

TECHNICAL MEMORANDUM

SOIL GAS INVESTIGATION



**Infilled Log Pond
Former Mill Property**
2210 Tamarack Street
Sweet Home, Oregon 97386

ODEQ ECSI No. 347

Prepared for:

Northern Investments
Attn: Josh Victor
1102 Main Street
Sweet Home, Oregon 97386

Issued on:

September 26, 2023

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This

Soil Gas Investigation Technical Memorandum

For the

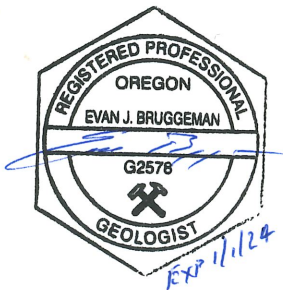
**Infilled Log Pond
Former Mill Site**
2210 Tamarack Street
Sweet Home, Oregon 97386

Has been prepared for:

Northern Investments
Attn: Josh Victor
1102 Main Street
Sweet Home, Oregon 97386

and their assignees

Issued September 26, 2023 by:



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List of Symbols, Acronyms and Abbreviations

%	percent by volume
ΔP	pressure differentials
bgs	below ground surface
Client	Northern Investments
CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
ENW	EVREN Northwest, Inc.
FSDS	Field Sampling Data Sheet
H ₂ S	hydrogen sulfide
In. H ₂ O	inches of water column
In. Hg	inches of mercury
LEL	lower explosive limit
O ₂	oxygen
ODEQ	Oregon Department of Environmental Quality
PID	photoionization detector
ppmv	parts per million by volume
PVC	polyvinyl chloride
SOW	scope of work
subject site	2210 Tamarack Street, Sweet Home, Oregon 97386

1.0 Introduction

On behalf of Northern Investments (Client), EVREN Northwest, Inc. (ENW) has prepared this technical memorandum documenting the soil gas investigation conducted in and around an infilled log pond at a former mill property located at 2210 Tamarack Street in Sweet Home, Oregon (subject site; Figures 1 and 2).

The subject site historically operated as a lumber mill from 1934 through 1989 and a plywood mill from 1959 through 1994.^{1,2} An approximately 32-acre log pond filled sometime between 1955 and 1976 is in the central portion of the 162-acre site. Varying amounts of wood chips and bark were encountered along with unconsolidated silt, sand, gravel, and cobbles in test pits and borings advanced by others in the infilled log pond area.¹ This mixed woody debris and soil has bio-degraded to produce methane (methanogenesis).

The soil gas investigation was conducted according to the methods described in ENW's *Focused Infilled Log Pond Investigation Work Plan*³ (September 2022) and ENW's *Focused Soil Gas Investigation Update*⁴ (January 2023). Both documents were submitted to and approved by the Oregon Department of Environmental Quality (ODEQ).

2.0 Background

2.1 Site Description and History

The subject site is comprised of Recreational Commercial zoned land in Sweet Home extending approximately 1 mile east of the intersection of 18th Avenue and Tamarack Street. Linn County identifies the site as tax lots 13S01E29-02200, 13S01E29CC-0110, 13S01E29DA-3000, 13S01E32BB-00200, and 13S01E32AB-0010 in Township 13 South, Range 1 East, Sections 29 and 32. The site lies between the South Santiam River and Highway 20 on generally level terrain at an elevation of 550 feet above mean sea level (Figure 1).

¹ Geosyntec, December 2017. *Site Investigation Report, Willamette Industries Site Investigation Sweet Home, Oregon*. EPA BF-00J94801. Prepared for Oregon Department of Environmental Quality.

² Enviro Assessment, PC, March 2022. *Phase I Environmental Site Assessment, Tamarack Street Property, 2210 Tamarack Street, Sweet Home, OR 97386*. Prepared for Northern Investments.

³ ENW, September 20, 2022. *Work Plan – September 2022 Revision, Focused Infilled Log Pond Investigation, Former Mill Property, 2210 Tamarack Street, Sweet Home, Oregon, ODEQ ECSI No. 347*: Prepared for: Northern Investments, Attn: Josh Victor, 1102 Main Street, Sweet Home, Oregon.

⁴ ENW, January 27, 2023. *Focused Soil Gas Investigation Update, 2210 Tamarack Street, Sweet Home, Oregon*: Letter addressed to Oregon Department of Environmental Quality, Western Region Environmental Cleanup Program, Attn: Margaret Oscilia, 4026 Fairview Industrial Drive SE, Salem, Oregon 97302.

Site historical background and results of previous log pond characterization studies are summarized in ENW's *Focused Infilled Log Pond Investigation Work Plan*³.

The *Work Plan*³ called for three rounds of soil gas monitoring within 60 days of probe completion in October 2022; however, widespread saturated ground conditions prevented soil gas monitoring of some or all the semi-permanent soil gas points during subsequent monitoring attempts on November 7, 2022, November 30, 2022, and December 21, 2022. In response, ENW prepared and submitted to ODEQ a January 2023 *Update* letter⁴ which presented available data and described a modified sampling strategy and schedule to address saturated ground water conditions encountered during previous monitoring attempts. ENW proposed to conduct further monitoring during drier weather, i.e., a minimum of 14 days without measurable precipitation, to increase the likelihood of data collection from all monitoring locations. In addition to monitoring the existing semi-permanent points, ENW proposed collecting additional data from temporary soil gas probes advanced using slide hammer technique to further delineate methane in the infilled log pond area.

This technical memorandum presents the results of soil gas monitoring per ENW's *Work Plan*³ and *Update*⁴ letter.

2.2 Purpose

Soil gas monitoring was conducted to:

- Characterize and delineate methane occurrence in soil gas in and around the infilled log pond area, and
- Evaluate the potential for methane to migrate in areas adjacent to the infilled log pond area where it could potentially accumulate in confined spaces at concentrations that could create an explosion hazard.

2.3 Scope of Work

ENW conducted the following scope of work (SOW) for this project according to the *Work Plan*³ and *Update*⁴ letter:

- Constructed semi-permanent soil gas monitoring points SG01 through SG08 with the assistance of a direct push drill rig.
- Installed temporary soil gas probes SG09 through SG13 to further delineate methane for select monitoring events (June 2023 and July 2023).
- Purged and monitored semi-permanent and temporary soil gas points using a calibrated LandTec GEM 5000 landfill gas meter with concurrent recording of percent methane (CH₄), carbon dioxide (CO₂), oxygen (O₂), and balance gases in percent by volume (%). Carbon monoxide (CO) and hydrogen sulfide gas (H₂S) values in parts per million by volume (ppmv) were also recorded.
- Tabulated and presented the monitoring results in this technical memorandum that includes:

- Percent CH₄, CO₂, O₂, and balance gas data,
- CO and H₂S data in ppmv,
- Sampling methodology, and
- Conclusions and recommendations.

3.0 Methods and Procedures

Soil gas monitoring methods and procedures for semi-permanent soil gas points SG01 through SG08 and temporary soil gas probes SG09 through SG13 are described previously in ENW's *Work Plan*³ and *Update*⁴ letter. Photographs taken during installation and monitoring activities are included in Appendix A. Boring logs are included in Appendix B and Field Sampling Data Sheets (FSDS) are included in Appendix C.

Landfill gas monitoring results are presented in Table 1 (attached) and discussed below.

4.0 Semi-Permanent Soil Gas Monitoring Point Installation

Semi-permanent monitoring points were installed at the site as described in ENW's *Work Plan*.³ Eight exploratory soil borings (SG01-SG08) were completed within and/or along the margins of the infilled log pond area using a tracked direct-push drill rig operated by a licensed Oregon driller in locations illustrated on Figure 3A. Soil borings were completed to between 15 and 20 feet below ground surface (bgs) except for SG06 where shallow refusal due to rocky soils was encountered at 7.5 feet bgs. Soil cores were inspected by an Oregon Registered geologist and screened for potential suggestions of methane using a calibrated GEM 500 landfill gas monitor, photoionization detector (PID – for volatiles) and laser thermometer (for indications of raised temperature that may be related to methanogenesis). Observations were recorded on boring logs included as Appendix B.

Upon reaching total depth, the drill tooling was removed, and a semi-permanent soil gas monitoring well was constructed within each borehole. A stainless-steel screen tip was installed within a "sand filter pack" of 10/20 Colorado silica sand at a depth targeting conditions suggestive of potential methane production (e.g., buried organic matter) and affixed to a section of ¼-inch Teflon tubing that extended out of the boring. The sand pack was capped with a layer of granulated bentonite, and the uppermost portion of the boring filled with a cement grout slurry. A 4-inch inside diameter threaded polyvinyl chloride (PVC) monument with removable cap was set in a concrete surface seal at the original surface grade. Inside the monument, the end of the Teflon tubing was fitted with a valve. A schematic illustrating soil gas probe construction is included as Figure 5.

5.0 Temporary Soil Gas Monitoring Point Installation

As described in the ENW's *Update* letter⁴, five (5) temporary soil gas probes were installed for the June 2023 and July 2023 monitoring events to further delineate the extent of methane within the former log

pond area. Temporary soil gas probes were advanced using a slide-hammer technique and/or electric jackhammer to a depth of approximately 4.5 feet bgs, correlating with the depths of most of the semi-permanent monitoring locations. Upon reaching target depth, probes were retracted a few inches to allow for remote opening of the probe tip. A section of dedicated Teflon™ tubing affixed to a threaded fitting was inserted through the hollow probe rods and connected to the probe tip, creating a soil gas pathway from probe tip to the surface. A seal of hydrated bentonite was placed around the soil gas probe at the ground surface to prevent ambient air intrusion.

6.0 Soil Gas Monitoring

ENW monitored semi-permanent soil gas points SG01 through SG08 and temporary soil gas probes SG09 through SG13 from October 2022 through July 2023. The following items provide supporting information:

- Table 1 (behind text) presents methane monitoring results from all monitoring events.
- Table 6-1 (below) summarizes soil gas monitoring results for the three complete monitoring events (October 21, 2022, June 14, 2023, and July 10, 2023).
- Figures 3A, 3B, and 3C illustrate sample locations relative to site features and present methane iso-concentration contours in soil gas for the three complete monitoring events.
- Appendix C presents soil gas FSDS for all sampling events.

6.1 Methane Screening Level

Methane generated by solid waste landfills is regulated under federal,⁵ Resource Conservation and Recovery Act (RCRA) Subtitle D,⁶ and Oregon Hazardous Substance Remedial Action Rules.⁷ Pursuant to ODEQ's August 23, 2022, request, a screening level of 1.0% methane by volume (20% of the lower explosive limit [LEL] of CH₄) is used for this investigation.

Table 6-1. Soil Gas Monitoring Plan

Parameter	Instrument	Screening Level
CH ₄ , CO ₂ , O ₂ , CO, H ₂ S, balance gas, and static pressure	LandTec GEM 5000 Landfill Gas Meter	CH ₄ of 1.0% by volume

⁵ 40 CFR 60 Subpart Cf

⁶ 40 CFR 258.23 and 42 USC 82

⁷ OAR 340-122-0040(3)

6.2 Findings

Results of field measurements for landfill gases and discrete soil gas sampling for CH₄ are presented in this section.

Table 6-2. Soil Gas Monitoring Summary

Soil Gas Probe ID	Sample Date	Soil Gas Constituent Concentrations ¹						Notes
		CH ₄	CO ₂	O ₂	Bal. Gases	CO	H ₂ S	
		%	%	%	%	ppmv	ppmv	
SG01	10/21/2022	1.6	13.3	0.9	84.2	--	--	
	6/14/2023	1.0	10.7	0.3	88.0	0	1	
	7/10/2023	1.4	11.5	0.3	86.8	2	1	
SG02	10/21/2022	56.2	17.3	0.6	25.9	0	10	
	6/14/2023	25.7	0.0	8.3	66.0	2	2	GEM Obs.
	7/10/2023	41.4	6.5	16.0	36.1	0	2	GEM Obs.
SG03	10/21/2022	44.2	17.6	1.4	36.8	0	33	
	6/14/2023	64.0*	30.1*	1.4*	4.5*	1*	6*	GEM Obs.
	7/10/2023	40.7	15.3	7.0	37.0	--	--	GEM Obs.
SG04	10/21/2022	2.9	6.4	0.3	90.4	43	52	
	6/14/2023	37.2	16.8	0.7	45.3	2	6	
	7/10/2023	37.9	19.5	0.4	42.2	0	4	
SG05	10/21/2022	0.6	6.0	11.8	81.6	--	--	
	6/14/2023	0.0	6.7	13.3	80.0	1	7	
	7/10/2023	0.0	10.0	7.5	82.5	0	4	
SG06	10/21/2022	12.5	10.7	0.2	76.6	0	6	
	6/14/2023	13.1	10.4	0.5	76.0	1	7	
	7/10/2023	8.5	11.6	0.4	79.5	0	7	
SG07	10/21/2022	0.0	2.5	16.5	81.0	--	--	
	6/14/2023	0.0	7.5	9.7	82.8	0	4	
	7/10/2023	0.0	7.8	10.7	81.5	1	5	
SG08	10/21/2022	0.1	13.3	0.2	86.4	--	--	
	6/14/2023	3.4	7.5	0.1	89.0	2	5	
	7/10/2023	2.3	9.1	0.3	88.3	0	6	
SG09	6/14/2023	3.7	6.7	13.8	75.8	60	79	
	7/10/2023	18.4	30.3	5.3	46.0	2	6	
SG10	6/14/2023	0.0	0.1	20.7	79.2	5	9	
	7/10/2023	0.0	6.5	14.3	79.2	1	4	
SG11	6/14/2023	0.0	2.2	18.4	79.4	0	4	
	7/10/2023	0.0	0.7	20.2	79.1	2	4	
SG12	6/14/2023	0.5	14.2	3.2	82.1	9	10	
	7/10/2023	0.4	14.9	5.7	79.0	0	6	
SG13	6/14/2023	0.0	0.9	19.8	79.3	1	3	
	7/10/2023	0.0	0.8	20.0	79.2	0	1	

10/21/2022	Max.	56.2	17.6	16.5	90.4	43	52
	Min.	0.0	2.5	0.2	25.9	0	6
6/14/2023	Max.	64.0	30.1	20.7	89.0	60	79
	Min.	0.0	0.0	0.1	4.5	0	1
7/10/2023	Max.	41.4	30.3	20.2	88.3	2	7
	Min.	0.0	0.7	0.3	36.1	0	1

Notes:

1. One semi-permanent soil gas point or temporary soil gas probe volume

* = Less than one point or probe volume

% = Percent by volume

ppmv = Parts per million by volume

6.2.1 Methane

October 21, 2022. During the initial monitoring event on October 21, 2022, CH₄ was detected in all monitoring points except SG07 at concentrations ranging from 0.1 to 56.2 % (see Figure 3A). The CH₄ screening level of 1.0 % was exceeded in SG01 through SG04, and SG06, with the highest concentration in SG02 within the western portion of the infilled pond.

