March 9, 2023
File: 227704604

Attention: **Kevin Dana**
Oregon Department of Environmental Quality – Northwest Region
700 NE Multnomah Street, Suite 600
Portland, Oregon 97232

Dear Mr. Dana,

Reference: Workplan for Additional Assessment and Well Installation
Oregon Plastic Tubing and Pacific Corrugated Facility,
6401 and 6402 South Miller Road, Hubbard, Oregon

Stantec Consulting Services Inc. (Stantec) has prepared this workplan for additional environmental assessment and well installation at the Oregon Plastic Tubing and Pacific Corrugated Facility at 6401 and 6402 South Miller Road in Hubbard, Oregon (Subject Property) on behalf of Prinsco Water Management Solutions (Prinsco). The scope of work is based on findings of the April 2022 Phase II Environmental Site Assessment (ESA), the June/July 2022 Supplemental Phase II ESA and recommendations from the Oregon Department of Environmental Quality (DEQ) cleanup project manager, Mr. Kevin Dana.

Rationale for this investigation is based the DEQ guidance document *Risk-Based Decision Making for the Remediation of Contaminated Site,* September 22, 2003, 2017 revision.

Background and Previous Environmental Investigations

The Subject Property consists of 61.31 acres occupied by an office and shop building, pipe manufacturing building and canopied shed with pipe storage in the eastern and south-central portions of the Property. A hazelnut orchard is located on the north-western portion of the Property. Access to the Subject Property is from South Miller Road, which bisects the northern and southern portions of the Subject Property (**Figures 1 and 2**).

Phase I ESA

Stantec completed a Phase I ESA for the Property in March 2022 and identified the following recognized environmental conditions (RECs):

REC #1: The existing above ground storage tanks (ASTs) and associated ground surface staining observed during the Phase I ESA site reconnaissance were considered a REC based on the potential for releases owing to over 15 years of AST use;

REC #2: Two decommissioned underground storage tank (UST) records were identified for the Property during the development of the Phase I ESA. Additional information (location, size, product type or decommissioning date) was not available. Based on the lack of closure documentation, these historical UST records were considered a REC; and

REC #3: Two private septic systems are located on the Property, one associated with the office/shop building north of Miller Road, and one associated with the pipe manufacturing building south of Miller Road. Owing to the industrial use of the Property, releases of petroleum products and/or

hazardous substances into the septic system(s) could have adversely affected the Property environmental conditions.

Phase II ESA

In April 2022, Stantec completed a Phase II ESA at the Subject Property to investigate the RECs. Phase II boring locations are presented on **Figure 3.**

REC#1 - Active AST area

One soil boring (GP-6) was advanced adjacent to the AST fuel dispensers. The grab groundwater sample collected from this location contained a concentration of ethylbenzene exceeding the DEQ Risk-Based Concentration (RBC) for tapwater ingestion by occupational workers. No other contaminants of potential concern (COPCs) were reported in soil and groundwater samples from this boring.

REC #2 - Former UST Areas Near Office/Shop Building

A geophysical subsurface mapping survey (SMS) was completed surrounding the office/shop building to explore for evidence of abandoned USTs or areas of disturbed soils indicative of removed USTs, and three former UST pits were identified to the south and east of the office/shop building (**Figure 3**).

Two borings were advanced south of the office/shop building (GP-3 and GP-7) and one boring was advanced east of the office/shop (GP-4) in the former UST locations identified during the SMS. Soil and groundwater sample results from these borings indicated concentrations of gasoline range organics (GRO), diesel-range organics (DRO) and volatile organic compounds (VOCs) in all three of these borings, with the highest concentrations of these CPOCs in samples collected from borings GP-3 and GP-7 south of the building. Several analyte concentrations in soil samples collected from boring GP-7 exceeded the RBC for leaching to groundwater for occupation receptors, while benzene and ethylbenzene in soil samples collected from boring GP-7 exceeded the RBC for vapor intrusion into buildings pathway for occupational receptors. No soil concentrations exceeded RBCs in soil samples collected from borings GP-3 or GP-4.

Groundwater samples collected from borings GP-3, GP-4 and GP-7 indicated several analytes exceeded the RBC for ingestion from tapwater. Benzene in the sample collected from GP-3 exceeded the vapor intrusion RBC for occupational workers. Moreover, GRO in both GP-3 and GP-7, and benzene in GP-3 were reported exceeding the RBC for groundwater in an excavation.

REC #3 - Septic Fields

Borings GP-1 and GP-5 were advanced in the southern and northern septic fields, respectively. Groundwater sample results from GP-1 indicate no exceedances of RBCs. Concentrations of GRO, benzene, ethylbenzene and naphthalene in the groundwater sample collected from GP-5 exceeded the potentially applicable RBC for tap water ingestion.

