

State of Oregon  
Department of Environmental Quality

Memorandum

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**Date:** October 10, 2023

**To:** FILE

**Through:** Peter Donahower, Program Manager  
Jeff Schatz, Lead Worker

**From:** Todd Vanek, Project Manager  
Northwest Region Cleanup Program

**Subject:** Gary's Cannon Beach Service Center, LUST No. 04-07-1597 Staff Memorandum  
in support of a Partial/Conditional No Further Action determination

This document presents the basis for the Oregon Department of Environmental Quality's (DEQ's) recommended Conditional No Further Action (CNFA) determination for the Gary's Cannon Beach Service Center in Cannon Beach, Oregon. As discussed in this report and conditional upon adherence to a contaminated media management plan and property use restrictions in an Easement and Equitable Servitudes (E&ES) dated July 12, 2023, contaminant concentrations in soil and groundwater are below acceptable risk levels on the Gary's Cannon Beach Service Center property (Gary's Property). The contaminated groundwater plume has migrated offsite and additional remedial efforts are necessary for the down gradient Webb's Scenic Surf Motel property (Webb's Motel Property) to the west and Christian Conference Center property (conference center property) directly to the north.

The proposed NFA determination meets the requirements of Oregon Administrative Rules Chapter 340, Division 122, Sections 0205 to 360 and ORS 465.200 through 465.455.

The proposal is based on information documented in the administrative record for this site. A copy of the administrative record index is presented at the end of this report.

## **1. BACKGROUND**

### **Site location.**

The site's location (Figure 1) can be described as follows:

- Address: 280 North Hemlock Street, Cannon Beach, Oregon
- Latitude 45.8996° North, longitude -123.9611° West
- Tax lots 1602 (Gary's Property); 1600, 1601, and 2600 (Webb's Motel Property); 1500 and 2700 (conference center property); Township 5 North, Range 10 West, Section 19, SE¼, SE¼.

### **Site setting.**

The 0.23-acre site property is developed with an approximately 3,077 square foot building and is listed as limited commercial by Clatsop County. The service station building is still intact and

asphalt-paved parking areas are located on the north and east portions of the property with a gravel storage area on the west (Figure 2).

The site property is located to the southwest of the intersection of North Hemlock Street and Third Street in Cannon Beach, Oregon. According to Clatsop County, the surrounding properties are zoned limited commercial and residential motel. Properties adjacent to the site are occupied as follows:

North: Conference Center (tax lot 1600, 1601, 2600), followed by a city park  
East: North Hemlock Street, followed by commercial dwelling and a parking lot (tax lots 202, 1300, and 1400)  
South: Bruce's Candy Kitchen (tax lot 1800), followed by commercial properties.  
West: Webb's Scenic Surf Motel (tax lots 1600, 1601, and 2600), followed by a 10-foot high seawall and a public beach. There is a 10-foot easement owned by Gary's Cannon Beach Service Center along the east side of tax lot 1600 that separates the site from the Webb's Motel Property.

#### **Physical setting.**

According to the United States Geological Survey (USGS) 7.5-minute topographic map for the Cannon Beach, Oregon quadrangle, the site is located approximately 13 feet above mean sea level. Topography in the area slopes west towards Ecola Creek and the Pacific Ocean, which are located approximately 300 feet and 900 feet away from the site, respectively.

The soil on the site property is reported as sands, gravels, and silts as alluvial deposits from Ecola Creek. Regional deposits also include talus, slope wash, and thin peat beds. During site investigations, the site stratigraphy was observed to be predominantly poorly graded sand (beach sand) to 5 feet below ground surface (bgs), underlain by dense sand to 23 feet bgs with interbedded silt and peat from 10 to 15 feet.

The shallow groundwater in the vicinity of the site is located within an unconfined water bearing zone with a depth that fluctuates between 3 and 8 feet bgs on the site. Coles and Associates performed a tidal study in 2012 that did not indicate a tidal influence on groundwater at the site. Based on the prior investigations at the site performed since 2007, the groundwater flow direction is to the west towards Ecola Creek with a hydraulic gradient of approximately 0.005 feet per foot (ft/ft). Groundwater flow direction and gradient can be influenced by upland flows and infiltration into the poorly graded sands in unpaved areas during extreme weather events.

#### **Site history.**

The site operated as a towing and repair service station including retail fuel sales from the mid-1950s through 2007 when the gasoline underground storage tanks (USTs) were decommissioned. In October 2007, a groundwater sheen was observed in the excavation during the decommissioning of four USTs at the site. Soil and groundwater sampling was performed subsequent to the removal of the USTs and total petroleum hydrocarbons as gasoline (TPH-Gx) were reported at concentrations as high as 44,200 milligrams per kilogram (mg/kg) and 229,000 micrograms per liter (µg/L), respectively. Approximately 252 tons of petroleum-contaminated

soil were excavated from the former UST cavity in the northwest corner of Gary's Property. Removal of the full extent of observed impacted soil was not feasible without compromising the integrity of the retaining walls along the western and norther property lines.

## **2. BENEFICIAL LAND AND WATER USE DETERMINATIONS**

### **Land use.**

Based on the information provided as part of the historical site investigations since 2007, the Locality of Facility (LOF) includes the northwest portion of the site, the southern portion of the parking lot on the conference center property, and the northern portion of the Webb's Motel Property extending west to well MW-9 and the seawall. (Figure 2). Petroleum hydrocarbons were reported in groundwater samples collected directly west of the seawall downgradient of well MW-9 in 2009, but additional sampling results in the same location in 2014 and 2022 were all below the laboratory method reporting limits (MRLs) confirming that post-remedial action the contaminant plume does not extend beyond the seawall. Additional detail regarding historical investigations and remedial actions is included in Section 3 below.

According to Clatsop County, the site property is listed for limited commercial (C1). Based on the current zoning designation and surrounding property uses, the property is reasonably likely to remain as commercial use in the future. The surrounding properties are zoned for limited commercial and residential motel (RM) uses and consist of the Webbs Motel Property and conference center property west and north of the site, with retail shops to the south. While the site and Webb's Motel Property might be redeveloped in the near future, they are reasonably likely to remain limited commercial or residential motel based on the current land use and zoning in the vicinity of the site.

### **Groundwater use.**

A Beneficial Water Use Determination (BWUD) was performed by Coles and Associates in 2013 and determined that the shallow groundwater in the area is not used for drinking water purposes and is not a reasonably likely future water supply. The Oregon Water Resources Department's (OWRD) Well Log Query database was reviewed and only two water wells were identified within the same quarter-quarter section as the site. One well (CLAT 161) was identified 1,000 feet north of the site across Ecola Creek and one well (CLAT384) was identified 500 south of the site. CLAT 161 is listed as an irrigation well, screened from 11 to 59 feet bgs, and is hydraulically cross-gradient from the site. CLAT 384 is listed as domestic use, screened from 47 to 67 feet bgs and located hydraulically cross-gradient to the site. No other water wells were identified in the OWRD database within the search area. According to Clatsop County records, the site and surrounding properties are currently hooked up to the municipal water supply. Based on the lack of water wells in close proximity to the site and the availability of municipal drinking water, groundwater within the search area of the site does not have a current or reasonably likely beneficial use as drinking water.

### **Surface water use.**

The closest surface water body is Ecola Creek followed by the Pacific Ocean, 300 feet and 900 feet west of the former UST location on the site, respectively. Ecola Creek has current and likely future beneficial uses including recreation, fishing, and habitat for fish and other aquatic organisms.

### **3. INVESTIGATION AND CLEANUP WORK**

On October 15 and 16, 2007, four USTs formerly located on Gary's Property were decommissioned and transported offsite for disposal. A total of 10 compliance soil samples (#1 through #10) were collected from the limits of the UST cavity. Two soil samples were collected from beneath each of the four USTs, one soil sample from beneath the product piping, and one soil sample from beneath the dispenser island. Groundwater was encountered at 9-10 feet bgs during decommissioning activities. Laboratory analysis identified gasoline range organics (GRO) and select volatile organic compounds (VOCs) exceeded DEQ Risk-Based Concentrations (RBCs) in soil and/or groundwater samples collected near the USTs. An additional 10 sidewall soil samples (C1 through C10) and one reconnaissance groundwater sample (W1A) were collected from within the excavation during over-excavation activities subsequent to removal of the USTs. Additional excavation was limited due to the instability of sandy soils and the proximity to the onsite building and retaining walls at the site. GRO was detected in the soil and groundwater samples at concentrations of up to 13,600 mg/kg (north sidewall) and 205,000 µg/l, respectively.

In September 2008 and February 2009, eight soil borings were advanced to depths of 5 to 15 feet bgs (T-1 through T-8) and completed as temporary monitoring wells (TW1 through TW8). Temporary wells TW1 and TW2 were located on Gary's Property, TW4 on the Webb's Motel Property, TW3, TW5, and TW6 on the conference center property, and TW7 and TW8 on the beach to the west of the seawall (Beach Area). The maximum concentration of GRO detected in groundwater collected on the conference center property was 128,000 µg/l (TW3). GRO was detected in groundwater in the beach area at 14,600 µg/l (TW7). Additional sampling was recommended to define the extent of contamination in the beach area west of the seawall.

In May 2009, five soil boring were advanced ("a" through "e") in the beach area to depths of 4.5 feet bgs and borings "b" and "e" were completed as temporary monitoring wells (TW9 and TW10, respectively). GRO was not reported in the groundwater sample collected from TW9 (south of TW7) and was reported in TW10 (downgradient of TW7) at a concentration of 281 µg/L.

In July 2009, a Level I ecological risk assessment was completed for the site and properties within the LOF and submitted to DEQ for review. Results of the assessment stated that while the groundwater plume extended beyond the seawall and into the beach area (vicinity of TW7), the plume does not extend to Ecola Creek. DEQ approved the assessment in a letter dated April 22, 2010, and stated that the plume did not pose an unacceptable ecological risk and that no additional investigation is recommended.

On May 26 and 27, 2010, eight groundwater monitoring wells were installed (MW-1 through MW-8) in the vicinity of the former USTs. During groundwater monitoring events conducted in June 2010, November 2010, and March 2011, GRO was detected in all wells with the exception of well MW-8, with the maximum detected concentration (MDC) in well MW-7 at a concentration of 84,200 µg/l.

On November 7, 2011, four soil borings were advanced to 20 feet bgs and completed as one monitoring well (MW-9) and three soil gas wells (PP-1 through PP-3). A total of nine soil samples and three groundwater samples (PP-1 through PP-3) were collected for laboratory analysis. Wells PP-1, PP-2, and MW-9 were advanced on the Webb's Motel Property, and PP-3 was advanced on the conference center property. GRO was detected in the soil and groundwater samples at concentrations of up to 15,100 mg/kg and 80,400 µg/l, respectively.

On February 6, 2012, a study was conducted to evaluate potential tidal influence on groundwater levels at the Site. Groundwater level measurements were collected from monitoring well MW-9 (located adjacent to the seawall) over a ten-hour period to span high and low tides. Measurement of the groundwater levels in MW-9 during the high-low tide cycle did not indicate a tidal influence on groundwater elevations.

In 2012 and 2013, five quarterly groundwater monitoring events and four quarterly soil gas monitoring events were performed. GRO was detected in each of the wells except for well MW-8 (downgradient well on the conference center property), with the MDC reported in well MW-7. Reported concentrations exceeded the construction and excavation worker RBCs for the direct contact in excavation exposure pathway in each of the wells (except well MW-8) during one or more sampling events.

The quarterly soil gas monitoring events were conducted in May, August, and December 2012 and February 2013 in all three soil gas wells (PP-1 through PP-3). GRO, benzene, toluene, and xylenes were detected during select events but none of the reported concentrations exceeded any risk-based concentrations (RBCs).

In February and March 2014, a soil vapor survey was performed that included the installation of 43 soil gas detection modules across the site and in areas with limited accessibility. Consistent with groundwater analytical data, the results of the survey indicate that the most elevated concentrations of GRO were located near well MW-7, on the conference center property.

On February 26, 2014, one soil boring (SB-1) was advanced to 15 feet bgs near the location of the former USTs system to assess potential residual concentrations in the source area. GRO was reported in soil at a concentration of 488 mg/kg at 9.5 to 10 feet bgs and in groundwater at a concentration of 419,000 µg/l.

On March 26, 2014, six shallow soil borings (SB-2 through SB-7) were advanced in the beach area adjacent to the Webb's Motel Property and the conference center property. Boring were completed to 2.5 to 3.5 feet bgs using a hand auger and one soil sample and one groundwater

sample from each boring were submitted for laboratory analysis. None of the submitted samples had reported concentration above the laboratory MRLs.

On July 10, 2014, two soil borings (SB-8 and SB-9) on Gary's Property and two soil borings (SB-10 and SB-11) were advanced in the right-of-way on the west side of North Hemlock Street. One soil sample and one groundwater sample were collected from each boring and submitted for laboratory analysis. The MDC for GRO in soil was 6.56 mg/kg in soil boring SB10 and the MDC for GRO in groundwater was 3,400 µg/l in soil boing SB11.

In February and March 2014, \*company\* performed pilot test activities to evaluate soil vapor extraction (SVE) and air sparging (AS) as remedial option for the site. Test activities included the installation of three SVE wells (SVE-1 through SVE-3) and one air sparge well (AS-1) in the vicinity of the former USTs. The subsequent SVE/AS pilot testing indicated a radius of influence (ROI) for AS of approximately 15 feet and ROI for SVE of between 13 and 25 feet, indicating that AS/SVE was a feasible remediation technology for the site.

In 2016, a *Corrective Action Plan* (CAP) dated November 14, 2016, was prepared to evaluate and select a remedial action for the site. The remedial alternatives evaluated included monitored natural attenuation (MNA) combined with institutional controls, enhanced aerobic bioremediation and MNA, in-situ chemical oxidation (ISCO), and AS/VE. The preferred alternative selected in the CAP included ISCO in combination with institutional controls requiring a vapor barrier for future construction as the selected remedy. The ISCO scope selected included direct injection of oxidants into the subsurface coupled with some limited soil mixing in the vicinity of the former USTs. The conceptual site model (CSM) for the site was updated and the COPCs for the sites exposure routes and pathways were defined as GRO for soil and GRO, BTEX, naphthalene, and 1,2,4-trimethyl benzene (1,2,4-TMB) for groundwater. DEQ approved the CAP and recommended remedy in correspondence dated January 13, 2017.

In January and February of 2017, soil and groundwater on the three affected properties were treated with ISCO using a combination of soil mixing and direct injection into 66 soil borings. Soil mixing was performed in an approximate 225 square-foot area in the northwest corner of Gary's Property. A total of 4,518 pounds of sodium hydroxide and 612 gallons of 25% sodium hydroxide solution was directly mixed into impacted soil below 5 feet bgs and subsequently capped to grade. The 66 direct injection points were advanced on Gary's Property, Webbs Motel Property, and the conference center property to 15 feet bgs and temporary well points were installed to facilitate injection of the oxidants from 5 to 15 feet bgs. A total of 22,002 pounds of sodium persulfate and 4,084 gallons of sodium hydroxide were injected. It was determined through further analysis of site groundwater data that the anticipated timeframe for attaining applicable RBCs through post-injection MNA was not optimal for the project schedule.

In April 2019, confirmation soil sampling was performed in the northwest corner of Gary's Property and the parking area of the conference center property to assess the effectiveness of ISCO in source area soils. Ten soil boings were advanced in vadose zone soils and the results of the investigation indicate that residual concentrations of GRO in soil are below the respective RBCs for soil.

In September 2020, an amendment to the corrective action plan was prepared to modify select wells in the monitoring well network (MW-2, MW-4, MW-5, and MW-7) for gravity feed of oxidants in the former source area, the replacement of former well MW-3 with a 4-inch remediation well (RMW-3), and expanding the well network with three more monitoring wells (MW-10 through MW-12). Subsequent ISCO injection events were performed in December 2020, March 2021, June 2021, and October 2021. Approximately 1,740 gallons of catalyst-activated sodium percarbonate was injected during these events via gravity draining into the remediation wells and direct-push injections south of the former UST area.

Four consecutive quarters of confirmation groundwater monitoring was completed subsequent to the injections from December 2021 through September 2022. The MDC for GRO in groundwater on the Gary's Property was reported at 13,400 µg/l in well MW-12 during the September 2022 event, and the MDC for the Webb's Motel Property was reported at 10,700 µg/l in well MW-9 during the September 2022 event. The MDC for GRO on the conference center property was reported at 73,500 µg/l in well MW-11 during the confirmation sampling period, significantly above the site CUL of 14,000 µg/l. A request for a partial NFA was submitted in December 2022 for the Gary's Property and the Webb's Motel Property with additional remedial action proposed on the conference center property.

Locations of site wells, historical sample locations, and injection points are presented in Figures 2 through 8. Analytical results for soil and groundwater and presented in Pacific Crest's Table 1 and Table 3, and soil vapor analytical results are presented in Cole and Associates Table 6.

#### 4. RISK EVALUATION

##### Conceptual site model.

To evaluate human exposure to residual chemical contamination requires an assessment of the type and extent of that exposure. This is based on current and reasonably likely future site use. DEQ publishes RBCs for contaminants commonly encountered, for different types of exposure scenarios. These RBCs are conservative estimates of protective levels of contaminants in soil, groundwater and air. In-text Table A (below) shows potential exposure pathways and receptors for this site. Based on this, applicable RBCs are identified and used for risk screening.

**Table A. Identification of applicable RBCs, based on pertinent pathways and receptors**

| Pathway                                   | Receptor            | Applicable RBC? | Basis for selection/exclusion |
|-------------------------------------------|---------------------|-----------------|-------------------------------|
| <b>SOIL</b>                               |                     |                 |                               |
| Ingestion, dermal contact, and inhalation | Residential         | Yes             | See Note 1.                   |
|                                           | Urban residential   | Yes             |                               |
|                                           | Occupational        | Yes             |                               |
|                                           | Construction worker | Yes             |                               |
|                                           | Excavation worker   | Yes             |                               |
|                                           | Residential         | Yes             | See Note 1.                   |

| Pathway                                 | Receptor                           | Applicable RBC? | Basis for selection/exclusion |
|-----------------------------------------|------------------------------------|-----------------|-------------------------------|
| Volatilization to outdoor air           | Urban residential                  | Yes             |                               |
|                                         | Occupational                       | Yes             |                               |
| Vapor intrusion into buildings          | Residential                        | Yes             | See Note 1.                   |
|                                         | Urban residential                  | Yes             |                               |
|                                         | Occupational                       | Yes             |                               |
| Leaching to groundwater                 | Residential                        | No              | See Note 2.                   |
|                                         | Urban residential                  | No              |                               |
|                                         | Occupational                       | No              |                               |
| GROUNDWATER                             |                                    |                 |                               |
| Ingestion and inhalation from tap water | Residential                        | No              | See Note 3.                   |
|                                         | Urban residential                  | No              |                               |
|                                         | Occupational                       | No              |                               |
| Volatilization to outdoor air           | Residential                        | Yes             | See Note 1.                   |
|                                         | Urban residential                  | Yes             |                               |
|                                         | Occupational                       | Yes             |                               |
| Vapor intrusion into buildings          | Residential                        | Yes             | See Note 1.                   |
|                                         | Urban residential                  | Yes             |                               |
|                                         | Occupational                       | Yes             |                               |
| Groundwater in excavation               | Construction and excavation worker | Yes             | See Note 4.                   |

Notes:

1. Although the site is currently a non-residential facility, land use zoning on the Webb's Property and the conference center property allows for future residential use.
2. Groundwater is not used for drinking and water is supplied by the municipal water system under current and reasonably likely future scenarios. This pathway is therefore not considered, in accordance with Section B.3.2.4 of DEQ's RBDM guidance.
3. City water is provided. Local groundwater is not currently used for drinking water and is not likely to be used for this purpose in the future.
4. Construction and excavation work are generally limited to a depth of approximately 15 feet. Groundwater has been encountered at the site as shallow as 2-3 feet bgs historically; therefore, the groundwater in excavation pathway is considered.

**Contaminant concentrations.**

**Maximum Contaminant Concentrations – Soil**

To evaluate human health risks posed by contaminants in soil under various exposure scenarios, the highest detected concentrations of GRO, VOCs, and lead from the historical site investigations prior to implementing the ISCO remedy were conservatively utilized for comparison to RBCs.

**Soil Ingestion, Dermal Contact and Inhalation Pathway**

| Constituent of Interest | MDC in Soil mg/kg | Residential (RBC <sub>ss</sub> ) mg/kg | Occupational Worker (RBC <sub>ss</sub> ) mg/kg | Construction Worker (RBC <sub>ss</sub> ) mg/kg | COPC? (Yes/No) |
|-------------------------|-------------------|----------------------------------------|------------------------------------------------|------------------------------------------------|----------------|
| GRO                     | 30,200            | 1,200                                  | 20,000                                         | 9,700                                          | Y              |

|               |       |       |        |        |   |
|---------------|-------|-------|--------|--------|---|
| benzene       | 3.4   | 8.2   | 37     | 380    | N |
| toluene       | 375   | 5,800 | 88,000 | 28,000 | N |
| ethylbenzene  | 520   | 34    | 150    | 1,700  | Y |
| total xylenes | 3,580 | 1,400 | 25,000 | 20,000 | Y |
| naphthalene   | 23.4  | 5.3   | 23     | 580    | Y |
| lead          | 21.5  | 400   | 800    | 800    | N |

Yellow highlighted RBCs were exceeded in samples collected from one or more locations.

