

ATTACHMENT 10

Contamination and Toxic Substances

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Contamination and Toxic Substances (Multifamily and Non-Residential Properties)

General requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.		24 CFR 58.5(i)(2) 24 CFR 50.3(i)
Reference		
https://www.hudexchange.info/programs/environmental-review/site-contamination		

1. How was site contamination evaluated? ¹ Select all that apply.

- ASTM Phase I ESA
- ASTM Phase II ESA
- Remediation or clean-up plan
- ASTM Vapor Encroachment Screening
- None of the above

→ Provide documentation and reports and include an explanation of how site contamination was evaluated in the Worksheet Summary.
Continue to Question 2.

2. Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)

No

Yes.

Explain: Taxlot 300 of Map 13S-31E-22D (“Oregon Pine”) was purchased by the City of John Day from D.R. Johnson Lumber Company after it was used and abandoned by various industrial

¹ HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site. For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD’s toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

users in the 20th-century. Dredging, mining and lumber operations took place on the site. Oregon DEQ placed the Oregon Pine site on the state database (ECSI #2739) in 2009 after a site assessment with then-owned D.R. Johnson Lumber.

Concerns of the site’s historical use and signs of potential contamination prompted a number of investigations and remediation operations. PCBs, diesel, and other soil contaminants were identified through site assessments in 2010 and 2011. Site cleanup took place in 2013, removing over 50 tons of soil, which resulted in a No Further Action (NFA) letter from DEQ. After the City acquired the lot, they performed Phase I (5/11/2017) and Phase II (1/2/2018) Environmental Site Assessments there. These investigations identified small areas on contamination remaining. The City removed an additional 33 tons of soil were excavated and transported off-site for disposal. DEQ provided an additional NFA letter.

3. Mitigation

Document the mitigation needed according to the requirements of the appropriate federal, state, tribal, or local oversight agency. If the adverse environmental effects cannot be mitigated, then HUD assistance may not be used for the project at this site.

Can adverse environmental impacts be mitigated?

Adverse environmental impacts cannot feasibly be mitigated

→ Project cannot proceed at this location.

Yes, adverse environmental impacts can be eliminated through mitigation.

→ *Provide all mitigation requirements² and documents. Continue to Question 4.*

4. Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls³, or use of institutional controls⁴.

² Mitigation requirements include all clean-up actions required by applicable federal, state, tribal, or local law. Additionally, provide, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.

³ Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, without limitation, slurry walls and ground water pumping systems.

⁴ Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

The WWTF will be located on a former Brownfields and DEQ ECSI site. Oregon Department of Environmental Quality provided a No Further Action letter for ECSI #2739, in January 2014 and February 2018. The City of John Day purchased this site from D.R. Johnson Lumber with the intention of construction the wastewater treatment facility here. They coordinated with DEQ to clean-up the site. A final survey and clean-up plan were completed and the entire site was cleared with No Further Action status.

In October 2013, a soil cleanup of 51.68 tons of contaminated soil from the Oregon Pine site were removed. After the City purchased the lot and performed Phase I and Phase II ESAs in 2017 and 2018 respectively, isolated areas of contamination were identified. To mitigate that contamination, the City removed an additional 33 tons of contaminated soil.

No additional remediation or mitigation needed on this site to meet HUD standards.

If a remediation plan or clean-up program was necessary, which standard does it follow?

- Complete removal
→ *Continue to the Worksheet Summary.*
- Risk-based corrective action (RBCA)
→ *Continue to the Worksheet Summary.*

Worksheet Summary

The City of John Day has acted with due diligence to remove all contaminated soil from the site of the new WWTF. As the property was formerly a Brownfields and DEQ Environmental Cleanup Site Information Database (ECSI) site, but the contamination was cleared through a number of studies and soil removal actions over the last 10 years. The City has purposefully cleaned up the site and made it available for this development.

Other ECSIs near the project area, which are not impacted by the Wastewater System Improvements: Phase 1 project, including ECSIs 5049 (Patterson Bridge Rd), 3941 (Richfield Bulk Plant), and 4755 (Iron Triangle Logging). Patterson Bridge Rd. site is considered No Further Action status. Richfield Bulk Plan received a “Removed” status from DEQ in 2017. Iron Triangle Logging is located directly to the north of the new WWTF facility lot and will also be purchased by the City as a part of the different project in the near future. The City intends to clean up the lot in a similar fashion, identifying contamination, disposing of the affected soil, and

Attachments:

