URS

July 24, 2014

Mr. David South
Senior Engineer
Toxics Cleanup Program
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008–5452

Re: Letter Work Plan – Revision 1.0
Additional Investigation – Pump Station Area
Laurel Station
1009 East Smith Road
Bellingham, Washington

Dear Mr. South:

Introduction

During review of the Remedial Investigation/Feasibility Study (RI/FS) report (URS 2014) for Laurel Station by Washington State Department of Ecology (Ecology), you noted that two prior sample locations (TP-9 andTM-B11) near the former drain tile in the southwest corner of the Pump Station Area were not evaluated during the remedial investigation (see attached Drawings GA1012 and GA1013). URS confirmed that these two locations were not assessed during the RI. Subsequently, Ecology requested that assessment of the current conditions and if necessary, cleanup of these locations, be conducted as part of the Laurel Station cleanup action (Consent Decree 14-2-01294-9, June 2014, Exhibit A - Cleanup Action Plan). This letter work plan presents the prior data obtained during previous sampling and proposed procedures to collect current soil data from this area. This information will be used to determine if there is a need to conduct cleanup activities in the vicinity of locations TP-9 and TM-B11. We are prepared to initiate the additional investigation as soon as Ecology's approval of this work plan is received.

Information from Previous Sampling

The locations for test pit TP-9 and soil boring TM-B11 are shown on Drawing GA1013. Previous data collected in November 1991 from TP-9 indicated field screening results for total petroleum hydrocarbons (TPH) of 2,000 mg/kg at 5 feet below ground surface (bgs), 900 mg/kg at 7 feet bgs, and 500 mg/kg at 10 feet bgs. At 15 feet bgs, field screening did not indicate presence of TPH contamination. The petroleum-affected soil was within a zone noted to have water seepage at 5 feet bgs. The boring TM-B11 was drilled in February 1992 to 65 feet bgs. TPH was detected at a concentration of 2,000 mg/kg at 5 feet bgs based on Ecology's Hydrocarbon Identification (HCID) method.. Field screening did not identify the presence of TPH at 15 feet bgs, 35 feet bgs, and 65 feet bgs. Groundwater was not encountered during drilling at TM-B11.

Investigation Plan

To evaluate the soil conditions in the vicinity of TP-9 and TM-B11, three shallow borings (SB-1, SB-2, and SB-5, Drawing GA1015) will be completed adjacent to and between these former locations to a depth of 15 feet bgs using direct push drilling methods by a Washington State licensed drilling subcontractor. Prior to drilling, public and private utility locates will be performed and the proposed boring locations will be cleared by Kinder Morgan Canada, Inc. personnel. Soil samples will be collected continuously to

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the total depth of each boring. Monitoring of drilling and soil sampling activities will be conducted by a qualified URS geologist or engineer. The field personnel will maintain a detailed log of the subsurface materials encountered and record photo-ionization detector (PID) screening data. Particular attention will be given to noting visible evidence of contamination, odors, or other relevant factors indicative of the presence of contaminants. Soils will be classified in general accordance with the Unified Soil Classification System (USCS) (ASTM D 2487-93). Soil samples will be collected by URS personnel and selected for laboratory analysis based on the field screening results. Soil samples will be collected at 3, 5, 7, 10, 12, and 15 feet bgs. Based on field observations, the shallowest and deepest samples indicating contamination will be analyzed. A sample will also be collected from directly below the deepest apparent contamination. If field observations do not identify contamination, samples will be collected at 3, 5, 7, 10, 12, and 15 feet bgs, but only the samples from 5, 10 and 15 feet bgs will be analyzed. It is not anticipated that groundwater will be encountered as the drain tile was removed in 1992 (nearest TP-9) and groundwater was not encountered at TM-B11. If groundwater is encountered, groundwater samples will be collected. All samples will be submitted to Analytical Resources, Inc. (ARI), an Ecology-accredited laboratory, located in Tukwila, Washington for analysis.

The samples will be analyzed for total petroleum hydrocarbons (TPH – gasoline-, diesel-, and oil-range) by Ecology methods NWTPH-Gx and NWTPH-Dx, and benzene, toluene, ethyl benzene, and xylenes (BTEX) by EPA Method 8021B. If the results of the NWTPH-Dx testing (sum of diesel- and oil-range) are greater than 460 mg/kg, samples will be analyzed for polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270D modified for selected ion monitoring. If groundwater samples are collected, they will be analyzed for TPH by NWTPH-Gx and NWTPH-Dx, BTEX, and PAHs.

