4 Soil Gas Sampling and Analysis Plan

4.1 Proposed Monitoring Locations

The existing soil vapor monitoring network at the Site, as shown in Figure 2, will be modified for the purpose of monitoring post-remedial action soil gas quality. Soil vapor monitoring points/vapor pins were installed as part of the RI/FFS primarily to evaluate vapor intrusion potential at the Site and its vicinity. However, not all of these vapor pins are needed and most vapor pins will be removed (*e.g.*, vapor pins SS-URI-01, SS-URI-02, SS-URI-04, and SS-URI-05 will be abandoned since data collected from vapor pin SS-URI-03 will be adequate to evaluate post-remedial action soil gas quality on the URI property). Table 1 summarizes which vapor pins will be retained or abandoned. The proposed post-remedy soil gas monitoring locations are listed in Table 4 and shown in Figure 3. Prior to abandonment and remedy implementation, an additional round of pre-remedy ("baseline") data will be collected at vapor pins with less than three rounds of samples, as indicated in Table 1. Consistent with the RI/FFS Report (Gradient, 2016), soil gas samples will be analyzed for standard parameters in the TO-15 analytical method including naphthalene (US EPA, 1997).

4.2 Analysis Plan

Samples will be collected in accordance with previously approved work plans. Soil gas quality at the Site and its vicinity will be assessed by collecting and submitting samples for laboratory analysis of selected potential MGP constituents, as summarized in Table 4. Additional soil gas sampling at the Heartland property will not be performed, because the building is expected to have an active vapor mitigation system.

Table 4 Soil Gas Sampling and Analysis Plan

| Monitoring Locations | Parameters ^a | Analytical Method |
|----------------------|-------------------------|-------------------|
| SS-CUL-02 | Benzene, | TO-15 |
| SS-UB01 | 1,2,4-Trimethylbenzene, | |
| SS-UB11 | 1,3,5-Trimethylbenzene, | |
| SS-URI-03 | Naphthalene | |

Note:

(a) Indicator compounds.

4.3 Frequency

Up to two rounds of post-remedial action soil gas samples will be collected to ensure that remedial action has not altered subsurface conditions in such a way as to induce vapor intrusion (*e.g.*, creating preferential vapor migration pathways).

5 Reporting and Analysis

The data collected in each Site monitoring event will be validated, and a report that summarizes and analyzes the validated data will be generated. This report will be submitted to NDDH as well as to the appropriate property owners.

5.1 Data Validation

Data validation is a process of independently reviewing data and accepting, qualifying, or rejecting them on the basis of predetermined criteria. Data collected as part of the Site monitoring program will be validated in accordance with the Site-specific Quality Assurance Project Plan (QAPP; Barr, 2016m).

5.2 Analysis

Data analysis will include reviewing and analyzing the field and laboratory results to evaluate temporal trends. Plots of the groundwater elevation at each monitoring well through time will be generated to review temporal trends in the elevations. Plots of key analytes at monitoring wells through time will be generated to review temporal trends in groundwater quality. If the plots show stable and predictable results, the monitoring wells will be proposed for abandonment. Example plots based on the current groundwater data set are included as Attachment A. Soil vapor data will be analyzed to ensure that remedial action has not altered subsurface conditions in such a way as to induce vapor intrusion.

6 References⁵

Barr Engineering Co. (Barr). 2015d. Technical Memorandum by S. Gaffin, R. Heimbach, and M. Sands to A. Peterson (Northern States Power Co.) re: Historic Union Complex Investigation Results (Draft). 432p., October 5.

Barr Engineering Co. (Barr). 2015e. Technical Memorandum by S. Gaffin, R. Heimbach, and M. Sands to A. Peterson (Northern States Power Co.) re: United Refrigeration, Inc. Property Investigation Results (Draft). 468p., December 21.

Barr Engineering Co. (Barr). 2015f. Technical Memorandum by S. Gaffin, R. Heimbach, and M. Sands to A. Peterson (Northern States Power Co.) re: Heartland Apartments Property Investigation Results (Draft). 282p., December 21.

Barr Engineering Co. (Barr). 2015g. Technical Memorandum by S. Gaffin, R. Heimbach, and M. Sands to A. Peterson (Northern States Power Co.) re: 11th and 12th Streets North Rights-of-Way Investigation Results (Draft). 509p., December 21.

Barr Engineering Co. (Barr). 2016g. Technical Memorandum to A. Peterson (Northern States Power Co.) re: City Rights-of-Way Investigation Results (Draft). 794p., August 30.

Barr Engineering Co. (Barr). 2016h. Technical Memorandum to A. Peterson (Northern States Power Co.) re: Culligan Property Investigation Results (Draft). 321p., August 30.

Barr Engineering Co. (Barr). 2016i. Technical Memorandum to A. Peterson (Northern States Power Co.) re: Heartland Apartments Property Investigation Results (Draft). 1,611p., August 30.

Barr Engineering Co. (Barr). 2016j. Technical Memorandum to A. Peterson (Northern States Power Co.) re: Historic Union Complex Monitoring Results (Draft). 329p., August 30.

Barr Engineering Co. (Barr). 2016k. Technical Memorandum to A. Peterson (Northern States Power Co.) re: United Refrigeration, Inc. Property Investigation Results (Draft). 323p., August 30.

Barr Engineering Co. (Barr). 2016m. "Quality Assurance Project Plan, Former Fargo MGP Site, Fargo, North Dakota (Revision 1.0)." Report to Northern States Power Co. 2,141p., April.

Byllesby Engineering & Management Corp.; H.M. Byllesby & Co.; Northern States Power Co. (NSP). 1911-1958. "Fargo MGP engineering drawings."

Cass County, North Dakota. 2015. "Cass County Roads Shapefile." GIS Dept. Accessed at <https://www.casscountynd.gov/county/depts/GIS/Pages/GISHome.aspx>.

Environmental Systems Research Institute (ESRI). 2016a. "World Topographic Map." February 5. Accessed at <http://www.arcgis.com/home/item.html?id=30e5fe3149c34df1ba922e6f5bbf808f>.

⁵ The reference letters used in this report were assigned in a manner consistent with the RI/FFS report (Gradient, 2016).

Environmental Systems Research Institute (ESRI). 2016b. "World Imagery: Aerial imagery web mapping service." February 8. Accessed at <https://www.arcgis.com/home/item.html?id=10df2279f9684e4a9f6a7f08febac2a9>.

Erickson, C. [North Dakota Dept. of Health (NDDH)]. 2017. Letter to M. Nisbet (Xcel Energy - North Dakota) and T. Coss (Xcel Energy) re: RI/FSS Report, Fargo MGP. 2p., January 20.

Fargo, North Dakota. 2015b. "City of Fargo Parcels Shapefile." Accessed at <http://gis.cityoffargo.com/Link/jsfe/index.aspx>.

Gradient. 2016. "Remedial Investigation and Focused Feasibility Study, Fargo Manufactured Gas Plant (MGP) and Vicinity, Fargo, Cass County, North Dakota." Report to Northern States Power Co. (Minneapolis, MN), 1,361p., November 29.