COPC = constituent of potential concern

Historical concentrations of GRO, ethylbenzene, total xylenes and naphthalene exceeded the residential RBCs for the soil ingestion, dermal contact and inhalation exposure pathway in soil collected from borings located on the Gary's Property in the location of the former USTs. The MDCs of GRO, benzene, and naphthalene were detected in boring #7 at 9 feet bgs located beneath the eastern 2,000-gal UST during decommissioning activities in 2007. COPCs were not reported in shallow soils <3 feet bgs during historical investigations, therefore, this pathway is considered incomplete for residential, urban residential, and occupational receptors. While GRO impacted soil was identified in the former source area above the construction worker RBC of 9,700 mg/kg during historical investigations, confirmation soil sampling performed in 2019 after initial ISCO injections were all below laboratory MRLs (Figure 4). It should be noted that benzene concentrations were low or non-detect during initial sampling activities when the release was discovered, indicating the contamination was already weathered and likely from an old release from the USTs.

#### Soil Vapor Intrusion into Building

| Constituent of Interest | MDC in Soil mg/kg | Residential (RBC <sub>si</sub> ) mg/kg | Occupational Worker (RBC <sub>si</sub> ) mg/kg | COPC? (Yes/No) |
|-------------------------|-------------------|----------------------------------------|------------------------------------------------|----------------|
| GRO                     | 30,200            | 94                                     | >Max                                           | Y              |
| benzene                 | 3.4               | 0.16                                   | 2.1                                            | Y              |
| toluene                 | 375               | >Csat                                  | >Csat                                          | N              |
| ethylbenzene            | 520               | 1.3                                    | 17                                             | Y              |
| total xylenes           | 3,580             | 160                                    | >Csat                                          | Y              |
| naphthalene             | 23.4              | 6.4                                    | 83                                             | Y              |

Yellow-shaded RBCs were exceeded in samples collected from one or more locations.

>Csat = Soil concentrations in excess of Csat indicate free product may be present.

>Max = The constituent RBC for this pathway is greater than 1,000,000 mg/kg or 1,000,000 mg/L. Therefore, these substances are not expected to pose risks in the scenario shown.

Historical GRO and select VOC concentrations exceeded the residential/occupational RBCs for soil vapor intrusion into building pathway in soil samples collected from the vicinity of the USTs in the northwest corner of Gary's Property and in proximity to the property line on the conference center property near well MW-7. Based on the elevated concentrations detected in the soil during historical sampling events, potential risks to occupants of nearby commercial buildings within 100 feet of site contamination could not be ruled out. Note that VOCs have not been sampled in soil at the site since 2014 and ethylbenzene, xylenes, naphthalene, and 1,2,4-TMB exceeded the residential RBC for vapor intrusion in the former UST area. VOCs in soil were screened out of the sampling plan due to the results of the soil vapor sampling in 2012 and

2013 and the proposed inclusion of vapor barriers on any future building construction in the 2016 approved CAP. Soil gas sampling was performed in 2012 and 2013. Details of the soil vapor investigations are provided below.

### Maximum Contaminant Concentrations – Groundwater

To evaluate human health risks from contamination in groundwater under various exposure scenarios, the highest detected concentrations of GRO and VOCs from monitoring wells during post-remedy confirmation sampling on the Gary's Property were utilized for comparison to RBCs.

#### Groundwater Vapor Intrusion into Building

| Constituent of Interest | MDC in Groundwater<br>µg/l | Residential (RBC <sub>wi</sub> )<br>µg/l | Occupational Worker (RBC <sub>wi</sub> )<br>µg/l | COPC? (Yes/No) |
|-------------------------|----------------------------|------------------------------------------|--------------------------------------------------|----------------|
| GRO                     | 13,400                     | 22,000                                   | >S                                               | N              |
| benzene                 | 0.0910                     | 210                                      | 2,800                                            | N              |
| toluene                 | 1.85                       | >S                                       | >S                                               | N              |
| ethylbenzene            | 104                        | 620                                      | 8,200                                            | N              |
| total xylenes           | 387                        | 86,000                                   | >S                                               | N              |
| naphthalene             | 107                        | 840                                      | 11,000                                           | N              |
| 1,2,4-TMB               | 762                        | 5,000                                    | >S                                               | N              |

>S = Groundwater RBC exceeds the solubility limit, which indicates light nonaqueous phase liquids (LNAPL) may be present. Based on historical groundwater observations, measurable LNAPL is not present at the site.

GRO and VOC concentrations did not exceed the residential RBC for groundwater vapor intrusion into the building in groundwater collected from wells MW-1 and MW-12 (Gary's Property) and wells MW-9 and MW-10 (Webb's Motel Property) during the last four quarters of monitoring subsequent to the final ISCO injection event in October 2021.

Review of groundwater analytical data (Table 1) shows that GRO and/or VOCs were detected in monitoring wells on the conference center Property (MW-6, MW-8, and MW-11) during the last four quarters of monitoring subsequent to the completion of ISCO injections at concentrations above the residential RBC for vapor intrusion; as a result, remedial activities are still ongoing for this property.

#### Groundwater in Excavation

| Constituent of Interest | MDC in Groundwater<br>µg/l | Construction/Excavation Worker (RBC <sub>we</sub> )<br>µg/l | COPC? (Yes/No) |
|-------------------------|----------------------------|-------------------------------------------------------------|----------------|
| GRO                     | 13,400                     | 14,000                                                      | N              |
| benzene                 | 0.0910                     | 1,800                                                       | N              |
| toluene                 | 1.85                       | 220,000                                                     | N              |
| ethylbenzene            | 104                        | 4,500                                                       | N              |
| total xylenes           | 387                        | 23,000                                                      | N              |
| naphthalene             | 107                        | 500                                                         | N              |

|           |     |       |   |
|-----------|-----|-------|---|
| 1,2,4-TMB | 762 | 6,300 | N |
|-----------|-----|-------|---|

Yellow highlighted RBCs were exceeded in samples collected from one or more locations.

The results of GRO and VOC concentrations from confirmation sampling performed subsequent to the final ISCO injection event in October 2021 were all below the RBCs for construction and excavation worker exposure pathway on the Gary's Property and the Webb's Motel Property. GRO and VOC concentrations on the conference center property remain significantly above the RBC for this pathway (GRO at 73,500 in September 2022) and additional remedial action is in progress.

#### **Additional Evaluation of Soil Gas.**

Soil gas sampling was performed in consecutive quarters from May 2012 through February 2013 in three vapor points (PP-1 through PP-3) located along the west property line of Gary's Property and in the conference center property parking lot (Figure 3). GRO, benzene, toluene, and xylenes had reported concentrations, but all analyzed petroleum constituents in the samples were significantly below the applicable RBCs. It should be noted that none of the soil gas samples were collected on Gary's Property in the vicinity of the former USTs or in proximity to the existing structure, and leak detection procedures for the soil gas sampling train were only performed during the first sampling event in May 2012. In addition, DEQ is currently revising its vapor intrusion RBCs to reflect updated toxicological information, evolving understanding of the vapor intrusion pathway and increasing awareness of short-term exposure risks for selected contaminants. Based on consideration of these factors and elevated concentrations of GRO remaining in groundwater, DEQ presumes that residual soil contamination potentially poses an unacceptable vapor intrusion risk to occupants of *future* buildings constructed at the property.

#### **Human health risk.**

Historical concentrations of GRO and VOCs including benzene, ethylbenzene, total xylenes, naphthalene, and 1,2,4-TMB were detected in soil and groundwater at concentrations exceeding generic RBCs for one or more exposure pathways and exposure scenarios. ISCO events performed between 2017 and 2021 have reduced contaminant concentrations below t (soil/GW RBCs for construction/excavation worker receptor scenario) on the Gary's Property and the Webb's Motel Property, but groundwater concentrations on the conference center property remain above RBCs. DEQ has the following conclusions regarding risks posed by specific exposure pathways:

- Historical soil contamination containing GRO above the construction worker RBC for soil ingestion, dermal contact and inhalation and below 7.5 feet bgs in the former UST area (sample #7 and borings C1, C2 and PP-3) on the Gary's Property was not resampled during the soil confirmation sampling performed in 2019. Significant remedial actions were undertaken in the vicinity of the former UST pit. However, because these locations were not reoccupied and sampled following ISCO remediation, future construction or excavation workers may encounter historically contaminated soils that have not been confirmed as remediated or degraded with confirmation data. As a result, a remedy is needed to mitigate potential risks from this pathway.

- Soil and groundwater contamination exceeding generic RBCs for the vapor intrusion into building exposure pathways under residential and/or occupational worker scenarios are potentially present at the site. Although limited soil gas sampling data were collected in 2012 and 2013, conditions in the former UST pit and nearby buildings were not assessed. Based on these facts and DEQ's anticipated downward revision of RBCs related to vapor intrusion, risks to occupants of future buildings constructed at the Gary's and Webb's Motel properties could not be ruled out and a remedy is needed to mitigate such risks.

### **Ecological risk.**

While GRO was reported in groundwater in the beach area directly west of well MW-9 in 2008 (boring T7 – 14,600 µg/l, boring T10 – 281 µg/l), subsequent sampling events performed west of the Seawall along the Webb's Property and the conference center property in 2014 and 2023 were below laboratory method reporting limits for GRO and VOCs. DEQ approved a Level I ecological risk assessment in July 2009 that concluded the historical western extent of the plume did not extend to Ecola Creek and follow up sampling results indicate that any historical contamination directly west of the seawall has degraded. Based on the known extent of the historical and residual groundwater contamination, ecological receptors are unlikely to be impacted.

## **5. RECOMMENDATION**

Potential unacceptable risks to construction and excavation workers from contact with soil or groundwater in excavations below 7.5 feet bgs should be mitigated through implementation of the DEQ-approved CMMP. The CMMP establishes procedures for evacuation, characterization, and management of groundwater in excavations exhibiting characteristics of impact by petroleum hydrocarbons which is exposed during future construction and/or utility work. The CMMP should be maintained at the site and all off-site properties impacted by petroleum hydrocarbons for future implementation as needed.

Barring further cleanup, an E&ES that prohibits the construction of any new buildings for human occupation without DEQ's prior written approval would mitigate unacceptable vapor intrusion risks to the occupants of future buildings constructed at the Gary's Property and the Webb's Motel Property. Prior to such construction, development plans would have to be submitted to DEQ for approval. If further cleanup and/or soil gas sampling is not performed, the development plans would have to include engineering controls incorporated into the design of future buildings constructed for human occupation to mitigate unacceptable vapor intrusion risks to occupants.

Provided that future construction or excavations incorporate the protocols and property use restrictions described above are memorialized in E&ES documents executed for the Gary's Property and the Webb's Property and recorded on the corresponding property deeds on file with Clatsop County, a partial, conditional No Further Action determination is possible for the affected tax lots. The No Further Action determination should be recorded in DEQ's LUST database (LUST No. 04-07-1597). Note that as of the date of this Staff Memo, Gary's Cannon Beach Service Center has executed and recorded with the County an EE&S requiring a CMMP and necessary restrictions on property use for future construction. It is unknown if an EE&S is a

feasible alternative as part of the site remedy for the Webb's Motel Property, and the corrective action plan will need to be amended for the affected tax lots if an EE&S is not executed.

## **6. ADMINISTRATIVE RECORD**

*Summary Report for the Fourth Quarterly Monitoring Event: Gary's Cannon Beach Service Center, 280 North Hemlock Street, Canon Beach, Oregon 98117, DEQ File #04-07-1597. Coles & Associates, LLC. April 5, 2013.*

*Draft Site Investigation Report: Gary's Cannon Beach Service Center, 280 North Hemlock Street, Canon Beach, Oregon 98117, DEQ File #04-07-1597. Coles & Associates, LLC. July 31, 2013.*

*Corrective Action Plan: Gary's Cannon Beach Service Center, 280 North Hemlock Street, Canon Beach, Oregon 98117, DEQ File #04-07-1597. Pacific Crest Environment. November 14, 2016.*

*Corrective Action Progress Report: Gary's Cannon Beach Service Center, 280 North Hemlock Street, Canon Beach, Oregon 98117, DEQ File #04-07-1597. Pacific Crest Environment. September 2, 2017.*

*Revised Amendment to the Corrective Action Plan: Gary's Cannon Beach Service Center, 280 North Hemlock Street, Canon Beach, Oregon 98117, DEQ File #04-07-1597. Pacific Crest Environment. September 25, 2020.*

*Conditional Closure Report and Partial No Further Action Request: Gary's Cannon Beach Service Center, 280 North Hemlock Street, Canon Beach, Oregon 98117, DEQ File #04-07-1597. Pacific Crest Environmental. December 2, 2022.*

## **7. ATTACHMENTS**

Figure 1. Site Location Map

Figure 2. Site Plan

Figure 3. Site Plan with Historical ISCO Treatment Locations

Figure 4. Confirmation Soil Sample Results

Figure 5 - Groundwater Analytical Results (December 14, 2021)

Figure 6 - Groundwater Analytical Results (March 22, 2022)

Figure 7 - Groundwater Analytical Results (June 23, 2022)

Figure 8 - Groundwater Analytical Results (September 7-8, 2022)

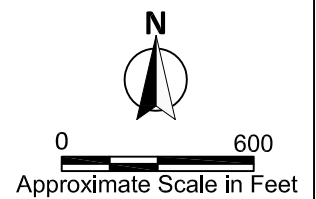
Table 1 - Groundwater Elevation Data Summary

Table 3 - Groundwater Analytical Results Summary

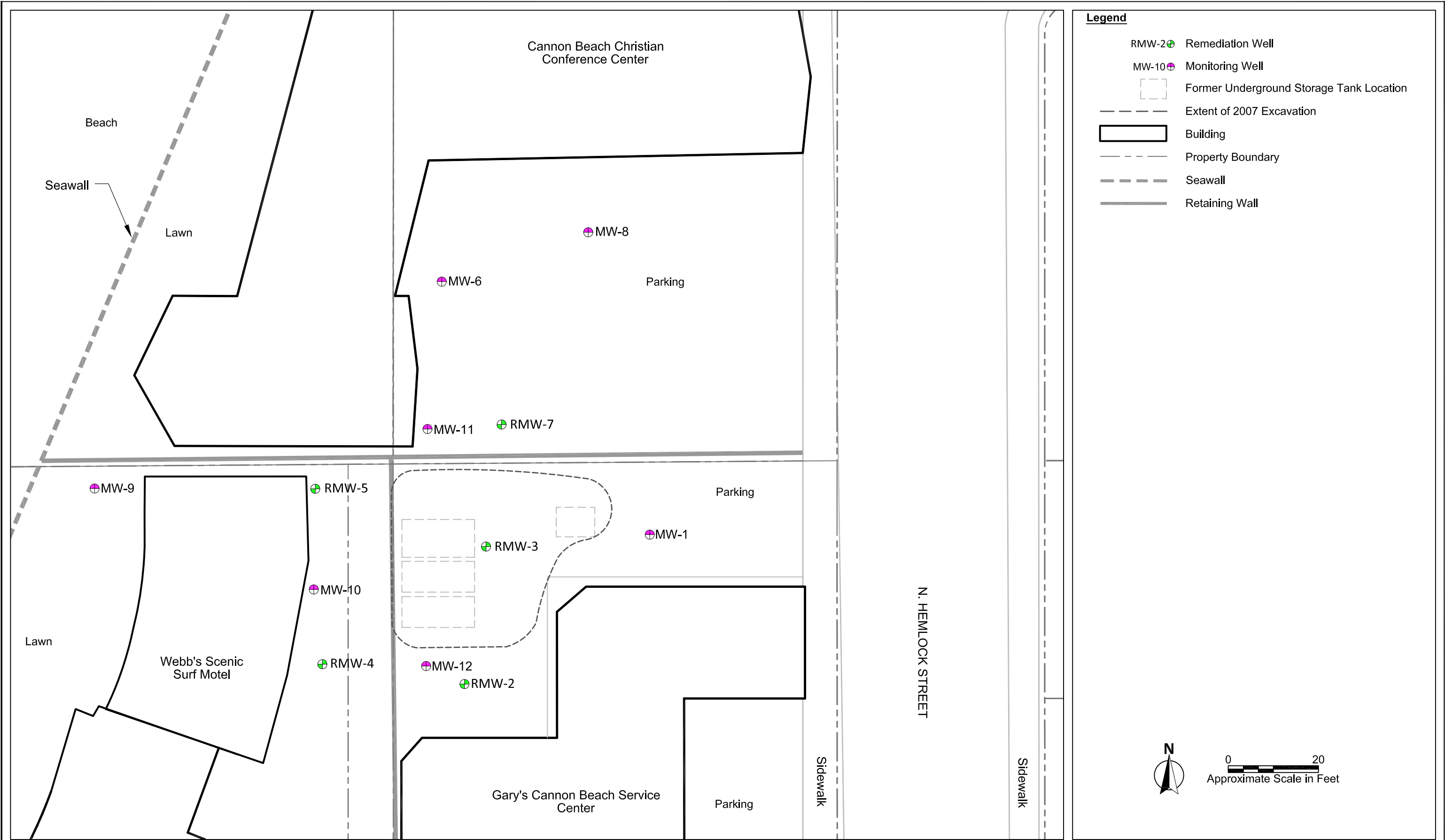
Table 6 - Soil Gas Sample Analysis Results (C&A)