Contingency step-out borings will be performed if field-screening indicates the need for additional lateral characterization of hydrocarbon impacts. Soil sampling procedures and methods as well as quality assurance measures are presented in Appendix G of the RI/FS Work Plan (URS 2010). Upon completion of the field sampling, the boreholes will be filled with bentonite and patched with topsoil to match the existing surface conditions at each location.

Data Evaluation

Sample analysis will be expedited to allow time to incorporate the findings into the planning for remedial activities that will begin at the facility in September 2014. The laboratory will provide full data packages to URS which will be validated by a URS chemist. Final validated analytical data will be entered into the project ACCESS database with coordinates acquired in the field via GPS or measured from a known point near the borings.

The data will be compared to the cleanup levels in the Cleanup Action Plan (Table 2, Consent Decree, Exhibit A) for areas that do not have a soil surface cap. If the results are below applicable cleanup levels, no cleanup will be necessary at these locations. If cleanup levels are exceeded, then this area will be incorporated into the cleanup action for Laurel Station. The results of the investigation and recommendations for further action, if warranted, will be presented to Ecology in a letter report that will include summary data tables, figures showing the boring locations, and a copy of the updated database.

We trust the information included in this letter is complete to address the investigation of this area. Please contact us if you have any questions.

Sincerely,
URS CORPORATION

Karen L. Mixon
Project Manager

David Raubvogel
Project Geologist

Copy: Mike Droppo – Kinder Morgan

Attachments:

Drawings

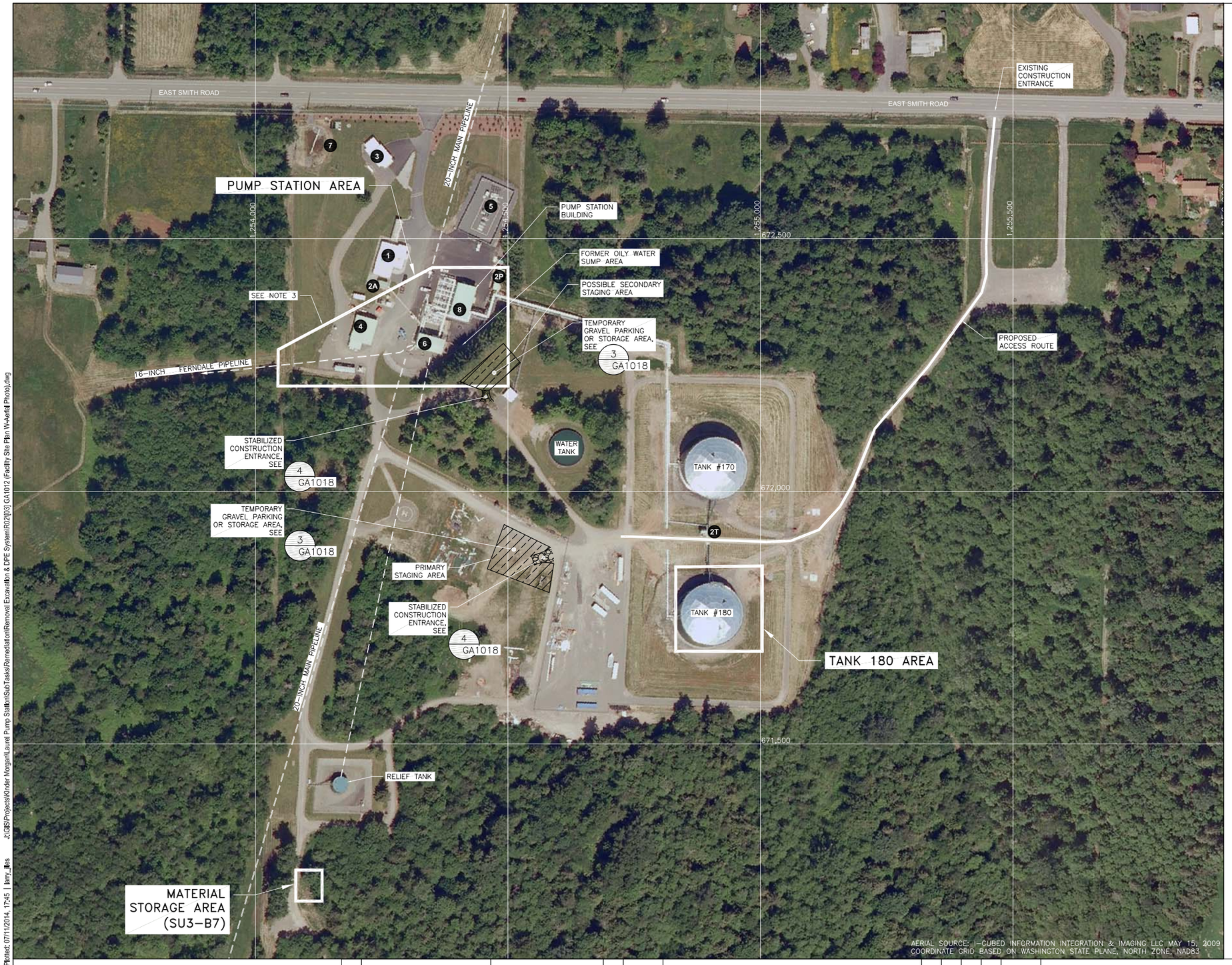
GA1012 Facility Site Plan with Aerial Photo
GA1013 Existing Conditions Site Plan – Pump Station Area
GA1015 Existing Conditions and Investigation Plan and Section - Pump Station Area