November and December 2022. During monitoring events conducted on November 7, November 30, and December 21, 2022, saturated soil conditions were encountered that limited or prevented monitoring of semi-permanent monitoring points. As requested by ODEQ, the incomplete datasets gathered during these attempted monitoring events are included in Table 1 and FSDS forms are included in Appendix C.

June 14, 2023. During the June 2023 monitoring event, CH₄ was detected in SG01 through SG04, SG06, SG08, SG09, and SG12 at concentrations ranging from 0.5 to 64.0 %. CH₄ was not detected in SG05, SG07, SG10, SG11, or SG13 (Figure 3B). The CH₄ screening level of 1.0 % was exceeded in SG01 through SG04, SG06, SG08, and SG09, with the highest concentration in SG03 within the central part of the infilled pond. Saturated soil conditions likely caused the GEM 5000 flow to become choked in SG02 and SG03, but not before readings were acquired.

July 10, 2023. During the July 2023 monitoring event, CH₄ was detected in SG01 through SG04, SG06, SG08, SG09, and SG12 at concentrations ranging from 0.4 to 41.4 %. CH₄ was not detected in SG05, SG07, SG10, SG11, or SG13 (Figure 3C). The CH₄ screening level of 1.0 % was exceeded in SG01 through SG04, SG06, SG08, and SG09, with the highest concentration in SG02 within the western part of the infilled pond. Saturated soil conditions likely caused the GEM 5000 flow to become choked in SG02 and SG03, but not before readings were acquired.

A plot of soil gas methane concentration versus time in Figure 6 suggests a stable or decreasing CH₄ concentration trend may be developing for SG01, SG03 and SG08, while an increasing trend may be present at SG04 (located in the east-center of the infilled pond area). Trends are still developing for SG02 and SG06, since each is based on three data points. Trends are unable to be established for SG09 and SG12, having only two data points each.

6.2.2 Carbon Dioxide (CO₂)

CO₂ can be an indicator of decomposition of organic debris in a landfill, i.e., infilled pond. Monitoring point SG03 was found to have the highest concentration of CO₂ during the October 2022 and June 2023 monitoring events, at 17.6% and 30.1%, respectively. During the July 2023 event, the maximum CO₂ concentration was 30.3 % in SG09. CO₂ was measured at concentrations ranging from 0.0% to 19.5% in the remaining soil gas probes during the three complete monitoring events combined. The typical concentration of CO₂ in ambient air is 0.04%.

6.2.3 Oxygen (O₂)

Methanogenesis is an anaerobic activity, so oxygen (O₂) concentrations can be expected to be lowest where CH₄ and CO₂ are detected. During the October 2022 and June and July 2023 monitoring events, the minimum detected O₂ concentration was 0.1 % in SG08 located along the south-central infilled pond boundary. Oxygen was detected at concentrations ranging from 0.2% to 20.7% in the remaining soil gas probes during the three complete monitoring events combined. O₂ is typically 20.9% in ambient air.

6.2.4 Carbon Monoxide (CO)

Small amounts of CO (0-0.2%) can be found in landfill gas from the breakdown of organic matter.⁸ During the October 2022 and June 2023 monitoring events, maximum CO concentrations were detected in SG04 and SG09 at 43 ppmv and 60 ppmv, respectively. During the July 2023 event, the maximum CO concentration was 2 ppmv in SG01, SG09, and SG11. CO was measured at concentrations ranging from 0 ppmv to 9 ppmv in the remaining soil gas probes during the three complete monitoring events combined. As the most abundant (by mass) pollutant gas, CO levels in typical urban areas around 10 ppmv.⁹

6.2.5 Hydrogen Sulfide (H₂S)

H₂S can be produced in landfills from the break-down of organic matter.¹⁰ During the October 2022 and June 2023 monitoring event, maximum H₂S concentrations were detected in SG04 and SG09 at 52 ppmv and 79 ppmv, respectively. During the July 2023 event, the maximum H₂S concentration was 7 ppmv in SG06. H₂S was detected at concentrations ranging from 1 ppmv to 33 ppmv in the remaining soil gas probes during the three complete monitoring events combined. H₂S concentrations in ambient air in urban areas are generally less than 0.001 ppmv.¹¹

6.2.6 Barometric Pressure and Temperature

Extreme changes in barometric pressure can contribute to pressure differentials between the ground and atmosphere that may promote movement of gases produced by methanogenesis. The effect of temperature on a gas held at constant volume is directly proportional to pressure.

The barometric pressure and temperatures 24 hours prior to the approximate time-frame monitoring were recorded on the day of monitoring¹² and are summarized in Table 6-3 below.

⁸ ASTDR, *Chapter 2: Landfill Gas Basics*;

<https://www.atsdr.cdc.gov/hac/landfill/html/ch2.html#:~:text=By%20volume%2C%20landfill%20gas%20typically,%2C%20benzene%2C%20and%20vinyl%20chloride.>

⁹ UCAR Center for Science Education, *Carbon Monoxide*; <https://scied.ucar.edu/learning-zone/air-quality/carbon-monoxide#:~:text=Carbon%20monoxide%20is%20the%20most,as%20high%20as%2050%20ppm.>

¹⁰ New York State Department of Health, *Important Things to Know About Landfill Gas, Odors from Landfill Gas*; https://www.health.ny.gov/environmental/outdoors/air/landfill_gas.htm#:~:text=Odors%20in%20landfill%20gas%20are,hydrogen%20sulfide%20can%20be%20formed.

¹¹ ASTDR, December 2016. *Public Health Statement, Hydrogen Sulfide, What Happens to Hydrogen Sulfide When it Enters the Environment?*; <https://www.atsdr.cdc.gov/toxprofiles/tp114-c1-b.pdf>

¹² <https://www.wunderground.com/dashboard/pws/KORSWEET40/table/2023-07-10/2023-07-10/daily>

Table 6-3. Summary of Barometric Pressure and Temperature

	Units	10/20/2022		10/21/2022	
		9:54 am	2:54 pm	9:54 am	2:54 pm
Barometric Pressure	In. Hg	29.75	29.67	29.59	29.42
Temperature	°F	51	73	55	60
	Units	06/13/2023		06/14/2023	
		10:14 am	3:34 pm	10:14 am	3:34 pm
Barometric Pressure	In. Hg	30.11	30.08	30.23	30.16
Temperature	°F	65.9	75.6	59.4	68.2
	Units	07/09/2023		07/10/2023	
		9:29 am	3:49 pm	9:29 am	3:49 pm
Barometric Pressure	In. Hg	29.99	29.92	30.13	30.10
Temperature	°F	62.3	80.2	62.5	73.7

October 20-21, 2022. As shown in Table 6-3 above, the barometric pressure was falling slowly over the 24 hours preceding and during ENW's October 21, 2022, monitoring event; a maximum change of - 0.37 in Hg (5.04 in H₂O). Therefore, the pressure differentials (ΔP) of -0.035 to 0.03 in H₂O observed in soil gas points at the site likely were caused by the slight change in barometric pressure just preceding or during the monitoring event. During the October 21, 2022, monitoring event, it does not appear that landfill gases induced a ΔP in the infilled log pond.

June 13-14, 2023. As shown in Table 6-3 above, the barometric pressure was rising slowly over the 24 hours preceding and during ENW's June 14, 2023, monitoring event; a maximum change of + 0.15 in Hg (2.04 in H₂O). Therefore, the ΔP of -0.088 to 5.525 in H₂O observed in soil gas points/ probes at the site likely were not caused by the slight change in barometric pressure alone just preceding or during the monitoring event and may be related to pressure differentials in soil gas near the areas monitored.

July 9-10, 2023. As shown in Table 6-3 above, the barometric pressure fluctuated slightly though rose overall during the 24 hours preceding and during ENW's July 10, 2023, monitoring event; a maximum change of + 0.21 in Hg (2.86 in H₂O). Therefore, the slight ΔP of -0.895 to 0.078 in H₂O observed in soil gas points/ probes at the site likely were caused by the slight change in barometric pressure just preceding or during the monitoring event. During the July 10, 2023, monitoring event, it does not appear that soil gases induced a ΔP in the infilled log pond.

7.0 Discussion

ENW completed three (3) full rounds of soil gas monitoring of eight semi-permanent soil gas points within and surrounding the methane test area including the infilled log pond at the subject site. The last two

rounds also included monitoring of five temporary soil gas probes. Temporary soil gas probes were immediately abandoned following monitoring.

Results suggest the following conditions at the infilled log pond at the subject site:

- CH₄ concentrations are greatest in the central portion of the infilled pond area (SG02, SG03, and SG04), followed by areas just east of the former infilled pond area (SG06 and SG09), and in the south-central margin of the infilled pond area (SG08). CH₄ was detected at concentrations up to 64%. Possible stable and/or decreasing CH₄ concentration trends appear to be developing in SG01, SG03 and SG08 (western infilled pond margin, central infilled pond area, and south-central infilled pond margin, respectively), while possible increasing trends are suggested at SG04 (east-central infilled pond area). Decreasing trends may also be developing at SG02 and SG06 (west-central infilled pond area and eastern infilled pond margin, respectively); however, this is based on only three data points.
- The extent of CH₄ impacts greater than 1.0% was delineated along the entire north side, west end, and southeast side of the infilled log pond. ENW estimated the southwestward and eastward extents of CH₄ impacts greater than 1.0% based on attenuation factors, e.g., 0.065 percent CH₄ average reduction per lineal foot (% CH₄/LF) between SG02 and SG01 and 0.040 % CH₄/LF between SG04 and SG06. The resulting estimated areal extent of CH₄ impacts greater than 1.0% is shown on Figure 4, which is a culmination of all three monitoring events. Overall, the resulting impacted area mostly mirrors the infilled log pond area inferred from aerial photographs and subsurface data.
- Soil gas pressure differential monitoring on June 14, 2023, suggests that soil gases may have induced a ΔP up 5.525 in H₂O in SG05 in the southeast corner of the pond relative to other areas. Methane was not detected in SG05, however. During the October 21, 2022 and July 10, 2023, monitoring events, it does not appear that soil gases induced a ΔP in the infilled log pond.

8.0 Recommendations

Given the soil gas monitoring results, ENW recommends the following:

- No further soil gas monitoring of the infilled log pond is recommended at this time.
- Preparation of a *Soil Gas Management Plan* is recommended to inform decisions related to managing the occurrence of hazardous soil gas constituents, e.g., CH₄, CO, and H₂S, during future trenching, utility, or other site construction related activities that could encounter impacted soil gas at the subject property. This plan would also serve to notify workers of the location, extent, and magnitude of subsurface impacts, prescribe appropriate protective equipment, and present appropriate monitoring and management options during future construction projects.
- To protect against exposure to hazardous soil gases, a 50-foot setback from the estimated area of methane in soil gas at concentrations greater than 1.0% is recommended for future site

development. Engineering controls are recommended for any site development plans that encroach on this setback. Such engineering controls should be designed and installed per an Engineer or Architect knowledgeable of soil gas hazards who is familiar with the site's Soil Gas Management Plan.

- Select semi-permanent soil gas points (i.e., SG01, SG05 through SG08) should be maintained as observations wells. The wells could be part of a long-term monitoring program to ensure the adequacy of the estimated 50-foot setback.

We recommend this report is kept as part of the permanent property records.

9.0 Limitations

The scope of this report is limited to observations made during on-site work; interviews with knowledgeable sources; and review of readily available published and unpublished reports and literature. As a result, these conclusions are based on information supplied by others as well as interpretations by qualified parties.

The focus of the site closure does not extend to the presence of the following conditions unless they were the express concerns of contacted personnel, report and literature authors or the work scope.