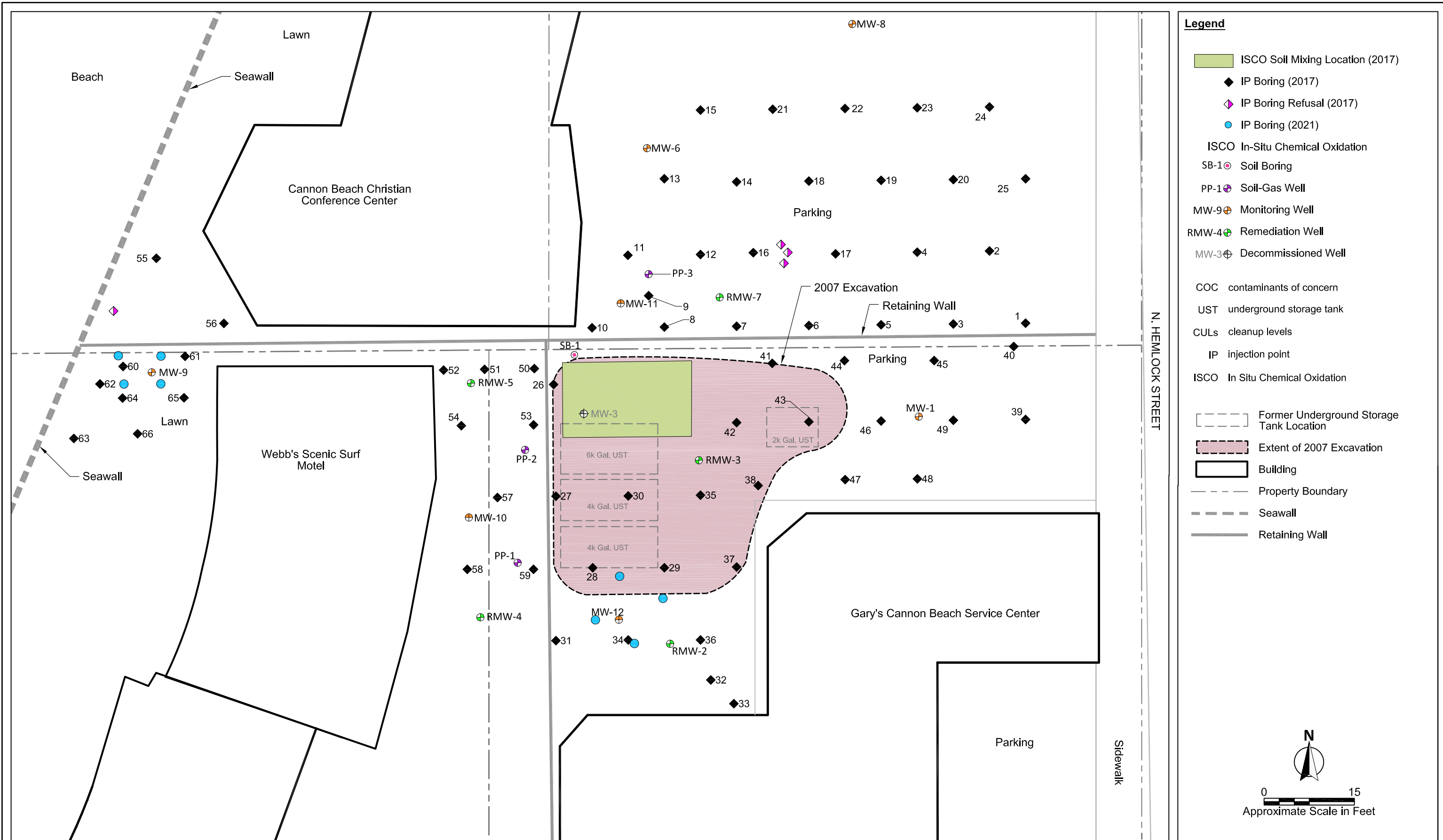
**Source:** TOPO! 2007



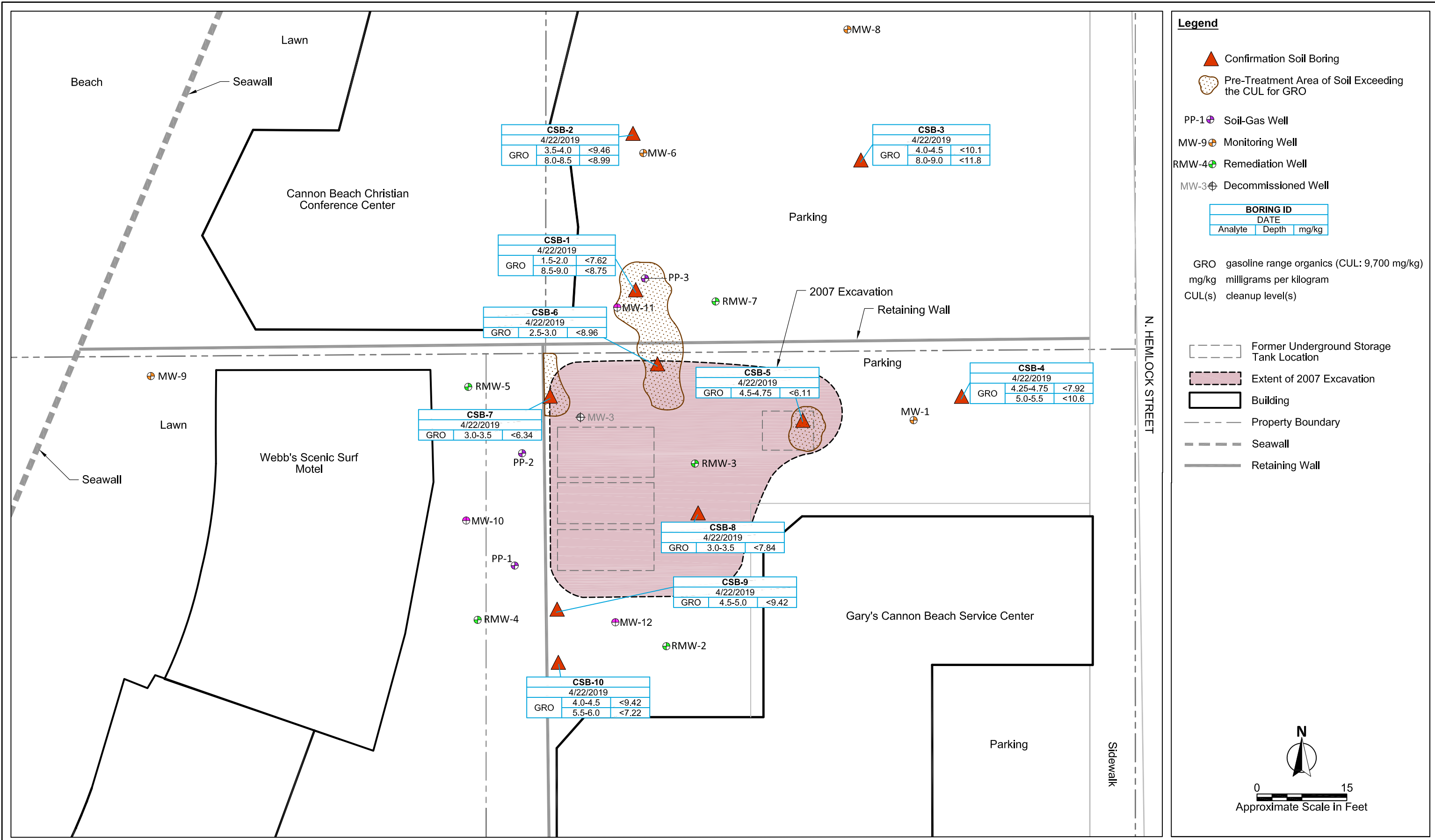
12/2/2022 173-002-040.dwg FIG 2



11/11/2022 173-002-046.dwg FIG 3 Historic ISCO



11/11/2022 173-002-047.dwg FIG 4 Soil

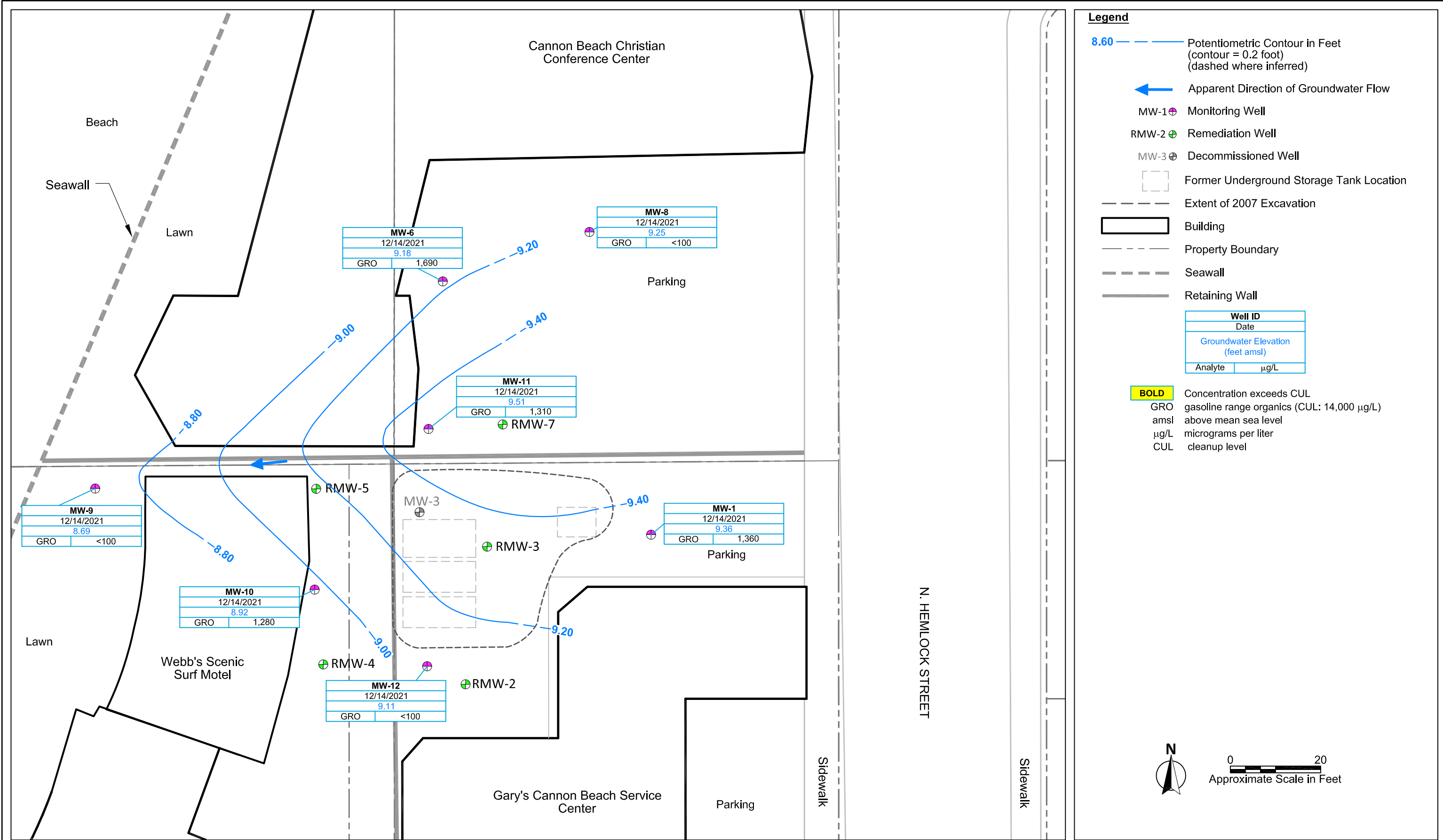


Gary's Cannon Beach Service Center  
280 North Hemlock Street  
Cannon Beach, Oregon  
PN: 173-002

**Sources:**  
1. Coles & Associates, LLC  
2. K&S Environmental, Inc.

**Figure 4**  
Site Plan with Confirmation Soil Analytical Results

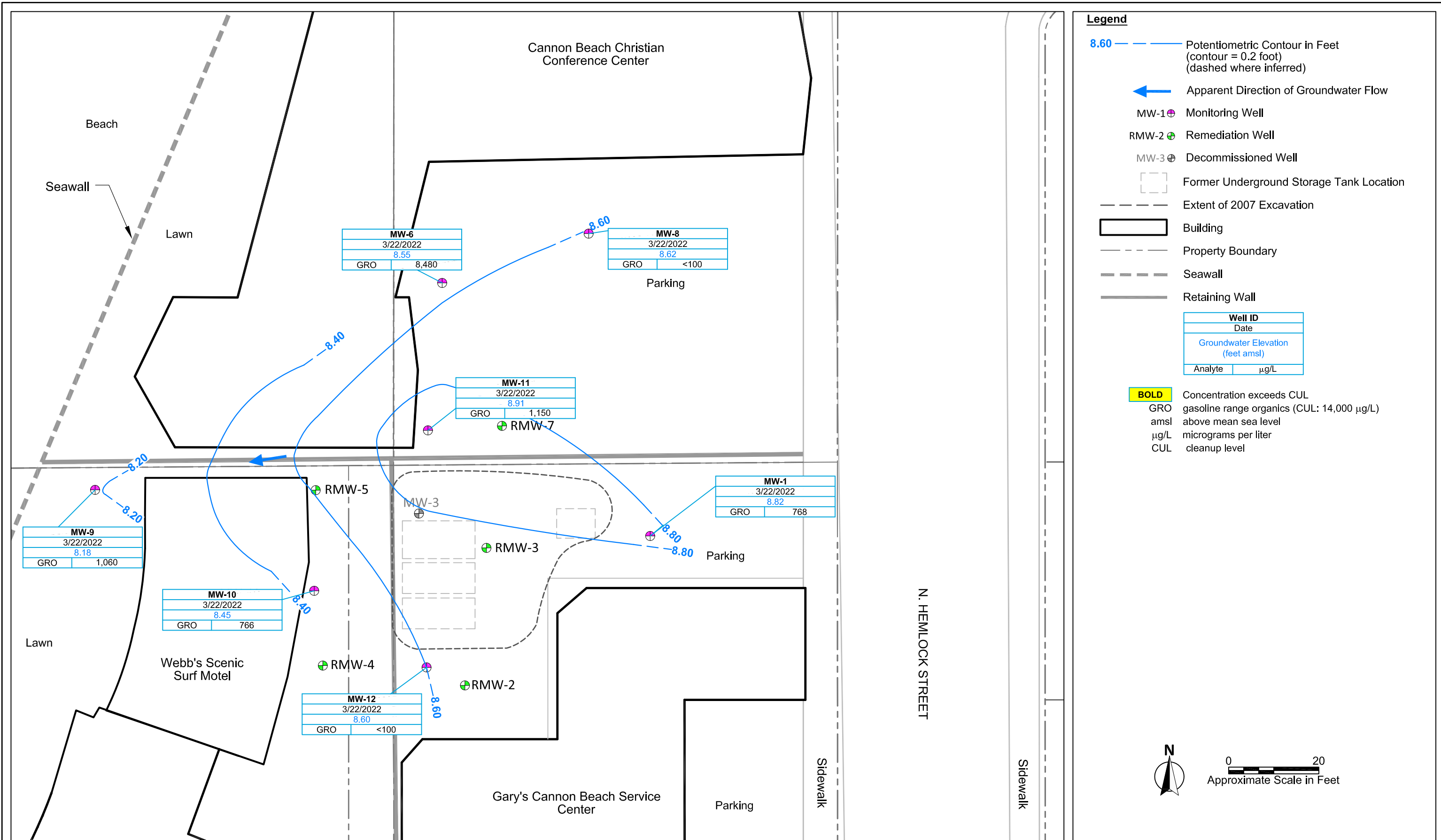
11/11/2022 173-002-041.dwg FIG 5 GW 121421



Gary's Cannon Beach Service Center  
280 North Hemlock Street  
Cannon Beach, Oregon  
PN: 173-002

**Figure 5**  
Site Plan with Potentiometric Surface and Groundwater Analytical Results  
(December 14, 2021)

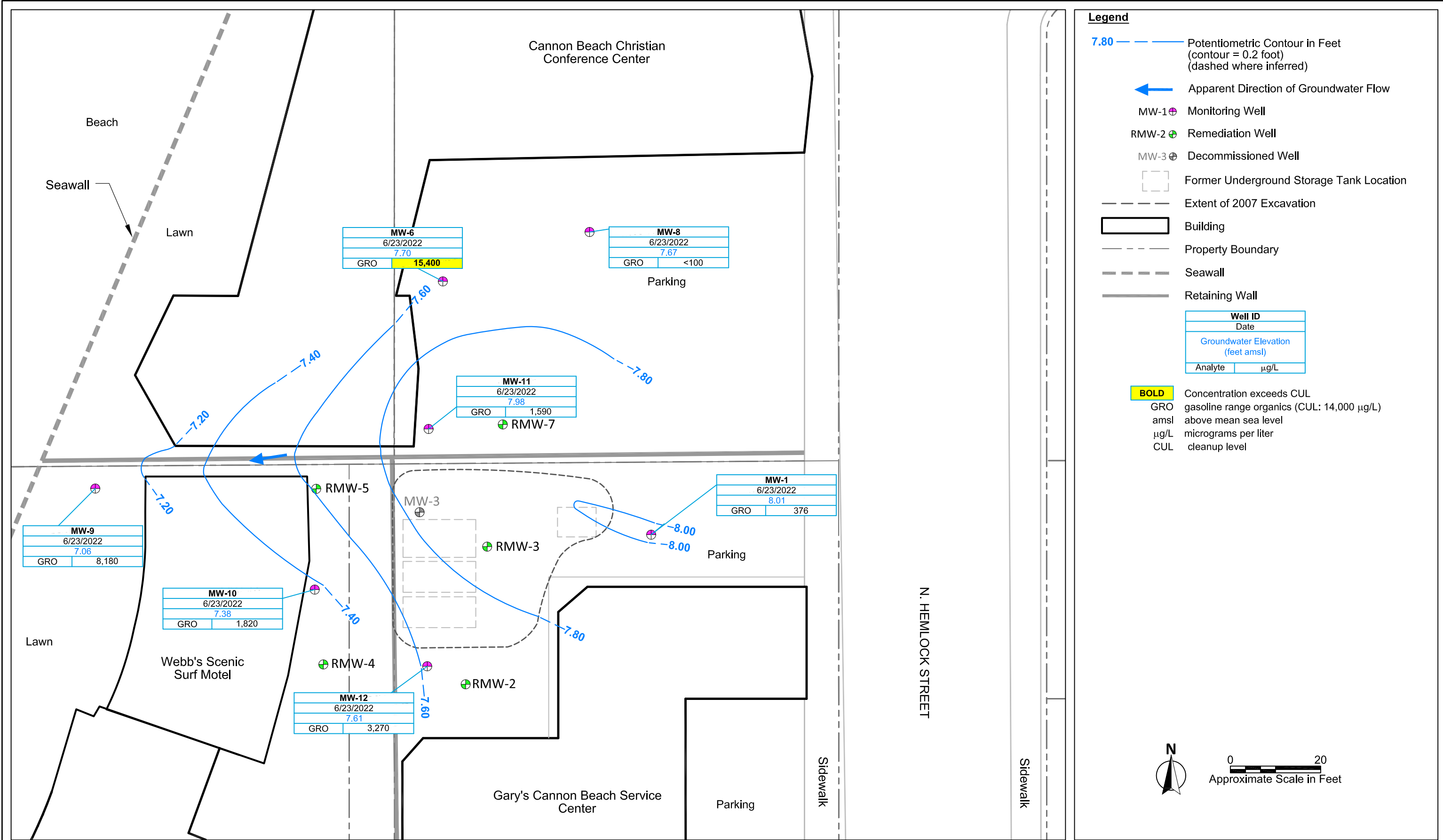
11/11/2022 173-002-043.dwg FIG 6 GW 32222



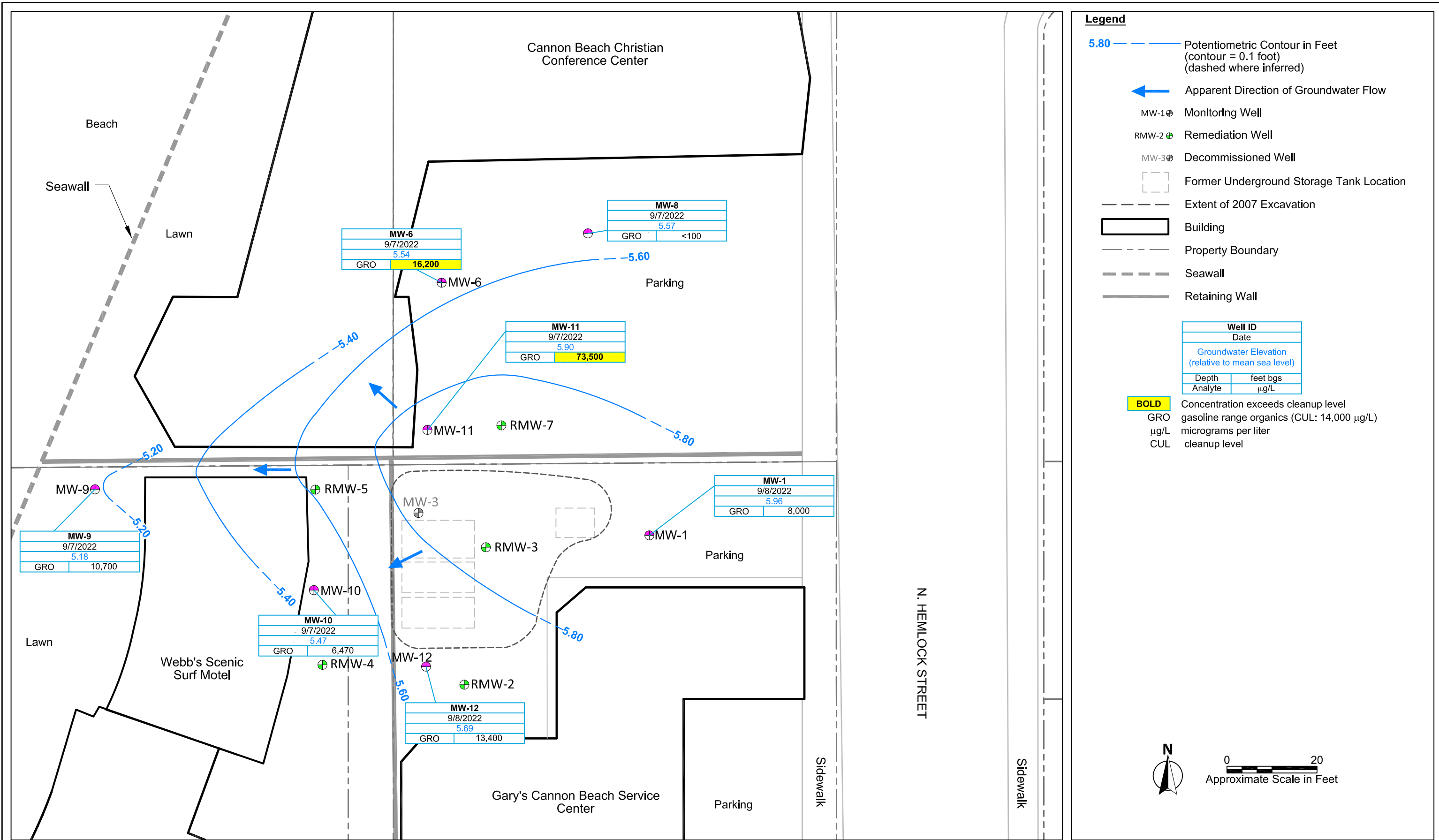
Gary's Cannon Beach Service Center  
280 North Hemlock Street  
Cannon Beach, Oregon  
PN: 173-002

**Figure 6**  
Site Plan with Potentiometric Surface and Groundwater Analytical Results  
(March 22, 2022)

11/11/2022 173-002-044.dwg FIG 7 GW 062322



11/11/2022 173-002-045.dwg FIG 8 GW 9-7-22



Gary's Cannon Beach Service Center  
280 North Hemlock Street  
Cannon Beach, Oregon