References:

URS Corporation, 2010. Final Supplemental Remedial Investigation/Feasibility Study Work Plan, Laurel Station, 1009 East Smith Road, Bellingham, Washington. May 28

URS Corporation, 2014. Final Supplemental Remedial Investigation/Feasibility Study Report, Laurel Station, 1009 East Smith Road, Bellingham, Washington. June 2.

Washington State Department of Ecology, 2014. Consent Decree 14-2-01294-9, Exhibit A Cleanup Action Plan, effective June 5, 2014.



AERIAL SOURCE: I-CUBED INFORMATION INTEGRATION & IMAGING LLC MAY 15, 2009
COORDINATE GRID BASED ON WASHINGTON STATE PLANE, NORTH ZONE, NAD83

NOTES:

1. AERIAL SOURCE: I-CUBED NFORMATION INTEGRATION & IMAGING LLC MAY 15, 2009.
2. COORDINATE GRID BASED ON WASHINGTON STATE PLANE, NORTH ZONE, NAD83.
3. SEE DOCUMENT NUMBERS GA1013, GA1017, AND CE1019 FOR A CLOSE-UP VIEW OF THE PUMP STATION AREA.

LEGEND

1. LAUREL STATION OFFICE
2. MOTOR CONTROL CENTER BUILDINGS
3. MAINTENANCE SHOP
4. COLD STORAGE BUILDING
5. PUGET SOUND ENERGY SUBSTATION
6. PIPING MANIFOLD
7. RETENTION POND
8. PUMP STATION

PIPELINE

SITE BOUNDARY INDICATING AREAS DESIGNATED FOR REMEDIATION

STAGING AREA

STABILIZED CONSTRUCTION ENTRANCE

N

0 100 200

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TRANSMOUNTAIN
TRANSMOUNTAIN PIPELINE (PUGET SOUND)

DRAWN L. JILES	FACILITY SITE PLAN WITH AERIAL PHOTO
CHECKED P. McCULLOUGH	
APPROVED C. BROWN	LAUREL STATION
SHEET SIZE D	
SCALE AS NOTED	
DATE 07/11/14	