Supplemental Phase II ESA

Findings of the April 2022 Phase II ESA completed at the Property indicated concentrations of petroleum hydrocarbons and VOCs in soil and groundwater samples exceeded several DEQ RBCs, principally for the tap water ingestion and vapor intrusion into buildings pathways. Accordingly, Stantec completed a

Supplemental Phase II ESA at the Property between June and July 2022 to further evaluate these two risk pathways to Property receptors.

Based on the data collected and evaluated during the Supplemental Phase II ESA, no unacceptable human health risk to current Property occupants from historical petroleum releases is present, as summarized below:

Groundwater monitoring well installation and sampling

Groundwater monitoring well MW-1 was installed at the Property in the location where the highest levels of groundwater contamination were identified during the April 2022 Phase II ESA to determine if free product or separate phase hydrocarbons (SPH) was present in the subsurface (**Figure 3**). No detectable layer of SPH was identified within the well; however, concentrations of dissolved-phase GRO, DRO and VOCs exceeding applicable RBCs were present in the groundwater sample collected from MW-1.

Sub-Slab Soil Vapor Sampling

Sub-slab soil vapor sampling points SV-1 and SV-2 were installed beneath the concrete slab of the office/shop building and samples were collected to evaluate vapor intrusion risk to building occupants (**Figure 3**). None of the Property COPCs were detected at concentrations exceeding applicable vapor intrusion RBCs.

Domestic water well sampling

A domestic water sample was collected from the office/shop building to evaluate ingestion risk to Property occupants. All COPCs were reported as non-detect by the analytical except for GRO and DRO, which were reported below laboratory method detection limits.

Conceptual Site Model

The conceptual site model (CSM) completed for the Property is based on findings of the April 2022 Phase II ESA and June/July 2022 Supplemental Phase II ESA. The land use determination, locality of facility and beneficial water use determination used to develop the CSM is included in the May 2022 *Phase II ESA Report* prepared for the Property. Potential receptors and exposure pathways identified consist of:

- Dermal contact with soil and groundwater for occupational (soil only), construction and excavation worker receptors (soil and groundwater);
- Ingestion of contaminants in groundwater (tapwater) for occupational receptors;
- Contaminants in soil leaching to groundwater for occupational receptors; and
- Contaminants in soil and groundwater volatilizing to outdoor and indoor air for occupational receptors.

Based on analytical results from the April 2022 Phase II ESA and June/July 2022 Supplemental Phase II ESA, concentrations of COPCs detected in samples collected at the Property to date contain exceedances of the following DEQ RBCs (**Figure 4**):

- Dermal contact with soil and groundwater in an excavation for construction workers;
- Dermal contact with groundwater in an excavation for excavation workers;
- Contaminants in soil leaching to groundwater for occupational receptors; and
- Contaminants in groundwater volatilizing to outdoor air for occupational receptors.

Reported concentrations of soil and groundwater samples collected from the former tank pit south of the office/shop building were reported exceeding the vapor intrusion into buildings RBC; however, sub-slab soil vapor samples collected beneath the building did not contain RBC exceedances.

Regulatory Status

Based on the discovery of soil and groundwater contamination in borings GP-3 and GP-7 during the April 2022 Phase II ESA, a petroleum release was reported to the Oregon DEQ on April 28, 2022 and Leaking Underground Storage Tank (LUST) number 03-22-0412 was issued for the Property. After receiving analytical data, Stantec additionally submitted an *Initial (Twenty Day) Report for UST Cleanup Projects* to DEQ on May 23, 2022.

The Property was enrolled in the DEQ Voluntary Cleanup Program (VCP) on July 18, 2022 under DEQ Environmental Cleanup Site Information (ECSI) #6521. On January 17, 2023 Stantec received a letter from DEQ indicating Mr. Kevin Dana was assigned as Cleanup Project Manager for the Property.

Additional Assessment Objectives

During a phone conversation on February 14, 2023, Mr. Dana indicated that the next steps for the Property assessment are: 1) delineation of the groundwater plume sourced from the former USTs south of the shop building, and 2) additional sub-slab soil vapor samples to evaluate vapor intrusion risk to occupants inside the office building.

Scope of Work

The purpose of the work described herein is to further assess the petroleum release as discussed with the DEQ Cleanup Project Manager.

Pre-Field Activities

Prior to initiating any field activities, Stantec will update the existing Health and Safety Plan and renew the dig ticket issued by the underground public Utility Notification Center. In addition, a private utility locator will be retained by Stantec to clear any proposed boring/monitoring well locations of possible subsurface utilities.

A daily safety meeting will be conducted by Stantec with all field personnel involved in field activities.

Soil Borings

Five temporary soil borings (GP-8 through GP-12) will be advanced at the Property in the locations depicted on **Figure 3** to aid in delineating soil and groundwater impacts along the eastern Property boundary adjacent to Rock Creek. The borings will be completed by an Oregon-licensed driller utilizing a direct-push drill rig equipped with a hydraulically driven hammer to advance a clear acetate liner within a hollow stainless-steel drill rod to collect relatively undisturbed soil cores in 5-foot sections.