PN: 173-002

**Figure 8**  
Site Plan with Potentiometric Surface and Groundwater Analytical Results  
(September 7 - 8, 2022)

**Table 1**  
**Groundwater Elevation Data Summary**  
**Gary's Cannon Beach Service Center**  
**280 North Hemlock Street**  
**Cannon Beach, Oregon**  
**Pacific Crest Project No: 173-002**

| Well ID | Date                                    | Collected By  | Screened Interval<br>(feet btoc) <sup>1</sup> | Top of Casing Elevation<br>(feet amsl) <sup>2</sup> | Depth to Groundwater<br>(feet btoc) <sup>1</sup> | Potentiometric Surface Elevation<br>(feet amsl) <sup>2</sup> |
|---------|-----------------------------------------|---------------|-----------------------------------------------|-----------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------|
| MW-1    | 6/17/2010                               | K&S           | 5-15                                          | 12.82                                               | 4.96                                             | 7.86                                                         |
|         | 11/10/2010                              | K&S           |                                               |                                                     | 4.74                                             | 8.08                                                         |
|         | 3/23/2011                               | K&S           |                                               |                                                     | 3.69                                             | 9.13                                                         |
|         | 2/6/2012                                | C&A           |                                               |                                                     | 4.15                                             | 8.67                                                         |
|         | 5/21/2012                               | C&A           |                                               |                                                     | 4.75                                             | 8.07                                                         |
|         | 8/26/2012                               | C&A           |                                               |                                                     | 6.85                                             | 5.97                                                         |
|         | 12/3/2012                               | C&A           |                                               |                                                     | 2.83                                             | 9.99                                                         |
|         | 2/24/2013                               | C&A           |                                               |                                                     | 3.68                                             | 9.14                                                         |
|         | 1/17/2017                               | Pacific Crest |                                               |                                                     | 4.61                                             | 8.21                                                         |
|         | 5/10/2017                               | Pacific Crest |                                               |                                                     | 4.45                                             | 8.37                                                         |
|         | 8/8/2017                                | Pacific Crest |                                               |                                                     | 6.62                                             | 6.20                                                         |
|         | 12/7/2017                               | Pacific Crest |                                               |                                                     | 3.88                                             | 8.94                                                         |
|         | 3/26/2018                               | Pacific Crest |                                               |                                                     | 4.14                                             | 8.68                                                         |
|         | 6/14/2018                               | Pacific Crest |                                               |                                                     | 5.92                                             | 6.90                                                         |
|         | 9/20/2018                               | Pacific Crest |                                               |                                                     | 7.05                                             | 5.77                                                         |
|         | 12/4/2018                               | Pacific Crest |                                               |                                                     | 5.02                                             | 7.80                                                         |
|         | 3/12/2019                               | Pacific Crest |                                               |                                                     | 4.64                                             | 8.18                                                         |
|         | 6/6/2019                                | Pacific Crest |                                               |                                                     | 6.12                                             | 6.70                                                         |
|         | 9/17/2019                               | Pacific Crest |                                               |                                                     | 6.85                                             | 5.97                                                         |
|         | 11/18/2019                              | Pacific Crest |                                               |                                                     | 6.35                                             | 6.47                                                         |
|         | 6/29/2020                               | Pacific Crest |                                               |                                                     | 6.15                                             | 6.67                                                         |
|         | 9/23/2020                               | Pacific Crest |                                               |                                                     | 7.38                                             | 5.44                                                         |
|         | 12/8/2020                               | Pacific Crest |                                               |                                                     | 4.85                                             | 7.97                                                         |
|         | 12/10/2020                              | Pacific Crest |                                               |                                                     | 4.78                                             | 8.04                                                         |
|         | 12/21/2020                              | Pacific Crest |                                               |                                                     | 3.87                                             | 8.95                                                         |
|         | 1/14/2021                               | Pacific Crest |                                               |                                                     | 2.98                                             | 9.84                                                         |
|         | 4/26/2021                               | Pacific Crest |                                               |                                                     | 5.61                                             | 7.21                                                         |
|         | 7/28/2021                               | Pacific Crest |                                               |                                                     | 7.03                                             | 5.79                                                         |
|         | 9/1/2021                                | Pacific Crest |                                               |                                                     | 7.34                                             | 5.48                                                         |
|         | 12/14/2021                              | Pacific Crest |                                               |                                                     | 3.46                                             | 9.36                                                         |
|         | 3/22/2022                               | Pacific Crest |                                               |                                                     | 4.00                                             | 8.82                                                         |
|         | 6/23/2022                               | Pacific Crest |                                               |                                                     | 4.81                                             | 8.01                                                         |
|         | 9/7/2022                                | Pacific Crest |                                               |                                                     | 6.86                                             | 5.96                                                         |
| MW-2    | 6/17/2010                               | K&S           | 5-15                                          | 13.06                                               | 5.55                                             | 7.51                                                         |
|         | 11/10/2010                              | K&S           |                                               |                                                     | 5.00                                             | 8.06                                                         |
|         | 3/23/2011                               | K&S           |                                               |                                                     | 4.02                                             | 9.04                                                         |
|         | 2/6/2012                                | C&A           |                                               |                                                     | 4.70                                             | 8.36                                                         |
|         | 5/21/2012                               | C&A           |                                               |                                                     | 5.25                                             | 7.81                                                         |
|         | 8/26/2012                               | C&A           |                                               |                                                     | 7.25                                             | 5.81                                                         |
|         | 12/3/2012                               | C&A           |                                               |                                                     | 3.07                                             | 9.99                                                         |
|         | 2/24/2013                               | C&A           |                                               |                                                     | 4.10                                             | 8.96                                                         |
|         | 1/17/2017                               | Pacific Crest |                                               |                                                     | 5.09                                             | 7.97                                                         |
|         | 5/10/2017                               | Pacific Crest |                                               |                                                     | 4.93                                             | 8.13                                                         |
|         | 8/8/2017                                | Pacific Crest |                                               |                                                     | 7.06                                             | 6.00                                                         |
|         | 12/7/2017                               | Pacific Crest |                                               |                                                     | 4.27                                             | 8.79                                                         |
|         | 3/26/2018                               | Pacific Crest |                                               |                                                     | 4.50                                             | 8.56                                                         |
|         | 6/14/2018                               | Pacific Crest |                                               |                                                     | 6.31                                             | 6.75                                                         |
|         | 9/20/2018                               | Pacific Crest |                                               |                                                     | 7.34                                             | 5.72                                                         |
|         | 12/4/2018                               | Pacific Crest |                                               |                                                     | 5.35                                             | 7.71                                                         |
|         | 3/12/2019                               | Pacific Crest |                                               |                                                     | 4.94                                             | 8.12                                                         |
|         | 6/6/2019                                | Pacific Crest |                                               |                                                     | 6.59                                             | 6.47                                                         |
|         | 9/17/2019                               | Pacific Crest |                                               |                                                     | 6.93                                             | 6.13                                                         |
|         | 11/18/2019                              | Pacific Crest |                                               |                                                     | 6.71                                             | 6.35                                                         |
|         | 6/29/2020                               | Pacific Crest |                                               |                                                     | 6.60                                             | 6.46                                                         |
|         | 9/23/2020                               | Pacific Crest |                                               |                                                     | 7.60                                             | 5.46                                                         |
|         | CONVERTED TO REMEDIATION WELL 12/7/2020 |               |                                               |                                                     |                                                  |                                                              |
| MW-3    | 6/17/2010                               | K&S           | 5-15                                          | 12.61                                               | 5.01                                             | 7.60                                                         |
|         | 11/10/2010                              | K&S           |                                               |                                                     | 5.53                                             | 7.08                                                         |
|         | 3/23/2011                               | K&S           |                                               |                                                     | 3.70                                             | 8.91                                                         |
|         | 2/6/2012                                | C&A           |                                               |                                                     | 4.28                                             | 8.33                                                         |
|         | 5/21/2012                               | C&A           |                                               |                                                     | 4.85                                             | 7.76                                                         |
|         | 8/26/2012                               | C&A           |                                               |                                                     | 6.88                                             | 5.73                                                         |
|         | 12/3/2012                               | C&A           |                                               |                                                     | 2.57                                             | 10.04                                                        |
|         | 2/24/2013                               | C&A           |                                               |                                                     | 3.62                                             | 8.99                                                         |
|         | 1/17/2017                               | Pacific Crest |                                               |                                                     | 4.70                                             | 7.91                                                         |
|         | DECOMMISSIONED 1/30/2017                |               |                                               |                                                     |                                                  |                                                              |
| MW-4    | 6/17/2010                               | K&S           | 8-18                                          | 17.03                                               | 9.81                                             | 7.22                                                         |
|         | 11/10/2010                              | K&S           |                                               |                                                     | 8.91                                             | 8.12                                                         |
|         | 3/23/2011                               | K&S           |                                               |                                                     | 8.33                                             | 8.70                                                         |
|         | 2/6/2012                                | C&A           |                                               |                                                     | 8.98                                             | 8.05                                                         |
|         | 5/21/2012                               | C&A           |                                               |                                                     | 9.51                                             | 7.52                                                         |
|         | 8/26/2012                               | C&A           |                                               |                                                     | 11.44                                            | 5.59                                                         |
|         | 12/3/2012                               | C&A           |                                               |                                                     | 7.20                                             | 9.83                                                         |
|         | 2/24/2013                               | C&A           |                                               |                                                     | 8.29                                             | 8.74                                                         |
|         | 1/17/2017                               | Pacific Crest |                                               |                                                     | 9.43                                             | 7.60                                                         |
|         | 5/10/2017                               | Pacific Crest |                                               |                                                     | 9.19                                             | 7.84                                                         |
|         | 8/8/2017                                | Pacific Crest |                                               |                                                     | 11.22                                            | 5.81                                                         |
|         | 12/7/2017                               | Pacific Crest |                                               |                                                     | 8.48                                             | 8.55                                                         |
|         | 3/26/2018                               | Pacific Crest |                                               |                                                     | 8.69                                             | 8.34                                                         |
|         | 6/14/2018                               | Pacific Crest |                                               |                                                     | 10.53                                            | 6.50                                                         |
|         | 9/20/2018                               | Pacific Crest |                                               |                                                     | 11.43                                            | 5.60                                                         |
|         | 12/4/2018                               | Pacific Crest |                                               |                                                     | 9.44                                             | 7.59                                                         |
|         | 3/12/2019                               | Pacific Crest |                                               |                                                     | 9.20                                             | 7.83                                                         |
|         | 6/6/2019                                | Pacific Crest |                                               |                                                     | 10.81                                            | 6.22                                                         |
|         | 9/17/2019                               | Pacific Crest |                                               |                                                     | 11.06                                            | 5.97                                                         |
|         | 11/18/2019                              | Pacific Crest |                                               |                                                     | 10.83                                            | 6.20                                                         |
|         | 6/29/2020                               | Pacific Crest |                                               |                                                     | 10.81                                            | 6.22                                                         |
|         | 9/23/2020                               | Pacific Crest |                                               |                                                     | 11.72                                            | 5.31                                                         |
|         | CONVERTED TO REMEDIATION WELL 12/7/2020 |               |                                               |                                                     |                                                  |                                                              |

**Table 1**  
**Groundwater Elevation Data Summary**  
**Gary's Cannon Beach Service Center**  
**280 North Hemlock Street**  
**Cannon Beach, Oregon**  
**Pacific Crest Project No: 173-002**

| Well ID                                 | Date          | Collected By  | Screened Interval<br>(feet btoc) <sup>1</sup> | Top of Casing Elevation<br>(feet amsl) <sup>2</sup> | Depth to Groundwater<br>(feet btoc) <sup>1</sup> | Potentiometric Surface Elevation<br>(feet amsl) <sup>2</sup> |
|-----------------------------------------|---------------|---------------|-----------------------------------------------|-----------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------|
| MW-5                                    | 6/17/2010     | K&S           | 8-18                                          | 16.66                                               | 9.46                                             | 7.20                                                         |
|                                         | 11/10/2010    | K&S           |                                               |                                                     | 8.76                                             | 7.90                                                         |
|                                         | 3/23/2011     | K&S           |                                               |                                                     | 7.95                                             | 8.71                                                         |
|                                         | 2/6/2012      | C&A           |                                               |                                                     | 8.55                                             | 8.11                                                         |
|                                         | 5/21/2012     | C&A           |                                               |                                                     | 9.11                                             | 7.55                                                         |
|                                         | 8/26/2012     | C&A           |                                               |                                                     | 11.09                                            | 5.57                                                         |
|                                         | 12/3/2012     | C&A           |                                               |                                                     | 6.75                                             | 9.91                                                         |
|                                         | 2/24/2013     | C&A           |                                               |                                                     | 7.83                                             | 8.83                                                         |
|                                         | 1/17/2017     | Pacific Crest |                                               |                                                     | 8.95                                             | 7.71                                                         |
|                                         | 5/10/2017     | Pacific Crest |                                               |                                                     | 8.78                                             | 7.88                                                         |
|                                         | 8/8/2017      | Pacific Crest |                                               |                                                     | 10.88                                            | 5.78                                                         |
|                                         | 12/7/2017     | Pacific Crest |                                               |                                                     | 8.06                                             | 8.60                                                         |
|                                         | 3/26/2018     | Pacific Crest |                                               |                                                     | 8.28                                             | 8.38                                                         |
|                                         | 6/14/2018     | Pacific Crest |                                               |                                                     | 10.15                                            | 6.51                                                         |
|                                         | 9/20/2018     | Pacific Crest |                                               |                                                     | 11.08                                            | 5.58                                                         |
|                                         | 12/4/2018     | Pacific Crest |                                               |                                                     | 8.94                                             | 7.72                                                         |
|                                         | 3/12/2019     | Pacific Crest |                                               |                                                     | 8.74                                             | 7.92                                                         |
|                                         | 6/6/2019      | Pacific Crest |                                               |                                                     | 10.39                                            | 6.27                                                         |
|                                         | 9/17/2019     | Pacific Crest |                                               |                                                     | 10.64                                            | 6.02                                                         |
|                                         | 11/18/2019    | Pacific Crest |                                               |                                                     | 10.45                                            | 6.21                                                         |
|                                         | 6/29/2020     | Pacific Crest |                                               |                                                     | 10.40                                            | 6.26                                                         |
|                                         | 9/23/2020     | Pacific Crest |                                               |                                                     | 11.34                                            | 5.32                                                         |
| CONVERTED TO REMEDIATION WELL 12/7/2020 |               |               |                                               |                                                     |                                                  |                                                              |
| MW-6                                    | 6/17/2010     | K&S           | 8-18                                          | 16.80                                               | 9.35                                             | 7.45                                                         |
|                                         | 11/10/2010    | K&S           |                                               |                                                     | 8.81                                             | 7.99                                                         |
|                                         | 3/23/2011     | K&S           |                                               |                                                     | 7.92                                             | 8.88                                                         |
|                                         | 2/6/2012      | C&A           |                                               |                                                     | 8.36                                             | 8.44                                                         |
|                                         | 5/21/2012     | C&A           |                                               |                                                     | 9.00                                             | 7.80                                                         |
|                                         | 8/26/2012     | C&A           |                                               |                                                     | 11.09                                            | 5.71                                                         |
|                                         | 12/3/2012     | C&A           |                                               |                                                     | 6.86                                             | 9.94                                                         |
|                                         | 2/24/2013     | C&A           |                                               |                                                     | 7.76                                             | 9.04                                                         |
|                                         | 1/17/2017     | Pacific Crest |                                               |                                                     | 8.85                                             | 7.95                                                         |
|                                         | 5/10/2017     | Pacific Crest |                                               |                                                     | 8.74                                             | 8.06                                                         |
|                                         | 8/8/2017      | Pacific Crest |                                               |                                                     | 10.96                                            | 5.84                                                         |
|                                         | 12/7/2017     | Pacific Crest |                                               |                                                     | 7.99                                             | 8.81                                                         |
|                                         | 3/26/2018     | Pacific Crest |                                               |                                                     | 8.34                                             | 8.46                                                         |
|                                         | 6/14/2018     | Pacific Crest |                                               |                                                     | 10.12                                            | 6.68                                                         |
|                                         | 9/20/2018     | Pacific Crest |                                               |                                                     | 11.21                                            | 5.59                                                         |
|                                         | 12/4/2018     | Pacific Crest |                                               |                                                     | 9.09                                             | 7.71                                                         |
|                                         | 3/12/2019     | Pacific Crest |                                               |                                                     | 8.87                                             | 7.93                                                         |
|                                         | 6/6/2019      | Pacific Crest |                                               |                                                     | 10.36                                            | 6.44                                                         |
|                                         | 9/17/2019     | Pacific Crest |                                               |                                                     | 10.96                                            | 5.84                                                         |
|                                         | 11/18/2019    | Pacific Crest |                                               |                                                     | 10.48                                            | 6.32                                                         |
|                                         | 6/29/2020     | Pacific Crest |                                               |                                                     | 10.39                                            | 6.41                                                         |
|                                         | 9/23/2020     | Pacific Crest |                                               |                                                     | 11.55                                            | 5.25                                                         |
|                                         | 12/8/2020     | Pacific Crest |                                               |                                                     | 8.96                                             | 7.84                                                         |
|                                         | 12/10/2020    | Pacific Crest |                                               |                                                     | 8.84                                             | 7.96                                                         |
|                                         | 12/21/2020    | Pacific Crest |                                               |                                                     | 7.94                                             | 8.86                                                         |
|                                         | 1/14/2021     | Pacific Crest |                                               |                                                     | 7.18                                             | 9.62                                                         |
|                                         | 4/26/2021     | Pacific Crest |                                               |                                                     | 9.93                                             | 6.87                                                         |
|                                         | 7/28/2021     | Pacific Crest |                                               |                                                     | 11.32                                            | 5.48                                                         |
|                                         | 9/1/2021      | Pacific Crest |                                               |                                                     | 11.63                                            | 5.17                                                         |
|                                         | 12/14/2021    | Pacific Crest |                                               |                                                     | 7.62                                             | 9.18                                                         |
|                                         | 3/22/2022     | Pacific Crest |                                               |                                                     | 8.25                                             | 8.55                                                         |
|                                         | 6/23/2022     | Pacific Crest |                                               |                                                     | 9.10                                             | 7.70                                                         |
|                                         | 9/7/2022      | Pacific Crest |                                               |                                                     | 11.26                                            | 5.54                                                         |
| MW-7                                    | 6/17/2010     | K&S           | 5-15                                          | 16.10                                               | 8.59                                             | 7.51                                                         |
|                                         | 11/10/2010    | K&S           |                                               |                                                     | 8.09                                             | 8.01                                                         |
|                                         | 3/23/2011     | K&S           |                                               |                                                     | 7.18                                             | 8.92                                                         |
|                                         | 2/6/2012      | C&A           |                                               |                                                     | 7.62                                             | 8.48                                                         |
|                                         | 5/21/2012     | C&A           |                                               |                                                     | 8.25                                             | 7.85                                                         |
|                                         | 8/26/2012     | C&A           |                                               |                                                     | 10.33                                            | 5.77                                                         |
|                                         | 12/3/2012     | C&A           |                                               |                                                     | 6.12                                             | 9.98                                                         |
|                                         | 2/24/2013     | C&A           |                                               |                                                     | 7.05                                             | 9.05                                                         |
|                                         | 1/17/2017     | Pacific Crest |                                               |                                                     | NM                                               | --                                                           |
|                                         | 1/31/2017     | Pacific Crest |                                               |                                                     | 7.79                                             | 8.31                                                         |
|                                         | 5/10/2017     | Pacific Crest |                                               |                                                     | 7.96                                             | 8.14                                                         |
|                                         | 8/8/2017      | Pacific Crest |                                               |                                                     | 10.16                                            | 5.94                                                         |
|                                         | 12/7/2017     | Pacific Crest |                                               |                                                     | 7.31                                             | 8.79                                                         |
|                                         | 3/26/2018     | Pacific Crest |                                               |                                                     | 7.60                                             | 8.50                                                         |
|                                         | 6/14/2018     | Pacific Crest |                                               |                                                     | 9.43                                             | 6.67                                                         |
|                                         | 9/20/2018     | Pacific Crest |                                               |                                                     | 10.48                                            | 5.62                                                         |
|                                         | 12/4/2018     | Pacific Crest |                                               |                                                     | 8.41                                             | 7.69                                                         |
|                                         | 3/12/2019     | Pacific Crest |                                               |                                                     | 8.04                                             | 8.06                                                         |
|                                         | 6/6/2019      | Pacific Crest |                                               |                                                     | 9.63                                             | 6.47                                                         |
|                                         | 9/17/2019     | Pacific Crest |                                               |                                                     | 10.17                                            | 5.93                                                         |
|                                         | 11/18/2019    | Pacific Crest |                                               |                                                     | 9.75                                             | 6.35                                                         |
|                                         | 6/29/2020     | Pacific Crest |                                               |                                                     | 9.65                                             | 6.45                                                         |
| 9/23/2020                               | Pacific Crest | 10.80         | 5.30                                          |                                                     |                                                  |                                                              |
| CONVERTED TO REMEDIATION WELL 12/7/2020 |               |               |                                               |                                                     |                                                  |                                                              |

**Table 1**  
**Groundwater Elevation Data Summary**  
**Gary's Cannon Beach Service Center**  
**280 North Hemlock Street**  
**Cannon Beach, Oregon**  
**Pacific Crest Project No: 173-002**