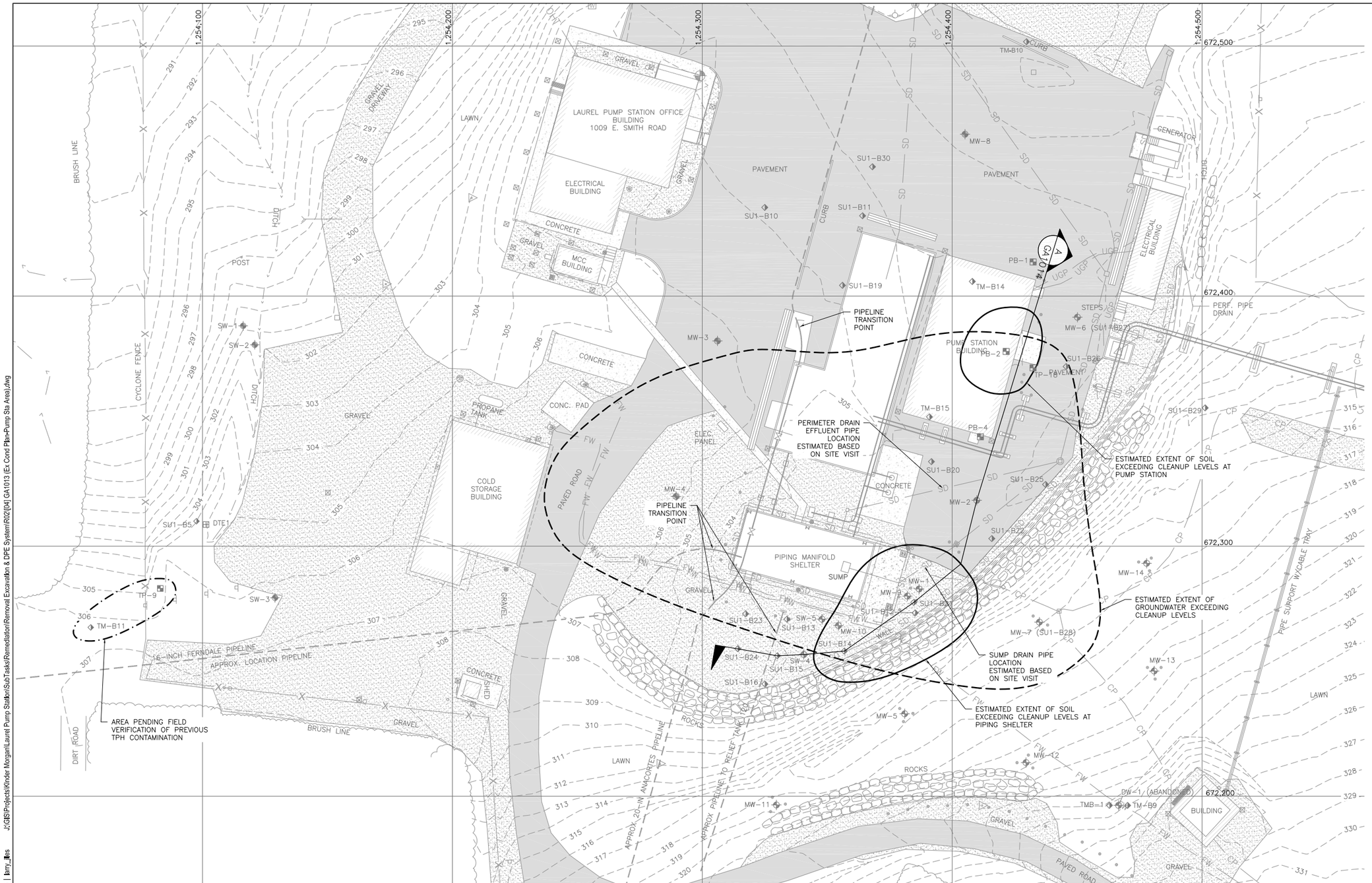
DRAWING NUMBER					
AFE	WBS	FACILITY ID.	DOCUMENT No.	SHT.No.	REV.
05-51041	C1A01	UL00	GA1012	3	A

NO.	REFERENCE DRAWINGS	DRAWING NO.
4	WELL ABANDONMENT, PROTECTION, AND INSTALLATION PLAN	CE1019
3	EROSION SEDIMENT CONTROL DETAILS AND NOTES	GA1018
2	STAGING, WORK LIMITS, AND TEMPORARY EROSION CONTROL PLAN	GA1017
1	EXISTING CONDITIONS SITE PLAN-PUMP STATION AREA	GA1013

NO.	DATE	REVISION	DR.	CHK.	APPR.

NO.	DATE	REVISION	DR.	CHK.	APPR.

Model: 07/11/2014, 16:12 | Plotted: 07/11/2014, 17:45 | barry_jiles J:\GIS\Projects\Kinder Morgan\Laurel Pump Station\SubTasks\Remediation\Removal Excavation & DPE System\R02\[03] GA1012 (Facility Site Plan W-Aerial Photo).dwg