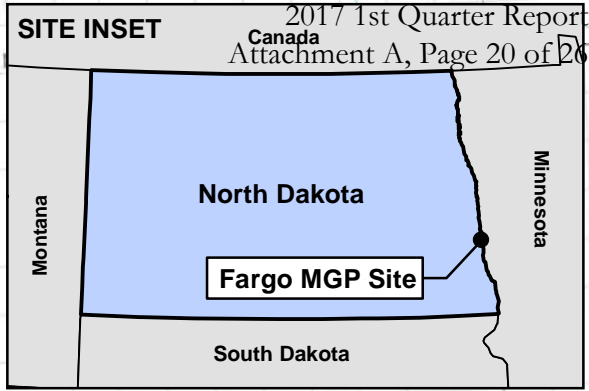
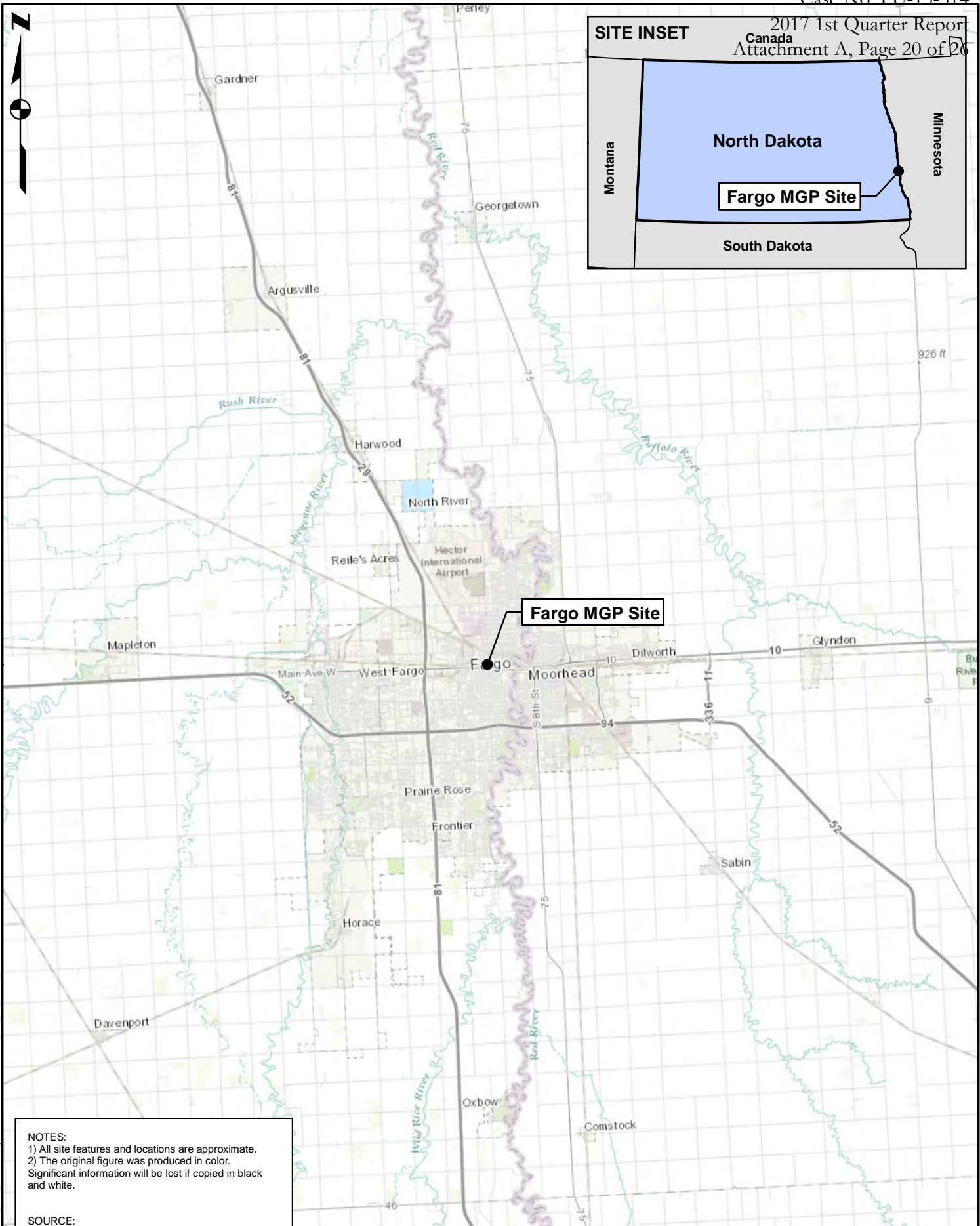
Northern States Power Co. (NSP); Wallwork, W.W. Fargo, Inc. 1966. "Lease and agreement between North States Power Company and Wallwork, W.W. Fargo Inc. re: Block 40, Roberts Second Addition to the City of Fargo exclusive of the land occupied by the Garage and Warehouse." 10p., April 1.

Sanborn Fire Insurance Maps. 1888-1969. "Certified Sanborn Map Report: 11 12th St. North, Fargo, ND 58102 [Source maps dated 1888-1969] – Block 41." 22p., July 31.

Union Light, Heat, and Power Co. 1920. "Union Light, Heat, and Power Co. Real Estate Plans." 5p., July 1.

US EPA. 1997. "Compendium Method TO-15 - Determination of volatile organic compounds (VOCs) in air collected in specially-prepared canisters and analyzed by gas chromatography/mass spectrometry (GC/MS)." Office of Research and Development (Cincinnati, OH), EPA/625/R-96/010b, 38p., January.

Figures



NOTES:
 1) All site features and locations are approximate.
 2) The original figure was produced in color.
 Significant information will be lost if copied in black and white.

SOURCE:
 1) ESRI, 2016a.

0 2 4
 Miles



Fargo Site Location Map
 Fargo, ND

FIGURE 1
 Date: 3/13/2017

File Path: G:\Projects\210066_Xcel_MGPs\Graphics\CADGIS\701\210066_701_01_LTMP_SiteLocation.mxd



File Path: G:\Projects\1210066_Xcel_MGPs\Graphics\CAD\GIS\701_02_LTMP_ExistingMonitoring.mxd



File Path: G:\Projects\120066_Xcel_MGPs\Graphics\CAD\GIS\701_03_LTMP_LongTermMonitoring.mxd



Proposed Long-Term
Monitoring Network

Fargo, ND

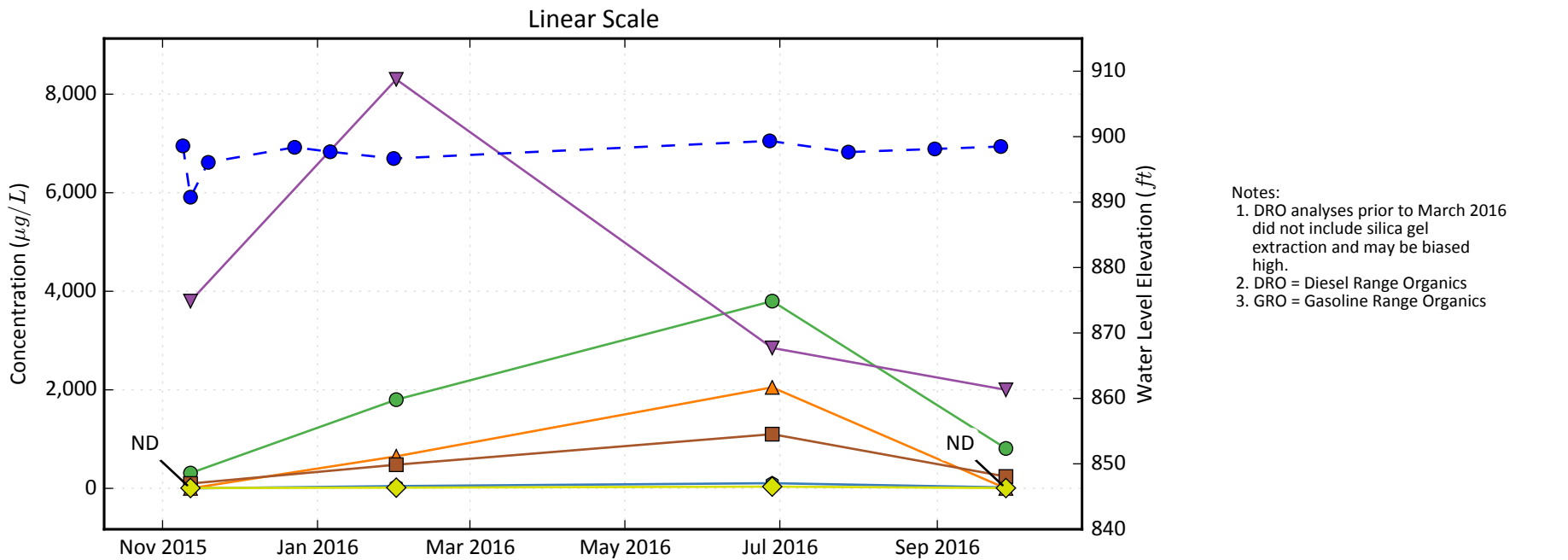
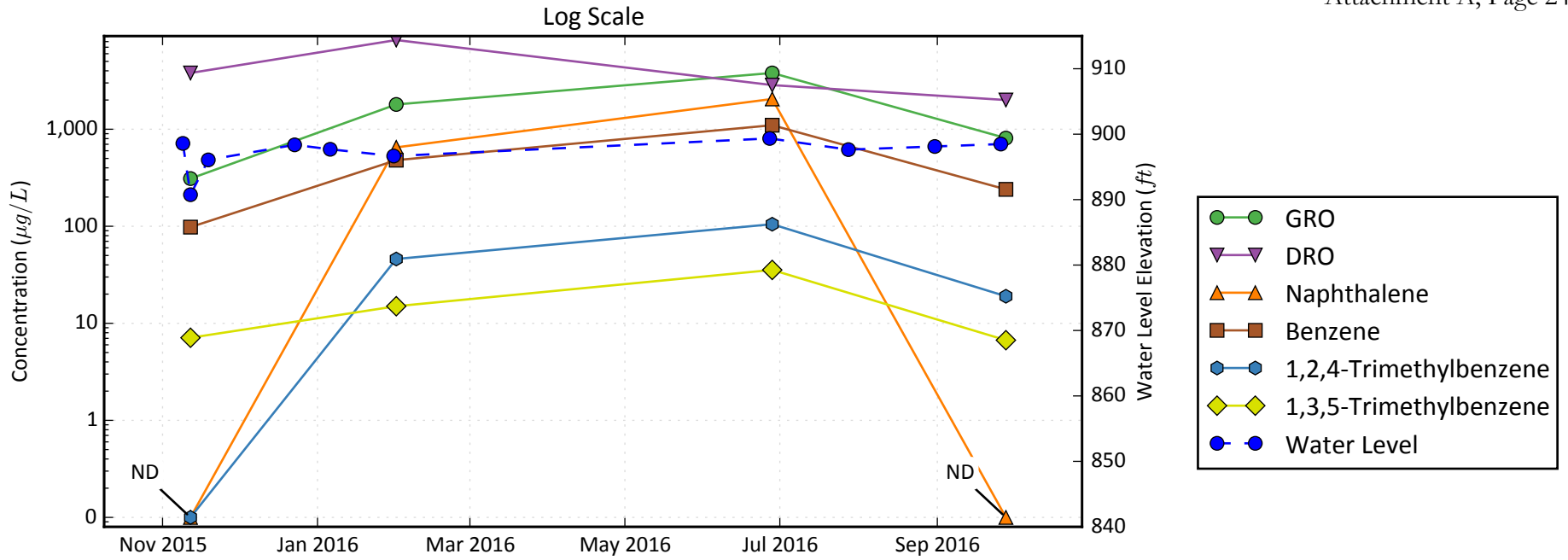
FIGURE
3