| Well ID | Date       | Collected By  | Screened Interval<br>(feet btoc) <sup>1</sup> | Top of Casing Elevation<br>(feet amsl) <sup>2</sup> | Depth to Groundwater<br>(feet btoc) <sup>1</sup> | Potentiometric Surface Elevation<br>(feet amsl) <sup>2</sup> |
|---------|------------|---------------|-----------------------------------------------|-----------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------|
| MW-8    | 6/17/2010  | K&S           | 8-18                                          | 15.86                                               | 8.29                                             | 7.57                                                         |
|         | 11/10/2010 | K&S           |                                               |                                                     | 7.85                                             | 8.01                                                         |
|         | 3/23/2011  | K&S           |                                               |                                                     | 6.87                                             | 8.99                                                         |
|         | 2/6/2012   | C&A           |                                               |                                                     | 6.25                                             | 9.61                                                         |
|         | 5/21/2012  | C&A           |                                               |                                                     | 7.94                                             | 7.92                                                         |
|         | 8/26/2012  | C&A           |                                               |                                                     | 10.11                                            | 5.75                                                         |
|         | 12/3/2012  | C&A           |                                               |                                                     | 5.91                                             | 9.95                                                         |
|         | 2/24/2013  | C&A           |                                               |                                                     | 6.74                                             | 9.12                                                         |
|         | 1/17/2017  | Pacific Crest |                                               |                                                     | 7.80                                             | 8.06                                                         |
|         | 5/10/2017  | Pacific Crest |                                               |                                                     | 7.69                                             | 8.17                                                         |
|         | 8/8/2017   | Pacific Crest |                                               |                                                     | 9.94                                             | 5.92                                                         |
|         | 12/7/2017  | Pacific Crest |                                               |                                                     | 7.00                                             | 8.86                                                         |
|         | 3/26/2018  | Pacific Crest |                                               |                                                     | 7.39                                             | 8.47                                                         |
|         | 6/14/2018  | Pacific Crest |                                               |                                                     | 9.21                                             | 6.65                                                         |
|         | 9/20/2018  | Pacific Crest |                                               |                                                     | 10.30                                            | 5.56                                                         |
|         | 12/4/2018  | Pacific Crest |                                               |                                                     | 8.16                                             | 7.70                                                         |
|         | 3/12/2019  | Pacific Crest |                                               |                                                     | 7.85                                             | 8.01                                                         |
|         | 6/6/2019   | Pacific Crest |                                               |                                                     | 9.36                                             | 6.50                                                         |
|         | 9/17/2019  | Pacific Crest |                                               |                                                     | 10.12                                            | 5.74                                                         |
|         | 11/18/2019 | Pacific Crest |                                               |                                                     | 9.51                                             | 6.35                                                         |
|         | 6/29/2020  | Pacific Crest |                                               |                                                     | 9.41                                             | 6.45                                                         |
|         | 9/23/2020  | Pacific Crest |                                               |                                                     | 10.62                                            | 5.24                                                         |
|         | 12/8/2020  | Pacific Crest |                                               |                                                     | 7.97                                             | 7.89                                                         |
|         | 12/10/2020 | Pacific Crest |                                               |                                                     | 7.90                                             | 7.96                                                         |
|         | 12/21/2020 | Pacific Crest |                                               |                                                     | 6.95                                             | 8.91                                                         |
|         | 1/14/2021  | Pacific Crest |                                               |                                                     | 6.10                                             | 9.76                                                         |
|         | 4/26/2021  | Pacific Crest |                                               |                                                     | 8.91                                             | 6.95                                                         |
|         | 7/28/2021  | Pacific Crest |                                               |                                                     | 10.35                                            | 5.51                                                         |
|         | 9/1/2021   | Pacific Crest |                                               |                                                     | 10.67                                            | 5.19                                                         |
|         | 12/14/2021 | Pacific Crest |                                               |                                                     | 6.61                                             | 9.25                                                         |
|         | 3/22/2022  | Pacific Crest |                                               |                                                     | 7.24                                             | 8.62                                                         |
|         | 6/23/2022  | Pacific Crest |                                               |                                                     | 8.19                                             | 7.67                                                         |
|         | 9/7/2022   | Pacific Crest |                                               |                                                     | 10.29                                            | 5.57                                                         |
| MW-9    | 2/6/2012   | C&A           | 5-20                                          | 16.30                                               | 8.63                                             | 7.67                                                         |
|         | 5/21/2012  | C&A           |                                               |                                                     | 9.07                                             | 7.23                                                         |
|         | 8/26/2012  | C&A           |                                               |                                                     | 10.92                                            | 5.38                                                         |
|         | 12/3/2012  | C&A           |                                               |                                                     | 6.78                                             | 9.52                                                         |
|         | 2/24/2013  | C&A           |                                               |                                                     | 7.79                                             | 8.51                                                         |
|         | 1/17/2017  | Pacific Crest |                                               |                                                     | 8.86                                             | 7.44                                                         |
|         | 5/10/2017  | Pacific Crest |                                               |                                                     | 8.83                                             | 7.47                                                         |
|         | 8/8/2017   | Pacific Crest |                                               |                                                     | 10.88                                            | 5.42                                                         |
|         | 12/7/2017  | Pacific Crest |                                               |                                                     | 8.07                                             | 8.23                                                         |
|         | 3/26/2018  | Pacific Crest |                                               |                                                     | 8.08                                             | 8.22                                                         |
|         | 6/14/2018  | Pacific Crest |                                               |                                                     | 9.95                                             | 6.35                                                         |
|         | 9/20/2018  | Pacific Crest |                                               |                                                     | 10.79                                            | 5.51                                                         |
|         | 12/4/2018  | Pacific Crest |                                               |                                                     | 8.78                                             | 7.52                                                         |
|         | 3/12/2019  | Pacific Crest |                                               |                                                     | 8.76                                             | 7.54                                                         |
|         | 6/6/2019   | Pacific Crest |                                               |                                                     | 10.34                                            | 5.96                                                         |
|         | 9/17/2019  | Pacific Crest |                                               |                                                     | 10.05                                            | 6.25                                                         |
|         | 11/18/2019 | Pacific Crest |                                               |                                                     | 10.29                                            | 6.01                                                         |
|         | 6/29/2020  | Pacific Crest |                                               |                                                     | 10.31                                            | 5.99                                                         |
|         | 9/23/2020  | Pacific Crest |                                               |                                                     | 11.22                                            | 5.08                                                         |
|         | 12/8/2020  | Pacific Crest |                                               |                                                     | 8.68                                             | 7.62                                                         |
|         | 12/10/2020 | Pacific Crest |                                               |                                                     | 8.55                                             | 7.75                                                         |
|         | 12/21/2020 | Pacific Crest |                                               |                                                     | 8.31                                             | 7.99                                                         |
|         | 1/14/2021  | Pacific Crest |                                               |                                                     | 7.80                                             | 8.50                                                         |
|         | 4/26/2021  | Pacific Crest |                                               |                                                     | 9.92                                             | 6.38                                                         |
|         | 7/28/2021  | Pacific Crest |                                               |                                                     | 11.16                                            | 5.14                                                         |
|         | 9/1/2021   | Pacific Crest |                                               |                                                     | 11.35                                            | 4.95                                                         |
|         | 12/14/2021 | Pacific Crest |                                               |                                                     | 7.61                                             | 8.69                                                         |
|         | 3/22/2022  | Pacific Crest |                                               |                                                     | 8.12                                             | 8.18                                                         |
|         | 6/23/2022  | Pacific Crest |                                               |                                                     | 9.24                                             | 7.06                                                         |
|         | 9/7/2022   | Pacific Crest |                                               |                                                     | 11.12                                            | 5.18                                                         |
| MW-10   | 12/8/2020  | Pacific Crest | 5-15                                          | 16.86                                               | 9.18                                             | 7.68                                                         |
|         | 12/10/2020 | Pacific Crest |                                               |                                                     | 9.04                                             | 7.82                                                         |
|         | 12/21/2020 | Pacific Crest |                                               |                                                     | 8.39                                             | 8.47                                                         |
|         | 1/14/2021  | Pacific Crest |                                               |                                                     | 7.62                                             | 9.24                                                         |
|         | 4/26/2021  | Pacific Crest |                                               |                                                     | 10.19                                            | 6.67                                                         |
|         | 7/28/2021  | Pacific Crest |                                               |                                                     | 11.46                                            | 5.40                                                         |
|         | 9/1/2021   | Pacific Crest |                                               |                                                     | 11.69                                            | 5.17                                                         |
|         | 12/14/2021 | Pacific Crest |                                               |                                                     | 7.94                                             | 8.92                                                         |
|         | 3/22/2022  | Pacific Crest |                                               |                                                     | 8.41                                             | 8.45                                                         |
|         | 6/23/2022  | Pacific Crest |                                               |                                                     | 9.48                                             | 7.38                                                         |
| MW-11   | 9/7/2022   | Pacific Crest | 5-15                                          | 17.22                                               | 11.39                                            | 5.47                                                         |
|         | 12/8/2020  | Pacific Crest |                                               |                                                     | 9.09                                             | 8.13                                                         |
|         | 12/10/2020 | Pacific Crest |                                               |                                                     | 8.98                                             | 8.24                                                         |
|         | 12/21/2020 | Pacific Crest |                                               |                                                     | 8.39                                             | 8.83                                                         |
|         | 1/14/2021  | Pacific Crest |                                               |                                                     | 7.21                                             | 10.01                                                        |
|         | 4/26/2021  | Pacific Crest |                                               |                                                     | 10.06                                            | 7.16                                                         |
|         | 7/28/2021  | Pacific Crest |                                               |                                                     | 11.39                                            | 5.83                                                         |
|         | 9/1/2021   | Pacific Crest |                                               |                                                     | 11.69                                            | 5.53                                                         |
|         | 12/14/2021 | Pacific Crest |                                               |                                                     | 7.21                                             | 10.01                                                        |
|         | 3/22/2022  | Pacific Crest |                                               |                                                     | 8.31                                             | 8.91                                                         |
|         | 6/23/2022  | Pacific Crest |                                               |                                                     | 9.24                                             | 7.98                                                         |
|         | 9/7/2022   | Pacific Crest |                                               |                                                     | 11.32                                            | 5.90                                                         |

Table 1  
Groundwater Elevation Data Summary  
Gary's Cannon Beach Service Center  
280 North Hemlock Street  
Cannon Beach, Oregon  
Pacific Crest Project No: 173-002

| Well ID | Date       | Collected By  | Screened Interval<br>(feet btoc) <sup>1</sup> | Top of Casing Elevation<br>(feet amsl) <sup>2</sup> | Depth to Groundwater<br>(feet btoc) <sup>1</sup> | Potentiometric Surface Elevation<br>(feet amsl) <sup>2</sup> |
|---------|------------|---------------|-----------------------------------------------|-----------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------|
| MW-12   | 12/8/2020  | Pacific Crest | 5-15                                          | 13.20                                               | 5.44                                             | 7.76                                                         |
|         | 12/10/2020 | Pacific Crest |                                               |                                                     | 5.30                                             | 7.90                                                         |
|         | 12/21/2020 | Pacific Crest |                                               |                                                     | 4.46                                             | 8.74                                                         |
|         | 1/14/2021  | Pacific Crest |                                               |                                                     | 3.69                                             | 9.51                                                         |
|         | 4/26/2021  | Pacific Crest |                                               |                                                     | 6.34                                             | 6.86                                                         |
|         | 7/28/2021  | Pacific Crest |                                               |                                                     | 7.65                                             | 5.55                                                         |
|         | 9/1/2021   | Pacific Crest |                                               |                                                     | 7.91                                             | 5.29                                                         |
|         | 12/14/2021 | Pacific Crest |                                               |                                                     | 4.09                                             | 9.11                                                         |
|         | 3/22/2022  | Pacific Crest |                                               |                                                     | 4.60                                             | 8.60                                                         |
|         | 6/23/2022  | Pacific Crest |                                               |                                                     | 5.59                                             | 7.61                                                         |
|         | 9/7/2022   | Pacific Crest |                                               |                                                     | 7.51                                             | 5.69                                                         |

**NOTES:**

btoc = below top of casing

amsl = above mean sea level

NM = not measured

K&S = K&S Environmental, Inc.

C&A = Coles & Associates, LLC

Pacific Crest = Pacific Crest Environmental, LLC

**Table 3**  
**Groundwater Analytical Results Summary**  
**Gary's Cannon Beach Service Center**  
**280 North Hemlock Street**  
**Cannon Beach, Oregon**  
**Pacific Crest Project No: 173-002**

| Well ID | ISCO Treatment | Sample Date                             | Sampled By    | Screened Interval (feet <sup>1</sup> ) | Groundwater Analytical Results (micrograms per liter) |                      |                      |                           |                      |                          |                                     |  |
|---------|----------------|-----------------------------------------|---------------|----------------------------------------|-------------------------------------------------------|----------------------|----------------------|---------------------------|----------------------|--------------------------|-------------------------------------|--|
|         |                |                                         |               |                                        | GRO <sup>2</sup>                                      | Benzene <sup>3</sup> | Toluene <sup>3</sup> | Ethylbenzene <sup>3</sup> | Xylenes <sup>3</sup> | Naphthalene <sup>3</sup> | 1,2,4-trimethylbenzene <sup>3</sup> |  |
| MW-1    | Pre-treatment  | 6/17/2010                               | K&S           | 5-15                                   | 31,700                                                | 0.880                | 77.2                 | 408                       | 6,010                | 266                      | 1,810                               |  |
|         |                | 11/10/2010                              | K&S           |                                        | 9,120                                                 | <5.00                | 20                   | 160                       | 2,300                | 53                       | 623                                 |  |
|         |                | 3/23/2011                               | K&S           |                                        | 72,500                                                | 3.19                 | 106                  | 614                       | 12,500               | 460                      | 3,900                               |  |
|         |                | 2/8/2012                                | C&A           |                                        | 45,300                                                | 0.870                | 60.6                 | 478                       | 9,150                | 324                      | 2,860                               |  |
|         |                | 5/22/2012                               | C&A           |                                        | 44,500                                                | 4.85                 | 37.0                 | 495                       | 10,400               | 467                      | 3,240                               |  |
|         |                | 8/27/2012                               | C&A           |                                        | 28,000                                                | <5.0                 | 34.2                 | 406                       | 5,280                | 240                      | 1,950                               |  |
|         |                | 12/5/2012                               | C&A           |                                        | 25,800                                                | <5.0                 | <20.0                | 244                       | 4,610                | 192                      | 2,170                               |  |
|         |                | 2/27/2013                               | C&A           |                                        | 56,900                                                | <5.0                 | 33.6                 | 471                       | 9,090                | 551                      | 3,810                               |  |
|         |                | 1/17/2017                               | Pacific Crest |                                        | 54,000                                                | <20                  | <100                 | 200                       | 3,600                | 380                      | 3,300                               |  |
|         | Post-treatment | WELL REDEVELOPED 5/11/2017              |               |                                        | -                                                     | -                    | -                    | -                         | -                    | -                        | -                                   |  |
|         |                | 5/11/2017                               | Pacific Crest |                                        | 19,600                                                | <2.0                 | <10.0                | 24.1                      | 384                  | 44.9                     | 768                                 |  |
|         |                | 8/8/2017                                | Pacific Crest |                                        | 12,300                                                | <2.0                 | <10.0                | 64.0                      | 361                  | 49.1                     | 694                                 |  |
|         |                | 12/7/2017                               | Pacific Crest |                                        | 17,000                                                | <0.2                 | <1.0                 | 174.0                     | 995                  | 126                      | 843                                 |  |
|         |                | 3/26/2018                               | Pacific Crest |                                        | 19,800                                                | 2.99                 | <10.0                | 193.0                     | 738                  | 131                      | 1,000                               |  |
|         |                | 6/14/2018                               | Pacific Crest |                                        | 18,600                                                | <2.00                | <10.0                | 272                       | 396                  | 182                      | 1,480                               |  |
|         |                | 9/20/2018                               | Pacific Crest |                                        | 13,800                                                | <2.00                | <10.0                | 187                       | 107                  | 150                      | 1,030                               |  |
|         |                | 12/4/2018                               | Pacific Crest |                                        | 10,300                                                | <2.00                | <10.0                | 114                       | 263                  | 82.6                     | 671                                 |  |
|         |                | 3/13/2019                               | Pacific Crest |                                        | 1,140                                                 | <0.200               | <1.00                | 3.79                      | 12.3                 | 3.10                     | 34.8                                |  |
|         |                | 6/6/2019                                | Pacific Crest |                                        | 2,680                                                 | 0.420                | <1.00                | 50.6                      | 60.5                 | 24.7                     | 124                                 |  |
|         |                | 9/17/2019                               | Pacific Crest |                                        | 9,340                                                 | 1.10                 | 6.55                 | 191                       | 643                  | 97.2                     | 678                                 |  |
|         |                | 11/19/2019                              | Pacific Crest |                                        | 5,090                                                 | <1.00                | <5.00                | 35.4                      | 268                  | 49.8                     | 410                                 |  |
|         |                | 6/29/2020                               | Pacific Crest |                                        | 2,030                                                 | 0.480                | <1.00                | 58.8                      | 49.8                 | 31.9                     | 63.1                                |  |
|         |                | 9/24/2020                               | Pacific Crest |                                        | 7,680                                                 | 0.880                | 9.29                 | 198                       | 552                  | 103                      | 432                                 |  |
|         |                | 1/14/2021                               | Pacific Crest |                                        | 580                                                   | <0.200               | <1.00                | 2.22                      | 10.2                 | 7.42                     | 31.6                                |  |
|         |                | 4/26/2021                               | Pacific Crest |                                        | 752                                                   | <0.200               | <1.00                | 8.64                      | 19.7                 | 6.47                     | 49.3                                |  |
|         |                | 7/28/2021                               | Pacific Crest |                                        | 6,710                                                 | <2.00                | <10.0                | 109                       | 580                  | 54.3                     | 564                                 |  |
|         |                | 9/1/2021                                | Pacific Crest |                                        | 5,440                                                 | 1.34                 | 4.03                 | 101                       | 490                  | 62.6                     | 418                                 |  |
|         |                | 12/14/2021                              | Pacific Crest |                                        | 1,360                                                 | 0.320                | <1.00                | 21.8                      | 30.2                 | 15.6                     | 107                                 |  |
|         |                | 3/22/2022                               | Pacific Crest |                                        | 768                                                   | <0.200               | <1.00                | 8.51                      | 27.9                 | 6.17                     | 47.5                                |  |
|         |                | 6/23/2022                               | Pacific Crest |                                        | 376                                                   | <0.200               | <1.00                | <0.500                    | 4.23                 | 2.81                     | 3.12                                |  |
|         |                | 9/8/2022                                | Pacific Crest |                                        | 8,000                                                 | 0.640                | 1.85                 | 80.8                      | 387                  | 78.4                     | 724                                 |  |
| MW-2    | Pre-treatment  | 6/17/2010                               | K&S           | 5-15                                   | 17,500                                                | <2.5                 | 43.4                 | 160                       | 1,690                | 317                      | 1,670                               |  |
|         |                | 11/10/2010                              | K&S           |                                        | 17,600                                                | <5.0                 | <20.0                | 168                       | 1,910                | 265                      | 1,830                               |  |
|         |                | 3/23/2011                               | K&S           |                                        | 31,700                                                | 0.920                | 77.2                 | 384                       | 4,140                | 329                      | 2,280                               |  |
|         |                | 2/7/2012                                | C&A           |                                        | 41,700                                                | 4.91                 | 254                  | 702                       | 7,650                | 386                      | 2,880                               |  |
|         |                | 5/21/2012                               | C&A           |                                        | 54,200                                                | <12.5                | 977                  | 1,150                     | 9,640                | 380                      | 2,420                               |  |
|         |                | 8/29/2012                               | C&A           |                                        | 11,900                                                | <6.25                | <25.0                | 173                       | 821                  | 170                      | 1,270                               |  |
|         |                | 12/4/2012                               | C&A           |                                        | 12,300                                                | <5.0                 | <20.0                | 122                       | 983                  | 134                      | 1,450                               |  |
|         |                | 2/26/2013                               | C&A           |                                        | 25,600                                                | <5.0                 | 57.8                 | 402                       | 3,230                | 302                      | 2,100                               |  |
|         |                | 1/17/2017                               | Pacific Crest |                                        | 850                                                   | <0.40                | <2.0                 | 3                         | 25                   | 3.7                      | 50                                  |  |
|         | Post-treatment | WELL REDEVELOPED 2/1/2017               |               |                                        | -                                                     | -                    | -                    | -                         | -                    | -                        | -                                   |  |
|         |                | 2/1/2017                                | Feige         |                                        | 66,900                                                | 2.38                 | 151                  | 1,270                     | 9,690                | 411                      | 2,820                               |  |
|         |                | 5/11/2017                               | Pacific Crest |                                        | 11,300                                                | <2.00                | <10.0                | <5.00                     | 25.7                 | <20.0                    | 477                                 |  |
|         |                | 8/8/2017                                | Pacific Crest |                                        | 29,700                                                | 1.64                 | <5.00                | 501                       | 1,430                | 309                      | 2,630                               |  |
|         |                | 12/7/2017                               | Pacific Crest |                                        | 2,740                                                 | <0.2                 | <1.0                 | <0.5                      | 5                    | <2.0                     | 140                                 |  |
|         |                | 3/26/2018                               | Pacific Crest |                                        | 9,540                                                 | <0.2                 | <1.0                 | 0.761                     | 11.6                 | 35.6                     | 689                                 |  |
|         |                | 6/14/2018                               | Pacific Crest |                                        | 21,200                                                | <2.00                | <10.0                | 9.00                      | 73.8                 | 104                      | 1,720                               |  |
|         |                | 9/20/2018                               | Pacific Crest |                                        | 37,900                                                | <2.00                | <10.0                | 151                       | 785                  | 184                      | 2,410                               |  |
|         |                | 12/4/2018                               | Pacific Crest |                                        | 2,110                                                 | <0.200               | <1.00                | <0.500                    | 3.17                 | 4.83                     | 123                                 |  |
|         |                | 3/13/2019                               | Pacific Crest |                                        | 2,320                                                 | <0.400               | <2.00                | <1.00                     | 4.66                 | <4.00                    | 163                                 |  |
|         |                | 6/6/2019                                | Pacific Crest |                                        | 30,400                                                | <4.00                | <20.0                | <10.0                     | 49.0                 | 61.0                     | 2,020                               |  |
|         |                | 9/17/2019                               | Pacific Crest |                                        | 31,500                                                | <4.00                | <20.0                | 57.6                      | 280                  | 149                      | 2,670                               |  |
|         |                | 11/19/2019                              | Pacific Crest |                                        | 14,000                                                | <2.00                | <10.0                | 11.6                      | 57.2                 | 43.6                     | 1,050                               |  |
|         |                | 6/29/2020                               | Pacific Crest |                                        | 14,700                                                | <4.00                | <20.0                | <10.0                     | 30.6                 | <80.0                    | 1,200                               |  |
|         |                | 9/24/2020                               | Pacific Crest |                                        | 6,420                                                 | <0.400               | <2.00                | 4.06                      | 17.0                 | 14.4                     | 292                                 |  |
| MW-3    | Not Applicable | CONVERTED TO REMEDIATION WELL 12/7/2020 |               |                                        |                                                       |                      |                      |                           |                      |                          |                                     |  |
|         |                | 6/17/2010                               | K&S           | 5-15                                   | 1,500                                                 | 0.860                | 4.12                 | 37.4                      | 250                  | 21.1                     | 95                                  |  |
|         |                | 11/10/2010                              | K&S           |                                        | 13,400                                                | 6.40                 | 433                  | 772                       | 4,180                | 107                      | 536                                 |  |
|         |                | 3/23/2011                               | K&S           |                                        | 51,900                                                | 8.39                 | 4,250                | 1,550                     | 8,120                | 253                      | 1,350                               |  |
|         |                | 2/7/2012                                | C&A           |                                        | 23,200                                                | 3.09                 | 37.2                 | 1,020                     | 4,250                | 230                      | 1,560                               |  |
|         |                | 5/22/2012                               | C&A           |                                        | 20,400                                                | <1.25                | 379                  | 728                       | 4,150                | 242                      | 976                                 |  |
|         |                | 8/28/2012                               | C&A           |                                        | 8,950                                                 | 3.40                 | 15.3                 | 241                       | 1,620                | 122                      | 632                                 |  |
|         |                | 12/4/2012                               | C&A           |                                        | 18,300                                                | <5.0                 | 95.2                 | 533                       | 2,390                | 181                      | 1,690                               |  |
|         |                | 2/26/2013                               | C&A           |                                        | 41,100                                                | <5.0                 | 1,460                | 1,570                     | 7,710                | 348                      | 1,680                               |  |
|         |                | 1/17/2017                               | Pacific Crest |                                        | 210                                                   | <0.2                 | <1.0                 | 20                        | 7.3                  | 4.9                      | 2.5                                 |  |
|         |                | WELL DECOMMISSIONED 1/30/2017           |               |                                        |                                                       |                      |                      |                           |                      |                          |                                     |  |