- Naturally occurring toxic or hazardous substances in the subsurface soils, geology and water,
- Toxicity of substances common in current habitable environments, such as stored chemicals, products, building materials and consumables,
- Contaminants or contaminant concentrations that are not a concern now but may be under future regulatory standards,
- Unpredictable events that may occur after ENW's site work, such as illegal dumping or accidental spillage.

There is no practice that is thorough enough to absolutely identify the presence of all hazardous substances that may be present at a given site. ENW's investigation has been focused only on the potential for contamination that was specifically identified in the Scope of Work. Therefore, if contamination other than that specifically mentioned is present and not identified as part of a limited Scope of Work, ENW's environmental investigation shall not be construed as a guaranteed absence of such materials. ENW have endeavored to collect representative analytical samples for the locations and depths indicated in this report. However, no sampling program can thoroughly identify all variations in contaminant distribution.

We have performed our services for this project in accordance with our agreement and understanding with the client. This document and the information contained herein have been prepared solely for the use of the client.

ENW performed this study under a limited scope of services per our agreement. It is possible, despite the use of reasonable care and interpretation, that ENW may have failed to identify regulation violations related to the presence of hazardous substances other than those specifically mentioned at the closure

site. ENW assumes no responsibility for conditions that we did not specifically evaluate or conditions that were not generally recognized as environmentally unacceptable at the time this report was prepared.

Table

Table 1 - Summary of Methane Monitoring Data, Soil Gas

Monitoring Location		SG01						SG02					
Date Monitored		10/21/22	11/7/22	11/30/22	12/21/22	6/14/23	7/10/23	10/21/22	11/7/22	11/30/22	12/21/22	6/14/23	7/10/23
Approximate Intake depth		4-5' bgs						4-5' bgs					
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		Western margin of former pond						Within former pond margin, western area					
		% by volume						% by volume					
Methane													
Concentration after 1 pore volume		1.6	3.1	---	1.9	1.0	1.4	56.2	---	---	---	25.7	41.4
Peak concentration		1.6	3.1	---	1.9	1.0	1.4	59.3	---	54.6	---	25.7	41.4

Notes:
— = Unable to collect reading.
Bolded/Shaded concentrations exceed screening level.

Table 1 - Summary of Methane Monitoring Data, Soil Gas

Monitoring Location		SG03						SG04					
Date Monitored		10/21/22	11/7/22	11/30/22	12/21/22	6/14/23	7/10/23	10/21/22	11/7/22	11/30/22	12/21/22	6/14/23	7/10/23
Approximate Intake depth		6.5-7.55' bgs						4-5' bgs					
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		Within former pond margin, central area						Within former pond margin, eastern area					
		% by volume						% by volume					
Methane													
Concentration after 1 pore volume		44.2	54.6	---	53.9	---	40.7	2.9	7.7	---	15.7	37.2	37.9
Peak concentration		51.6	54.6	---	69.6	64.0	40.7	2.9	8.8	---	15.7	37.2	37.9

Notes:
--- = Unable to collect reading.
Bolded/Shaded concentrations exceed screening level.

Table 1 - Summary of Methane Monitoring Data, Soil Gas

Monitoring Location		SG05						SG06					
Date Monitored		10/21/22	11/7/22	11/30/22	12/21/22	6/14/23	7/10/23	10/21/22	11/7/22	11/30/22	12/21/22	6/14/23	7/10/23
Approximate Intake depth		4-5' bgs						3.5-5' bgs					
Sampled By		ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location		Southeastern margin of former pond						Eastern margin of former pond					
		% by volume						% by volume					
Methane													
Concentration after 1 pore volume		0.6	4.3	6.0	---	0.0	0.0	12.5	---	---	---	13.1	8.5
Peak concentration		0.6	10.2	8.1	---	0.0	0.3	12.7	---	---	---	13.1	15.7

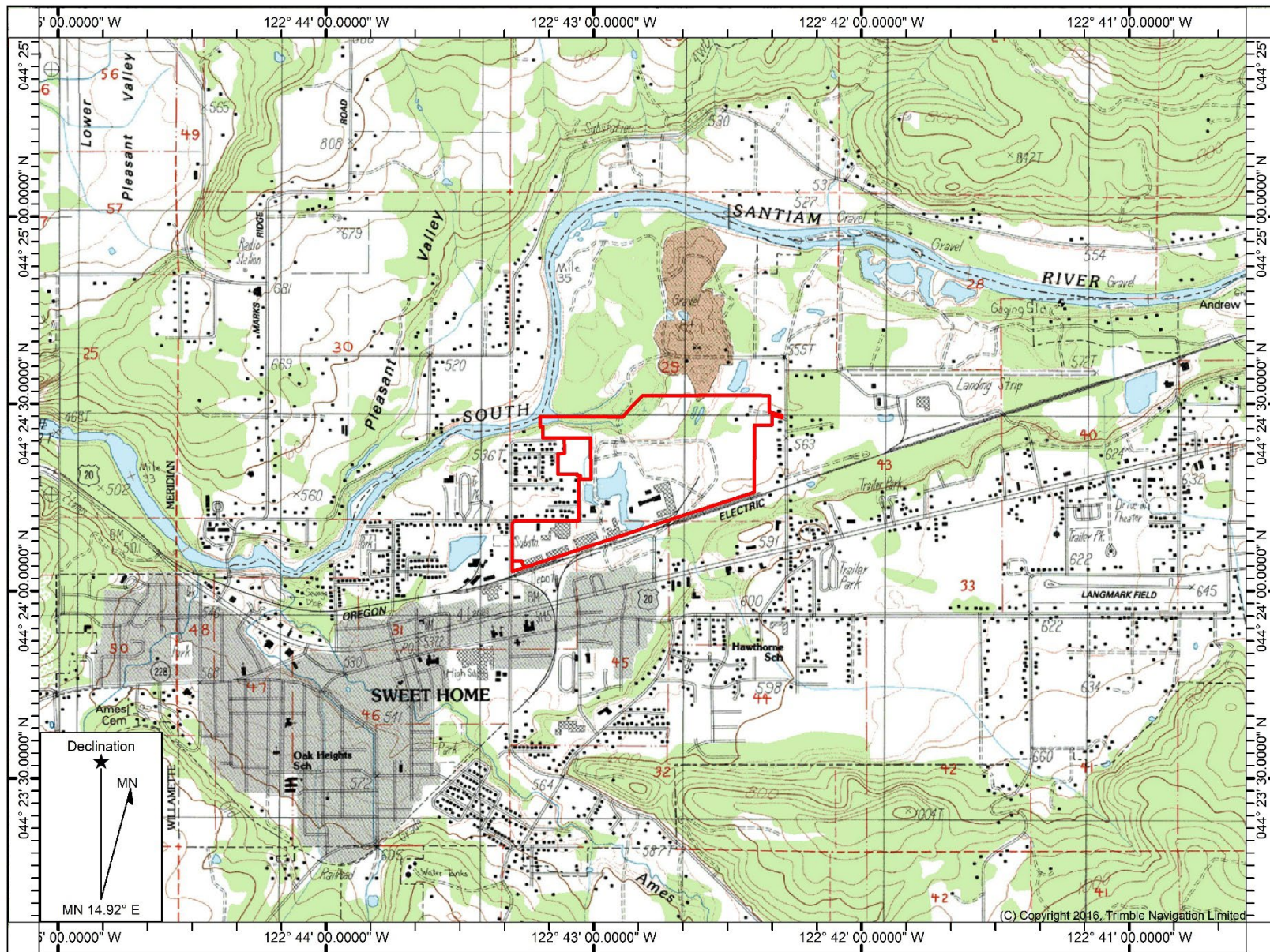
Notes:
--- = Unable to collect reading.
Bolded/Shaded concentrations exceed screening level.

Table 1 - Summary of Methane Monitoring Data, Soil Gas

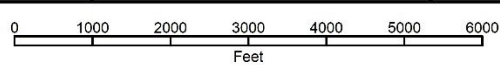
Monitoring Location		SG07						SG08					
Date Monitored		10/21/22	11/7/22	11/30/22	12/21/22	6/14/23	7/10/23	10/21/22	11/7/22	11/30/22	12/21/22	6/14/23	7/10/23
Approximate Intake depth		5-6' bgs						6.5-7.55' bgs					
Sampled By		ENW	ENW	ENW	ENW			ENW	ENW	ENW	ENW	ENW	ENW
Location		Northern margin of former pond						Southern margin of former pond					
		% by volume						% by volume					
Methane													
Concentration after 1 pore volume		0.0	0.0	---	0.0	0.0	0.0	0.1	0.1	0.0	0.0	3.4	2.3
Peak concentration		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	3.4	2.3

Notes:
--- = Unable to collect reading.
Bolded/Shaded concentrations exceed screening level.

Figures



Name: SWEET HOME
Date: 06/22/22



Location: 044° 24' 17.8024\" N, 122° 42' 49.0720\" W
Contour Interval: 40 ft



Date Drawn: 6/22/2022
CAD File Name: 1645-22001-01_fig1sv_map
Drawn By: CLR
Approved By: LDG

Former Mill Property
2210 Tamarack Street
Sweet Home, Oregon

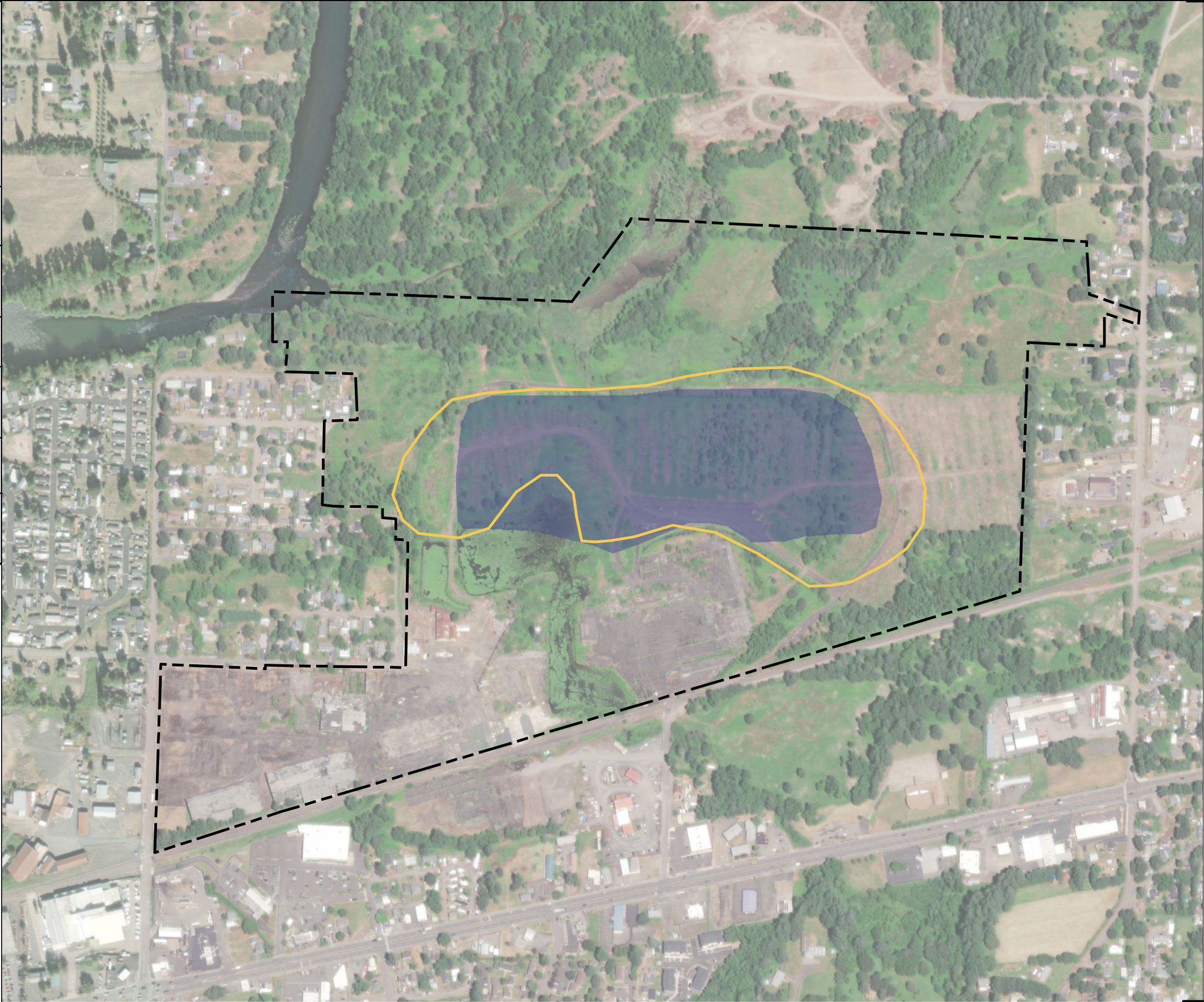
Site Vicinity Map

Project No.
1645-22001

Figure No.