Date: 3/13/2017

Attachment A

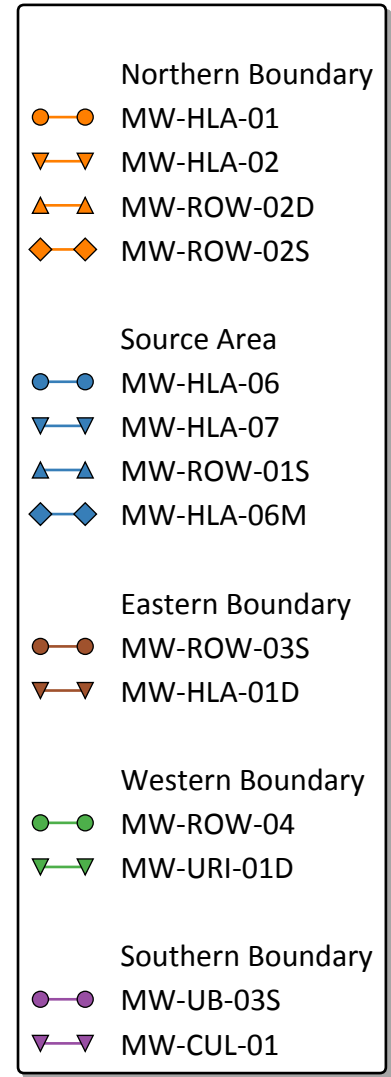
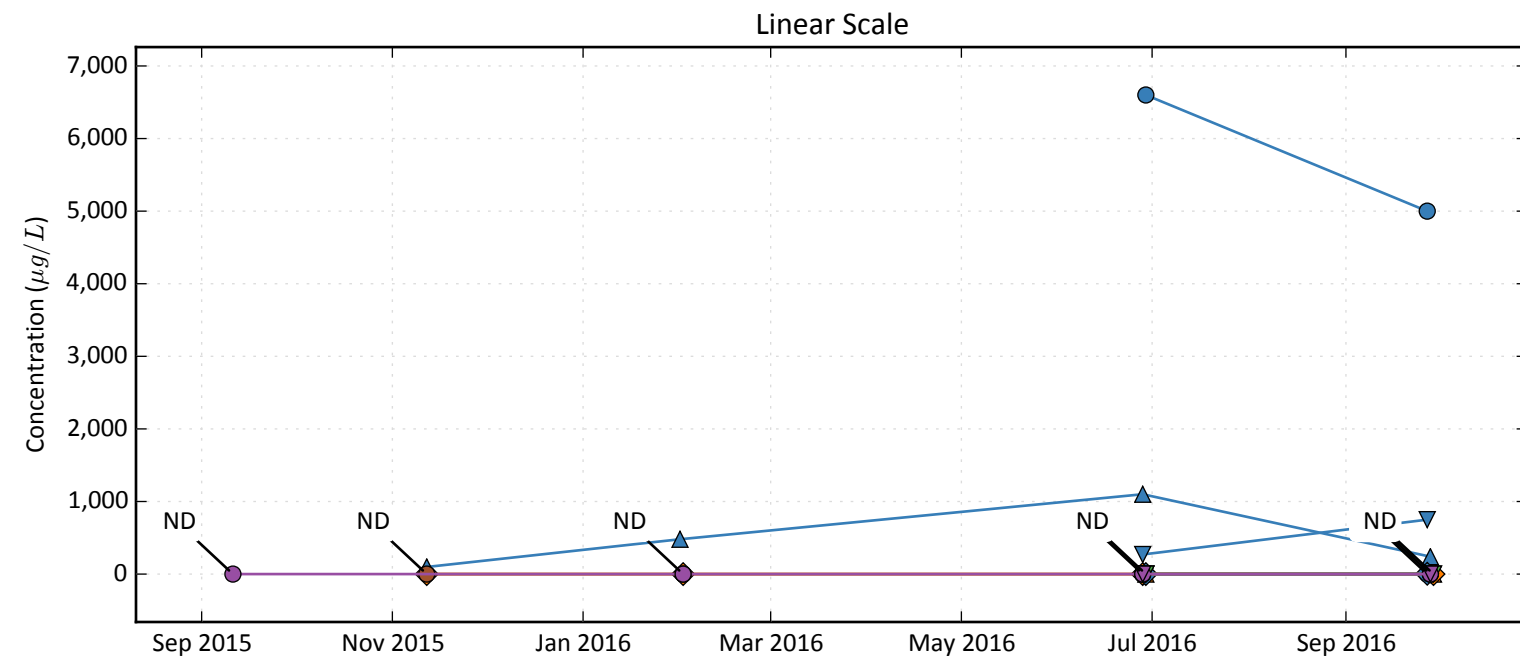
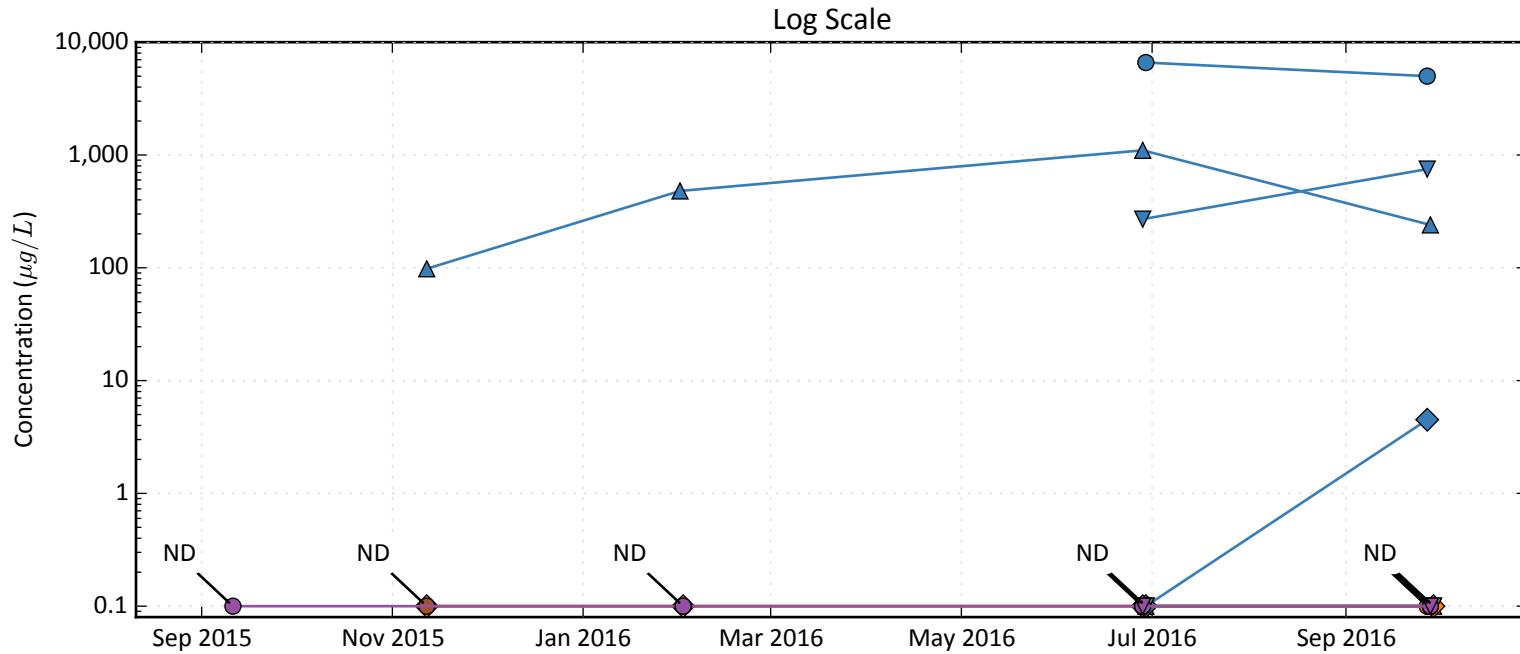
Example Trend Analysis Plots