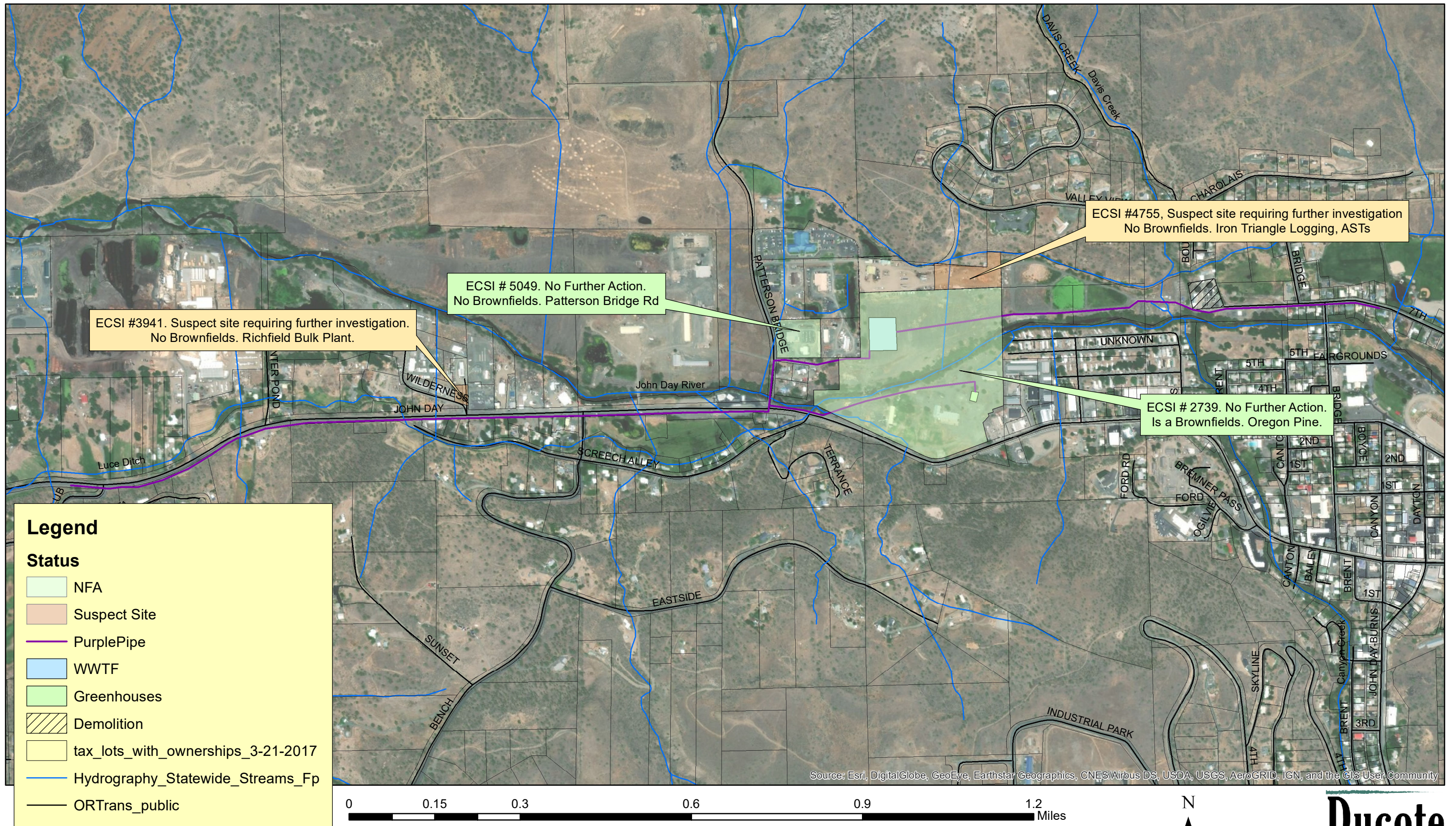
- A. This HUD Worksheet
- B. ECSI Map
- C. 2014 DEQ No Further Action Letter
- D. 2018 No Further Action Letter

Are formal compliance steps or mitigation required?

Yes

No

City of John Day WWTF Project Toxics, Environmental Review Record





Oregon

Department of Environmental Quality

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TTY 711

February 14, 2018

Nicholas Green
City of John Day
450 East Main Street
John Day, OR 97845

RE: No Further Action Determination for Oregon Pine Mill (former); ECSI No. 2739

Dear Mr. Green:

The Oregon Department of Environmental Quality (DEQ) has completed a review of the available information submitted to DEQ on your behalf. The former Oregon Pine Mill site (Map ID 13S31E22D tax lot 300) is located at 450 E Main St. in John Day, Oregon.