EXISTING FEATURES

- FOUND IRON PIPE OR REBAR/CAP
- FOUND OR SET SPIKE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- STORM MANHOLE
- STORM CATCH BASIN
- YARD DRAIN
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- WATER VAULT
- UTILITY POLE
- GUY WIRE
- CP POWER BREAKER BOX
- GROUNDING ROD COVER
- YARD LIGHT
- MONITORING WELL
- BOLLARDS
- SIGN OR PIPELINE MARKER
- MAILBOX OR ELEC PANEL
- QUARRY SPALLS
- PAVEMENT
- CONCRETE
- GRAVEL
- FILL
- APPROX. LOCATION PIPELINE
- AERIAL TELEPHONE LINE
- DITCH
- FENCE LINE
- GAS LINE
- STORM CULVERT
- STORM LINE
- UNDERGROUND POWER LINE (APPROX)
- FIRE WATER LINE
- CATHODIC PROTECTION (APPROX)
- AREA PENDING FIELD VERIFICATION OF PREVIOUS TPH CONTAMINATION
- ESTIMATED EXTENT OF SOIL EXCEEDING CLEANUP LEVELS
- ESTIMATED EXTENT OF GROUNDWATER EXCEEDING CLEANUP LEVELS

N

0 20 40

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NO.	REFERENCE DRAWINGS	DRAWING NO.	NO.	DATE	REVISION	DR.	CHK.	APPR.
1	EXISTING CONDITIONS SECTION–PUMP STATION AREA	GA1014						

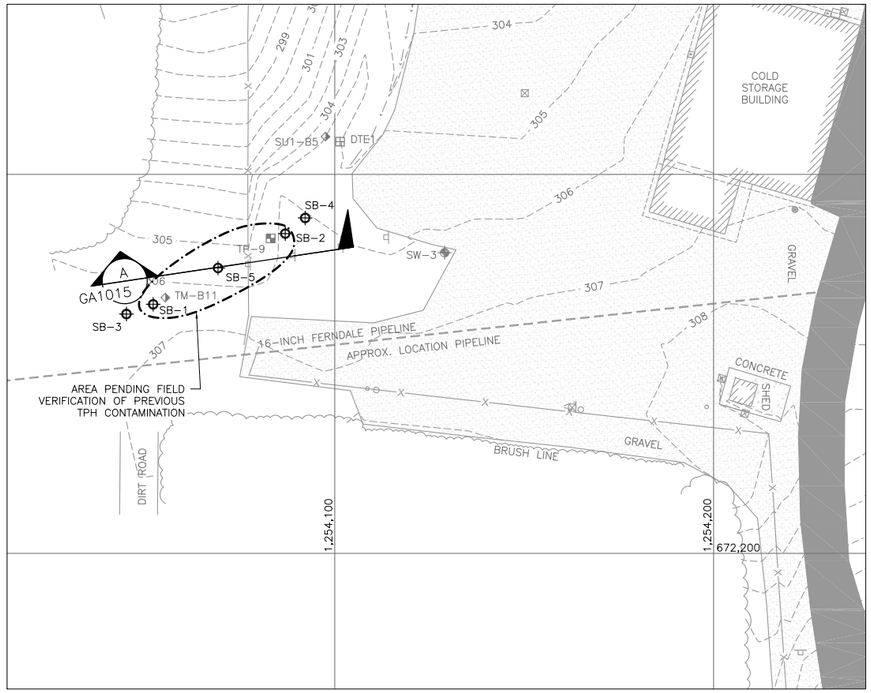
NO.	REVISION	DR.	CHK.	APPR.

TRANSMOUNTAIN
TRANSMOUNTAIN PIPELINE (PUGET SOUND)

DRAWN L. JILES	EXISTING CONDITIONS SITE PLAN–PUMP STATION AREA	SHEET SIZE D
CHECKED P. McCULLOUGH		SCALE AS NOTED
APPROVED C. BROWN	LAUREL STATION	DATE 07/11/14

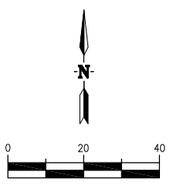
DRAWING NUMBER					
AFE	WBS	FACILITY ID.	DOCUMENT No.	SHT.No.	REV.
05–51041	C1A01	UL00	GA1013	4	A