MW-ROW-01S, Groundwater



Notes:
 1. DRO analyses prior to March 2016 did not include silica gel extraction and may be biased high.
 2. DRO = Diesel Range Organics
 3. GRO = Gasoline Range Organics

Benzene, Groundwater



Groundwater...Elevation

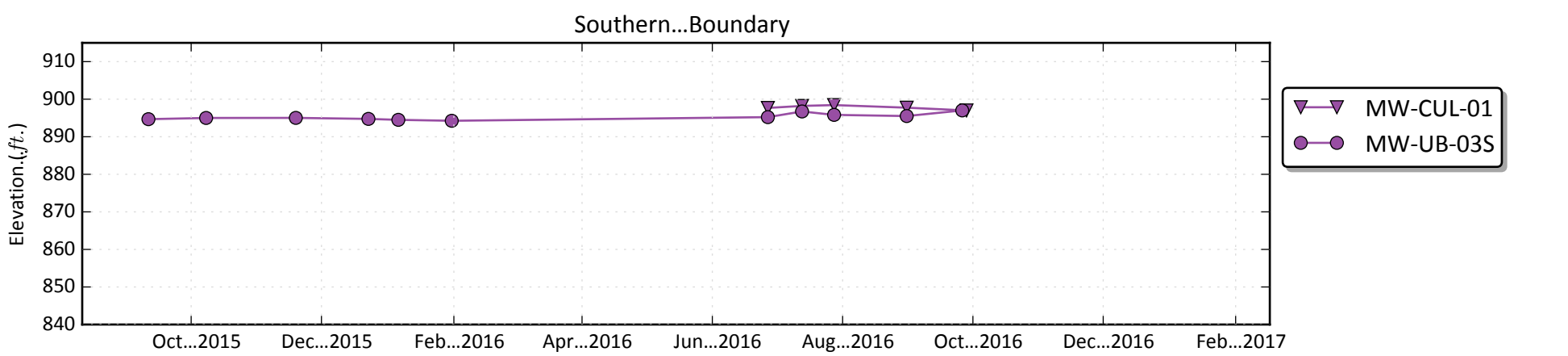
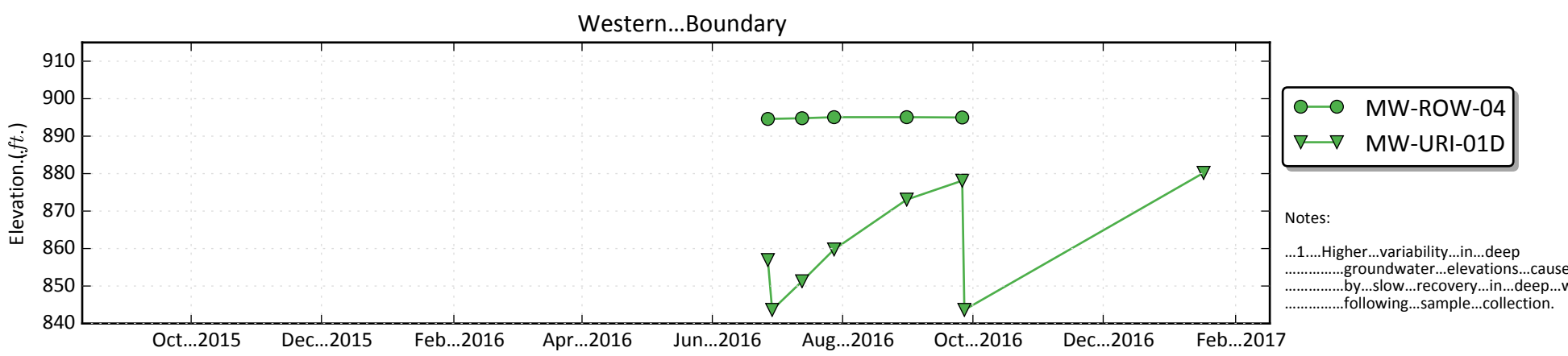
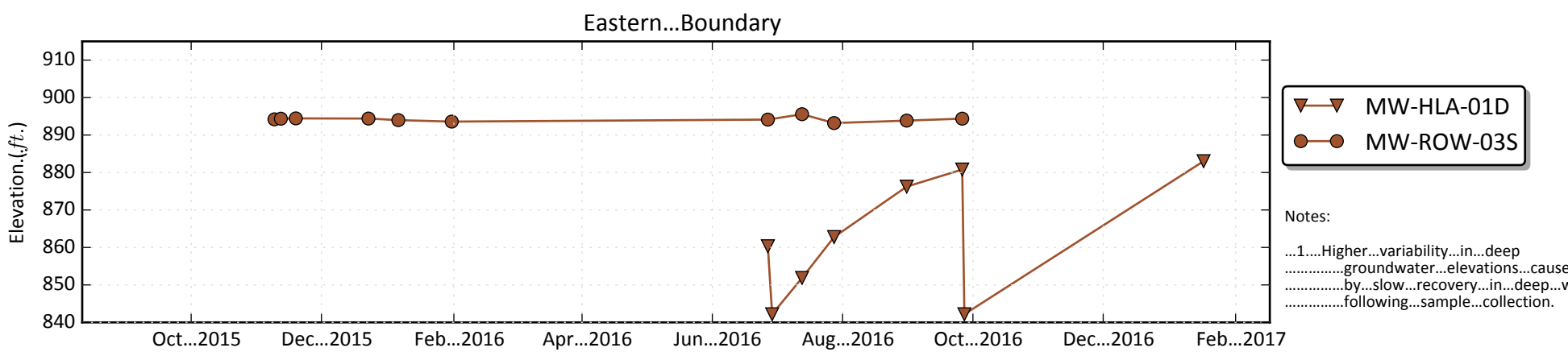
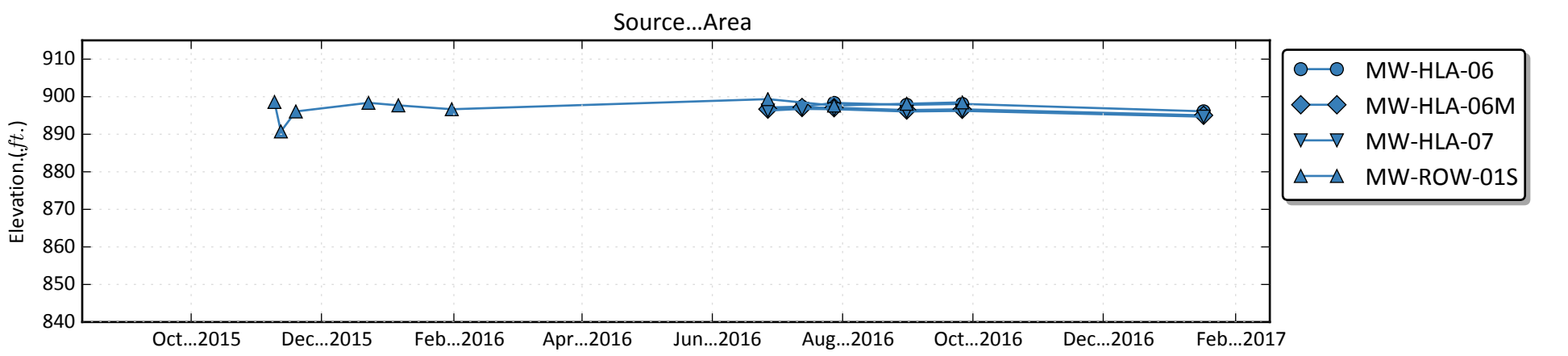
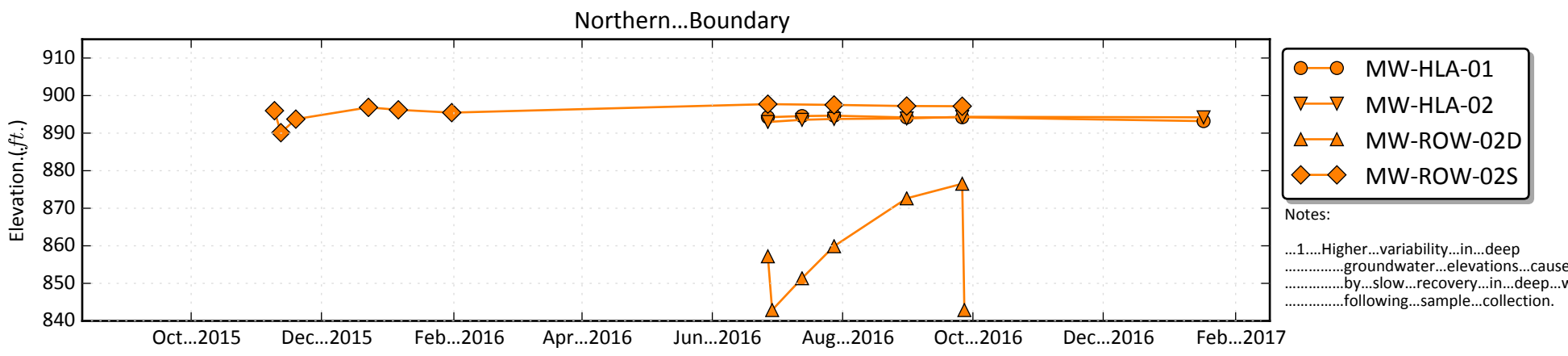