1

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
H. ROMER	9/12/2023	T. BENNETT	9/12/2023	L. GREEN	9/12/2023	
1645-22001(V01)						



LEGEND:

SUBJECT PROPERTY BOUNDARY

APPROXIMATE AREA OF FORMER POND
PER 1955 AND 1962 AERIAL PHOTOGRAPHS

METHANE TEST AREA
(AS DEFINED IN DOCUMENTS SUPPLIED
BY OTHERS)

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2022 AND ENW FIELD NOTES.
2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION

0312.56251,250

Feet

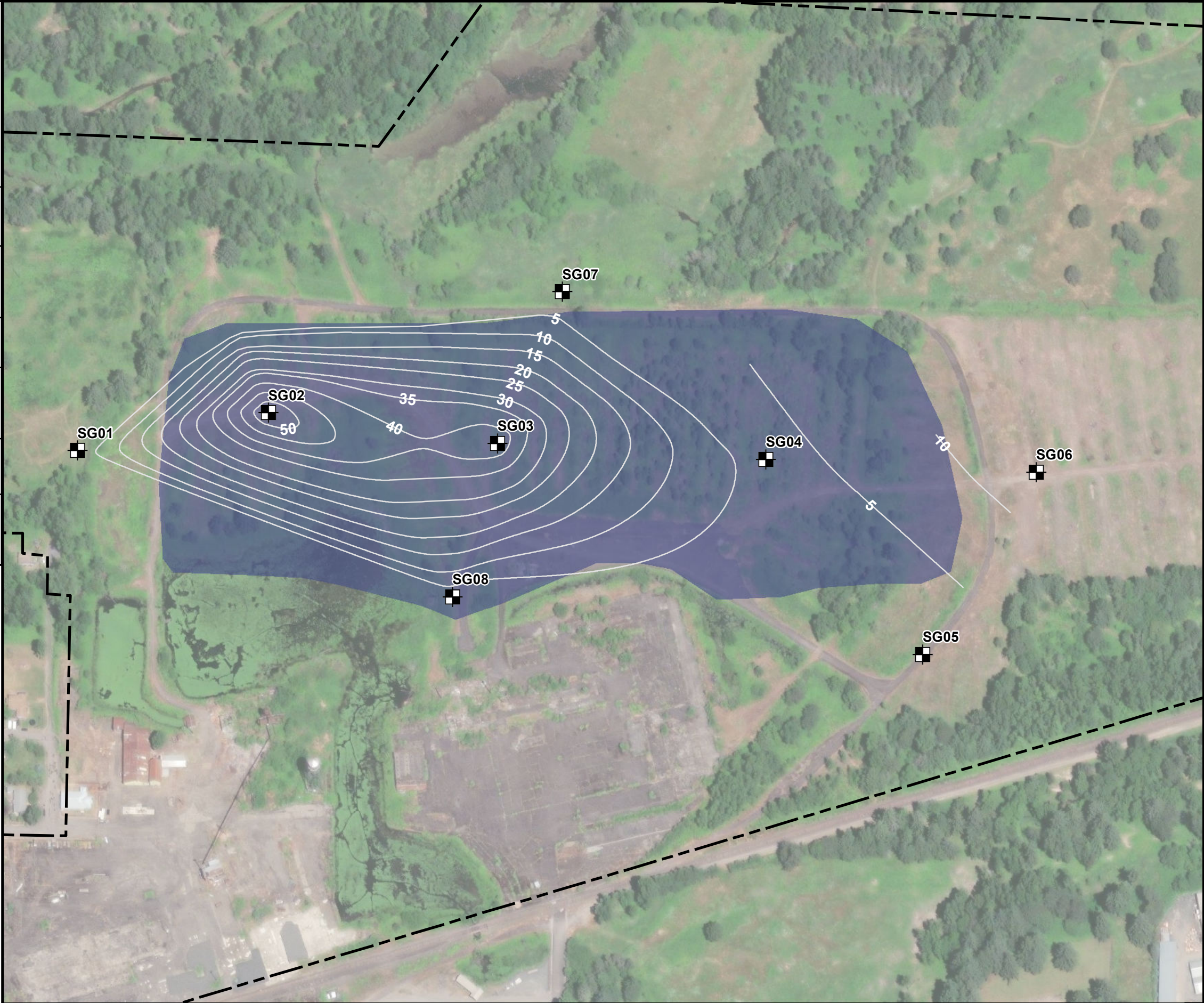


FIGURE 2

SITE PLAN

**INFILLED LOG POND
FORMER MILL PROPERTY
2210 TAMARACK STREET
SWEETHOME, OREGON**

DRAWN BY		CHECKED BY	APPROVED BY	DRAWING NUMBER
H. ROMER	9/12/2023	T. BENNETT	L. GREEN	
				1645-22001(V01)



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - APPROXIMATE AREA OF FORMER POND PER 1955 AND 1962 AERIAL PHOTOGRAPHS
 - METHANE CONCENTRATION CONTOURS (OCTOBER 2022 MONITORING EVENT)
 - SEMI PERMANET SOIL GAS POINT LOCATION

- NOTES:**
1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2022 AND ENW FIELD NOTES.
 2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
 3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION

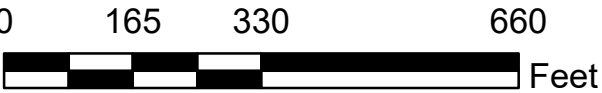
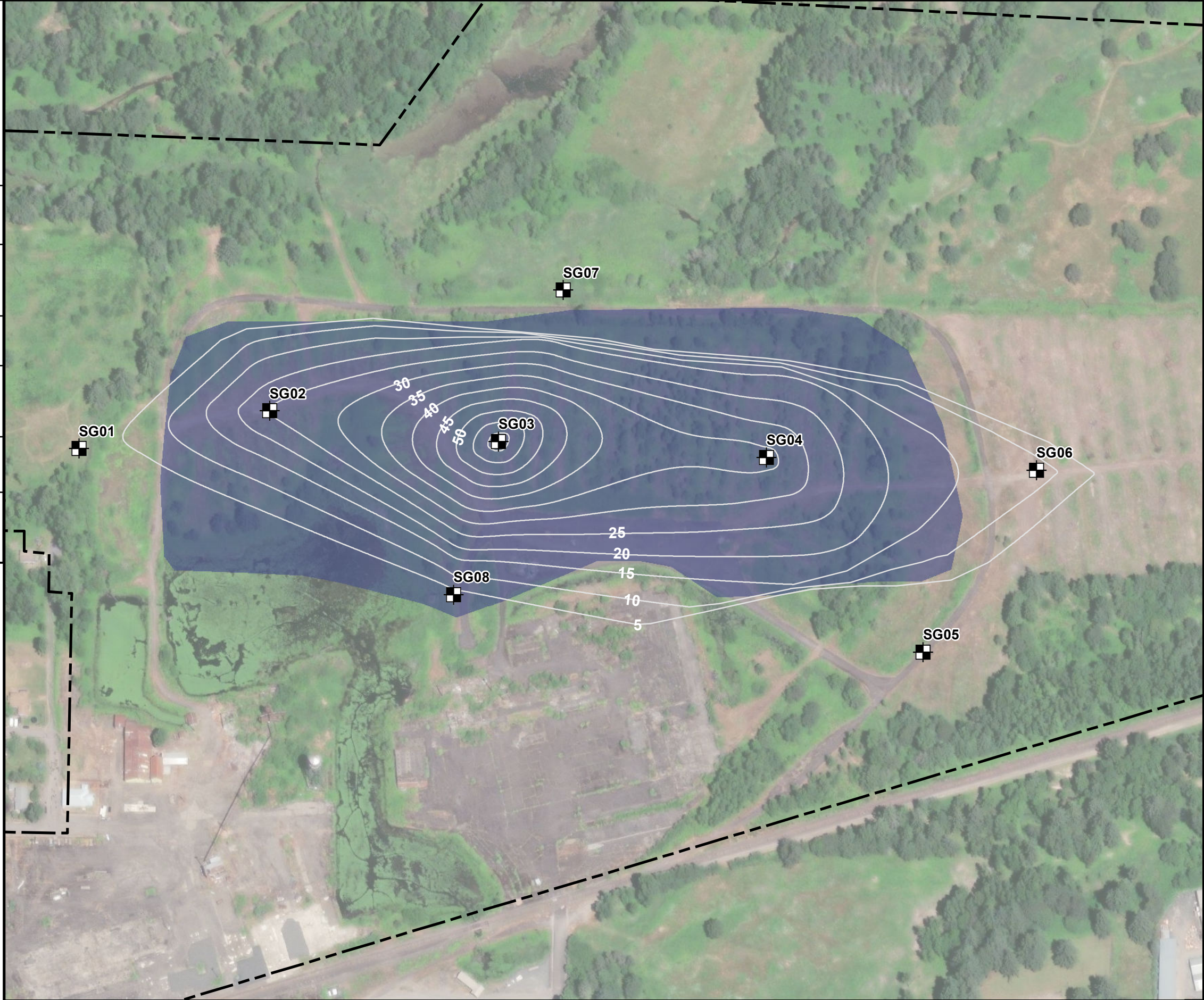


FIGURE 3A

**SOIL GAS MONITORING LOCATION
DIAGRAM AND METHANE
ISOCONCENTRATION PLOT, OCTOBER 2022**

**INFILLED LOG POND
FORMER MILL PROPERTY
2210 TAMARACK STREET
SWEETHOME, OREGON**

DRAWING NUMBER		1645-22001(V01)	
DRAWN BY		H. ROMER	
CHECKED BY		T. BENNETT	
APPROVED BY		L. GREEN	
		9/12/2023	



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - APPROXIMATE AREA OF FORMER POND PER 1955 AND 1962 AERIAL PHOTOGRAPHS
 - METHANE CONCENTRATION CONTOURS (JUNE 2023 MONITORING EVENT)
 - SEMI PERMANET SOIL GAS POINT LOCATION

- NOTES:**
- BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2022 AND ENW FIELD NOTES.
 - ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
 - SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION

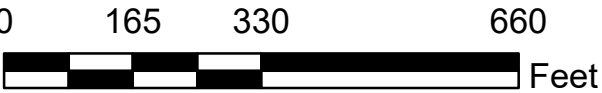
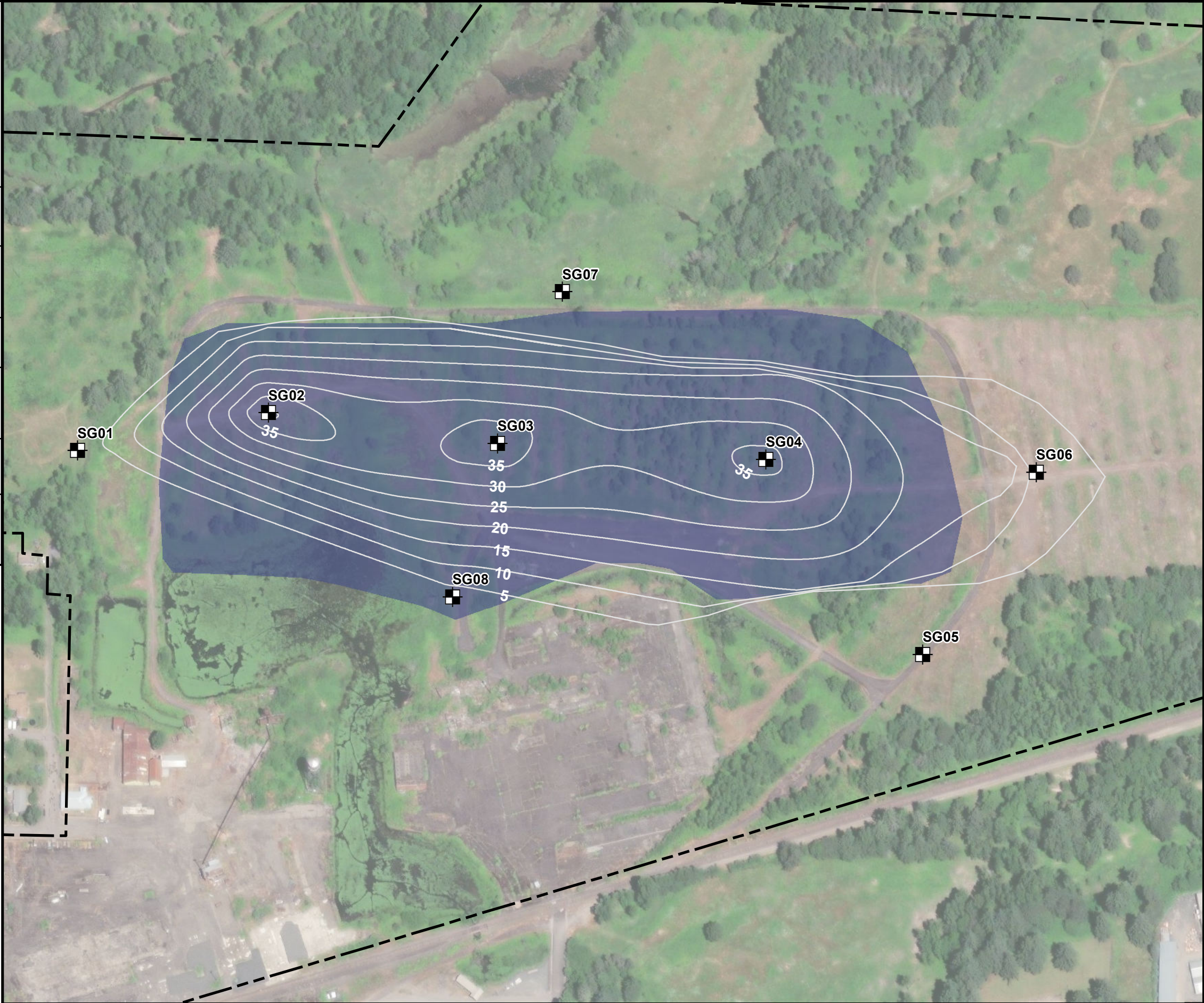