**Table 3**  
**Groundwater Analytical Results Summary**  
**Gary's Cannon Beach Service Center**  
**280 North Hemlock Street**  
**Cannon Beach, Oregon**  
**Pacific Crest Project No: 173-002**

| Well ID                                 | ISCO Treatment | Sample Date                | Sampled By    | Screened Interval (feet <sup>1</sup> ) | Groundwater Analytical Results (micrograms per liter) |                      |                      |                           |                      |                          |                                     |  |
|-----------------------------------------|----------------|----------------------------|---------------|----------------------------------------|-------------------------------------------------------|----------------------|----------------------|---------------------------|----------------------|--------------------------|-------------------------------------|--|
|                                         |                |                            |               |                                        | CrO <sup>3</sup>                                      | Benzene <sup>3</sup> | Toluene <sup>3</sup> | Ethylbenzene <sup>3</sup> | Xylenes <sup>3</sup> | Naphthalene <sup>3</sup> | 1,2,4-trimethylbenzene <sup>3</sup> |  |
| MW-4                                    | Pre-treatment  | 6/17/2010                  | K&S           | 8-18                                   | 27,500                                                | 0.330                | 82.9                 | 308                       | 2,300                | 253                      | 2,010                               |  |
|                                         |                | 11/10/2010                 | K&S           |                                        | 16,500                                                | <5.0                 | <20.0                | 102                       | 1,220                | 161                      | 1,330                               |  |
|                                         |                | 3/23/2011                  | K&S           |                                        | 11,500                                                | 0.25                 | <1.0                 | 15.0                      | 161                  | 54.5                     | 647                                 |  |
|                                         |                | 2/7/2012                   | C&A           |                                        | 10,200                                                | <0.25                | <1.0                 | 6.55                      | 40.0                 | 38.6                     | 725                                 |  |
|                                         |                | 5/22/2012                  | C&A           |                                        | 8,950                                                 | <1.25                | <5.0                 | 2.80                      | 19.6                 | 18.5                     | 504                                 |  |
|                                         |                | 8/27/2012                  | C&A           |                                        | 23,000                                                | 4.45                 | 463                  | 725                       | 5,180                | 184                      | 1,500                               |  |
|                                         |                | 12/3/2012                  | C&A           |                                        | 9,120                                                 | <5.0                 | <20.0                | 159                       | 821                  | 104                      | 879                                 |  |
|                                         |                | 2/26/2013                  | C&A           |                                        | 7,770                                                 | <2.5                 | <10.0                | 11.3                      | 62.9                 | 24.3                     | 416                                 |  |
|                                         | Post-treatment | WELL REDEVELOPED 5/11/2017 |               |                                        | -                                                     | -                    | -                    | -                         | -                    | -                        | -                                   |  |
|                                         |                | 5/11/2017                  | Pacific Crest |                                        | 5,590                                                 | 0.250E               | <1.00                | 4.80                      | 14.8                 | 12.1                     | 44.7                                |  |
|                                         |                | 8/8/2017                   | Pacific Crest |                                        | 22,500                                                | 3.70                 | 8.44                 | 942                       | 3,050                | 50.7                     | 424                                 |  |
|                                         |                | 12/7/2017                  | Pacific Crest |                                        | <100                                                  | <0.2                 | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 3/26/2018                  | Pacific Crest |                                        | <100                                                  | <0.2                 | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 6/14/2018                  | Pacific Crest |                                        | 2,070                                                 | <0.200               | <1.00                | 2.47                      | 6.7                  | 5.12                     | 12.9                                |  |
|                                         |                | 9/20/2018                  | Pacific Crest |                                        | 18,000                                                | 2.01                 | <10.0                | 78.0                      | 447                  | 116                      | 919                                 |  |
|                                         |                | 12/4/2018                  | Pacific Crest |                                        | 5,040                                                 | <0.200               | <1.00                | 1.42                      | 4.36                 | 11.4                     | 16.8                                |  |
|                                         |                | 3/12/2019                  | Pacific Crest |                                        | 1,070                                                 | <0.200               | <1.00                | 0.695                     | 3.01                 | <2.00                    | 6.98                                |  |
|                                         |                | 6/6/2019                   | Pacific Crest |                                        | 894                                                   | 0.210                | <1.00                | 5.00                      | 23.1                 | <2.00                    | 23.5                                |  |
|                                         |                | 9/18/2019                  | Pacific Crest |                                        | 20,600                                                | 1.90                 | 10.9                 | 168                       | 731                  | 190                      | 1,280                               |  |
|                                         |                | 11/19/2019                 | Pacific Crest |                                        | 3,810                                                 | <2.00                | <10.0                | 24.0                      | 131                  | 39.0                     | 205                                 |  |
|                                         |                | 6/29/2020                  | Pacific Crest |                                        | 7,650                                                 | 1.58                 | 3.90                 | 110                       | 682                  | 64.4                     | 389                                 |  |
|                                         |                | 9/23/2020                  | Pacific Crest |                                        | 25,600                                                | <2.00                | <10.0                | 582                       | 1,490                | 337                      | 1,660                               |  |
| CONVERTED TO REMEDIATION WELL 12/7/2020 |                |                            |               |                                        |                                                       |                      |                      |                           |                      |                          |                                     |  |
| MW-5                                    | Pre-treatment  | 6/17/2010                  | K&S           | 8-18                                   | 48,500                                                | 9.00                 | 433                  | 1,200                     | 5,530                | 605                      | 2,370                               |  |
|                                         |                | 11/10/2010                 | K&S           |                                        | 32,200                                                | <5.00                | 288                  | 512                       | 3,970                | 186                      | 1,250                               |  |
|                                         |                | 3/23/2011                  | K&S           |                                        | 20,900                                                | <2.50                | 47.5                 | 427                       | 2,620                | 144                      | 835                                 |  |
|                                         |                | 2/7/2012                   | C&A           |                                        | 6,180                                                 | <0.250               | 8.08                 | 144                       | 750                  | 51                       | 215                                 |  |
|                                         |                | 5/22/2012                  | C&A           |                                        | 23,500                                                | 1.48                 | 27.0                 | 495                       | 3,070                | 237                      | 934                                 |  |
|                                         |                | 8/27/2012                  | C&A           |                                        | 35,900                                                | <2.50                | 307                  | 1,060                     | 4,790                | 484                      | 1,850                               |  |
|                                         |                | 12/3/2012                  | C&A           |                                        | 1,410                                                 | <1.25                | 6.55                 | 12.9                      | 103                  | <10.0                    | 47.5                                |  |
|                                         |                | 2/26/2013                  | C&A           |                                        | 5,650                                                 | 0.25                 | 6.06                 | 70.8                      | 446                  | 33.2                     | 181                                 |  |
|                                         | Post-treatment | WELL REDEVELOPED 5/11/2017 |               |                                        | -                                                     | -                    | -                    | -                         | -                    | -                        | -                                   |  |
|                                         |                | 5/11/2017                  | Pacific Crest |                                        | 16,600                                                | 2.40                 | 5.55                 | 197                       | 675                  | 101                      | 603                                 |  |
|                                         |                | 8/8/2017                   | Pacific Crest |                                        | 51,300                                                | 4.37                 | 29.0                 | 313                       | 2,440                | 158                      | 2,180                               |  |
|                                         |                | 12/7/2017                  | Pacific Crest |                                        | 200                                                   | <0.2                 | <1.0                 | 0.544                     | 7                    | <2.0                     | 4.91                                |  |
|                                         |                | 3/26/2018                  | Pacific Crest |                                        | 1,280                                                 | <0.2                 | <1.0                 | 1.37                      | 10.2                 | <2.0                     | 17.0                                |  |
|                                         |                | 6/14/2018                  | Pacific Crest |                                        | 22,600                                                | 2.42                 | 10.0                 | 55.7                      | 494                  | 45.3                     | 970                                 |  |
|                                         |                | 9/20/2018                  | Pacific Crest |                                        | 68,900                                                | 2.74                 | 50.7                 | 889                       | 4,780                | 397                      | 2,920                               |  |
|                                         |                | 12/4/2018                  | Pacific Crest |                                        | 1,000                                                 | <0.200               | <1.00                | 0.617                     | 23.6                 | <2.00                    | 17.2                                |  |
|                                         |                | 3/12/2019                  | Pacific Crest |                                        | 2,550                                                 | <0.200               | <1.00                | 0.606                     | 30.9                 | <2.00                    | 14.2                                |  |
|                                         |                | 6/6/2019                   | Pacific Crest |                                        | 35,900                                                | <2.00                | 11.3                 | 86.5                      | 922                  | 49.6                     | 1,220                               |  |
|                                         |                | 9/18/2019                  | Pacific Crest |                                        | 36,900                                                | 3.00                 | 33.2                 | 815                       | 1,880                | 180                      | 2,230                               |  |
|                                         |                | 11/19/2019                 | Pacific Crest |                                        | 28,800                                                | <2.00                | <10.0                | 76.1                      | 565                  | 55.1                     | 1,410                               |  |
|                                         |                | 6/29/2020                  | Pacific Crest |                                        | 17,000                                                | <2.00                | <10.0                | 46.0                      | 350                  | 47.2                     | 714                                 |  |
|                                         |                | 9/23/2020                  | Pacific Crest |                                        | 43,800                                                | <2.00                | 213                  | 630                       | 4,700                | 246                      | 2,250                               |  |
| CONVERTED TO REMEDIATION WELL 12/7/2020 |                |                            |               |                                        |                                                       |                      |                      |                           |                      |                          |                                     |  |
| MW-6                                    | Pre-treatment  | 6/17/2010                  | K&S           | 8-18                                   | 12,500                                                | 2.12                 | 29.3                 | 631                       | 1,310                | 298                      | 858                                 |  |
|                                         |                | 11/10/2010                 | K&S           |                                        | 4,430                                                 | <5.0                 | <20.0                | 145                       | 593                  | 58                       | 542                                 |  |
|                                         |                | 3/23/2011                  | K&S           |                                        | 10,500                                                | <2.5                 | 115                  | 539                       | 898                  | 282                      | 727                                 |  |
|                                         |                | 2/6/2012                   | C&A           |                                        | 16,400                                                | 3.02                 | 201                  | 882                       | 2,120                | 291                      | 1,180                               |  |
|                                         |                | 5/21/2012                  | C&A           |                                        | 14,800                                                | <1.25                | 257                  | 595                       | 1,520                | 333                      | 927                                 |  |
|                                         |                | 8/28/2012                  | C&A           |                                        | 20,600                                                | <2.50                | 537                  | 943                       | 2,950                | 369                      | 1,230                               |  |
|                                         |                | 12/4/2012                  | C&A           |                                        | 6,240                                                 | <5.0                 | <20.0                | 462                       | 338                  | 182                      | 588                                 |  |
|                                         |                | 2/25/2013                  | C&A           |                                        | 6,820                                                 | <2.5                 | <10.0                | 325                       | 658                  | 146                      | 562                                 |  |
|                                         |                | 1/17/2017                  | Pacific Crest |                                        | 3,800                                                 | <1.0                 | 7.5                  | 260                       | 251                  | 140                      | 200                                 |  |
|                                         | Post-treatment | WELL REDEVELOPED 2/1/2017  |               |                                        | -                                                     | -                    | -                    | -                         | -                    | -                        | -                                   |  |
|                                         |                | 2/1/2017                   | Feige         |                                        | 16,100                                                | <2.0                 | 34.4                 | 540                       | 1,080                | 275                      | 803                                 |  |
|                                         |                | 5/11/2017                  | Pacific Crest |                                        | 10,500                                                | 1.30                 | <5.00                | 526                       | 284                  | 274                      | 363                                 |  |
|                                         |                | 8/8/2017                   | Pacific Crest |                                        | 7,480                                                 | 1.30                 | <5.00                | 533                       | <7.50                | 406                      | 97.8                                |  |
|                                         |                | 12/7/2017                  | Pacific Crest |                                        | 4,370                                                 | 3.62                 | <1.0                 | 290                       | 289                  | 136                      | 87.0                                |  |
|                                         |                | 3/26/2018                  | Pacific Crest |                                        | 6,000                                                 | 2.26                 | <10.0                | 492                       | 152                  | 356                      | 111                                 |  |
|                                         |                | 6/14/2018                  | Pacific Crest |                                        | 17,700                                                | <2.00                | 96.5                 | 998                       | 1,640                | 314                      | 882                                 |  |
|                                         |                | 9/20/2018                  | Pacific Crest |                                        | 13,200                                                | <2.00                | <10.0                | 437                       | 1,010                | 173                      | 786                                 |  |
|                                         |                | 12/4/2018                  | Pacific Crest |                                        | 20,700                                                | 3.80                 | <10.0                | 428                       | 1,140                | 432                      | 1,360                               |  |
|                                         |                | 3/12/2019                  | Pacific Crest |                                        | 467                                                   | <0.200               | <1.00                | 14.0                      | 2.79                 | 35.5                     | 14.7                                |  |
|                                         |                | 6/6/2019                   | Pacific Crest |                                        | 5,430                                                 | <2.00                | <10.0                | 291                       | 474                  | 97.6                     | 182                                 |  |
|                                         |                | 9/17/2019                  | Pacific Crest |                                        | 3,000                                                 | 1.07                 | <1.00                | 138                       | 67.8                 | 25.4                     | 74                                  |  |
|                                         |                | 11/18/2019                 | Pacific Crest |                                        | 2,720                                                 | 0.810                | <1.00                | 45.3                      | 16.5                 | 87.3                     | 87.8                                |  |
|                                         |                | 6/29/2020                  | Pacific Crest |                                        | 4,380                                                 | <2.00                | <10.0                | 173                       | 292                  | 119                      | 221                                 |  |
|                                         |                | 9/23/2020                  | Pacific Crest |                                        | 5,280                                                 | 0.420                | <2.00                | 494                       | 88.2                 | 206                      | 74.9                                |  |
|                                         |                | 1/14/2021                  | Pacific Crest |                                        | 1,640                                                 | 1.43                 | <1.00                | 19.3                      | 12.3                 | 68.6                     | 98.2                                |  |
|                                         |                | 4/26/2021                  | Pacific Crest |                                        | 2,080                                                 | <0.200               | <1.00                | 133                       | 35.9                 | 129                      | 60.5                                |  |
|                                         |                | 7/28/2021                  | Pacific Crest |                                        | 6,550                                                 | <2.00                | <10.0                | 304                       | 325                  | 239                      | 380.0                               |  |
|                                         |                | 9/1/2021                   | Pacific Crest |                                        | 11,100                                                | <2.00                | 10.1                 | 221                       | 1,130                | 342                      | 929                                 |  |
|                                         |                | 12/14/2021                 | Pacific Crest |                                        | 1,690                                                 | 0.900                | <1.00                | 66.2                      | 12.6                 | 68.0                     | 70.0                                |  |
|                                         |                | 3/22/2022                  | Pacific Crest |                                        | 8,480                                                 | 0.640                | 16.6                 | 425                       | 459                  | 327                      | 606                                 |  |
|                                         |                | 6/23/2022                  | Pacific Crest |                                        | 15,400                                                | <2.00                | <10.0                | 743                       | 620                  | 849                      | 892                                 |  |
|                                         |                | 9/7/2022                   | Pacific Crest |                                        | 16,200                                                | <1.00                | 44.4                 | 549                       | 1,610                | 655                      | 1,670                               |  |

**Table 3**  
**Groundwater Analytical Results Summary**  
**Gary's Cannon Beach Service Center**  
**280 North Hemlock Street**  
**Cannon Beach, Oregon**  
**Pacific Crest Project No: 173-002**

| Well ID                                 | ISCO Treatment | Sample Date                | Sampled By    | Screened Interval (feet <sup>1</sup> ) | Groundwater Analytical Results (micrograms per liter) |                      |                      |                           |                      |                          |                                     |  |
|-----------------------------------------|----------------|----------------------------|---------------|----------------------------------------|-------------------------------------------------------|----------------------|----------------------|---------------------------|----------------------|--------------------------|-------------------------------------|--|
|                                         |                |                            |               |                                        | CrO <sup>2</sup>                                      | Benzene <sup>3</sup> | Toluene <sup>3</sup> | Ethylbenzene <sup>3</sup> | Xylenes <sup>3</sup> | Naphthalene <sup>3</sup> | 1,2,4-trimethylbenzene <sup>3</sup> |  |
| MW-7                                    | Pre-treatment  | 6/17/2010                  | K&S           | 5-15                                   | 84,200                                                | <25.0                | 4,580                | 2,610                     | 15,200               | 1,200                    | 3,440                               |  |
|                                         |                | 11/10/2010                 | K&S           |                                        | 61,900                                                | 7.00                 | 2,030                | 3,080                     | 19,400               | 699                      | 2,700                               |  |
|                                         |                | 3/23/2011                  | K&S           |                                        | 81,800                                                | 2.84                 | 4,280                | 2,500                     | 14,800               | 438                      | 2,590                               |  |
|                                         |                | 2/7/2012                   | C&A           |                                        | 72,900                                                | 2.14                 | 1,700                | 2,150                     | 15,600               | 615                      | 3,400                               |  |
|                                         |                | 5/21/2012                  | C&A           |                                        | 119,000                                               | <5.00                | 8,830                | 4,340                     | 26,800               | 728                      | 3,460                               |  |
|                                         |                | 8/27/2012                  | C&A           |                                        | 83,000                                                | <12.5                | 2,150                | 3,480                     | 18,100               | 750                      | 3,150                               |  |
|                                         |                | 12/3/2012                  | C&A           |                                        | 36,200                                                | <25.0                | 484                  | 1,400                     | 9,540                | 308                      | 1,700                               |  |
|                                         |                | 2/25/2013                  | C&A           |                                        | 95,600                                                | <12.5                | 4,070                | 3,420                     | 20,200               | 440                      | 2,900                               |  |
|                                         |                | 1/31/2017                  | Pacific Crest |                                        | 21,600                                                | <2.00                | 162                  | 490                       | 3,390                | 87.0                     | 591                                 |  |
|                                         | Post-treatment | WELL REDEVELOPED 5/10/2017 |               |                                        | -                                                     | -                    | -                    | -                         | -                    | -                        | -                                   |  |
|                                         |                | 5/10/2017                  | Pacific Crest |                                        | 116,000                                               | <10.0                | 1,060                | 2,740                     | 15,500               | 670                      | 2,960                               |  |
|                                         |                | 8/8/2017                   | Pacific Crest |                                        | 50,700                                                | <10.0                | <50.0                | 2,690                     | 7,140                | 335                      | 1,830                               |  |
|                                         |                | 12/7/2017                  | Pacific Crest |                                        | 263                                                   | <0.2                 | <1.0                 | 11.30                     | 15.30                | 5.01                     | 19                                  |  |
|                                         |                | 3/26/2018                  | Pacific Crest |                                        | 6,440                                                 | <0.2                 | 12.0                 | 251                       | 529                  | 74.8                     | 336                                 |  |
|                                         |                | 6/14/2018                  | Pacific Crest |                                        | 33,000                                                | <10.0                | 142                  | 1,100                     | 5,450                | 386                      | 1,400                               |  |
|                                         |                | 9/20/2018                  | Pacific Crest |                                        | 33,300                                                | 2.36                 | 24                   | 988                       | 2,980                | 420                      | 1,990                               |  |
|                                         |                | 12/4/2018                  | Pacific Crest |                                        | 40,400                                                | <4.00                | 45.2                 | 1,010                     | 3,190                | 531                      | 2,370                               |  |
|                                         |                | 3/12/2019                  | Pacific Crest |                                        | 201                                                   | <0.200               | 1.16                 | 11.6                      | 15.4                 | 3.06                     | 13.5                                |  |
|                                         |                | 6/6/2019                   | Pacific Crest |                                        | 10,800                                                | <1.00                | 21.8                 | 461                       | 654                  | 145                      | 648                                 |  |
|                                         |                | 9/17/2019                  | Pacific Crest |                                        | 36,100                                                | 3.00                 | 71.8                 | 1,500                     | 5,830                | 448                      | 2,320                               |  |
|                                         |                | 11/18/2019                 | Pacific Crest |                                        | 45,800                                                | <10.0                | 128                  | 2,000                     | 7,720                | 366                      | 1,940                               |  |
|                                         |                | 6/29/2020                  | Pacific Crest |                                        | 10,600                                                | <1.00                | 24.8                 | 774                       | 1,140                | 192                      | 646                                 |  |
|                                         |                | 9/23/2020                  | Pacific Crest |                                        | 23,700                                                | 2.60                 | 39.6                 | 1,030                     | 3,730                | 241                      | 1,080                               |  |
| CONVERTED TO REMEDIATION WELL 12/7/2020 |                |                            |               |                                        |                                                       |                      |                      |                           |                      |                          |                                     |  |
| MW-8                                    | Pre-treatment  | 6/17/2010                  | K&S           | 8-18                                   | <100                                                  | <0.25                | <0.50                | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 11/10/2010                 | K&S           |                                        | <100                                                  | <0.25                | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 3/23/2011                  | K&S           |                                        | <100                                                  | <0.25                | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 2/6/2012                   | C&A           |                                        | <100                                                  | <0.25                | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 5/21/2012                  | C&A           |                                        | <100                                                  | <0.25                | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 8/28/2012                  | C&A           |                                        | <100                                                  | <0.25                | <1.0                 | <0.0                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 12/4/2012                  | C&A           |                                        | <100                                                  | <0.25                | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 2/25/2013                  | C&A           |                                        | <100                                                  | <0.25                | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         | Post-treatment | WELL REDEVELOPED 5/10/2017 |               |                                        | -                                                     | -                    | -                    | -                         | -                    | -                        | -                                   |  |
|                                         |                | 5/10/2017                  | Pacific Crest |                                        | <100                                                  | 0.44                 | <1.0                 | <0.500                    | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 8/8/2017                   | Pacific Crest |                                        | <100                                                  | <0.20                | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 12/7/2017                  | Pacific Crest |                                        | <100                                                  | <0.20                | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 3/26/2018                  | Pacific Crest |                                        | <100                                                  | <0.20                | <1.0                 | <0.5                      | <1.5                 | <2.0                     | <1.0                                |  |
|                                         |                | 6/14/2018                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |  |
|                                         |                | 9/20/2018                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |  |
|                                         |                | 12/4/2018                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |  |
|                                         |                | 3/12/2019                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |  |
|                                         |                | 6/6/2019                   | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |  |
|                                         |                | 9/17/2019                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |  |
|                                         |                | 11/19/2019                 | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |  |
|                                         |                | 6/29/2020                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <4.00                    | <1.00                               |  |
|                                         |                | 9/23/2020                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <4.00                    | <1.00                               |  |
|                                         |                | 1/14/2021                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |  |
| 4/26/2021                               | Pacific Crest  | <100                       | <0.200        | <1.00                                  | <0.500                                                | <1.50                | <4.00                | <1.00                     |                      |                          |                                     |  |
| 7/28/2021                               | Pacific Crest  | <100                       | <0.200        | <1.00                                  | <0.500                                                | <1.50                | <2.00                | <1.00                     |                      |                          |                                     |  |
| 9/1/2021                                | Pacific Crest  | <100                       | <0.200        | <1.00                                  | <0.500                                                | <1.50                | <2.00                | <1.00                     |                      |                          |                                     |  |
| 12/14/2021                              | Pacific Crest  | <100                       | <0.200        | <1.00                                  | <0.500                                                | <1.50                | <2.00                | <1.00                     |                      |                          |                                     |  |
| 3/22/2022                               | Pacific Crest  | <100                       | <0.200        | <1.00                                  | <0.500                                                | <1.50                | <2.00                | <1.00                     |                      |                          |                                     |  |
| 6/23/2022                               | Pacific Crest  | <100                       | <0.200        | <1.00                                  | <0.500                                                | <1.50                | <4.00                | <1.00                     |                      |                          |                                     |  |
| 9/7/2022                                | Pacific Crest  | <100                       | <0.200        | <1.00                                  | <0.500                                                | <1.50                | <2.00                | <1.00                     |                      |                          |                                     |  |
| MW-9                                    | Pre-treatment  | 2/6/2012                   | C&A           | 5-20                                   | 43,400                                                | 5.64                 | 16.2                 | 1,660                     | 9,040                | 395                      | 2,490                               |  |
|                                         |                | 5/23/2012                  | C&A           |                                        | 53,600                                                | <5.0                 | 39.2                 | 1,610                     | 9,830                | 399                      | 2,340                               |  |
|                                         |                | 8/27/2012                  | C&A           |                                        | 40,900                                                | <6.25                | 103                  | 1,880                     | 7,320                | 508                      | 2,230                               |  |
|                                         |                | 12/3/2012                  | C&A           |                                        | 43,800                                                | 98.5                 | 71.5                 | 2,250                     | 11,900               | 322                      | 1,940                               |  |
|                                         |                | 2/25/2013                  | C&A           |                                        | 43,400                                                | 5.40                 | 140                  | 1,300                     | 7,460                | 248                      | 2,440                               |  |
|                                         |                | 1/17/2017                  | Pacific Crest |                                        | 34,000                                                | <20                  | <100                 | 1,200                     | 6,320                | 370                      | 2,300                               |  |