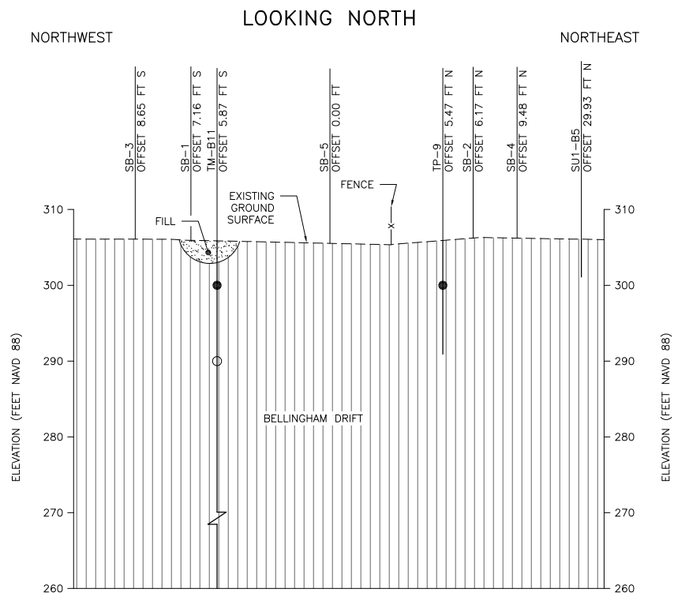
Mod: 07/11/2014, 16:17 | Plotted: 07/11/2014, 17:45 | larry_jiles J:\GIS\Projects\Kinder Morgan\Laurel Pump Station\SubTasks\RemediationRemoval Excavation & DPE System\R02\[04] GA1013 (Ex Cond Plan-Pump Sta Area).dwg



EXISTING CONDITIONS AND INVESTIGATION SITE PLAN

SCALE: 1-IN=20-FT

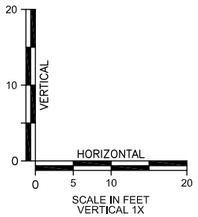




EXISTING CONDITIONS AND INVESTIGATION

A / GA1015 SECTION

SCALE: AS SHOWN



NOTES:

1. THE CROSS SECTION SHOWN IS BASED ON SURFACE TOPOGRAPHY DATA FROM THE JANUARY 2014 LAND SURVEY AND BORING LOGS FROM PREVIOUS INVESTIGATIONS. THE OFFSET DISTANCE FROM EACH BORING TO THE SECTION LINE IS SHOWN IN FEET. S INDICATES THE BORING IS SOUTH OF THE SECTION LINE; N INDICATES THE BORING IS NORTH OF THE SECTION LINE.
2. LIMITS SHOWN FOR SOIL EXCEEDING CUL ARE ESTIMATED.
3. PROPOSED SOIL BORINGS WILL BE CONTINUOUSLY SAMPLED AND FIELD SCREENED USING A PID METER.
4. IF SB-1 OR SB-2 SHOW SIGNS OF CONTAMINATION THEN ADDITIONAL BORINGS WILL BE COMPLETED, SB-3 AND SB-4.
5. SOIL BORINGS SHALL BE COMPLETED TO 15 FT BGS UNLESS SOIL CONTAMINATION IS PRESENT. AT THAT POINT FIELD ENGINEER WILL DETERMINE THE FINAL DEPTH OF SOIL BORING.

LEGEND

- FILL
- BELLINGHAM DRIFT
- AREA PENDING FIELD VERIFICATION OF PREVIOUS TPH CONTAMINATION

FOR CONCENTRATION LEVEL INFORMATION, SEE REMEDIAL INVESTIGATION/ FEASIBILITY STUDY REPORT (URS 2014)

- SOIL BELOW CLEANUP LEVELS
- SOIL EXCEEDS CLEANUP LEVELS
- SB-1 PROPOSED SOIL BORING LOCATIONS TO DETERMINE EXTENT OF SOIL EXCEEDING CLEANUP LEVELS

SOIL BORING LOCATIONS

POINT NO.	NORTHING	EASTING
SB-1	672265.7	1254052.1
SB-2	672284.4	1254087.0
SB-3	672263.2	1254045.0
SB-4	672288.5	1254092.2
SB-5	672275.3	1254069.2

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TRANSMOUNTAIN
TRANSMOUNTAIN PIPELINE (PUGET SOUND)

DRAWN: L. JILES	EXISTING CONDITIONS AND INVESTIGATION PLAN AND SECTION -PUMP STATION AREA	SHEET SIZE: D
CHECKED: P. McCULLOUGH		SCALE: AS NOTED
APPROVED: C. BROWN	LAUREL STATION	DATE: 07/11/14

DRAWING NUMBER					
AFE	WBS	FACILITY ID.	DOCUMENT No.	SHT.No.	REV.
05-51041	C1A01	UL00	GA1015	6	A