FIGURE 3B

**SOIL GAS MONITORING LOCATION
DIAGRAM AND METHANE
ISOCONCENTRATION PLOT, JUNE 2023**

**INFILLED LOG POND
FORMER MILL PROPERTY
2210 TAMARACK STREET
SWEETHOME, OREGON**

DRAWN BY		CHECKED BY	APPROVED BY	DRAWING NUMBER
H. ROMER	9/12/2023	T. BENNETT	L. GREEN	
				1645-22001(V01)



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - APPROXIMATE AREA OF FORMER POND PER 1955 AND 1962 AERIAL PHOTOGRAPHS
 - METHANE CONCENTRATION CONTOURS (JULY 2023 MONITORING EVENT)
 - SEMI PERMANET SOIL GAS POINT LOCATION

- NOTES:**
1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2022 AND ENW FIELD NOTES.
 2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
 3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION

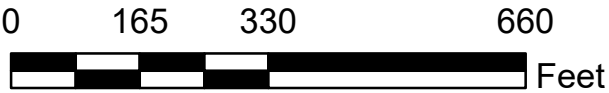


FIGURE 3C

**SOIL GAS MONITORING LOCATION
DIAGRAM AND METHANE
ISOCONCENTRATION PLOT, JULY 2023**

**INFILLED LOG POND
FORMER MILL PROPERTY
2210 TAMARACK STREET
SWEETHOME, OREGON**

DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
H. ROMER	9/12/2023	T. BENNETT	9/12/2023	L. GREEN	9/12/2023	

1645-22001(V01)



- LEGEND:**
- SUBJECT PROPERTY BOUNDARY
 - APPROXIMATE AREA OF FORMER POND PER 1955 AND 1962 AERIAL PHOTOGRAPHS
 - ESTIMATED AREA OF METHANE IMPACTS GREATER THAN SCREENING LEVEL (1.0%)
 - 50-FOOT SETBACK FOR FUTURE SITE DEVELOPMENT(ADJUSTED BASED ON FORMER POND MARGINS IN SELECT AREAS)

- NOTES:**
- BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2022 AND ENW FIELD NOTES.
 - ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
 - SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION

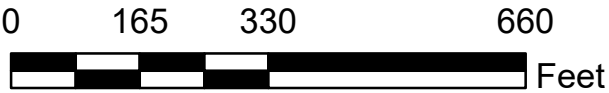
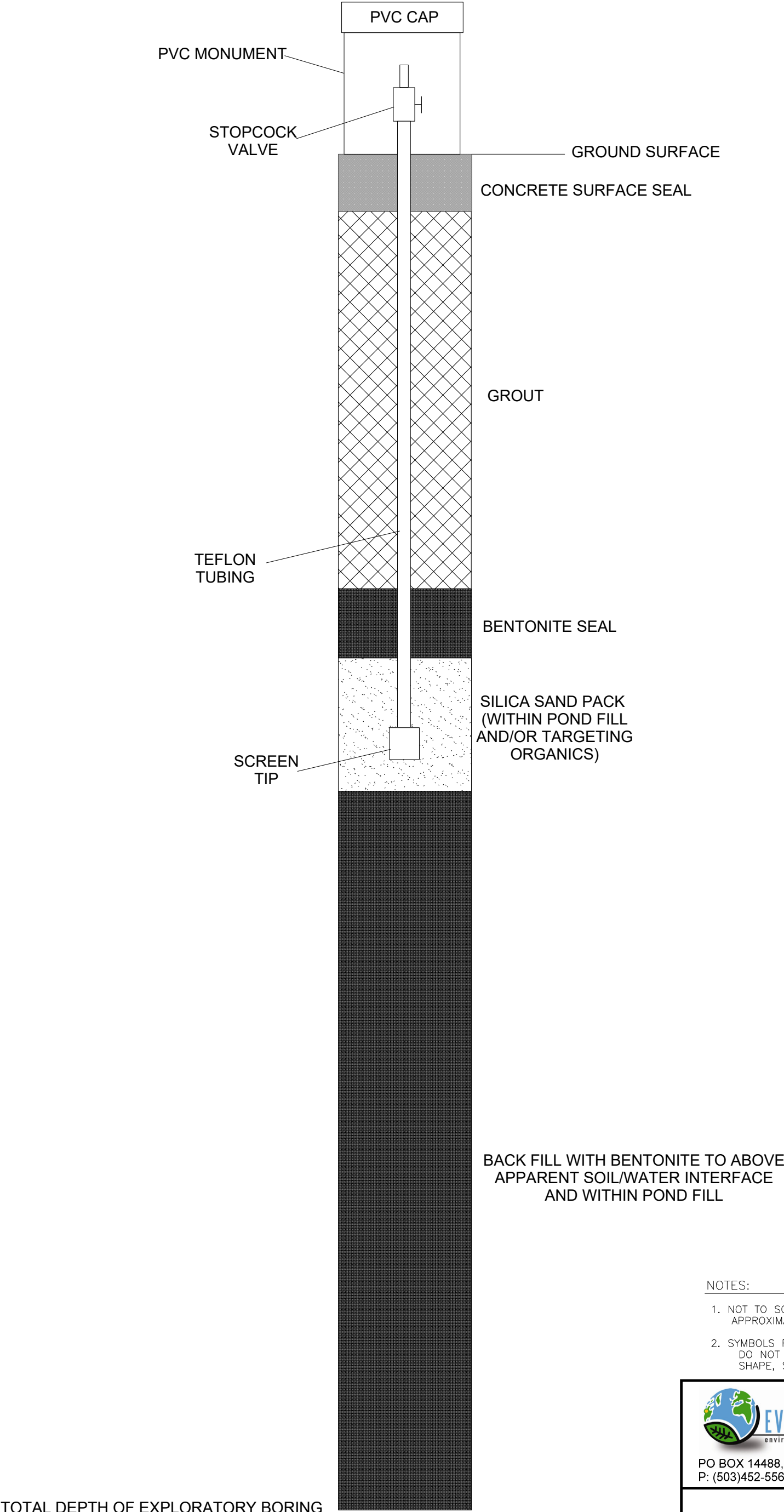


FIGURE 4

ESTIMATED EXTENT OF METHANE IMPACTS

**INFILLED LOG POND
FORMER MILL PROPERTY
2210 TAMARACK STREET
SWEETHOME, OREGON**



- NOTES:
1. NOT TO SCALE, ALL FEATURES ARE APPROXIMATE.
 2. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.



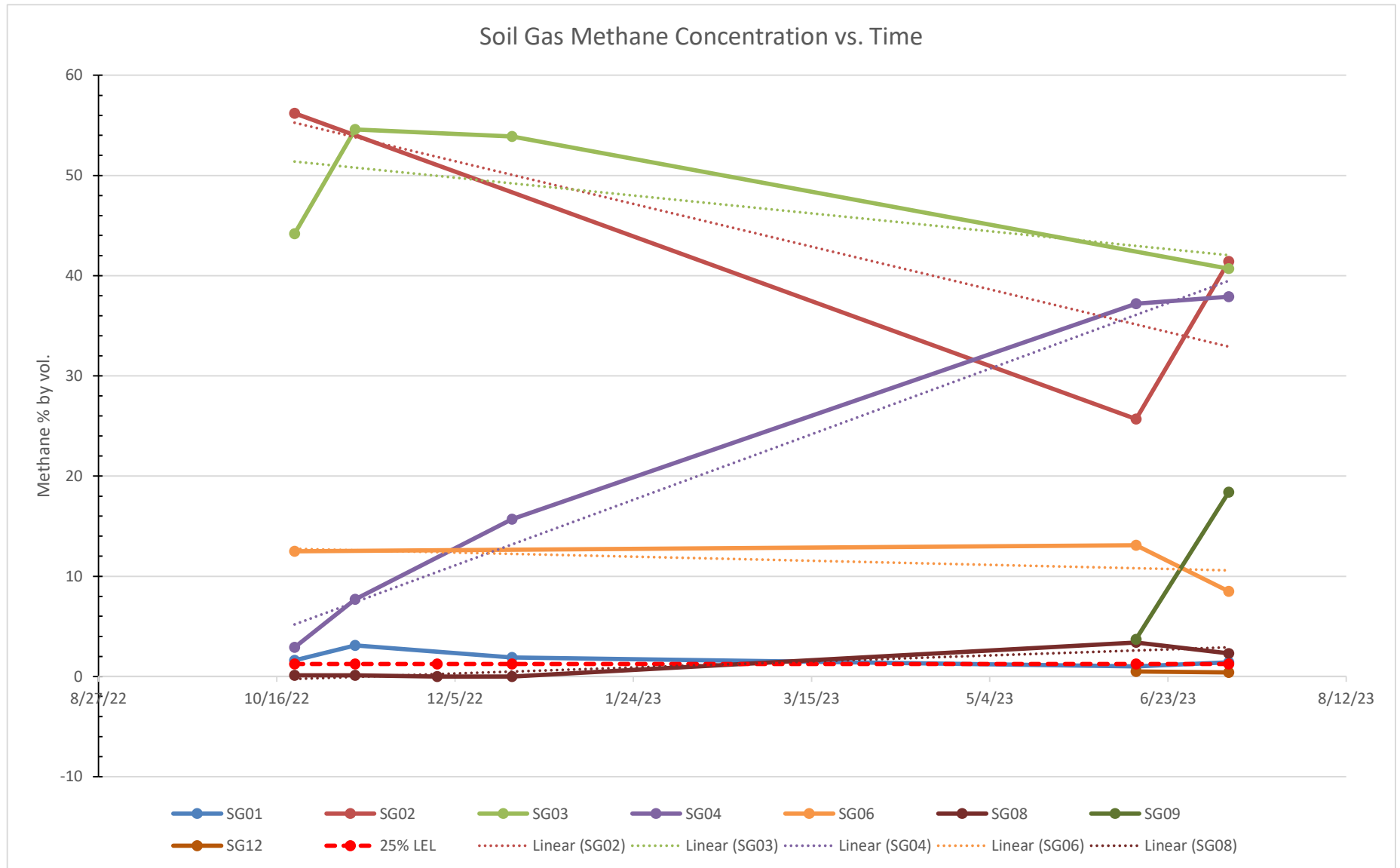
environmental natural resource consultants

PO BOX 14488, PORTLAND, OREGON 97293
P: (503)452-5561, E: ENW@EVREN-NW.COM

FIGURE 5

SOIL GAS PROBE SCHEMATIC
INFILLED LOG POND
FORMER MILL PROPERTY
2210 TAMARACK STREET
SWEET HOME, OREGON

Figure 6



Appendix A

Site Photographs



Permanent soil gas monitoring points were installed with the assistance of a direct-push drill rig.



Soil cores were inspected continuously, and observations recorded on boring logs. Particular attention was given to soils containing organic matter.



A photoionization detector and laser thermometer were also utilized to screen soil cores for possible indications of methanogenesis.



Immediately upon reaching total depth, open boreholes were screened for the presence of methane using a GEM 5000.



Semi-permanent monitoring points were constructed within the borings.



Monitoring points utilized Teflon tubing and a stopcock valve, which remain closed between monitoring events.



Using a GEM 5000 to monitor a semi-permanent soil gas monitoring point.



Advancing a temporary soil gas monitoring point using a slide hammer to drive manual soil gas tooling.



An electric jack hammer was also used to drive temporary soil gas probes in rocky areas.



Opening the sacrificial drive tip in preparation for monitoring soil gas.



Using the GEM 5000 to monitor soil gas in a temporary soil gas probe (typical).



Some clearing of vegetation had been conducted within the monitoring area prior to the June 2023 monitoring event; however, monitoring locations were not disturbed.



Soil Gas Monitoring
2210 Tamarack Street
Sweet Home, OR 97386

Site Photographs

Project No.
1645-22001-01

Appendix
A

Appendix B

Boring Logs

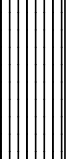
DRILL LOG		PROJECT Infilled Log Pond		PROJECT NO. 1645-22001-01		BORING NO. SG01	
SITE 2210 Tamarack Street, Sweet Home, Oregon		BEGUN 10/20/2022		COMPLETED 10/20/2022		HOLE SIZE 2"	
COORDINATES		DEPTH GROUND WATER		DATE SL		STATIC LEVEL 12.5	
DRILLER Holt		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: ENW				DEPTH BOTTOM OF HOLE 15	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Silty, sandy GRAVEL (GM), medium dense, dry, medium brown, sub-rounded to sub-angular gravel clasts.						
3			Rock fragments			50			
6			Silty fine SAND (SM), medium dense, slightly moist, grey, includes some rounded gravel clasts.					0.1	
9			Silty, sandy GRAVEL (GM), dense, slightly moist, grey and brown, sub-rounded to sub- angular gravel clasts and rock fragments.			50			
12			Rock fragments, hard drilling. Moist.					0.1	
15			Wet, on top of dense layer below. SILT (ML) with trace fine sand, stiff, moist, medium brown.			70			
18			Grades to silty GRAVEL (GM), very dense, slightly moist, grey/green with rusty mottling.					0.0	
21			End of boring; construct SG monitoring point at 5' bgs.						