Each temporary boring will be advanced to a maximum depth of approximately 20-feet below ground surface (bgs). Based on previous subsurface investigations, groundwater is anticipated to be encountered at a depth of approximately 10 feet bgs. Soil cores will be logged using the Unified Soil

Classification System, results of field screening for VOCs conducted with a field calibrated photoionization detector (PID), and visual/olfactory observations of soil conditions will be recorded by a Stantec Oregon-registered geologist on field data sheets. One soil sample will be collected for laboratory analysis from each temporary boring either 1) at the depth interval exhibiting the highest field indicators of contamination, or 2) at the capillary fringe if no impacts are observed. Specific sampling depths within each boring location will be determined based on field observations. Soil samples will be submitted to Pace Analytical for laboratory analyses as indicated in **Table 1**.

Groundwater Monitoring Well Installation

After advancing the five temporary soil borings, the two borehole locations exhibiting the highest field evidence of COPC contamination (visual or olfactory observations and/or elevated PID response) will be completed as groundwater monitoring wells MW-2 and MW-3. If no field indications of contamination are observed in the temporary soil borings, monitoring wells MW-2 and MW-3 will be installed in boreholes GP-9 and GP-11 (**Figure 3**) to provide lateral delineation of groundwater impacts to the east of the former UST location.

An additional monitoring well, MW-4, will be installed in the presumed up-gradient groundwater location to the west of the shop building (**Figure 3**).

All proposed monitoring wells will be installed to a total depth of 20 feet bgs. Monitoring well construction will consist of two-inch diameter polyvinyl chloride well casing with a screen interval from approximately 10 to 20 feet bgs. After installation of the well casing, clean, imported silica sand will be used as a filter pack. The filter pack will extend from the terminal depth of each well bore to approximately one foot above the screen interval. The well seal will be installed using hydrated bentonite chips and will be installed above the filter pack to within one foot of the ground surface. A locking well cap will be installed on the casing and a flush-mounted well box will be installed for security and access. All well installation activities will be completed by an Oregon-licensed and bonded monitoring well constructor under the direct supervision of a Stantec Oregon-Registered Geologist.

Groundwater Monitoring Well Development

Newly installed monitoring wells MW-2 through MW-4 will be developed in accordance with OAR 690-240-0485. Development will consist of surging the entire well screen for approximately 15 minutes followed by pumping a minimum of five borehole volumes of water from the well.

Groundwater Monitoring Well Sampling and Testing

A minimum of 48-hours after well development, Stantec will complete a groundwater monitoring event including previously installed well MW-1. Groundwater monitoring will be completed in accordance with the standard operating procedure included in **Appendix A** and samples will delivered under chain-of-custody protocol to Pace Analytical's Mt. Juliet, Tennessee analytical laboratory for the testing regimen described on **Table 2**.

If SPH is measured in a well, no purging or sampling will be completed, and the thickness of the product will be recorded on the field data sheet.

Well Survey

All Property monitoring wells (MW-1 through MW-4) will be surveyed by a licensed surveyor both vertically and horizontally using the North American Vertical Datum 88 (NAVD 88), Oregon State Plane Coordinate System 3601/North American Datum 83 (NAD83), respectively. The vertical elevation accuracy will be ± 0.01 foot, and the horizontal location will have an accuracy of ± 0.1 foot.

Survey data will be used to calculate a piezometric groundwater surface and groundwater contour maps to determine flow direction of the upper-most groundwater zone beneath the Property.

Sub-Slab Soil Vapor Sampling and Testing

Concentrations of benzene and ethylbenzene were reported in exceedance of the DEQ vapor intrusion into buildings RBC for soil samples collected from boring GP-7 and benzene was reported in exceedance of the DEQ vapor intrusion into buildings RBC for the groundwater sample collected from boring GP-3. To assess for vapor-phase risk to occupants of the office/shop building, two sub-slab soil vapor samples were collected during the June/July Phase II ESA in the locations indicated on **Figure 3**. None of the Property COPCs were detected at concentrations exceeding applicable vapor intrusion RBCs.

However, the DEQ Cleanup Project Manager requested additional assessment of the vapor intrusion risk to building occupants. Accordingly, Stantec proposes reinstallation of two temporary sub-slab soil vapor points (SV-1R and SV-2R) and collection of soil vapor samples.

Sub-slab soil vapor samples will be collected from field-constructed, temporary vapor probes installed immediately below the slab and sealed at the surface to prevent infiltration of ambient air. At each location, a hammer-drill with a 1-inch bit will be used to penetrate the concrete floor slab, and a vapor sampling point will be installed into the base course material immediately below the slab. The area around the vapor point will be sealed with non-VOC non-shrinking material and allowed to dry for at least 30 minutes before collecting the sample. Once the surface seal is dry, a minimum of two volumes of the sampling apparatus will be purged prior to sample collection.