Exhibit B

Approval of Long Term Groundwater Monitoring Plan



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



File: Uncontrolled Sites – Town Gas Sites - Fargo

March 28, 2017

Terry Coss
Xcel Energy
414 Nicollet Mall
Minneapolis MN 55401-1993

Dear Mr. Coss:

Subject: Long-Term Monitoring Plan

The Department has reviewed the Long-Term Monitoring Plan dated March 2017 for the former Fargo Manufactured Gas Plant site. The groundwater and soil gas sampling and analysis plans appear to meet the Department's rules and guidance regarding monitoring of groundwater and soil gas at impacted sites based on current conditions at the site and property access assumptions. The Department does not have any additional comments regarding the Long-Term Monitoring Plan.

Should you have any questions regarding this letter, please feel free to contact Christine Roob at 701.499.5207 or me at 701.328.5166.

Sincerely,

Curtis L. Erickson, Manager
Hazardous Waste Program
Division of Waste Management

CLE:CKR:mkg
cc: Grant Larson, Fargo Cass Public Health

Exhibit C
Historic Union and Culligan Work Plan



Remedial Action Work Plan – Fargo MGP Site

Historic Union and Culligan Properties

Fargo, Cass County, North Dakota

Prepared for
Northern States Power Co.
Minneapolis, MN

March 31, 2017

Remedial Action Work Plan - Fargo MGP Site
Historic Union and Culligan Properties
March 31, 2017

Contents

| | | |
|-----|-------------------------------------|---|
| 1.0 | Introduction | 1 |
| 1.1 | Background | 1 |
| 1.2 | Property Description and Use..... | 2 |
| 2.0 | Remedial Action | 3 |
| 2.1 | Overview..... | 3 |
| 2.2 | Site Preparation..... | 3 |
| 2.3 | Targeted Source Removal | 3 |
| 2.4 | Odor and Dust Control..... | 3 |
| 2.5 | Air Monitoring..... | 4 |
| 2.6 | Groundwater Management | 4 |
| 2.7 | Material Handling and Disposal..... | 5 |
| 2.8 | Soil Sampling..... | 5 |
| 2.9 | Backfill and Restoration..... | 5 |
| 3.0 | Schedule and Reporting | 6 |
| 4.0 | References | 7 |

List of Tables

| | |
|---------|------------------------|
| Table 1 | Air Monitoring Summary |
|---------|------------------------|

List of Figures

| | |
|----------|----------------------------------|
| Figure 1 | Property Location |
| Figure 2 | Culligan and Historic Union Plan |

1.0 Introduction

This Remedial Action Work Plan (RAWP) was prepared on behalf of Northern States Power Co. (NSP) to provide the approach for implementing the selected remedy at the Historic Union and Culligan properties (Figure 1) as a component of the North Dakota Department of Health (NDDH) approved remedial approach for the former manufactured gas plant (MGP) in Fargo, North Dakota (Site). The former MGP operated on the north side of Northern Pacific (NP) Avenue between 11th Street North and North University Drive.

The following sections of this work plan provide additional background information, remedial action design, schedule and reporting. The work plan has been prepared pursuant to applicable North Dakota Department of Health regulations and United States Environmental Protection Agency (US EPA) guidance.

1.1 Background

Between June 2015 and January 2017, NSP performed a multi-media investigation of the former MGP Site and its vicinity. The Remedial Investigation/Focused Feasibility Study (RI/FFS) Report (Gradient, 2016a) and property-specific RI/FFS reports for the Culligan and Historic Union properties (Gradient, 2016b and 2016c) documented the findings of these environmental site investigations, human health risk assessment, and focused feasibility analysis of remediation alternatives.

The investigation concluded that MGP residuals, such as drip oils and tars, in the subsurface as non-aqueous phase liquids (NAPL) impacted the surrounding soil. The more soluble and volatile NAPL constituents are present in groundwater and soil vapor. The extent of the impacts from the former MGP are defined and the low hydraulic conductivity of the clay soil limits groundwater movement both horizontally and vertically. For the Historic Union and Culligan properties, the impacts appear to be associated with a remnant MGP pipe corridor that adjoins the two properties.

A risk evaluation was performed in the RI/FFS from the data collected and concluded that there are no unacceptable risks to human health based on current conditions for the Historic Union property and based on current and future potential conditions for the Culligan property. There are, however, elevated risks associated with future potential exposures for a Construction Worker for the Historic Union property in the vicinity of the former MGP pipe corridor along the western portion of the property. A detailed assessment of the remediation alternatives was performed in the RI/FFS and Targeted Source Removal was approved as the remedy to meet the remedial objectives for the Historic Union and Culligan properties. The targeted source removal will remove the MGP pipes as a potential preferential pathway and reduce the potential risk to a future Construction Worker.

Environmental controls, if any, will be determined based on discussions with the property owners and NDDH. A long-term monitoring (LTM) plan will be prepared to assess the stability and attenuation of impacts during and after remedy implementation.

1.2 Property Description and Use

The Historic Union property is comprised of two abutting buildings that were previously occupied by a food processing and refrigerated storage warehouse constructed in approximately 1929. The western building is three stories tall and the eastern building is four stories tall. The building complex has a footprint of about 22,000 square feet (Barr, 2015). Both buildings comprising the building complex have been remodeled. The western building has been remodeled for use as office space, including a basement level for storage. The eastern building has been remodeled for residential use with a basement for underground parking (Barr, 2015).

The Culligan property is occupied by an approximately 6,700 square foot slab on-grade building constructed in 1968, a small, concrete-paved parking lot, and grassy areas. The building includes an office and warehouse spaces. The parking lot is present on the northwest side of the building, and the grassy areas are on the east, south, and north sides of the building (Barr, 2016a).

An area that is approximately 27-feet wide separates the buildings between the Historic Union and Culligan properties. The area is covered with a grass surface. A concrete slab that is approximately 250 square feet is located in the southwest portion of the Historic Union property.

2.0 Remedial Action

2.1 Overview

Targeted source removal was selected as the remedy to meet the remedial objectives for the Historic Union and Culligan properties. Soil excavation and removal of remnant MGP distribution piping will be completed in the area between the adjoining properties as depicted in Figure 2. Excavated materials will be transported for off-site disposal at a permitted landfill. Excavated areas will be backfilled with clean fill as work progresses to maintain trench stability, and the area will be restored to pre-existing conditions.

2.2 Site Preparation

Current conditions within the proposed excavation area include a grass-covered ground surface between the Historic Union and Culligan buildings. Monitoring well MW-UB-01S is located within the proposed excavation area and will be abandoned prior to soil excavation activities. Proposed monitoring well MW-CUL-02 will be installed as a replacement well for post remedy groundwater monitoring as depicted in Figure 2.