DRILL LOG	PROJECT		PROJECT NO.		BORING NO.
	Infilled Log Pond		1645-22001-01		SG02
SITE		BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
2210 Tamarack Street, Sweet Home, Oregon		10/20/2022	10/20/2022	2"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER
					12.5
DRILLER		CORE RECOVERY (%)		# SAMPLES	# CORE BOXES
Holt					
DRILL MAKE AND MODEL		LOGGED BY:			DEPTH BOTTOM OF HOLE
		ENW			15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Silty, sandy GRAVEL (GM), medium dense, dry, medium brown, sub-rounded to sub-angular gravel clasts.						
			Fine sandy SILT(ML), stiff, slightly moist, dark brown to grey, some woody debris.			60			
3			Rock fragments.					1.0	
			Grades to medium stiff, moist.			50			
6			Silty, sandy GRAVEL (GM), dense, slightly moist, grey, rock fragments.						
9			SILT (ML) with trace fine sand, stiff, moist, dark grey.					0.1	
12			Silty, sandy GRAVEL (GM), dense to very dense, slightly moist, grey, rock fragments.			70			
			Hard drilling.						
15			End of boring; construct SG monitoring point at 4-5' bgs.					0.0	
18									
21									

DRILL LOG		PROJECT		PROJECT NO.		BORING NO.	
		Infilled Log Pond		1645-22001-01		SG03	
SITE		BEGUN		COMPLETED		HOLE SIZE	
2210 Tamarack Street, Sweet Home, Oregon		10/20/2022		10/20/2022		2"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION	
					12.5		
DRILLER		CORE RECOVERY (%)		# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK	
Holt							
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE	
		ENW				15	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Silty, sandy GRAVEL (GM), medium dense, dry, light brown.						
			Rock fragments						
3			Some wood and plastic debris within gravel.			70			
			Fine sandy SILT (ML), medium stiff, moist, medium brown with grey/green/rusty mottling.					0.1	
6			Organic/silt mixture, medium dense, moist, dark grey/black, strong wood odor.			50			
			SILT (ML), medium stiff, moist, grey, trace rounded gravel clasts and fine sand near top.					0.1	
9			Rock fragments.						
12			Silty, sandy GRAVEL (GM), dense, moist, grey, rounded clasts.			60			
15			Wet.					0.0	
			End of boring; construct SG monitoring point at 6.5-7.5' bgs.						
18									
21									

DRILL LOG		PROJECT Infilled Log Pond		PROJECT NO. 1645-22001-01		BORING NO. SG04	
SITE 2210 Tamarack Street, Sweet Home, Oregon		BEGUN 10/20/2022		COMPLETED 10/20/2022		HOLE SIZE 2"	
COORDINATES		DEPTH GROUND WATER		DATE SL STATIC LEVEL		FIRST WATER 12.5	
DRILLER Holt		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: ENW				DEPTH BOTTOM OF HOLE 15	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Silty, sandy GRAVEL (GM), medium dense, dry, medium brown, sub-rounded to sub-angular clasts.						
			Organic/silt mixture, medium dense, slightly moist, dark grey/black.						
3			Silty, sandy GRAVEL (GM), very dense, slightly moist, light grey. Interbedded GM and rock fragments, hard drilling.			50			
6								0.0	
9									
12			Moist, includes green/rusty mottling.			50		0.0	
15			End of boring; construct SG monitoring point at 4-5' bgs.					0.0	
18									
21									

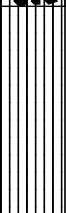
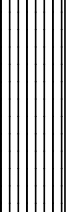
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		Infilled Log Pond		1645-22001-01		SG05
SITE		BEGUN	COMPLETED		HOLE SIZE	
2210 Tamarack Street, Sweet Home, Oregon		10/20/2022	10/20/2022		2"	
COORDINATES		DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
					12.5	
DRILLER		CORE RECOVERY (%)		# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
Holt						
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE
		ENW				15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.			
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion					
0			Silty, sandy GRAVEL (GM), dense, dry, medium brown, sub-rounded to sub-angular clasts.			50		0.0				
3			Interbedded GM and rock fragments, hard drilling.									
6			Grades to slightly moist, brown with rusty mottling.			60						
9										50		
12			Wet.									
15			End of boring; construct SG monitoring point at 4-5' bgs.								0.0	
18												
21												

DRILL LOG		PROJECT		PROJECT NO.		BORING NO.	
		Infilled Log Pond		1645-22001-01		SG06	
SITE		BEGUN		COMPLETED		HOLE SIZE	
2210 Tamarack Street, Sweet Home, Oregon		10/20/2022		10/20/2022		2"	
COORDINATES		DEPTH GROUND WATER		DATE SL		FIRST WATER	
						12.5	
DRILLER		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
Holt							
DRILL MAKE AND MODEL		LOGGED BY:				DEPTH BOTTOM OF HOLE	
		ENW				7.75	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Silty, sandy GRAVEL (GM), medium dense, dry, brown/grey, sub-rounded to sub-angular clasts.						
3			SILT (ML) with some fine sand, stiff, dry, dark grey, wood debris.						
			Grades to slightly moist.			70			
			Grades to moist with less wood debris.						
6			Silty, sandy GRAVEL (GM), dense, slightly moist to moist, grey, sub-rounded to sub-angular clasts.					0.1	
			Rock fragments, light brown/grey.			50			
			Hard refusal at 7.5' bgs.						
9			End of boring; construct SG monitoring point at 3.5-5' bgs.						
12									
15									
18									
21									

DRILL LOG		PROJECT Infilled Log Pond		PROJECT NO. 1645-22001-01		BORING NO. SG07	
SITE 2210 Tamarack Street, Sweet Home, Oregon		BEGUN 10/20/2022		COMPLETED 10/20/2022		HOLE SIZE 2"	
COORDINATES		DEPTH GROUND WATER		DATE SL 10/20/2022		FIRST WATER 12.5	
DRILLER Holt		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: ENW				DEPTH TOP OF ROCK	
						DEPTH BOTTOM OF HOLE 15	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Silty, sandy GRAVEL (GM), medium dense, dry, medium brown, sub-rounded to sub-angular gravel clasts.						
3			Fine sandy SILT (ML), stiff, slightly moist, medium brown.			40			
			Silty, sandy GRAVEL (GM), medium dense, slightly moist, medium brown, rock fragments.						
6			SILT (ML) with some fine sand, stiff, slightly moist, medium brown with grey/rusty mottling, wood debris. No wood debris, medium stiff.			60		0.0	
9			Grades to moist, grey.					0.0	
12			Silty, sandy GRAVEL (GM), dense, moist, grey with rusty mottling. Wet.			30			
15			End of boring; construct SG monitoring point at 5-6' bgs.					0.0	
18									
21									

DRILL LOG		PROJECT Infilled Log Pond		PROJECT NO. 1645-22001-01		BORING NO. SG08	
SITE 2210 Tamarack Street, Sweet Home, Oregon		BEGUN 10/20/2022		COMPLETED 10/20/2022		HOLE SIZE 2"	
COORDINATES		DEPTH GROUND WATER		DATE SL 10/20/2022		FIRST WATER 12.5	
DRILLER Holt		CORE RECOVERY (%)		# SAMPLES		# CORE BOXES	
DRILL MAKE AND MODEL		LOGGED BY: ENW				DEPTH TOP OF ROCK	
						DEPTH BOTTOM OF HOLE 20	

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA				PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
				SAMPLE NO.	SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion		
0			Silty, sandy GRAVEL (GM), medium dense, dry, medium brown, sub-rounded to sub-angular gravel clasts.						
			Fine sandy SILT(ML), medium stiff, slightly moist, medium brown with rusty mottling.			70			
3			Rock fragments (4" layer).					0.0	
6						60			
9			Rock fragments.					0.1	
			SILT (ML), stiff, slightly moist, grey with green/ rusty motling, some wood debris.						
12			Poor recovery, easy drilling.			10			
15			Sandy SILT (ML/SM), medium stiff, wet, medium brown to grey, some rounded gravel and coarse sand.					0.0	
			Poor recovery, easy drilling.						
18			Less coarse sand, grey.			10			
21			End of boring; construct SG monitoring point at 9-10' bgs.					0.0	

Appendix C

Field Sampling Data Sheets

Field Sampling Data Sheets
October 21, 2022

Reading Location			SG01					
Date Monitored			10/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			1/4" Teflon					
Location			Western edge of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.0	-0.016				
Gas Readings		36			1.6	13.3	0.9	84.2
		60			1.6	13.6	0.2	84.6
		120			1.6	13.6	0.2	84.6
		180			1.6	13.6	0.1	84.7
		240			1.6	13.6	0.1	84.7
		300			1.6	13.6	0.1	84.7
		360			1.6	13.6	0.1	84.7
		420			1.6	13.6	0.1	84.7
		480			1.6	13.6	0.1	84.7
		540			1.6	13.6	0.1	84.7
		600			1.6	13.6	0.1	84.7
		660			1.6	13.6	0.1	84.7

Reading Location			SG02					
Date Monitored			10/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			1/4" Teflon					
Location			West former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement			0.0	-0.015				
Gas Readings		36			56.2	17.3	0.6	26.0
		60			57.0	18.4	0.2	24.2
		120			58.8	20.3	0.1	20.4
		180			59.3	21.9	0.1	18.6
		240			59.0	22.9	0.1	18.0
		300			58.6	23.3	0.1	18.1
		360			58.5	23.5	0.1	18.0
		420			58.3	23.7	0.0	18.0
		480			58.2	23.8	0.0	17.9
		540			58.2	23.8	0.0	18.0
		600			58.2	23.8	0.0	17.9
		660			58.2	23.8	0.0	17.9

Field Sampling Data Sheets
October 21, 2022

Reading Location			SG03					
Date Monitored			10/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			1/4" Teflon					
Location			Center of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement			0.02	-0.025				
Gas Readings		37			44.2	17.6	1.4	36.8
		60			44.3	16.8	1.2	37.4
		120			49.6	16.6	1.1	32.1
		180			50.6	16.9	1.1	32.3
		240			51.0	17.1	1.0	30.9
		300			51.1	17.1	1.0	30.6
		360			51.2	17.2	1.0	30.5
		420			51.3	17.3	1.0	30.5
		480			51.5	17.3	1.0	30.2
		540			51.5	17.3	1.0	30.2
		600			51.5	17.4	1.0	30.1
		660			51.6	17.4	1.0	30.0

Reading Location			SG04					
Date Monitored			10/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type								
Location			East former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.07	-0.035				
Gas Readings		36			2.9	6.4	0.3	93.4
		60			2.5	6.7	0.2	90.4
		120			2.5	8.0	0.1	89.3
		180			2.4	8.0	0.1	88.8
		240			2.3	9.3	0.1	88.3
		300			2.4	9.9	0.1	87.5
		360			2.5	10.3	0.1	87.1
		420			2.6	10.7	0.1	86.6
		480			2.7	11.0	0.0	86.1
		540			2.8	11.3	0.0	85.8
		600			2.9	11.6	0.0	85.4
		660			2.9	11.8	0.0	85.2

Field Sampling Data Sheets
October 21, 2022

Reading Location			SG05					
Date Monitored			10/21/2022					
Sampled by								
Depth								
Casing Diameter / Type								
Location			Southeast margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			-0.02	-0.018				
Gas Readings		36			0.6	6.0	11.8	82.3
		60			0.0	6.0	11.7	82.3
		120			0.0	6.0	11.5	82.4
		180			0.0	6.1	11.5	82.5
		240			0.0	6.1	11.4	82.5
		300			0.0	6.1	11.4	82.5
		360			0.0	6.1	11.4	82.5
		420			0.0	6.2	11.4	82.5
		480			0.0	6.2	11.3	82.5
		540			0.0	6.2	11.3	82.5
		600			0.0	6.2	11.3	82.5

Reading Location			SG06					
Date Monitored			10/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type								
Location			East margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec						
Initial Measurement			-0.04	0.008				
Peak								
Gas Readings		51			12.5	10.7	0.2	76.6
		60			12.6	10.8	0.2	76.3
		120			12.7	11.6	0.1	75.5
		180			12.8	12.2	0.1	74.9
		240			12.7	12.5	0.1	74.6
		300			12.7	12.7	0.1	74.4
		360			12.7	12.9	0.1	74.4
		420			12.7	13.0	0.1	74.2
		480			12.7	13.1	0.0	74.2
		540			12.7	13.1	0.0	74.1
		600			12.7	13.1	0.0	74.1

Field Sampling Data Sheets
October 21, 2022

Reading Location			SG07					
Date Monitored			10/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			1/4" Teflon					
Location			North margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement			0.01	0.03				
Gas Readings		37			0.0	2.5	16.5	81.0
		60			0.0	2.5	16.5	81.0
		120			0.0	2.5	16.5	81.0
		180			0.0	2.4	16.6	81.0
		240			0.0	2.4	16.6	81.0
		300			0.0	2.4	16.6	81.0
		360			0.0	2.4	16.6	81.0
		420			0.0	2.4	16.6	81.0
		480			0.0	2.3	16.6	81.0
		540			0.0	2.3	16.6	81.0
		600			0.0	2.3	16.6	81.0