Following probe installation, at least 30-minutes will be allowed for subsurface conditions to equilibrate prior to conducting leak checks, purging and sample collection. Three volumes of the sampling apparatus will be purged prior to sample collection.

Samples will be collected in general accordance with DEQ's 2010 guidance document titled *Guidance for Assessing and Remediating Vapor Intrusion in Buildings*. Each soil vapor sample will be collected in a 1-liter laboratory batch-certified Summa canister fitted with a flow controller set to collect a sample at less than 200 milliliters/minute. The initial vacuum on the Summa canister will be recorded on the chain of custody prior to sampling. The soil vapor sampling points will be attached to the Summa canisters with inert, impermeable tubing (e.g., ¼-inch o.d. Teflon) to facilitate soil vapor sample collection. The soil vapor samples will be submitted to Pace National for analyses of Total Petroleum Hydrocarbons, quantified as gasoline and VOCs by United States Environmental Protection Agency (EPA) Method TO-15 as indicated on **Table 3**.

Helium gas will be used to check for leaks in the sample train during collection of the soil vapor sample. The leak check will be performed by placing an enclosure over the sampling probe and maintaining a concentration of helium of at least 10% in the enclosure. In addition to VOC analysis, the soil vapor samples will be submitted for analysis of helium by EPA Method 3C Modified or American Society of Testing and Materials (ASTM) D1946 to evaluate for leaks in the sampling system.

Reporting

Following receipt of all sample results from the analytical laboratory, Stantec will prepare a written report documenting field findings and analytical results. The report will include the following:

- A description of all activities completed at the Property;
- An updated summary of Property regulatory status with the DEQ;
- Laboratory analytical data summary tables for all environmental media sampled at the Property to date, including DEQ RBCs for applicable exposure pathways according to the CSM;
- Figures illustrating the locations of environmental sample locations, groundwater monitoring well locations, soil vapor sample points and other relevant data;
- Waste disposal manifests; and
- An evaluation of all data collected at the Subject Property thus far.

Schedule

Stantec will schedule the fieldwork upon DEQ approval of the work plan. Note that the voluntary party would like to complete the additional work as soon as possible to comply with the post-closing escrow obligations with the former owner.

Regards,

Stantec Consulting Services Inc.

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Senior Associate, Environmental Services
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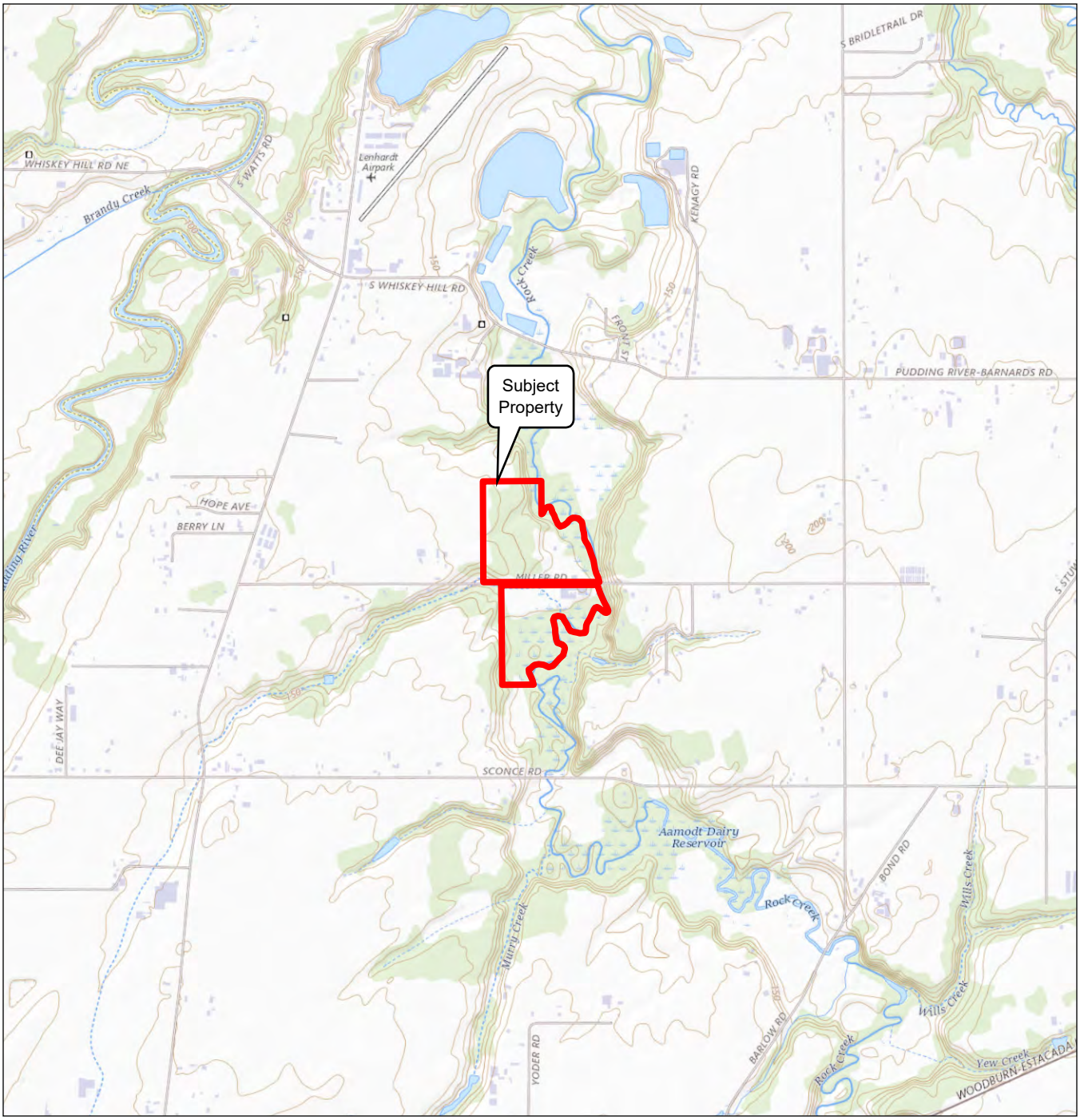
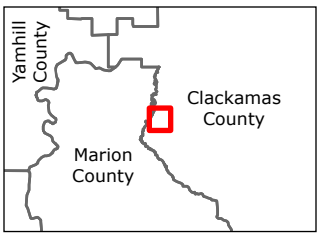
Attachments:

Figure 1:	Site Location Map
Figure 2:	Site Detail Map
Figure 3:	Phase II Investigation Areas and Proposed Monitoring Well Locations
Figure 4:	Conceptual Site Model
Table 1:	Sampling Design and Rationale – Soil
Table 2:	Sampling Design and Rationale – Groundwater
Table 3:	Sampling Design and Rationale – Soil Vapor
Appendix A:	Stantec Groundwater Monitoring & Low-Flow Sampling Procedures

FIGURES





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Subject Property

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Stantec

Project Location 6401 and 6402 South Miller Road, Hubbard, OR	Prepared by KJM on 2022-05-18 TR by RWM on 2020-05-23 IR by ES on 2020-05-23
Client/Project Oregon Plastic Tubing and Pacific Corrugated Company Workplan for Additional Assessment	227704604
Figure No. 1	
Title **Site Location Map**	

Notes

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: USGS, Clackamas County Parcels
3. Background: USGS 7.5 Minute Quadrangle

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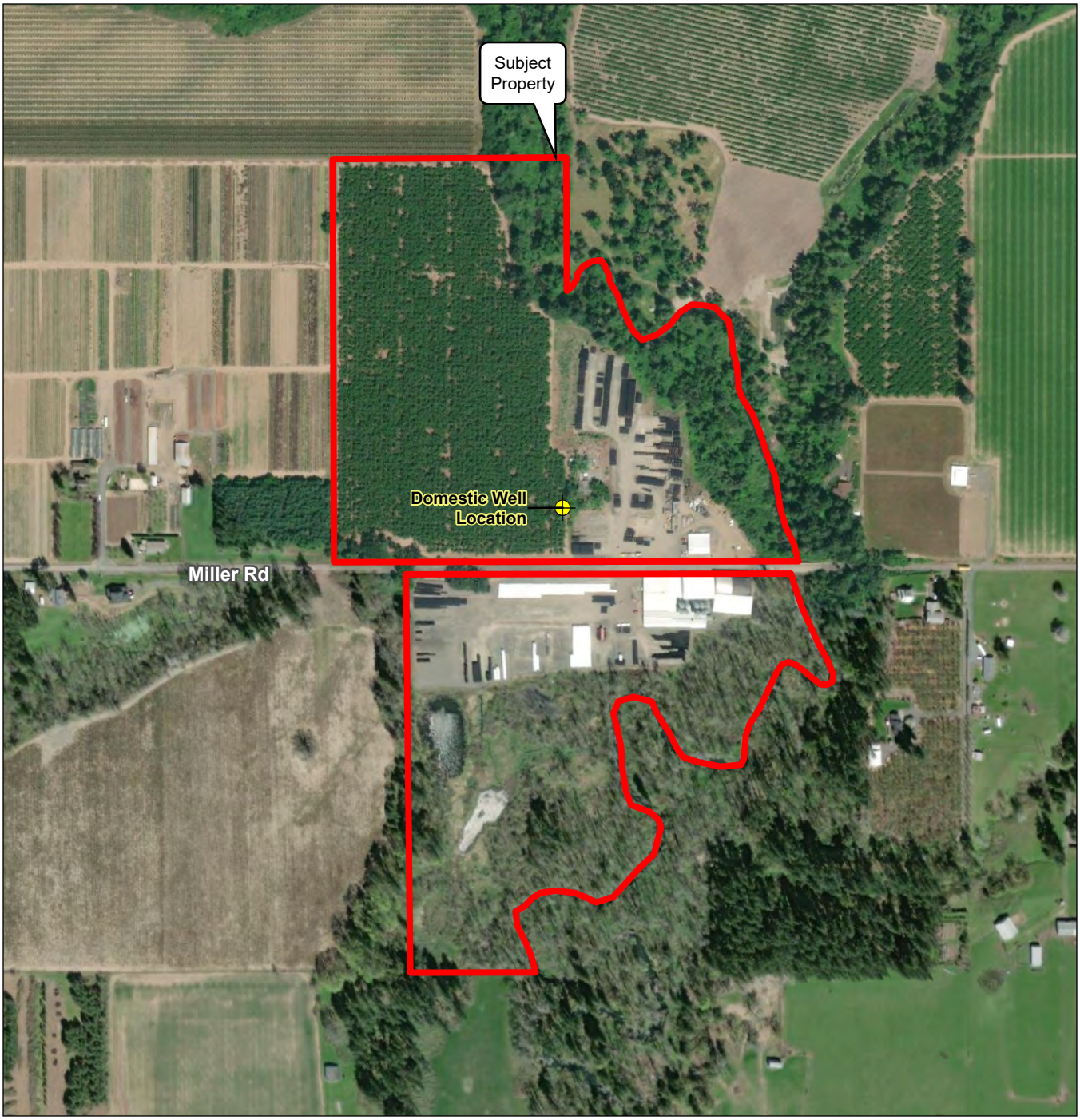

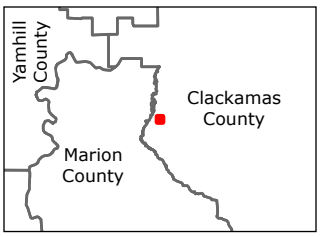

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- Domestic Well Location
- Subject Property

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Notes

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: USGS, Clackamas County Parcels
3. Background: USGS 7.5 Minute Quadrangle

Stantec

Project Location
6401 and 6402 South Miller Road,
Hubbard, OR

Prepared by KJM on 2022-05-18
TR by RWM on 2020-05-23
IR by ES on 2020-05-23

Client/Project 227704604
Oregon Plastic Tubing and Pacific Corrugated Company
Workplan for Additional Assessment

Figure No.
2

Title
Site Detail Map

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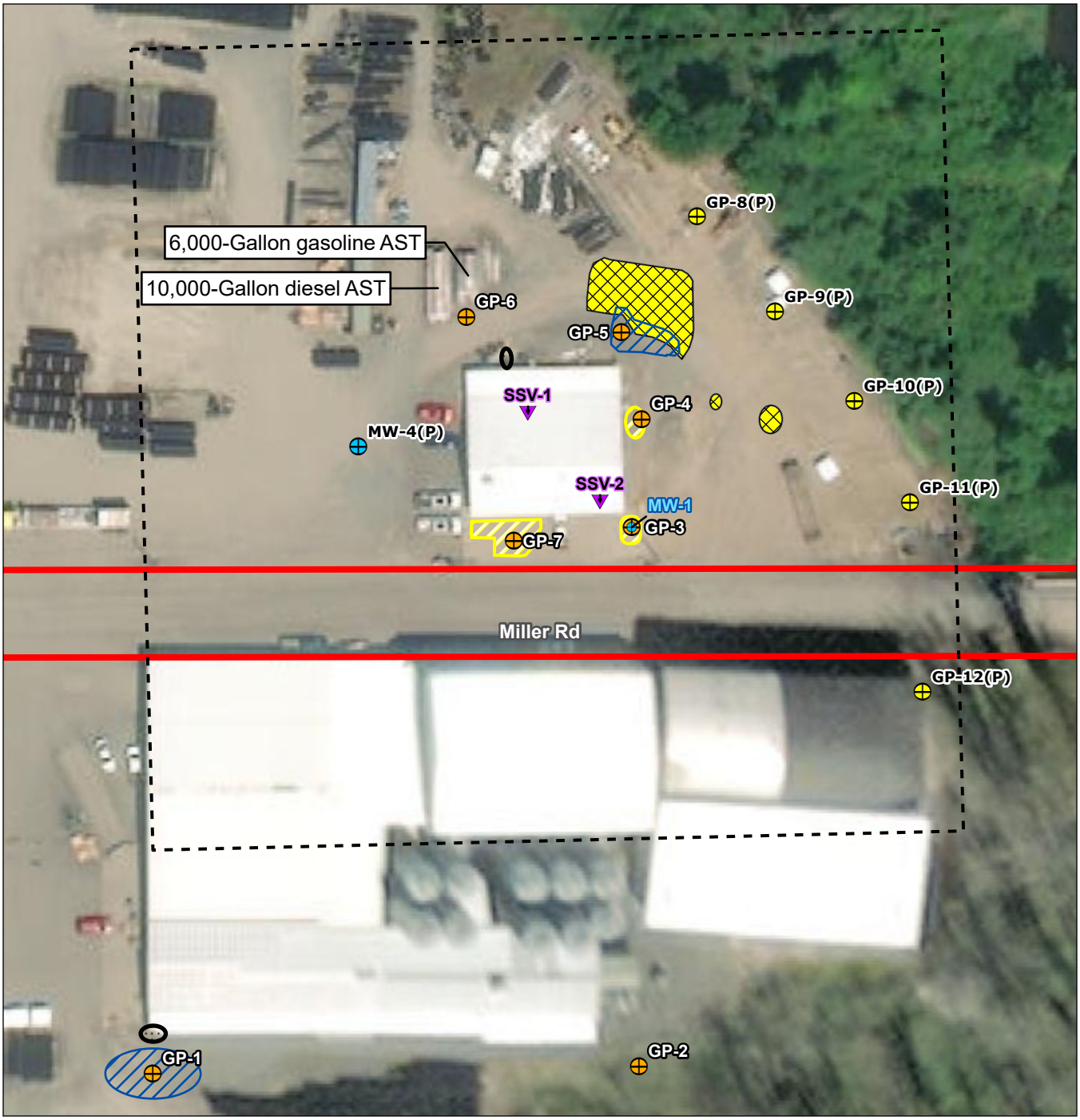