All necessary state, county, and city permits will be obtained by the contractor performing the work as detailed in the project specifications and contract. Signs, barricades, and construction fencing will be utilized, as needed, to control the work areas.

2.3 Targeted Source Removal

Following site preparation activities, soil will be excavated between the adjoining properties (up to 8 feet below ground surface and approximately 10 feet in width) as depicted in Figure 2. An estimated 300 to 350 cubic yards of soil will be excavated depending on actual field conditions. Remnant MGP distribution piping will be removed from the excavation. The end of the distribution pipes will be capped and surveyed at the end of the southern extent excavation.

An excavation trench box will be used to protect the Culligan building. Excavated soil will be screened for organic vapors using a photoionization detector (PID) and visual/olfactory evidence of impacts will be noted.

Erosion control devices including, but not limited to, storm water inlet protection, rock construction entrances, and erosion control logs, maybe used to prevent erosion and transport of contaminated materials offsite. Adjacent street surfaces will be swept daily and/or more frequently to limit sediment runoff.

2.4 Odor and Dust Control

Standard odor and dust control practices will be implemented, as necessary, during excavating, hauling, and backfilling activities. The following soil management techniques will be used to minimize odors and dust:

- Limit the quantity and duration of soil exposed to atmosphere;

- Limit work during unfavorable wind conditions (i.e. high winds, receptors downwind);
- Load excavated soil and piping directly into trucks to allow it to be direct hauled to the disposal facility or stage in roll off containers and cover when direct hauling is not practical;
- Apply odor/vapor suppressant spray on excavation sidewalls and excavated soil, as needed; and
- Backfill completed areas with clean fill as soon as possible follow the excavation.

2.5 Air Monitoring

Based on the limited scope and duration of this work, this work constitutes an alteration to a source that is of minor significance as described in North Dakota Administrative Code Section 33-15-14-01, and is therefore exempt from compliance with ambient air quality standards. However, air monitoring will be conducted to assess downwind air quality and inform air monitoring for future work.

During remedy implementation, air monitoring will be conducted within the work zone and at the downwind perimeter of the work zone for indicator contaminants with thresholds for exposure (i.e., benzene and naphthalene), odor, and dust. The monitoring results will be recorded in daily field monitoring logs. Monitoring will be conducted during excavation activities using the following:

- PID equipped with a 10.6 electron volt (eV) lamp to measure total organic vapor concentrations;
- Draeger Chip Management System to measure and record instantaneous air concentrations of benzene and naphthalene in the event that PID sampling detects elevated and sustained total organic vapor concentrations;
- Olfactory observations on the presence and intensity of odors characteristic of naphthalene and hydrogen sulfide; and
- Visual monitoring for dust conditions will be performed in the work area and at the perimeter monitoring locations. Dust will also be monitored with a portable dust meter using 5-minute averages.

The monitoring type, method, frequency, and action levels are summarized on Table 1. If air monitoring action criteria are exceeded, the work activities may be modified to include, but not be limited to, additional temporary measures, such as pausing work, applying additional odor suppressant, performing additional air monitoring, or expanding the work exclusion zone, as necessary. If unacceptable conditions persist then work will be discontinued and the conditions reevaluated.

2.6 Groundwater Management

Excavation dewatering is not anticipated to be necessary during the targeted source removal for the Historic Union and Culligan properties based on the sequencing of the work, nature of the clay soil, and backfilling methods. If dewatering becomes necessary, the contractor will perform dewatering by

pumping from a sump within the excavation and storing the water in temporary tanks for treatment and disposal. Granular activated carbon will likely be used to treat the water prior to discharge to the sanitary sewer system under an approved temporary permit in accordance with the City of Fargo's National Pollutant Discharge Elimination System (NPDES) permit.

2.7 Material Handling and Disposal

Excavated soil and MGP piping will be excavated and directly loaded into trucks or roll off containers with standard earth moving equipment for offsite disposal. Waste characterization samples were previously collected and the waste profile has been approved for disposal at the Vonco II landfill located in Becker, Minnesota. Excavated soil and MGP piping will be transported to the landfill daily.

2.8 Soil Sampling

Soil samples will be screened for organic vapors during the excavation with a photoionization detector (PID) and for visual/olfactory evidence of impacts in accordance with the sampling procedures in the QAPP (Barr, 2016b). Soil samples may be collected from the final extent of the excavation and submitted for analysis of volatile organic compounds (VOCs) by EPA method 8260B, semi-volatile organic compounds (SVOCs) by EPA method 8270D, and total petroleum hydrocarbons (TPH), reported as gasoline range organics (GRO) and diesel range organics (DRO) by EPA methods 9012B and 8015D.

2.9 Backfill and Restoration

The final excavation extents will be surveyed and a marker layer such as orange construction fencing may be placed at the base of excavation only if residual impacts remain based on field observations and physical limitations. Clean native (low-permeability) soil will be imported for backfill from a pre-verified source. If prior certification is not available for the source of the fill material, then samples may be collected for analysis of VOCs by EPA method 8260B, SVOCs by EPA method 8270D, and TPH, reported as GRO/DRO by EPA methods 9012B and 8015D.

The excavation will be backfilled as work progresses to maintain trench stability and protect nearby buildings. Ground surfaces will be restored to pre-existing grades and revegetated.

3.0 Schedule and Reporting

An access agreement is needed for both the Historic Union and Culligan properties before this work can commence. Once the property owners provide permission to proceed, the schedule will also depend on availability of field contractors following an opportunity for review and comment by the NDDH. The work is tentatively scheduled for May 2017. The work is anticipated to take approximately five days to complete. A report will be prepared at the completion of the work to document the implementation of the selected remedy.

4.0 References

Barr, 2015. "Vapor Assessment Work Plan, Former Union Storage and Transfer Complex, Fargo, North Dakota (Draft)." Report to Northern States Power Company, July 23, 2015.

Barr, 2016a. Preliminary Investigation of the Fargo MGP Site Work Plan – Supplement 01, Former Fargo MGP Site, Fargo, North Dakota. Prepared for Northern States Power Company, April 1, 2016.

Barr, 2016b. Quality Assurance Project Plan Revision 01, Former Fargo MGP Site, Fargo, North Dakota. Prepared for Northern States Power Company, April 2016.

Gradient, 2015. Historical Review of the Fargo Manufactured Gas Plant. Report to Northern States Power Company, October 9, 2015.

Gradient, 2016a. Remedial Investigation and Focused Feasibility Study, Fargo MGP and Vicinity, Prepared for Northern States Power Company, November 29, 2016.

Gradient, 2016b. Remedial Investigation and Focused Feasibility, Study: Historic Union Property, Fargo Manufactured Gas Plant (MGP) and Vicinity, Prepared for Northern States Power Company, December 1, 2016.

Gradient, 2016c. Remedial Investigation and Focused Feasibility, Study: Culligan Property, Fargo Manufactured Gas Plant (MGP) and Vicinity, Prepared for Northern States Power Company, December 1, 2016.