DEQ has determined that remedial action to address environmental contamination at the former Oregon Pine Mill site is complete, and no further action is required. This determination is based on the DEQ regulations and the facts as we now understand them including, but not limited to the following:

- DEQ previously issued a NFA for this site on January 14, 2014. The NFA was issued for the entire site based on the proposed future use identified at that time.
- A subsequent environmental review identified two additional recognized environmental concerns (RECs) that are small and distinct areas of the larger 50-acre site.
- This NFA covers the portion of the property south of the river planned for mixed use commercial and agricultural based light industrial development.
- Contaminants of potential concern (COPCs) identified were petroleum products, polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), and metals.
- Approximately 33 tons of contaminated soil was excavated and transported off-site for disposal.
- With the removal of the bulk of the contaminated gravel and cobbles and the continued degradation of any de minimis quantity of contamination on the surface area of remaining gravel and cobbles, the risk of exposure is unlikely.

Based on the available information, the former Oregon Pine Mill site is currently protective of public health and the environment. The site requires no further action under the Oregon

Environmental Cleanup Law, ORS 465.200 et seq. unless new or previously undisclosed information becomes available, or there are changes in site development or land and water uses, or more contamination is discovered. DEQ will update the Environmental Cleanup Site Information System (ECSI) database to reflect this decision.

If any contaminated soil or groundwater is encountered in the future, it must be handled and disposed of in accordance with local, state and federal regulations.

A copy of the staff memo supporting this No Further Action decision can be viewed in the ECSI database on-line at <http://www.oregon.gov/deq/pages/index.aspx> under site ID 2739. DEQ recommends keeping a copy of all of the documentation associated with this remedial action with the permanent facility records. If you have any questions, please contact Katie Robertson at 541-278-4620, or via email at robertson.katie@deq.state.or.us.

Sincerely,

A handwritten signature in black ink, appearing to read "David Anderson", with a long horizontal flourish extending to the right.

David Anderson, Manager
Eastern Region Cleanup Section

ecc: Katie Robertson, DEQ
Mark Yinger, Mark Yinger Associates, marky@bendbroadband.com

**No Further Action Decision Document
Oregon Mill (Former)
Grant County, Oregon
Project Manager: Katie Robertson
January 14, 2014**

ECSI Number: 2739

Prepared By: Katie Robertson, Cleanup Project Manager

Approved By: David Anderson, Cleanup Program Manager

Responsible Party: D.R. Johnson Lumber Company

RP Contact: Randy Crockett, D.R. Johnson Lumber Company
P.O. Box 66
Riddle, OR 97469

The Oregon Pine Mill site is a former saw and planer mill located approximately 3/4-mile west of John Day, Oregon (see Figure 1). The site has been inactive since 2007. A no further action determination is proposed for the former Oregon Pine Mill site. This recommended action was selected following completion of a risk-based evaluation conducted in accordance with DEQ's *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (RBDM) guidance dated September 22, 2003 and subsequent updates, in accordance with Oregon Revised Statutes 465.200 through 465.455, and Oregon Administrative Rules Chapter 340, Division 122.

The recommended action is based on information documented in the administrative record (ECSI File No. 2739) for this site. This document summarizes the more detailed information contained in the administrative record. D.R. Johnson joined DEQ's voluntary cleanup program in September 2009.

Site Description and History

The 50-acre irregular-shaped site is in an area of industrial, commercial, and residential use. The site is bordered by industrial land to the north and west, by Highway 26 and some residential properties to the south, and by industrial, commercial, and residential properties to the east. The John Day River flows through the center of the site, creating two distinct areas, the southern portion, made up of mostly mill structures, and the northern former log yard portion. A site map is included as Figure 2.

The original lumber mill was most likely built in 1933 by W.A. Riordan, who operated a small circular saw mill until 1943. This mill was purchased in 1943 by the Welch brothers, who operated as Blue Mountain Mills. The Welch brothers reportedly added a double cut band mill, dry kilns, a planer mill, and a molding plant. Hudspeth Pine bought Blue Mountain Mills in 1951 and also operated as San Juan Lumber. D.R. Johnson purchased Oregon Pine Products in 1984 from Walter E. Heller & Company. D.R. Johnson produced dimensional fir lumber until

the early 1990s, when the main production facilities were closed. The chip plant was shut down in 2007.

Preliminary Assessment – May and July 2010

Two soil borings (BH-12 to BH-13) and nine test pits were advanced in May 2010 in the vicinity of the former mill facilities (see Figures 3, 4, and 5). Subsurface soil generally consisted of silty gravel and cobbles to the total depth explored of 15 feet below ground surface (bgs).