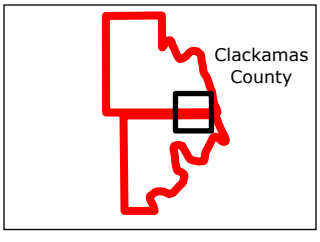

Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: USGS, Clackamas County Parcels
3. Background: ESRI World Imagery

Legend
- Subject Property
- Backfilled Excavations
  - Ferric
  - Non-Ferric
  - Locality of Facility
  - Drain Field
  - Septic Tank
- Proposed Soil Boring Locations
- Proposed Monitoring Well Location
- Groundwater Monitoring Well
- Proposed Soil Vapor Sample Locations
- Borehole Locations

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Stantec

Project Location
6401 and 6402 South Miller Road,
Hubbard, OR

Prepared by BS on 2023-02-23
TR by RWM on 2020-05-23
IR by ES on 2020-05-23

Client/Project 227704604
Oregon Plastic Tubing and Pacific Corrugated Company
Workplan for Additional Assessment

Figure No.
3

Title
Phase II Investigation Areas and Proposed Monitoring Well Locations

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Figure 4
Conceptual Site Model

Oregon Plastic Tubing and Pacific Corrugated Facility
6401 and 6402 South Miller Road, Hubbard, Oregon

Potential Receptor	Potentially Complete Current and Future Exposure Pathways					
	Soil - Direct Contact	Soil - Leaching to Groundwater	Soil/Groundwater - Volatilization to Outdoor Air	Vapor Intrusion	Tapwater Ingestion	Groundwater in Excavation
Residential	Not complete	Not complete	Not complete	Not complete	Not complete	Not complete
Urban Residential	Not complete	Not complete	Not complete	Not complete	Not complete	Not complete
Occupational Workers	Complete	Complete	Complete[1]	Complete[2]	Complete*	Not applicable
Construction Workers	Complete	Not applicable	Not applicable	Not applicable	Not applicable	Complete
Excavation Workers	Complete	Not applicable	Not applicable	Not applicable	Not applicable	Complete

Notes:

No current or reasonable future residential and urban residential use of the Property

Current and likely future land use: Mixed-use Commercial/Industrial

*Tapwater is sourced from the well located on the property.