**Table 3**  
**Groundwater Analytical Results Summary**  
**Gary's Cannon Beach Service Center**  
**280 North Hemlock Street**  
**Cannon Beach, Oregon**  
**Pacific Crest Project No: 173-002**

| Well ID                     | ISCO Treatment | Sample Date                | Sampled By    | Screened Interval (feet <sup>1</sup> ) | Groundwater Analytical Results (micrograms per liter) |                      |                      |                           |                      |                          |                                     |
|-----------------------------|----------------|----------------------------|---------------|----------------------------------------|-------------------------------------------------------|----------------------|----------------------|---------------------------|----------------------|--------------------------|-------------------------------------|
|                             |                |                            |               |                                        | GRO <sup>2</sup>                                      | Benzene <sup>3</sup> | Toluene <sup>3</sup> | Ethylbenzene <sup>3</sup> | Xylenes <sup>3</sup> | Naphthalene <sup>3</sup> | 1,2,4-trimethylbenzene <sup>3</sup> |
| MW-9 (cont.)                | Post-treatment | WELL REDEVELOPED 5/10/2017 |               | 5-20                                   | -                                                     | -                    | -                    | -                         | -                    | -                        | -                                   |
|                             |                | 5/10/2017                  | Pacific Crest |                                        | 50,100                                                | <10.0                | <50.0                | 781                       | 3,080                | 516                      | 2,680                               |
|                             |                | 8/8/2017                   | Pacific Crest |                                        | 29,900                                                | <10.0                | 59.9                 | 810                       | 4,020                | 126                      | 1,130                               |
|                             |                | 12/7/2017                  | Pacific Crest |                                        | 28,200                                                | 20.8                 | <1.0                 | 955                       | 1,560                | 250                      | 1,860                               |
|                             |                | 3/26/2018                  | Pacific Crest |                                        | 4,720                                                 | 1.15                 | <2.0                 | 261                       | 4.86                 | 71.6                     | 20.6                                |
|                             |                | 6/14/2018                  | Pacific Crest |                                        | 8,890                                                 | 2.36                 | <5.0                 | 577                       | 15.30                | 168                      | 38.5                                |
|                             |                | 9/20/2018                  | Pacific Crest |                                        | 7,080                                                 | 1.54                 | <2.00                | 218                       | 96.5                 | 52.3                     | 100                                 |
|                             |                | 12/4/2018                  | Pacific Crest |                                        | <100                                                  | <0.20                | <1.00                | 3.95                      | <1.50                | <2.00                    | <1.00                               |
|                             |                | 3/12/2019                  | Pacific Crest |                                        | 6,690                                                 | 0.675                | 1.29                 | 85.2                      | 228                  | 98.0                     | 155                                 |
|                             |                | 6/6/2019                   | Pacific Crest |                                        | 9,120                                                 | 2.74                 | <5.00                | 397                       | 225                  | 31.8                     | 273                                 |
|                             |                | 9/18/2019                  | Pacific Crest |                                        | 1,480                                                 | 1.91                 | <1.00                | 36.8                      | 89.1                 | 27.8                     | 86.4                                |
|                             |                | 11/19/2019                 | Pacific Crest |                                        | 19,600                                                | 40.6                 | 20.8                 | 934                       | 2,020                | 364                      | 917                                 |
|                             |                | 6/29/2020                  | Pacific Crest |                                        | 27,300                                                | 28.0                 | 18.2                 | 1,090                     | 1,950                | 589                      | 1,480                               |
|                             |                | 9/23/2020                  | Pacific Crest |                                        | 16,700                                                | 10.5                 | 76.5                 | 634                       | 1,940                | <200                     | 835                                 |
|                             |                | 12/21/2020                 | Pacific Crest |                                        | 200                                                   | <0.200               | <1.00                | 1.40                      | <1.50                | 4.59                     | 8.32                                |
|                             |                | 1/14/2021                  | Pacific Crest |                                        | 756                                                   | 0.260                | <1.00                | 15.1                      | 92.9                 | 7.58                     | 48.4                                |
|                             |                | 4/26/2021                  | Pacific Crest |                                        | 39,000                                                | <5.00                | 42.5                 | 1,220                     | 5,230                | 342                      | 2,310                               |
|                             |                | 7/28/2021                  | Pacific Crest |                                        | 26,400                                                | <2.00                | <10.0                | 587                       | 1,120                | 360                      | 2,220                               |
|                             |                | 9/1/2021                   | Pacific Crest |                                        | 10,900                                                | <2.00                | <10.0                | 178                       | 243                  | 174                      | 848                                 |
|                             |                | 12/14/2021                 | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | 2.30                      | 2.04                 | 3.18                     | 2.30                                |
|                             |                | 3/22/2022                  | Pacific Crest |                                        | 1,060                                                 | <0.200               | <1.00                | 9.17                      | 38.4                 | 14.7                     | 81.0                                |
|                             |                | 6/23/2022                  | Pacific Crest |                                        | 8,180                                                 | <2.00                | <10.0                | 176                       | 802                  | 73.1                     | 548                                 |
|                             |                | 9/7/2022                   | Pacific Crest |                                        | 10,700                                                | 0.72                 | 21.1                 | 318                       | 739                  | 174                      | 599                                 |
| MW-10                       | Post-treatment | WELL INSTALLED 12/7/2020   |               | 5-15                                   | 8,490                                                 | 0.400                | 1.49                 | 7.32                      | 38.5                 | 26.9                     | 485                                 |
|                             |                | 1/14/2021                  | Pacific Crest |                                        | 1,810                                                 | <0.200               | <1.00                | <0.5000                   | <1.50                | 2.33                     | 104                                 |
|                             |                | 4/26/2021                  | Pacific Crest |                                        | 5,800                                                 | <0.200               | <1.00                | 1.81                      | 3.83                 | 10.4                     | 251                                 |
|                             |                | 7/28/2021                  | Pacific Crest |                                        | 7,340                                                 | 0.840                | <2.00                | 44.40                     | 121.00               | 59.6                     | 189                                 |
|                             |                | 9/1/2021                   | Pacific Crest |                                        | 74,100                                                | 5.05                 | 3,590                | 3,020                     | 20,100               | 512                      | 1,920                               |
|                             |                | 12/14/2021                 | Pacific Crest |                                        | 1,280                                                 | 0.260                | <1.00                | 3.64                      | 4.22                 | 5.45                     | 59.0                                |
|                             |                | 3/22/2022                  | Pacific Crest |                                        | 766                                                   | <0.200               | <1.00                | 2.83                      | 3.22                 | 2.55                     | 29.9                                |
|                             |                | 6/23/2022                  | Pacific Crest |                                        | 1,820                                                 | <0.200               | <1.00                | 3.70                      | 5.10                 | 2.86                     | 27.8                                |
|                             |                | 9/7/2022                   | Pacific Crest |                                        | 6,470                                                 | 1.31                 | 1.14                 | 80.7                      | 97.0                 | 111                      | 223.0                               |
| MW-11                       | Post-treatment | WELL INSTALLED 12/7/2020   |               | 5-15                                   | 3,180                                                 | <0.200               | 17.1                 | 30.1                      | 306                  | 23.7                     | 156                                 |
|                             |                | 1/14/2021                  | Pacific Crest |                                        | 1,530                                                 | <0.200               | 7.39                 | 14.8                      | 122                  | 10.8                     | 90.0                                |
|                             |                | 4/26/2021                  | Pacific Crest |                                        | 8,010                                                 | 1.12                 | 2,430                | 735                       | 4,740                | 55.2                     | 469                                 |
|                             |                | 7/28/2021                  | Pacific Crest |                                        | 101,000                                               | 7.00                 | 5,740                | 3100                      | 18,500               | 670                      | 2,270                               |
|                             |                | 9/1/2021                   | Pacific Crest |                                        | 106,000                                               | 6.90                 | 4,730                | 3,770                     | 22,300               | 843                      | 2,510                               |
|                             |                | 12/14/2021                 | Pacific Crest |                                        | 1,310                                                 | <0.200               | 5.01                 | 11.2                      | 78.6                 | 7.44                     | 99.6                                |
|                             |                | 3/22/2022                  | Pacific Crest |                                        | 1,150                                                 | <0.200               | 30.8                 | 20.2                      | 124                  | 4.61                     | 54.5                                |
|                             |                | 6/23/2022                  | Pacific Crest |                                        | 1,590                                                 | 0.230                | 169                  | 84.6                      | 408                  | 12.6                     | 72.5                                |
|                             |                | 9/7/2022                   | Pacific Crest |                                        | 73,500                                                | 2.52                 | 2,310                | 2,800                     | 17,600               | 443                      | 2,620                               |
| MW-12                       | Post-treatment | WELL INSTALLED 12/7/2020   |               | 5-15                                   | 237                                                   | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | 1.01                                |
|                             |                | 1/14/2021                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |
|                             |                | 4/26/2021                  | Pacific Crest |                                        | 25,000                                                | 2.08                 | <20.0                | 658                       | 3,160                | 214                      | 1,670                               |
|                             |                | 7/28/2021                  | Pacific Crest |                                        | 19,400                                                | <2.00                | <10.0                | 356                       | 1,270                | 252                      | 1,970                               |
|                             |                | 9/1/2021                   | Pacific Crest |                                        | 10,800                                                | 2.43                 | <10.0                | 66.0                      | 241                  | 99.6                     | 619                                 |
|                             |                | 12/14/2021                 | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |
|                             |                | 3/22/2022                  | Pacific Crest |                                        | <100                                                  | <0.200               | <1.00                | <0.500                    | <1.50                | <2.00                    | <1.00                               |
|                             |                | 6/23/2022                  | Pacific Crest |                                        | 3,270                                                 | <2.00                | <10.0                | 34.3                      | 260                  | <40.0                    | 236                                 |
|                             |                | 9/8/2022                   | Pacific Crest |                                        | 13,400                                                | 0.910                | <1.00                | 104                       | 338                  | 107                      | 762                                 |
| Site-Specific Cleanup Level |                |                            |               | 14,000                                 | 1,800                                                 | 220,000              | 4,500                | 23,000                    | 500                  | 6,300                    |                                     |

**NOTES:**

<sup>1</sup> feet below top of well casing

<sup>2</sup> Sample analyzed by NWTPH-Gx

<sup>3</sup> Sample analyzed by EPA Method 8260

E = due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.

GRO = gasoline range organics

**BOLD:** indicates detected concentration exceeds Site-specific cleanup level

< = result is less than laboratory practical quantitation limit indicated

NA = not analyzed

K&S = K&S Environmental, Inc.

C&A = Coles & Associates, LLC

Pacific Crest = Pacific Crest Environmental, LLC

Table 6. Soil Gas Sample Analysis Results (µg/m³) including Helium (%)

| Sample ID<br>(date)                        | acetone                                                             | 2-butanone<br>(MEK) | benzene | chloroform | chloromethane | cumene    | ethanol | freon 11  | freon 12 | methylene<br>chloride | tetrachloroethene<br>(PCE) | toluene    | xylene  | gasoline-range<br>hydrocarbon | naphthalene | cyclohexane | heptane | 2,2,4-trimethyl<br>pentane | helium |
|--------------------------------------------|---------------------------------------------------------------------|---------------------|---------|------------|---------------|-----------|---------|-----------|----------|-----------------------|----------------------------|------------|---------|-------------------------------|-------------|-------------|---------|----------------------------|--------|
| PP-1 (0512)                                | 3.0                                                                 | <2.8                | <0.60   | 2.4        | <0.39         | <0.92     | <1.8    | 1.3       | 2.2      | <1.3                  | <1.3                       | <0.70      | <0.81   | <76                           | <4.9        | <0.64       | <0.77   | <4.4                       | 0.16   |
| PP-1 (0812)                                | 11                                                                  | <2.9                | 1.5     | 1.2        | 0.94          | 1.1       | 2.1     | 2.3       | 2.3      | <1.4                  | 1.4                        | <0.74      | <0.85   | <80                           | <5.1        | <0.67       | <0.80   | <4.6                       | <0.098 |
| PP-1 (1212)                                | 17                                                                  | 3.7                 | 1.1     | <0.91      | <0.34         | <0.92     | 2.0     | 2.3       | 3.4      | <1.3                  | <1.3                       | <0.70      | <0.81   | <76                           | <4.9        | <0.64       | <0.77   | <4.4                       | <0.094 |
| PP-1 (0213)                                | 11                                                                  | 3.3                 | <0.53   | <0.82      | <0.43         | <0.82     | 8.7     | 2.6       | 2.5      | <1.2                  | 1.4                        | 3.0        | <0.72   | <68                           | <4.4        | 3.3         | <0.68   | <3.9                       | <0.084 |
| PP-2 (0512)                                | 14                                                                  | <2.8                | <0.60   | 3.2        | <0.39         | <0.92     | 11      | 1.6       | 2.2      | 1.4                   | <1.3                       | 3.7        | <0.81   | <76                           | <4.9        | <0.64       | <0.77   | <4.4                       | <0.094 |
| PP-2 (0812)                                | 5.4                                                                 | <2.8                | <0.61   | 1.4        | <0.39         | <0.94     | 1.8     | 3.1       | 2.5      | <1.3                  | <1.3                       | <0.72      | <0.83   | <78                           | <5.0        | <0.66       | <0.78   | <4.5                       | <0.096 |
| PP-2 (1212)                                | 7.0                                                                 | <2.7                | <0.58   | <0.89      | <0.38         | <0.90     | <1.8    | 2.4       | 3.7      | <1.3                  | <1.2                       | <0.69      | <0.79   | <75                           | <4.8        | <0.63       | <0.75   | <4.3                       | <0.092 |
| PP-2 (0213)                                | <2.1                                                                | <2.6                | <0.56   | <0.86      | <0.36         | <0.86     | 1.9     | 1.4       | 2.7      | <1.2                  | <1.2                       | 0.96       | <0.76   | <72                           | <4.6        | <0.60       | <0.72   | <4.1                       | <0.088 |
| PP-3 (0512)                                | 3.1                                                                 | 3.6                 | <0.54   | <0.82      | <0.35         | <0.82     | <1.6    | 3.4       | 2.2      | <1.2                  | 1.8                        | 0.72       | 0.74    | <69                           | <4.4        | <0.58       | <0.69   | <3.9                       | 0.43   |
| PP-3 (0812)                                | 3.3                                                                 | <2.8                | <0.60   | <0.91      | <0.39         | <0.92     | <1.8    | 6.8       | 2.7      | <1.3                  | 2.9                        | <0.70      | <0.81   | <76                           | <4.9        | <0.64       | <0.77   | <4.4                       | 0.86   |
| PP-3 (1212)                                | 11                                                                  | <2.8                | <0.61   | <0.93      | <0.39         | <0.94     | <1.7    | 7.8       | 3.7      | <1.3                  | 1.6                        | <0.72      | <0.83   | <78                           | <5.0        | <0.66       | <0.78   | <4.5                       | 0.26   |
| PP-3 (0213)                                | 7.4                                                                 | <2.6                | 0.95    | <0.87      | <0.37         | <0.88     | 3.4     | 1.2       | 2.6      | <1.2                  | <1.2                       | <0.67      | <0.78   | 110                           | <4.7        | <0.62       | 7.2     | 4.3                        | 0.29   |
| RBCs                                       | Risk-Based Concentrations (from DEQ's RBC table, dated 7 June 2012) |                     |         |            |               |           |         |           |          |                       |                            |            |         |                               |             |             |         |                            |        |
| occupational, soil<br>gas, inhalation      | ---                                                                 | ---                 | 1,600   | 530        | 390,000       | 1,800,000 | ---     | 3,100,000 | ---      | 26,000                | 47,000                     | 22,000,000 | 440,000 | 1,700,000                     | 360         | ---         | ---     | ---                        | ---    |
| residential, soil gas,<br>inhalation       | ---                                                                 | ---                 | 62      | 21         | 19,000        | 83,000    | ---     | 150,000   | ---      | 1,000                 | 1,900                      | 1,000,000  | 21,000  | 79,000                        | 14          | ---         | ---     | ---                        | ---    |
| urban residential, soil<br>gas, inhalation | ---                                                                 | ---                 | 170     | 58         | 19,000        | 83,000    | ---     | 150,000   | ---      | 2,800                 | 5,100                      | 1,000,000  | 21,000  | 79,000                        | 39          | ---         | ---     | ---                        | ---    |

Notes:

Risk-Based Concentrations (RBCs) are from DEQ’s RBDM guidance document, as amended 7 June 2012. Bold shading highlights detected values (i.e, results exceeding method reporting limits). Methylene chloride is listed as dichloromethane and cumene is listed as propylbenzene, iso, in the DEQ’s Table of RBCs. DEQ has not identified RBDM RBCs for acetone, 2-butanone, ethanol, freon 12, cyclohexane, heptane, and 2,2,4-trimethylpentane. Soil-gas wells PP-1 through PP-3 were installed by C&A in November 2011.