Table

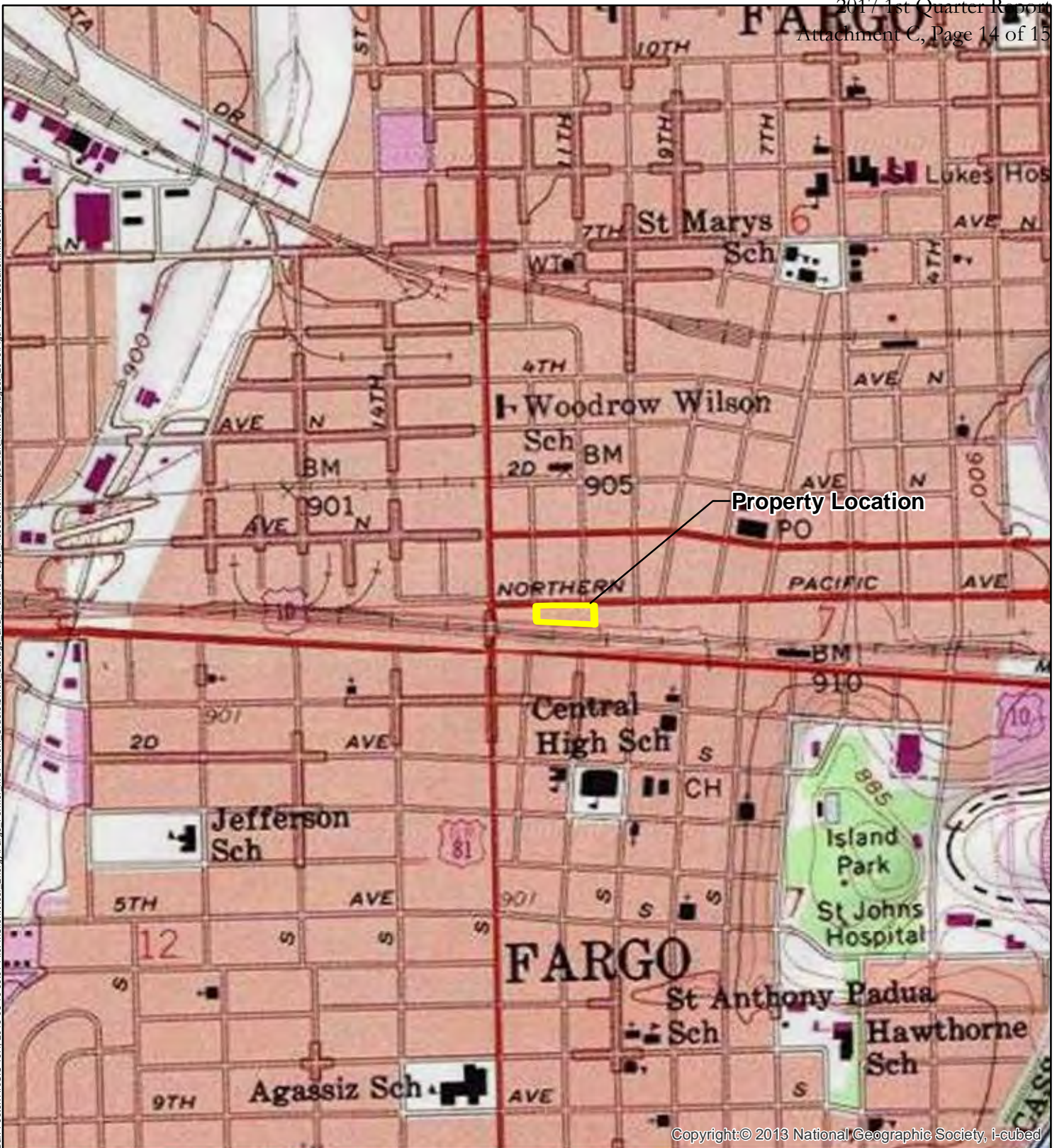
TABLE 1
Air Monitoring Summary
Former MGP Site – Historic Union and Culligan Properties
Fargo, North Dakota

| Type | Method | Frequency | Action Level/Response |
|-------------|---|--|--|
| PID | PID with 10.6 electron volt lamp | Continuous monitoring down-wind of excavation with datalogger recordings stored once per minute. | <p><u>Primary</u> - If PID is 2.5 ppm above background for greater than 5 minutes, then perform benzene and naphthalene detector tubes tests. If benzene or naphthalene test results are below action levels, continue monitoring and increase PID action level to 10 ppm above background.</p> <p><u>Secondary</u> - If PID is 10 ppm above background for greater than 5 minutes, then notify contractor and employ mitigation techniques.</p> |
| Benzene | Draeger - Gastec tube (No. 121L – benzene) | When PID >2.5 ppm above background concentrations for 5 minutes | 2.5 ppm benzene above background / notify contractor and employ mitigation techniques. |
| Naphthalene | Draeger – Gastec tube (No. 60 – phenol) | | 5.0 ppm naphthalene above background / notify contractor and employ mitigation techniques. |
| Dust | Visual and airborne dust particulate monitor (MiniRam or DataRam) | Visible dust | <p><u>Primary</u> – if visible sustained dust, then notify contractor and employ dust mitigation methods. Begin monitoring with dust particulate monitor.</p> <p><u>Secondary</u> – If dust particulate monitor exceeds 150 µg/m³, for 5 minute averages, then modify work and employ additional dust mitigation methods.</p> |

PID - photoionization detector
 ppm - parts per million
 µg/m³ – micrograms per cubic meter

Figures

Bar Footer: ArcGIS 10.4, 2016-08-10 09:01 File: I:\Client\Xcel_Energy\Fargo_Former_MGP\Work_Orders\Union_Storage_and_Transfer_Vapor_Assessment\Maps\Draft_Memo_August_2016\Figure 1 Site Location.mxd User: jrv



Property Location


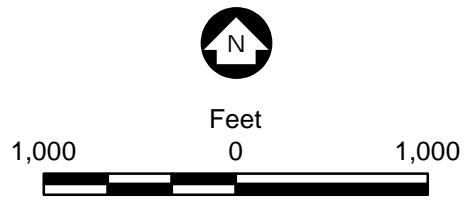
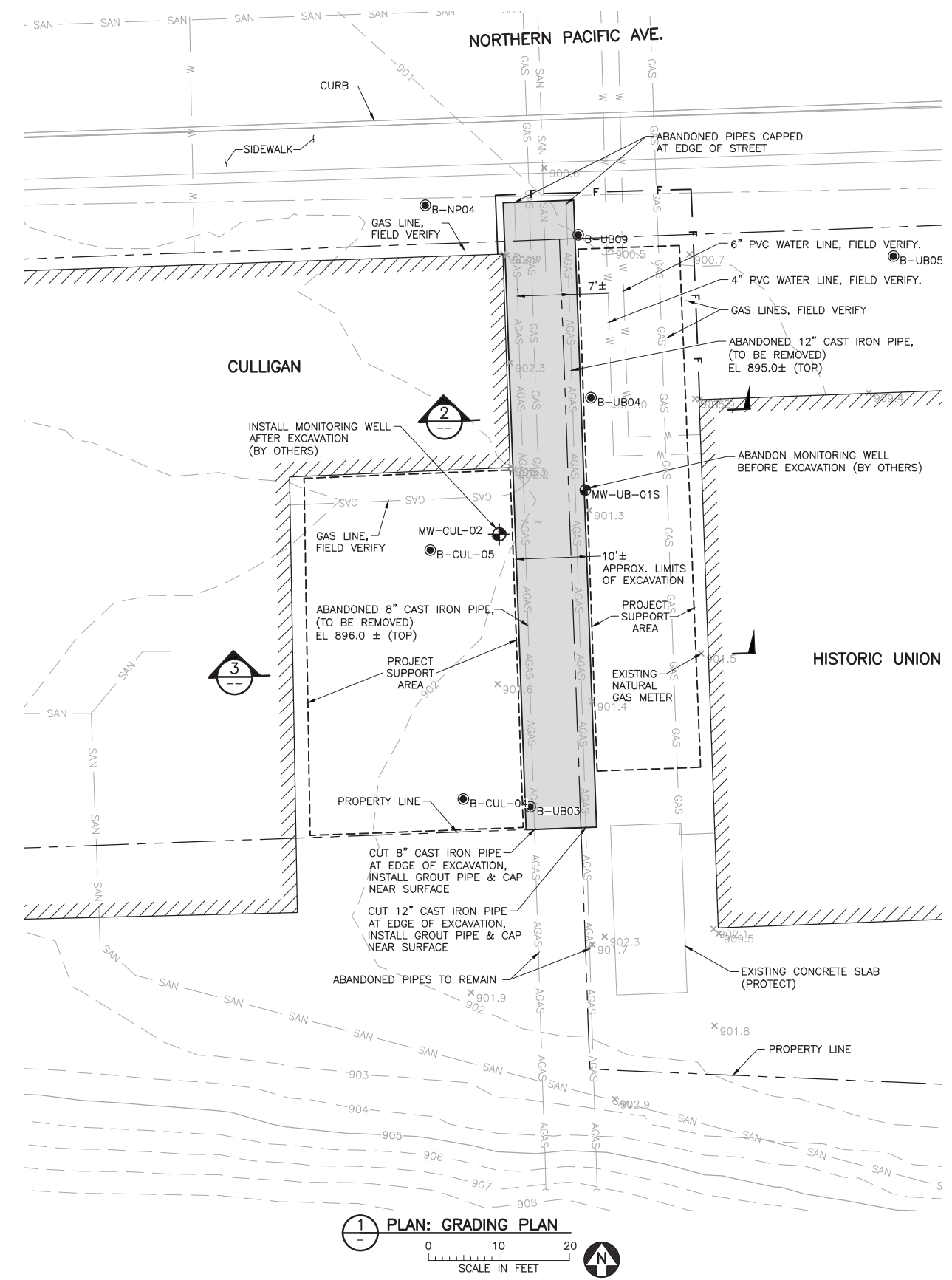
 Historic Union and Culligan Property Location