Reading Location			SG08					
Date Monitored			10/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			1/4" Teflon					
Location			South margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement			0.04	-0.004				
Gas Readings		39			0.1	13.3	0.2	86.5
		60			0.1	13.3	0.2	86.4
		120			0.1	13.7	0.1	86.1
		180			0.1	13.9	0.1	85.8
		240			0.2	14.1	0.1	85.7
		300			0.2	14.2	0.0	85.6
		360			0.2	14.3	0.0	85.5
		420			0.2	14.3	0.0	85.5
		480			0.2	14.4	0.0	85.4
		540			0.2	14.4	0.0	85.4
		600			0.2	14.4	0.0	85.4

Field Sampling Data Sheets

November 7, 2022

Reading Location			SG01					
Date Monitored			11/7/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Western edge of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			-0.04	-0.001				
Gas Readings		0			0	0.1	1.0	82.2
One Pore Volume		36			3.1	13.8	0.9	82.2
		60			3.1	13.8	0.2	82.8
		120			3.1	13.8	0.1	82.9
		180			3.1	13.8	0.1	82.9
		240			3.1	13.8	0.1	83.0
		300			3.1	13.8	0.1	83.0
		360			3.1	13.8	0.1	83.0
		420			3.1	13.8	0.0	83.0
		480			3.1	13.8	0.0	83.0
		540			3.1	13.8	0.0	83.1
		600			3.1	13.8	0.0	83.1
		660			3.1	13.8	0.0	83.1

Reading Location			SG02					
Date Monitored			11/7/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			West former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement			0.0	0.03				
Gas Readings		0			0.1	0.3	20.5	78.9
One Pore Volume		36						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Field Sampling Data Sheets
November 7, 2022

Reading Location			SG03					
Date Monitored			11/7/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Center of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement			0.18	-0.230				
Gas Readings		0			0.5	5.0	18.3	0.3
One Pore Volume		37			54.6	29.0	3.5	12.9
		60			54.6	29.4	3.3	12.5
		120			54.5	29.6	3.4	12.7
		180			54.2	29.5	3.4	13.0
		240			53.8	29.4	3.4	13.4
		300			53.6	29.2	3.4	13.7
		360			53.5	29.1	3.4	13.9
		420			53.5	29.1	3.4	14.0
		480			53.4	29.0	3.4	14.2
		540			53.5	28.9	3.4	14.2
		600			53.3	28.8	3.4	14.4
		660			53.4	28.8	3.5	14.3

Reading Location			SG04					
Date Monitored			11/7/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.04	-0.018				
Gas Readings		0			7.7	3.3	17.4	78.2
One Pore Volume		36			7.2	12.2	0.8	79.5
		60			7.5	13.7	0.5	77.2
		120			7.8	15.8	0.4	75.8
		180			8.0	16.1	0.4	75.4
		240			8.3	16.2	0.4	75.1
		300			8.5	16.2	0.4	74.9
		360			8.6	16.3	0.3	74.7
		420			8.7	16.4	0.3	74.5
		480			8.8	16.5	0.3	74.4
		540			8.8	16.5	0.3	74.3
		600			8.8	16.3	0.3	74.3
		660			8.8	16.6	0.3	74.3

Field Sampling Data Sheets
November 7, 2022

Reading Location			SG05					
Date Monitored			11/7/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Southeast margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement								
Gas Readings		0			2.2	2.6	16.0	80.8
One Pore Volume		36			4.3	7.1	0.3	88.3
		60			5.5	7.4	0.1	86.4
		120			8	7.8	0.1	83.9
		180			8.9	7.8	0.1	83.2
		240			9.3	7.8	0.0	82.9
		300			9.5	7.8	0.0	82.6
		360			9.8	7.8	0.0	82.4
		420			10	7.8	0.0	82.2
		480			10.1	7.8	0.0	82.2
		540			10.1	7.7	0.0	82.1
		600			10.2	7.7	0.0	82.1

Reading Location			SG06					
Date Monitored			11/7/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement			3.94	-4.003	1.7	1.9	17.7	81.4
Gas Readings		0						
One Pore Volume		52						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						

Field Sampling Data Sheets
November 7, 2022

Reading Location			SG07					
Date Monitored			11/7/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			North margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
			0.0	0.0				
Initial Measurement								
Gas Readings		0			12.2	11.2	3.3	75.9
One Pore Volume		37			0.0	1.4	14.5	84.1
		60			0.0	1.7	14.4	83.8
		120			0.0	2.4	13.9	83.7
		180			0.0	2.5	13.9	83.6
		240			0.0	2.6	13.8	83.6
		300			0.0	2.6	13.9	83.5
		360			0.0	2.7	13.9	83.4
		420			0.0	2.7	13.9	83.4
		480			0.0	2.7	13.9	83.4
		540			0.0	2.7	13.8	83.5
		600			0.0	2.7	13.8	83.5

Reading Location			SG08					
Date Monitored			11/7/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			South margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
			-0.04	-0.09				
Initial Measurement								
Gas Readings		0			0.5	0.3	20.2	74.4
One Pore Volume		39			0.1	13.5	0.6	85.8
		60			0.1	13.6	0.2	86.1
		120			0.1	13.7	0.1	86.1
		180			0.1	13.7	0.1	86.2
		240			0.1	13.7	0.1	86.2
		300			0.1	13.7	0.1	86.2
		360			0.1	13.7	0.1	86.2
		420			0.1	13.7	0.1	86.2
		480			0.1	13.6	0.1	86.2
		540			0.1	13.6	0.1	86.2
		600			0.1	13.6	0.1	86.2

Field Sampling Data Sheets

November 30, 2022

Reading Location			SG01					
Date Monitored			11/30/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Western edge of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement								
Gas Readings		0						
One Pore Volume		36						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Reading Location			SG02					
Date Monitored			11/30/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			West former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement			-0.2	0.166				
Gas Readings		0			54.6	15.5	1.6	28.8
One Pore Volume		36						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Field Sampling Data Sheets
November 30, 2022

Reading Location			SG03					
Date Monitored			11/30/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Center of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement								
Gas Readings		0						
One Pore Volume		37						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Reading Location			SG04					
Date Monitored			11/30/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement								
Gas Readings		0						
One Pore Volume		36						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Field Sampling Data Sheets

November 30, 2022

Reading Location			SG05					
Date Monitored			11/30/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Southeast margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement	10:45:00		0.00	0.000				
Gas Readings		0			3.4	7.6	0.9	88.1
One Pore Volume		36			6.0	7.6	0.2	86.2
		60			7.6	7.6	0.1	84.7
		120			8.0	7.5	0.1	84.4
		180			8.1	7.5	0.0	84.4
		240						
		300						
		360						
		420						
		480						
		540						
		600						

Reading Location			SG06					
Date Monitored			11/30/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement								
Gas Readings		0						
One Pore Volume		52						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						

Field Sampling Data Sheets
November 30, 2022

Reading Location			SG07					
Date Monitored			11/30/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			North margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement			-0.06	0.006				
Gas Readings		0			0.0	0.1	20.6	79.0
One Pore Volume		37						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						

Reading Location			SG08					
Date Monitored			11/30/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			South margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
			-0.01	-0.004				
Initial Measurement	10:57:00							
Gas Readings		0			0.0	8.9	6.6	84.5
One Pore Volume		39			0.0	8.9	6.6	84.5
		60			0.0	8.9	6.7	84.4
		120			0.0	8.5	7.5	84.0
		180			0.0	8.3	8.0	83.7
		240			0.0	8.1	8.2	83.7
		300			0.0	8.0	8.3	83.7
		360			0.0	8.0	8.4	83.6
		420			0.0	7.9	8.4	83.7
		480			0.0	7.9	8.5	83.6
		540			0.0	7.9	8.5	83.6
		600			0.0	7.8	8.5	83.7

Field Sampling Data Sheets
December 21, 2022

Reading Location			SG01					
Date Monitored			12/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Western edge of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement	11:20:00		-0.16	-0.004				
Gas Readings		0			1.9	12.2	0.0	85.2
One Pore Volume		36			1.9	12.2	0.0	85.2
		60			1.9	12.2	0.2	85.6
		120			1.9	12.2	0.2	85.7
		180			1.9	12.2	0.1	85.7
		240			1.9	12.2	0.0	85.7
		300			1.9	12.2	0.0	85.8
		360			1.9	12.2	0.0	85.8
		420			1.9	12.2	0.0	85.8
		480			1.9	12.2	0.0	85.8
		540			1.9	12.2	0.0	85.8
		600			1.9	12.1	0.0	85.9
		660						

Reading Location			SG02					
Date Monitored			12/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			West former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement	12:36:00		0.10	-0.045				
Gas Readings		0		0.25				
One Pore Volume		36			48.7	13.7	2.4	37.7
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Field Sampling Data Sheets
December 21, 2022

Reading Location			SG03					
Date Monitored			12/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Center of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement	10:54:00		-0.01	-0.034				
Gas Readings		0						
One Pore Volume		37			53.9	23.9	5.6	15.4
		60			55.8	24.6	4.3	14.9
		120			63.5	28.7	2.2	0.9
		180			69.6	30.1	0.3	0.0
		240			69.6	30.1	0.3	0.0
		300			69.6	30.1	0.3	0.0
		360			69.6	30.1	0.3	0.0
		420			69.5	30.2	0.3	0.0
		480			69.6	30.2	0.2	0.0
		540			69.5	30.2	0.2	0.0
		600			69.6	30.2	0.2	0.0
		660						

Reading Location			SG04					
Date Monitored			12/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.09	-0.041				
Gas Readings		0						
One Pore Volume		36			15.7	11.6	0.9	72.2
		60			14.4	11.9	0.0	73.6
		120			11.4	12.1	0.7	75.9
		180			10.7	12.1	0.7	76.5
		240			10.6	12.1	0.6	76.7
		300			10.5	12.1	0.6	76.8
		360			10.5	12.1	0.6	78.8
		420			10.5	12.1	0.4	76.9
		480			10.4	12.0	0.7	76.9
		540			10.4	12.0	0.7	77.0
		600			10.3	11.9	0.6	77.1
		660						

Field Sampling Data Sheets
December 21, 2022

Reading Location			SG05					
Date Monitored			12/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Southeast margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement	12:06:00		0.03	0.004				
Gas Readings		0						
One Pore Volume		36						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						

Reading Location			SG06					
Date Monitored								
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement								
Gas Readings		0						
One Pore Volume		52						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						

Field Sampling Data Sheets
December 21, 2022

Reading Location			SG07					
Date Monitored			12/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			North margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement	11:44:00		-0.24	0.272				
Gas Readings		0						
One Pore Volume		37			0.0	4.5	9.9	85.6
		60			0.0	4.6	10.1	85.2
		120			0.0	4.7	10.4	84.8
		180			0.0	4.8	10.6	84.6
		240			0.0	4.8	10.8	84.4
		300			0.0	4.8	10.9	84.3
		360			0.0	4.8	11.0	84.2
		420			0.0	4.8	11.1	84.1
		480			0.0	4.8	11.2	84.0
		540			0.0	4.8	11.2	84.0
		600			0.0	4.8	11.3	84.0

Reading Location			SG08					
Date Monitored			12/21/2022					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			South margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
Initial Measurement	12:44:00		0.00	-0.003				
Gas Readings		0						
One Pore Volume		39			0.0	9.6	5.1	85.3
		60			0.0	9.7	4.6	85.7
		120			0.0	9.7	4.5	85.8
		180			0.0	9.7	4.5	85.8
		240			0.0	9.7	4.5	85.9
		300			0.0	9.7	4.5	85.9
		360			0.0	9.7	4.5	85.9
		420			0.0	9.7	4.5	85.9
		480			0.0	9.7	4.5	85.9
		540			0.0	9.7	4.5	85.9
		600			0.0	9.7	4.5	85.9

Field Sampling Data Sheets
June 14, 2023

Reading Location			SG01					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Western edge of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.01	0.006				
Gas Readings		0			0.0	0.1	20.4	79.5
One Pore Volume		36			1.0	10.7	0.3	88.0
		60			1.0	10.7	0.2	88.1
		120			1.0	10.7	0.2	88.1
		180			1.0	10.7	0.1	88.2
		240			0.9	10.7	0.1	88.3
		300			0.9	10.7	0.1	88.3
		360			0.9	10.7	0.1	88.3
		420			0.9	10.7	0.1	88.3
		480			0.9	10.7	0.1	88.3
		540			0.9	10.6	0.1	88.4
		600			0.9	10.6	0.1	88.4
		660			0.9	10.6	0.1	88.4

Reading Location			SG02					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			West former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.05	-0.014				
Gas Readings		0			0.0	0.1	19.8	80.1
One Pore Volume		36			25.7	0.0	8.3	66.0
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Field Sampling Data Sheets
June 14, 2023

Reading Location			SG03					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Center of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.15	-0.088				
Gas Readings		0			64.0	30.1	1.4	4.5
One Pore Volume		37						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Reading Location			SG04					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.03	-0.043				
Gas Readings		0			0.0	0.1	21.0	78.9
One Pore Volume		36			37.2	16.8	0.7	45.3
		60			23.6	15.9	0.6	59.9
		120			14.7	14.8	0.5	70.0
		180			12.6	14.2	0.5	72.7
		240			11.9	13.9	0.4	73.8
		300			11.4	13.6	0.4	74.6
		360			11.0	13.4	0.4	75.2
		420			10.7	13.2	0.4	75.7
		480			10.7	13.1	0.4	75.8
		540			10.6	13.1	0.4	75.9
		600			10.5	13.0	0.3	76.2