[1] = Groundwater only

2 = Soil and groundwater only in vicinity of former tank pit, sub-slab soil vapor concentrations beneath office/shop building do not exceed applicable RBC

Green Shading = Pathway/receptor not complete or not applicable

Yellow Shading = Pathway/receptor considered complete, but detected concentrations reported below RBC

Red Shading = Pathway/receptor considered complete, and detected concentrations reported above RBC

TABLES

Table 1
Sampling Design and Rationale - Soil
Oregon Plastic Tubing and Pacific Corrugated Facility
6401 and 6402 South Miller Road, Hubbard, Oregon

Borehole ID	Sample Depth (feet)	Rationale	Gasoline-Range Organics (NWTPH-Gx)	Diesel- and Oil-Range Organics (NWTPH-Dx)	Volatile Organic Compounds (EPA 8260)
GP-8	TBD [1]	Downgradient of former UST location/source area	1	1	1
GP-9	TBD [1]	Downgradient of former UST location/source area	1	1	1
GP-10	TBD [1]	Downgradient of former UST location/source area	1	1	1
GP-11	TBD [1]	Downgradient of former UST location/source area	1	1	1
GP-12	TBD [1]	Downgradient of former UST location/source area	1	1	1
MW-4	TBD [1]	Upgradient of former UST location/source area	1	1	1
Total			6	6	6

Notes:

1. Soil samples will be collected from the depth interval exhibiting the greatest environmental impact based on field screening, visual, or olfactory observations. If no impact is observed, then sample will be collected from the capillary fringe.

TBD = To be determined

Table 2

Sampling Design and Rationale - Groundwater

Oregon Plastic Tubing and Pacific Corrugated Facility

6401 and 6402 South Miller Road, Hubbard, Oregon

Sample Identification	Rationale	Gasoline-Range Organics (NWTPH-Gx)	Diesel- and Oil-Range Organics (NWTPH-Dx)	Volatile Organic Compounds (EPA 8260)	Dissolved Lead (EPA 6020)
MW-1	Former UST location/source area	1	1	1	1
MW-2	Downgradient of former UST location/source area	1	1	1	1
MW-3	Downgradient of former UST location/source area	1	1	1	1
MW-4	Upgradient of former UST location/source area	1	1	1	1
Total		4	4	4	4

Notes:

Table 3
Sampling Design and Rationale - Sub-Slab Soil Vapor
Oregon Plastic Tubing and Pacific Corrugated Facility
6401 and 6402 South Miller Road, Hubbard, Oregon

Sample ID	Rationale	Gasoline and Volatile Organic Compounds (TO-15)	Helium (USEPA Method 3C Modified or ASTM D1946)
SSV-1R	Evaluate vapor intrusion risk to building occupants	1	1
SSV-2R	Evaluate vapor intrusion risk to building occupants	1	1
Total		2	2

Notes:

Helium used as leak detection tracer

APPENDIX A

Stantec Groundwater Monitoring & Low-Flow Sampling Procedures

STANTEC groundwater monitoring & Low-Flow sampling procedures

Monitoring well purging and sampling will be conducted using EPA approved low-flow sampling techniques as promulgated in *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples From Monitoring Wells* (EPA Region 1, 1996, revised 2017).

Purging Procedures

A. Using a decontaminated instrument (i.e., tape measure, continuity meter, or interface probe) measure the depth to groundwater in reference to the measuring point at the top of the casing. Measure the total depth of the well to calculate the height and volume of water in the borehole.
B. Based on previously obtained data, if a monitoring well is suspected of containing liquid-phase hydrocarbon (LPH) concentrations, lower a transparent bailer into the well to evaluate the presence of an LPH sheen on the water table.
C. Decontaminate the purge pump and/or PVC bailers by scrubbing in Alconox detergent solution, followed by a tap water rinse and then a deionized water rinse.
D. Purge, by low-flow pumping (less than 0.5 liters per minute) for approximately five minutes. If low-flow purging is not possible and bailing is used to purge the well, then a minimum of three well volumes will be removed. If the well goes dry, the procedure listed in step E2 (below) should be followed. Parameters should be measured after each ½-casing volume is removed.
E. Conduct field measurements (i.e., pH, specific conductivity, temperature, and oxidation-reduction potential) note clarity, color, turbidity, and odor of purge water, and measure depth to groundwater.
    1. If the well has not been purged dry, continue to pump and conduct field measurements (including depth to water) again every five minutes during purging.
        a. If the first through third series of measurements vary by less than 10 percent, the well has been adequately purged. Allow the well to recover to 80 percent of its static condition and begin the sampling procedure.
        b. If the measurements vary by 10 percent or greater, repeat Step E1 above.
        c. If a minimum of three parameters cannot be measured during purging, remove three well volumes prior to sampling.
    2. If the well has been purged dry, measure the water level and allow the well to recharge to 80 percent, or for two hours, whichever occurs first. Calculate the percent recovery and begin the sampling procedure.

Sampling Procedures

- Use the pump to collect the groundwater sample.
- Transfer the groundwater sample into the appropriate container(s). Where applicable, some containers are completely filled to achieve zero headspace. Label the samples according to location and date of collection.
- Enter the samples into Chain-of-Custody and preserve on ice until delivery to the analytical laboratory. Complete the Well Development or Purging/Sampling Log to be stored in the project file.

When requested by the client, collect a bailer rinsate blank of deionized water to check decontamination procedure. In addition, trip blanks prepared by the laboratory and kept with the samples may be included to check for cross contamination of samples within the cooler.