Table B-1  
Soil Analytical Results Summary  
Gary's Cannon Beach Service Center  
280 North Hemlock Street  
Cannon Beach, Oregon  
Pacific Crest Project No: 173-001

| Sample ID                                              | Sample Date | Sampled By    | Depth Sampled<br>(feet bgs) | Soil Analytical Results (milligrams per kilogram) |                    |                  |                      |                      |                           |                      |                          |                   |                               |                              |                                     |                                     |                  |                  |                   |                                |
|--------------------------------------------------------|-------------|---------------|-----------------------------|---------------------------------------------------|--------------------|------------------|----------------------|----------------------|---------------------------|----------------------|--------------------------|-------------------|-------------------------------|------------------------------|-------------------------------------|-------------------------------------|------------------|------------------|-------------------|--------------------------------|
|                                                        |             |               |                             | GRO <sup>1</sup>                                  | DRO <sup>2,3</sup> | ORO <sup>2</sup> | Benzene <sup>4</sup> | Toluene <sup>4</sup> | Ethylbenzene <sup>4</sup> | Xylenes <sup>4</sup> | Naphthalene <sup>4</sup> | MTBE <sup>4</sup> | Isopropylbenzene <sup>4</sup> | n-propylbenzene <sup>4</sup> | 1,2,4-trimethylbenzene <sup>4</sup> | 1,3,5-trimethylbenzene <sup>4</sup> | EDB <sup>4</sup> | EDC <sup>4</sup> | Lead <sup>5</sup> | Tetrachloroethene <sup>4</sup> |
| #1 (South 4,000-Gallon UST, East Bottom) <sup>6</sup>  | 10/15/2007  | K&S           | 9                           | 402                                               | NA                 | NA               | <0.0152              | 1.09                 | 3.12                      | 30.7                 | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| #2 (South 4,000-Gallon UST, West Bottom) <sup>6</sup>  | 10/15/2007  | K&S           | 9                           | 206                                               | NA                 | NA               | <0.0311              | <0.249               | 0.820                     | 13.8                 | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| #3 (North 4,000-Gallon UST, East Bottom) <sup>6</sup>  | 10/15/2007  | K&S           | 9                           | 7,960                                             | Detected           | <120             | 0.317                | 68.5                 | 81.3                      | 666                  | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| # 4 (North 4,000-Gallon UST, West Bottom) <sup>6</sup> | 10/15/2007  | K&S           | 9                           | 77.3                                              | NA                 | NA               | 0.0998               | <0.125               | 1.41                      | 10.4                 | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| #5 (6,000-Gallon UST, East Bottom) <sup>6</sup>        | 10/16/2007  | K&S           | 11                          | 224                                               | NA                 | NA               | 0.0292               | 5.33                 | 3.53                      | 28.1                 | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| #6 (6,000-Gallon UST, West Bottom) <sup>6</sup>        | 10/16/2007  | K&S           | 11                          | 1,770                                             | Detected           | <119             | <0.0657              | 21.2                 | 23.0                      | 180                  | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| #7 (2,000 Gallon UST, East Bottom) <sup>6</sup>        | 10/16/2007  | K&S           | 9                           | 30,200                                            | Detected           | <116             | 3.40                 | 375                  | 520                       | 3,580                | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| #8 (2,000-Gallon UST, West Bottom) <sup>6</sup>        | 10/16/2007  | K&S           | 9                           | 1,530                                             | NA                 | NA               | 0.334                | 30.3                 | 25.6                      | 182                  | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| #9 - Under Piping <sup>6</sup>                         | 10/16/2007  | K&S           | 3                           | <20.8                                             | <32.8              | 161              | NA                   | NA                   | NA                        | NA                   | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| #10 - Under Dispenser <sup>6</sup>                     | 10/16/2007  | K&S           | 2.5                         | <17.5                                             | 649                | <58.9            | NA                   | NA                   | NA                        | NA                   | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C1 (West Wall, North End) <sup>7</sup>                 | 10/30/2007  | K&S           | 7.5                         | 9,850                                             | NA                 | NA               | <0.0530              | 1.56                 | 15.9                      | 266                  | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C2 (North Wall, West End) <sup>7</sup>                 | 10/30/2007  | K&S           | 7.5                         | 13,600                                            | NA                 | NA               | <0.0527              | 26.8                 | 105                       | 1,140                | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C3 (North Wall, East End) <sup>7</sup>                 | 10/30/2007  | K&S           | 7.5                         | 6.61                                              | NA                 | NA               | <0.0130              | <0.104               | 0.0597                    | 0.503                | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C4 (East Wall) <sup>7</sup>                            | 10/30/2007  | K&S           | 5                           | 4,320                                             | NA                 | NA               | <0.0512              | 17.0                 | 34.4                      | 330                  | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C5 (Southeast Wall) <sup>7</sup>                       | 10/30/2007  | K&S           | 5                           | 4,840                                             | NA                 | NA               | <0.0507              | 35.1                 | 55.7                      | 463                  | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C6 (Southeast Wall) <sup>7</sup>                       | 10/30/2007  | K&S           | 5                           | 3,270                                             | NA                 | NA               | <0.0512              | 6.37                 | 20.2                      | 192                  | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C7 (South Wall) <sup>7</sup>                           | 10/30/2007  | K&S           | 7.5                         | <4.43                                             | NA                 | NA               | <0.0138              | <0.111               | <0.0277                   | 0.130                | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C8 (Northwest Corner) <sup>7</sup>                     | 10/30/2007  | K&S           | 4                           | <4.16                                             | NA                 | NA               | <0.0130              | <0.104               | <0.0260                   | <0.0781              | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C9 (West Wall, South End) <sup>7</sup>                 | 10/31/2007  | K&S           | 5                           | <4.20                                             | NA                 | NA               | <0.0131              | <0.105               | <0.0263                   | <0.0788              | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| C10 (West Wall, South End) <sup>7</sup>                | 10/31/2007  | K&S           | 7.5                         | 3,200                                             | NA                 | NA               | <0.161               | 17.5                 | 34.7                      | 344                  | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| RB1-A (7.5)                                            | 5/2009      | K&S           | 7.5                         | 3,930                                             | NA                 | NA               | <0.0656              | 0.480                | 6.45                      | 72.9                 | 11.6                     | <0.262            | 7.68                          | 37.1                         | 285                                 | 99.3                                | <0.131           | <0.131           | NA                | NA                             |
| RB1-B (8)                                              | 5/2009      | K&S           | 8                           | 1,100                                             | NA                 | NA               | NA                   | NA                   | NA                        | NA                   | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| RB1-C (8.5)                                            | 5/2009      | K&S           | 8.5                         | 3,350                                             | NA                 | NA               | <0.173               | 2.93                 | 18.4                      | 156                  | 15.5                     | <0.693            | 10.4                          | 41.0                         | 221                                 | 73.6                                | <0.346           | <0.346           | NA                | NA                             |
| PP-1 (14-14.5) <sup>8</sup>                            | 11/7/2011   | C&A           | 14-14.5                     | 81.0                                              | NA                 | NA               | <0.0327              | <0.131               | <0.0655                   | <0.196               | <0.262                   | <0.131            | <0.131                        | <0.0655                      | <0.131                              | <0.131                              | <0.0655          | <0.0655          | NA                | NA                             |
| PP-1 (18.5-19) <sup>8</sup>                            | 11/7/2011   | C&A           | 18.5-19                     | 378                                               | NA                 | NA               | <0.147               | <0.589               | 0.512                     | 5.60                 | 4.31                     | <0.589            | 1.10                          | 4.13                         | 31.7                                | 9.02                                | <0.294           | <0.294           | NA                | NA                             |
| PP-2 (13-13.5) <sup>8</sup>                            | 11/7/2011   | C&A           | 13-13.5                     | 758                                               | NA                 | NA               | <0.0711              | 2.07                 | 14.6                      | 111                  | 10.1                     | <0.284            | 1.51                          | 5.64                         | 39.8                                | 10.6                                | <0.142           | <0.142           | NA                | NA                             |
| PP-2 (19.5-20.0) <sup>8</sup>                          | 11/7/2011   | C&A           | 19.5-20                     | 110                                               | NA                 | NA               | <0.112               | 1.09                 | 2.84                      | 17.1                 | 1.48                     | <0.447            | <0.447                        | 0.823                        | 7.25                                | 2.00                                | <0.224           | <0.224           | NA                | NA                             |
| PP-3 (12-12.5)                                         | 11/7/2011   | C&A           | 12-12.5                     | 15,100                                            | NA                 | NA               | <0.493               | <1.97                | <0.986                    | 97.6                 | 23.4                     | <1.97             | <1.97                         | 1.99                         | 349                                 | 291                                 | <0.986           | <0.986           | NA                | NA                             |
| PP-3 (15.5-16) <sup>8</sup>                            | 11/7/2011   | C&A           | 15.5-16                     | 307                                               | NA                 | NA               | <0.137               | <0.546               | 6.67                      | 59.1                 | 2.96                     | <0.546            | 0.590                         | 1.73                         | 13.8                                | 3.91                                | <0.273           | <0.273           | NA                | NA                             |
| MW-9 (10.5-11) <sup>8</sup>                            | 11/7/2011   | C&A           | 10.5-11                     | <61.0                                             | NA                 | NA               | <0.152               | <0.610               | <0.305                    | <0.915               | <1.22                    | <0.610            | <0.610                        | <0.305                       | <0.610                              | <0.610                              | <0.305           | <0.305           | NA                | NA                             |
| MW-9 (14-14.5) <sup>8</sup>                            | 11/7/2011   | C&A           | 14-14.5                     | 283                                               | NA                 | NA               | 0.764                | <0.626               | 6.89                      | 52.6                 | 3.47                     | <0.626            | <0.626                        | 1.73                         | 14.3                                | 4.22                                | <0.313           | <0.313           | NA                | NA                             |
| MW-9 (17-17.5) <sup>8</sup>                            | 11/7/2011   | C&A           | 17-17.5                     | 263                                               | NA                 | NA               | <0.132               | 6.52                 | 9.11                      | 59.5                 | 2.00                     | <0.527            | <0.527                        | 0.969                        | 7.16                                | 1.86                                | <0.263           | <0.263           | NA                | NA                             |
| SB1-022614-4.5-5.0                                     | 2/26/2014   | Pacific Crest | 4.5-5.0                     | <4.60                                             | NA                 | NA               | <0.0000452           | 0.000364             | 0.000813                  | 0.00611              | 0.000232                 | <0.0000375        | 0.000170                      | 0.000670                     | 0.00270                             | 0.00114                             | <0.0000469       | <0.000113        | 1.24              | NA                             |
| SB1-022614-9.5-10.0 <sup>8</sup>                       | 2/26/2014   | Pacific Crest | 9.5-10.0                    | 488                                               | NA                 | NA               | 0.00175              | 0.271                | 1.760                     | 8.500                | 4.670                    | <0.0000341        | 2.260                         | 6.770                        | 13.800                              | 8.380                               | <0.0000427       | 0.000174         | 1.94              | NA                             |
| SB1-022614-14.5-15.0 <sup>8</sup>                      | 2/26/2014   | Pacific Crest | 14.5-15.0                   | <6.23                                             | NA                 | NA               | <0.0000424           | 0.0125               | 0.0222                    | 0.2422               | 0.0957                   | <0.0000352        | 0.00156                       | 0.00818                      | 0.127                               | 0.0300                              | <0.0000440       | <0.000106        | 0.770             | NA                             |
| SB2-032614-2.0-2.5                                     | 3/26/2014   | Pacific Crest | 2.0-2.5                     | <6.44                                             | NA                 | NA               | 0.000380             | 0.00578              | 0.00201                   | 0.01083              | 0.000389                 | <0.0000455        | 0.000232                      | 0.000620                     | 0.00310                             | 0.000918                            | <0.0000570       | <0.000137        | 1.04              | NA                             |
| SB3-032614-2.0-2.5                                     | 3/26/2014   | Pacific Crest | 2.0-2.5                     | <6.54                                             | NA                 | NA               | 0.000332             | 0.00484              | 0.00202                   | 0.01104              | 0.000256                 | <0.0000453        | 0.000204                      | 0.000590                     | 0.00325                             | 0.000968                            | <0.0000567       | <0.000137        | 0.927             | NA                             |
| SB4-032614-1.5-2.0                                     | 3/26/2014   | Pacific Crest | 1.5-2.0                     | <6.44                                             | NA                 | NA               | 0.000338             | 0.00448              | 0.00182                   | 0.01003              | 0.000205                 | <0.0000423        | 0.000194                      | 0.000557                     | 0.00298                             | 0.000888                            | 0.0000529        | <0.000128        | 1.05              | NA                             |
| SB5-032614-2.0-2.5                                     | 3/26/2014   | Pacific Crest | 2.0-2.5                     | <6.62                                             | NA                 | NA               | 0.000233             | 0.00353              | 0.00160                   | 0.00872              | 0.000198                 | <0.0000451        | 0.000186                      | 0.000519                     | 0.00267                             | 0.000816                            | <0.0000564       | <0.000136        | 1.03              | NA                             |
| SB6-032614-2.0-2.5                                     | 3/26/2014   | Pacific Crest | 2.0-2.5                     | <6.17                                             | NA                 | NA               | 0.000282             | 0.00379              | 0.00147                   | 0.00804              | 0.000149                 | <0.0000414        | 0.000151                      | 0.000440                     | 0.00226                             | 0.000686                            | <0.0000518       | <0.000125        | 1.09              | NA                             |
| 0 I                                                    | 3/26/2014   | Pacific Crest | 1.5-2.0                     | <6.22                                             | NA                 | NA               | 0.000620             | 0.00507              | 0.00150                   | 0.00808              | 0.000140                 | <0.0000416        | 0.000151                      | 0.000416                     | 0.00210                             | 0.000662                            | <0.0000521       | <0.000126        | 0.976             | NA                             |
| SB8-071014-7.0-7.5                                     | 7/10/2014   | Pacific Crest | 7.0-7.5                     | NA                                                | NA                 | NA               | NA                   | NA                   | NA                        | NA                   | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | <0.0290                        |
| SB9-071014-5.0-6.0                                     | 7/10/2014   | Pacific Crest | 5.0-6.0                     | NA                                                | NA                 | NA               | NA                   | NA                   | NA                        | NA                   | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | <0.0283                        |
| SB10-071014-6.0-7.0                                    | 7/10/2014   | Pacific Crest | 6.0-7.0                     | 6.56                                              | <21.8              | <54.5            | NA                   | NA                   | NA                        | NA                   | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |
| SB11-071014-6.5-7.5                                    | 7/10/2014   | Pacific Crest | 6.5-7.5                     | <5.96                                             | <25.6              | <63.9            | NA                   | NA                   | NA                        | NA                   | NA                       | NA                | NA                            | NA                           | NA                                  | NA                                  | NA               | NA               | NA                | NA                             |

Table B-1  
Soil Analytical Results Summary  
Gary's Cannon Beach Service Center  
280 North Hemlock Street  
Cannon Beach, Oregon  
Pacific Crest Project No: 173-001

| Sample ID                                          | Sample Date                                     | Sampled By          | Depth Sampled<br>(feet bgs) | Soil Analytical Results (milligrams per kilogram) |                    |                  |                      |                      |                           |                      |                          |                     |                               |                              |                                     |                                     |                     |                     |                    |                                |
|----------------------------------------------------|-------------------------------------------------|---------------------|-----------------------------|---------------------------------------------------|--------------------|------------------|----------------------|----------------------|---------------------------|----------------------|--------------------------|---------------------|-------------------------------|------------------------------|-------------------------------------|-------------------------------------|---------------------|---------------------|--------------------|--------------------------------|
|                                                    |                                                 |                     |                             | GRO <sup>1</sup>                                  | DRO <sup>2,3</sup> | ORO <sup>2</sup> | Benzene <sup>4</sup> | Toluene <sup>4</sup> | Ethylbenzene <sup>4</sup> | Xylenes <sup>4</sup> | Naphthalene <sup>4</sup> | MTBE <sup>4</sup>   | Isopropylbenzene <sup>4</sup> | n-propylbenzene <sup>4</sup> | 1,2,4-trimethylbenzene <sup>4</sup> | 1,3,5-trimethylbenzene <sup>4</sup> | EDB <sup>4</sup>    | EDC <sup>4</sup>    | Lead <sup>5</sup>  | Tetrachloroethene <sup>4</sup> |
| B1-8.0 <sup>6</sup>                                | 3/4/2014                                        | Farallon            | 8.0                         | 54                                                | NA                 | NA               | NA                   | NA                   | NA                        | NA                   | NA                       | NA                  | NA                            | NA                           | NA                                  | NA                                  | NA                  | NA                  | NA                 |                                |
| B2-11.0 <sup>8</sup>                               | 3/4/2014                                        | Farallon            | 11.0                        | 7.3                                               | NA                 | NA               | NA                   | NA                   | NA                        | NA                   | NA                       | NA                  | NA                            | NA                           | NA                                  | NA                                  | NA                  | NA                  | NA                 |                                |
| B3-8.5 <sup>9</sup>                                | 3/4/2014                                        | Farallon            | 8.5                         | 5,700                                             | NA                 | NA               | <3.003 <sup>9</sup>  | <3.003 <sup>9</sup>  | 42.341 <sup>9</sup>       | 370.041 <sup>9</sup> | 23.509 <sup>9</sup>      | <3.003 <sup>9</sup> | <3.003 <sup>9</sup>           | 86.756 <sup>9</sup>          | 219.031 <sup>9</sup>                | 90.582 <sup>9</sup>                 | <3.003 <sup>9</sup> | <3.003 <sup>9</sup> | 21.3 <sup>10</sup> |                                |
| B4-10.5 <sup>8</sup>                               | 3/4/2014                                        | Farallon            | 10.5                        | 1,600                                             | NA                 | NA               | NA                   | NA                   | NA                        | NA                   | NA                       | NA                  | NA                            | NA                           | NA                                  | NA                                  | NA                  | NA                  | NA                 |                                |
| B5-8.1 <sup>8</sup>                                | 3/4/2014                                        | Farallon            | 8.1                         | 6,500                                             | NA                 | NA               | <3.003 <sup>9</sup>  | <3.003 <sup>9</sup>  | 5.995 <sup>9</sup>        | 112.103 <sup>9</sup> | 25.065 <sup>9</sup>      | <3.003 <sup>9</sup> | <3.003 <sup>9</sup>           | 24.627 <sup>9</sup>          | 168.552 <sup>9</sup>                | 91.582 <sup>9</sup>                 | <3.003 <sup>9</sup> | <3.003 <sup>9</sup> | NA                 |                                |
| Risk-Based Concentrations<br>(by exposure pathway) | Ingestion, Dermal<br>Contact, and<br>Inhalation | Residential         |                             | 1,200                                             | 1,100              | 2,800            | 8.2                  | 5,800                | 34                        | 1,400                | 5.3                      | 250                 | 3,500                         | --                           | 110                                 | 780                                 | 0.16                | 3.6                 | 400                | 220                            |
|                                                    |                                                 | Occupational        |                             | 20,000                                            | 14,000             | 36,000           | 37                   | 88,000               | 150                       | 25,000               | 23                       | 1,100               | 57,000                        | --                           | 2,000                               | 12,000                              | 0.73                | 16                  | 800                | 1,000                          |
|                                                    |                                                 | Construction Worker |                             | 9,700                                             | 4,600              | 11,000           | 380                  | 28,000               | 1,700                     | 20,000               | 580                      | 12,000              | 27,000                        | --                           | 2,000                               | 3,500                               | 9                   | 200                 | 800                | 1,800                          |
|                                                    |                                                 | Excavation Worker   |                             | >Max                                              | >Max               | >Max             | 11,000               | 770,000              | 49,000                    | 560,000              | 16,000                   | 320,000             | 750,000                       | --                           | 54,000                              | 98,000                              | 250                 | 5,600               | 800                | 50,000                         |
|                                                    | Volatilization to<br>Outdoor Air                | Residential         |                             | 5,900                                             | >Max               | >Max             | 11                   | >Csat                | 36                        | >Csat                | 6.4                      | 340                 | >Csat                         | --                           | 230                                 | >Max                                | 0.15                | 3.4                 | NV                 | >Csat                          |
|                                                    |                                                 | Occupational        |                             | 69,000                                            | >Max               | >Max             | 50                   | >Csat                | 160                       | >Csat                | 83                       | 1,500               | >Csat                         | --                           | 980                                 | >Max                                | 0.65                | 15                  | NV                 | >Csat                          |
|                                                    | Vapor Intrusion<br>Into Buildings               | Residential         |                             | 94                                                | >Max               | >Max             | 0.16                 | >Csat                | 1.3                       | 160                  | 6.4                      | 8.5                 | >Csat                         | --                           | 16                                  | >Max                                | 0.012               | 0.077               | NV                 | 2.8                            |
|                                                    |                                                 | Occupational        |                             | >Max                                              | >Max               | >Max             | 2.1                  | >Csat                | 17                        | >Csat                | 83                       | 110                 | >Csat                         | --                           | 210                                 | >Max                                | 0.16                | 1.0                 | NV                 | 36                             |
|                                                    | Leaching to<br>Groundwater                      | Residential         |                             | 31                                                | 9,500              | >Max             | 0.023                | 150                  | 0.22                      | 24                   | 0.077                    | 0.11                | 140                           | --                           | 2.8                                 | 50                                  | 0.00012             | 0.0028              | 30                 | 0.46                           |
|                                                    |                                                 | Occupational        |                             | 130                                               | >Max               | >Max             | 0.10                 | 490                  | 0.90                      | 100                  | 0.34                     | 0.54                | >Csat                         | --                           | 12                                  | 110                                 | 0.00056             | 0.013               | 30                 | 1.90                           |
| Site Cleanup Level                                 |                                                 |                     |                             | 9,700                                             | -                  | -                | -                    | -                    | -                         | -                    | -                        | -                   | -                             | -                            | -                                   | -                                   | -                   | -                   | -                  | -                              |

NOTES:

<sup>1</sup> Sample analyzed by EPA Method NWTPH-Gx or NWTPH-HCID

<sup>2</sup> Sample analyzed by EPA Method NWTPH-Dx or NWTPH-HCID

<sup>3</sup> Results in the diesel organic range are primarily due to overlap from a gasoline range product

<sup>4</sup> Sample analyzed by EPA Method 8260

<sup>5</sup> Sample analyzed by EPA Method 6020

<sup>6</sup> Sample collected during underground storage tank (UST) system decommissioning

<sup>7</sup> Confirmation sample collected at limits of remedial excavation

<sup>8</sup> Sample collected in saturated zone

<sup>9</sup> Sample analyzed by gas chromatography/mass spectrometry (GC/MS)

<sup>10</sup> Sampled analyzed by EPA Method 6010B

GRO = gasoline range organics

DRO = diesel range organics

ORO = oil range organics

MTBE = methyl tert-butyl ether

EDB = ethylene dibromide

EDC = 1,2-dichloroethane

bgs = below ground surface

RBC = risk-based concentration

**BOLD:** indicates detected concentration exceeds Site cleanup level (generic RBC for construction workers via *Ingestion, Dermal Contact, and Inhalation* exposure pathway)

< = result is less than laboratory practical quantitation limit indicated

NA = not analyzed

NV = non-volatile

'-' = generic risk-based concentration unavailable

>Max = The constituent risk-based concentration for this pathway is calculated as greater than 1,000,000 mg/kg or 1,000,000 mg/L. Therefore, this substance is deemed not to pose risks in this scenario (per Oregon Department of Environmental Quality's Risk-Based Concentrations for Individual Chemicals, dated June 7, 2012).

K&S = K&S Environmental, Inc.

C&A = Coles & Associates, LLC

Pacific Crest = Pacific Crest Environmental, LLC

Farallon = Farallon Consulting, L.L.C.