Field Sampling Data Sheets
June 14, 2023

Reading Location			SG05					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Southeast margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			-6.53	5.525				
Gas Readings		0			0.0	0.2	15.2	84.6
One Pore Volume		36			0.0	6.7	13.3	80.0
		60			0.0	6.4	13.4	80.2
		120			0.0	6.2	14.0	79.8
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						

Reading Location			SG06					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.00	-0.032				
Gas Readings		0			0.0	0.0	20.5	79.5
One Pore Volume		52			13.1	10.4	0.5	76.0
		60			12.8	10.1	0.4	76.7
		120			12.5	9.7	0.4	77.4
		180			12.4	9.6	0.3	77.7
		240			12.3	9.5	0.3	77.9
		300			12.4	9.5	0.3	77.8
		360			12.3	9.5	0.3	77.9
		420			12.3	9.5	0.3	77.9
		480			12.3	9.5	0.3	77.9
		540			12.3	9.5	0.3	77.9
		600			12.3	9.5	0.3	77.9

Field Sampling Data Sheets

June 14, 2023

Reading Location			SG07					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			North margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			-0.08	0.012				
Gas Readings		0			0.0	0.2	20.2	79.6
One Pore Volume		37			0.0	7.5	9.7	82.8
		60			0.0	7.5	10.5	82.0
		120			0.0	7.0	10.6	82.4
		180			0.0	6.9	10.6	82.5
		240			0.0	6.9	10.6	82.5
		300			0.0	6.9	10.6	82.5
		360			0.0	6.9	10.5	82.6
		420			0.0	6.9	10.5	82.6
		480			0.0	6.9	10.5	82.6
		540			0.0	6.9	10.5	82.6
		600			0.0	6.8	10.5	82.7

Reading Location			SG08					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			South margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			-0.01	0.490				
Gas Readings		0			0.9	0.8	2.3	96.0
One Pore Volume		39			3.4	7.5	0.1	89.0
		60			3.4	7.5	0.1	89.0
		120			3.4	7.5	0.1	89.0
		180			3.4	7.5	0.1	89.0
		240			3.4	7.5	0.1	89.0
		300			3.4	7.5	0.1	89.0
		360			3.4	7.5	0.1	89.0
		420			3.4	7.5	0.1	89.0
		480			3.4	7.5	0.1	89.0
		540			3.4	7.5	0.1	89.0
		600			3.4	7.5	0.0	89.1

Field Sampling Data Sheets
June 14, 2023

Reading Location			SG09 (Temp)					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			East of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.01	-0.002				
Gas Readings		0			1.6	9.0	0.8	88.6
		60			3.7	7.7	13.2	75.4
		120			3.7	6.7	13.8	75.8
		180			2.6	5.7	14.4	77.3
		240			1.7	4.0	15.1	79.2
		300			1.4	4.1	15.5	79.0
		360			1.3	3.8	15.7	79.2
		420			1.3	3.5	15.7	79.5
		480			1.4	3.4	15.8	79.4
		540			1.4	3.3	15.8	79.5
		600			1.5	3.2	15.8	79.5

Reading Location			SG10 (Temp)					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			Southeast of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.07	-0.047				
Gas Readings		0			0.5	0.9	18.9	79.7
		60			0.0	0.1	20.4	79.5
		120			0.0	0.0	20.7	79.3
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						

Field Sampling Data Sheets
June 14, 2023

Reading Location			SG11 (Temp)					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			Northeast margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.00	-0.002				
Gas Readings		0			0.0	1.9	20.2	77.9
		60			0.0	2.2	18.4	79.4
		120			0.0	2.3	18.5	79.2
		180			0.0	2.3	18.6	79.1
		240			0.0	2.3	18.6	79.1
		300			0.0	2.3	18.6	79.1
		360			0.0	2.3	18.6	79.1
		420			0.0	2.3	18.6	79.1
		480			0.0	2.3	18.6	79.1
		540			0.0	2.3	18.6	79.1
		600			0.0	2.3	18.5	79.2

Reading Location			SG12 (Temp)					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			Northwest margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.08	0.090				
Gas Readings		0			0.0	0.0	20.2	79.8
		60			0.5	14.2	3.2	82.1
		120			0.6	16.8	1.1	81.5
		180			0.7	17.0	1.0	81.3
		240			0.7	17.1	1.0	81.2
		300			0.7	17.3	0.9	81.1
		360			0.7	17.3	0.9	81.1
		420						
		480						
		540						
		600						

Field Sampling Data Sheets
June 14, 2023

Reading Location			SG13 (Temp)					
Date Monitored			6/14/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			West of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			-0.01	-0.003				
Gas Readings		0			0.0	0.1	20.4	79.5
		60			0.0	0.9	19.8	79.3
		120			0.0	0.9	19.8	79.3
		180			0.0	0.9	19.7	79.4
		240			0.0	0.9	19.7	79.4
		300			0.0	0.9	19.7	79.4
		360			0.0	0.9	19.6	79.5
		420			0.0	0.9	19.6	79.5
		480			0.0	0.9	19.6	79.5
		540			0.0	0.9	19.5	79.6
		600			0.0	0.9	19.5	79.6

Field Sampling Data Sheets

July 10, 2023

Reading Location			SG01					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Western edge of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			-0.04	-0.001				
Gas Readings		0			0.0	0.2	20.1	79.7
One Pore Volume		36			1.4	11.5	0.3	86.8
		60			1.4	11.5	0.2	86.9
		120			1.4	11.5	0.1	87.0
		180			1.4	11.5	0.1	87.0
		240			1.4	11.5	0.1	87.0
		300			1.4	11.5	0.1	87.0
		360			1.4	11.5	0.1	87.0
		420			1.4	11.5	0.1	87.0
		480			1.4	11.5	0.1	87.0
		540			1.4	11.5	0.1	87.0
		600			1.3	11.4	0.0	87.3
		660			1.3	11.4	0.1	87.2

Reading Location			SG02					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			West former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.09	0.075				
Gas Readings		0			0.0	0.2	19.4	80.4
One Pore Volume		36			41.4	6.5	16.0	36.1
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Field Sampling Data Sheets

July 10, 2023

Reading Location			SG03					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Center of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.28	-0.274				
Gas Readings		0			40.7	15.3	7.0	37.0
One Pore Volume		37						
		60						
		120						
		180						
		240						
		300						
		360						
		420						
		480						
		540						
		600						
		660						

Reading Location			SG04					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.09	-0.015				
Gas Readings		0			0.4	0.2	20.2	79.2
One Pore Volume		36			37.9	19.5	0.4	42.2
		60			29.1	18.1	0.4	52.4
		120			19.4	16.3	0.3	64.0
		180			17.7	15.7	0.3	66.3
		240			17.1	15.2	0.2	67.5
		300			16.7	15.3	0.2	67.8
		360			16.4	15.1	0.2	68.3
		420			16.3	15.1	0.2	68.4
		480			16.1	15.0	0.2	68.7
		540			16.0	14.9	0.2	68.9
		600			15.8	14.8	0.2	69.2

Field Sampling Data Sheets

July 10, 2023

Reading Location			SG05					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			Southeast margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.17	-0.895				
Gas Readings		0			0.3	0.2	20.7	78.8
One Pore Volume		36			0.0	10.0	7.5	82.5
		60			0.0	10.0	7.7	82.3
		120			0.0	9.7	8.2	82.1
		180			0.0	9.7	8.3	82.0
		240			0.0	9.6	8.3	82.1
		300			0.0	9.6	8.3	82.1
		360			0.0	9.6	8.3	82.1
		420			0.0	9.5	8.3	82.2
		480			0.0	9.5	8.3	82.2
		540			0.0	9.5	8.3	82.2
		600			0.0	9.5	8.3	82.2

Reading Location			SG06					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			East margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.02	0.024				
Gas Readings		0			15.7	24.3	11.3	48.7
One Pore Volume		52			8.5	11.6	0.4	79.5
		60			8.4	11.2	0.4	80.0
		120			8.2	11.0	0.4	80.4
		180			8.2	10.9	0.3	80.6
		240			8.2	10.8	0.3	80.7
		300			8.2	10.8	0.3	80.7
		360			8.2	10.8	0.3	80.7
		420			8.2	10.8	0.3	80.7
		480			8.2	10.8	0.3	80.7
		540			8.2	10.7	0.3	80.8
		600			8.2	10.7	0.3	80.8

Field Sampling Data Sheets

July 10, 2023

Reading Location			SG07					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			North margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.03	0.078				
Gas Readings		0			0.0	0.8	19.7	79.5
One Pore Volume		37			0.0	7.8	10.7	81.5
		60			0.0	7.5	11.3	81.2
		120			0.0	7.2	11.5	81.3
		180			0.0	7.2	11.5	81.3
		240			0.0	7.2	11.5	81.3
		300			0.0	7.1	11.5	81.4
		360			0.0	7.1	11.5	81.4
		420			0.0	7.1	11.5	81.4
		480			0.0	7.1	11.5	81.4
		540			0.0	7.1	11.5	81.4
		600			0.0	7.1	11.5	81.4

Reading Location			SG08					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth								
Casing Diameter / Type			0.17" Teflon tubing					
Location			South margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.02	-0.017				
Gas Readings		0			0.0	2.3	18.8	78.9
One Pore Volume		39			2.3	9.1	0.3	88.3
		60			2.3	9.2	0.2	88.3
		120			2.3	9.3	0.1	88.3
		180			2.3	9.3	0.1	88.3
		240			2.3	9.4	0.1	88.2
		300			2.3	9.4	0.1	88.2
		360			2.3	9.4	0.1	88.2
		420			2.3	9.5	0.1	88.1
		480			2.3	9.5	0.0	88.2
		540			2.3	9.5	0.0	88.2
		600			2.3	9.5	0.0	88.2

Field Sampling Data Sheets

July 10, 2023

Reading Location			SG09 (Temp)					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			East of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			-0.06	-0.003				
Gas Readings		0			0.0	6.1	9.7	84.2
		60			18.4	30.3	5.3	46.0
		120			16.4	27.3	6.8	49.5
		180			16.1	26.4	7.5	50.0
		240			16.9	27.0	7.3	75.8
		300			16.5	27.3	7.8	48.4
		360			16.3	26.1	8.0	49.6
		420			16.8	26.3	8.0	48.9
		480			16.2	25.4	8.6	49.8
		540			15.9	24.9	8.8	50.4
		600			16.1	24.9	8.8	50.2

Reading Location			SG10 (Temp)					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			Southeast of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement								
Gas Readings		0			0.3	1.7	18.5	79.5
		60			0.0	6.5	14.3	79.2
		120			0.0	6.4	14.4	79.2
		180			0.0	6.3	14.4	79.3
		240			0.0	6.3	14.4	79.3
		300			0.0	6.3	14.4	79.3
		360			0.0	6.2	14.4	79.4
		420			0.0	6.2	14.4	79.4
		480			0.0	6.2	14.4	79.4
		540			0.0	6.1	14.4	79.5
		600			0.0	6.1	14.5	79.4

Field Sampling Data Sheets

July 10, 2023

Reading Location			SG11 (Temp)					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			Northeast margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			0.03	-0.009				
Gas Readings		0			0.2	10.7	11.1	78.0
		60			0.0	0.7	20.2	79.1
		120			0.0	0.7	20.2	79.1
		180			0.0	0.7	20.2	79.1
		240			0.0	0.7	20.2	79.1
		300			0.0	0.7	20.2	79.1
		360			0.0	0.7	20.2	79.1
		420			0.0	0.7	20.1	79.2
		480			0.0	0.7	20.1	79.2
		540			0.0	0.7	20.0	79.3
		600			0.0	0.7	20.0	79.3

Reading Location			SG12 (Temp)					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			Northwest margin of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement			-0.02	0.008				
Gas Readings		0			0.0	1.0	18.6	80.4
		60			0.3	17.3	2.9	79.5
		120			0.4	14.9	5.7	79.0
		180			0.4	14.8	5.7	79.1
		240			0.4	14.9	5.7	79.0
		300			0.4	14.9	5.7	79.0
		360			0.4	14.9	5.7	79.0
		420			0.4	14.9	5.7	79.0
		480			0.4	14.8	5.7	79.1
		540			0.4	14.8	5.7	79.1
		600			0.4	14.8	5.7	79.1

Field Sampling Data Sheets
July 10, 2023

Reading Location			SG13 (Temp)					
Date Monitored			7/10/2023					
Sampled by			ENW					
Depth			5					
Casing Diameter / Type			Temporary Point					
Location			West of former log pond					
Monitoring Parameters	Time	Lapsed Time	Static Press.	Diff. Press.	CH ₄	CO ₂	O ₂	Bal %
		sec	in. H ₂ O	in. H ₂ O	%	%	%	%
Initial Measurement								
Gas Readings		0			0.0	0.1	20.5	79.4
		60			0.0	0.8	20.0	79.2
		120			0.0	0.8	19.9	79.3
		180			0.0	0.8	19.9	79.3
		240			0.0	0.8	19.8	79.4
		300			0.0	0.8	19.8	79.4
		360			0.0	0.8	19.8	79.4
		420			0.0	0.8	19.7	79.5
		480			0.0	0.8	19.7	79.5
		540			0.0	0.8	19.6	79.6
		600			0.0	0.8	19.6	79.6