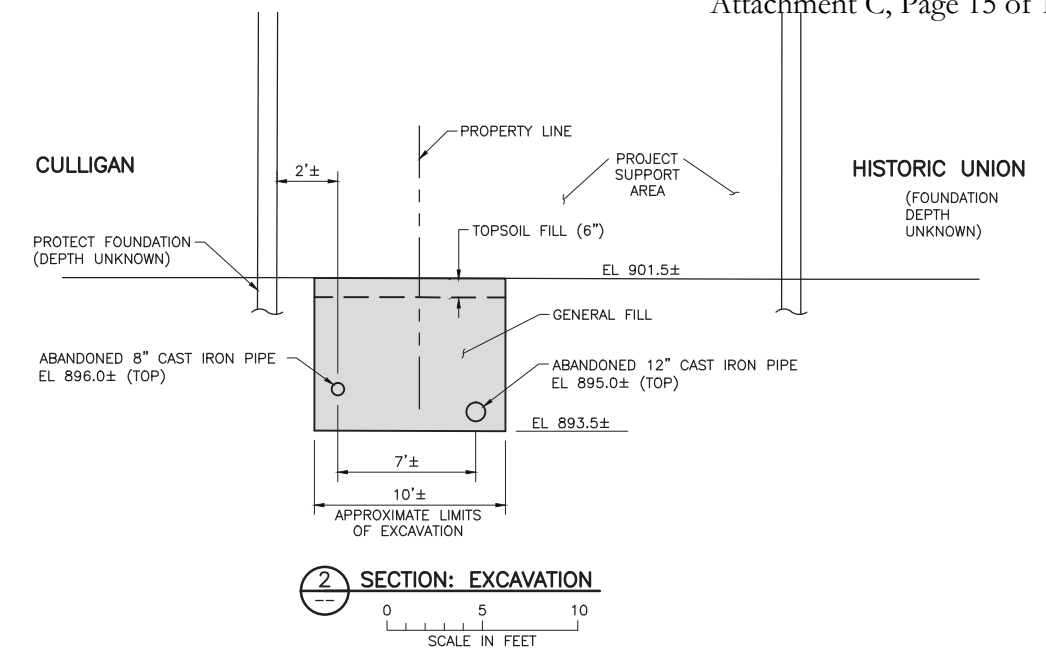
Figure 1

PROPERTY LOCATION
1026 - 1126 NP Avenue
Fargo, ND

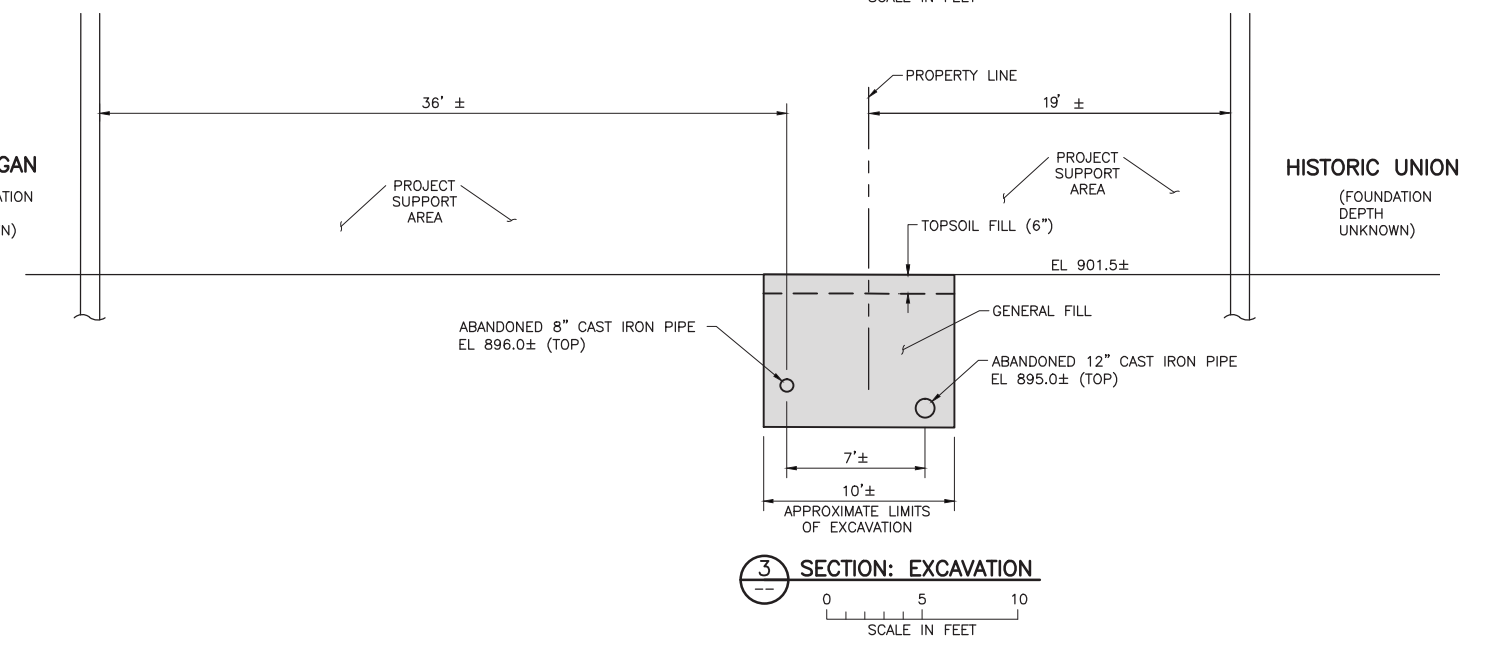




1 PLAN: GRADING PLAN
SCALE IN FEET



2 SECTION: EXCAVATION
SCALE IN FEET



3 SECTION: EXCAVATION
SCALE IN FEET

- NOTES:**
- UTILITY LOCATION AND DEPTHS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
 - CONTRACTOR TO PROTECT STABILITY AND INTEGRITY OF EXISTING BUILDINGS DURING TRENCH EXCAVATION AND BACKFILL.
 - DEPTH AND EXTENT OF EXCAVATION TO BE FIELD VERIFIED BY COMPANY'S FIELD REPRESENTATIVE.
 - CONTRACTOR TO INSTALL TEMPORARY CONSTRUCTION ENTRANCE ADJACENT TO PUBLIC ROAD ALONG APPROVED ACCESS ROUTE TO EXCAVATION AREA.

| NO. | BY | CHK. | APP. | DATE | REVISION DESCRIPTION |
|-----|----|------|------|------|----------------------|
| | | | | | |
| | | | | | |
| | | | | | |

| CLIENT | BID | CONSTRUCTION | EPA |
|--------|-----|--------------|-----|
| | | | |
| | | | |
| | | | |

| RELEASED TO/FOR | A | B | C | 0 | 1 | 2 | 3 |
|-----------------|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

BARR Project Office:
BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
Suite 200
MINNEAPOLIS, MN 55435
Corporate Headquarters:
Minneapolis, Minnesota
Ph: 1-800-632-2277
Fax: (952) 532-2601
www.barr.com

| Scale | AS SHOWN |
|----------|----------|
| Date | 03/21/17 |
| Drawn | BJH |
| Checked | |
| Designed | |
| Approved | |

NORTHERN STATES POWER CO.

FIGURE 2
FORMER MGP SITE
CULLIGAN-HISTORIC UNION PLAN

| BARR PROJECT No. | CLIENT PROJECT No. |
|------------------|--------------------|
| 34/09-1030.01 | |
| DWG. No. | REV. No. |
| | |

Exhibit D

**Conditional Approval of HU and Culligan Work Plan
(Comment received from NDDH)**



NORTH DAKOTA
DEPARTMENT *of* HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



File: Uncontrolled Sites – Town Gas Sites - Fargo

April 6, 2017

Terry Coss
Xcel Energy
414 Nicollet Mall
Minneapolis MN 55401-1993

Dear Mr. Coss:

Subject: Remedial Action Work Plan – Fargo MGP Site
Historic Union & Culligan Properties

The Department has reviewed the Remedial Action Work Plan for the Fargo MGP Site, Historic Union & Culligan Properties located in Fargo ND dated March 31, 2017 and has the following comment:

Section 2.8 Soil Sampling: This section states "Soil samples may be collected from the final extent of the excavation and submitted for analysis...". Since the location of the contamination and remedial activities is off-site from the manufactured gas plant, confirmation samples must be collected after impacted soils have been removed. Confirmation samples must be collected from the base of the excavation and sidewalls of the trench to verify that all contamination was removed or to document the levels of contamination left in place.

Should you have any questions regarding this letter, please feel free to contact Christine Roob at 701.499.5207 or me at 701.328.5166.

Sincerely,

Curtis L. Erickson, Manager
Hazardous Waste Program
Division of Waste Management

CLE:CKR:mkg