Groundwater was encountered approximately 2 feet to 10 feet bgs.

Soil samples collected from the two soil borings, select test pits, and surface areas were analyzed for one or more of the following: gasoline, diesel, heavy oil, volatile organic compounds (VOCs) or benzene, toluene, ethylbenzene, and xylenes (BTEX), polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and total Resource Conservation and Recovery Act (RCRA) eight metals. Gasoline was not detected in the two samples analyzed. BTEX was not detected in the two samples analyzed. VOCs were not detected above laboratory reporting limits in the three samples analyzed.

Concentrations of diesel and heavy oil were detected in nine of the ten samples analyzed. Concentrations were detected at levels up to 180 milligrams per kilograms (mg/kg) with the exception of sample 10260 collected in the electrical transformer area. Diesel was detected at 12,000 mg/kg and heavy oil was detected at 2,000 mg/kg in sample 10260. Concentrations of one or more PAHs were detected in the five samples analyzed at levels up to 0.036 mg/kg. Concentrations of one or more metal were detected in the four samples analyzed at levels up to 260 mg/kg.

Two samples, including sample 10260, were analyzed for PCBs. PCB 1260 was detected in sample 10260 at 0.75 mg/kg.

Groundwater samples were collected from the two soil borings and from one test pit (TP2/10250). Groundwater samples were analyzed for one or more of the following: gasoline, diesel, heavy oil, VOCs, and PAHs. Concentrations of gasoline, diesel, and heavy oil were not detected above the laboratory reporting limits in the groundwater sample from boring BH-13. Concentrations of diesel and heavy oil were not detected above the laboratory reporting limits in the groundwater sample from test pit TP-2/10250.

Concentrations of diesel (240 micrograms per liter ($\mu\text{g/l}$)) and heavy oil (800 $\mu\text{g/l}$) were detected in the groundwater sample from boring BH-12. Concentrations of VOCs and PAHs were not detected above the laboratory reporting limits in the groundwater sample from boring BH-12.

Site Investigation – October 2011

Three additional soil borings (BH-24, BH-25, BH-26) were advanced in October 2011 to further assess groundwater conditions in the vicinity of the former truck shop area (Boring BH-12) (see Figure 3). Groundwater samples collected from the borings were analyzed for diesel, heavy oil, and for total cadmium, total chromium, and total lead. Concentrations of diesel, heavy oil, and total cadmium were not detected above the laboratory reporting limits. Concentrations of total chromium were detected in groundwater from borings BH-24 (14 $\mu\text{g/l}$) and BH-25 (220 $\mu\text{g/l}$). Concentrations of total lead were detected in groundwater from boring BH-25 at 41 $\mu\text{g/l}$.

Removal Actions – December 2012 & October 2013

Approximately 7 tons of contaminated soil was excavated from two isolated surface stained areas (see Figure 2). The soil was disposed of at the Crook County Landfill in December 2012. Two soil confirmation samples were collected following the excavations and analyzed for diesel, heavy oil, and PAHs. Concentrations of diesel and heavy oil were detected in both soil samples at levels up to 1,800 mg/kg. Concentrations of PAHs were not detected above laboratory reporting limits.

Approximately 52 tons of PCB contaminated soil was excavated from the vicinity of the electrical transformer area (see Figure 6). The soil was disposed of at the Crook County Landfill in October 2013. Four soil confirmation samples were collected from the final extent of the excavation. The confirmation samples were analyzed for diesel, heavy oil, and PAHs. Concentrations of diesel and heavy oil were detected in three of the soil samples at levels up to 270 mg/kg. Concentrations of PAHs were detected in all four samples at levels up to 0.13 mg/kg. The sample with the highest diesel concentration (sample 10453) was also analyzed for PCBs. PCB 1260 was detected at 0.018 mg/kg.

Risk-Based Evaluation

A site specific Conceptual Site Model was developed and included defining the locality of the facility (LOF) and completing a beneficial water use and land use survey. The LOF is defined as any point where a human or an ecological receptor contacts, or is reasonably likely to come into contact with facility related hazardous substances. The LOF was defined for this site based primarily on analytical sampling data. The LOF consists of the area of the former mill operations south of the John Day River.

Land Use

The site is within the City of John Day's urban growth boundary and is zoned General Industrial. Adjacent properties are zoned as General Industrial, General Commercial, and Suburban Residential. General Industrial zoning allows for a caretaker resident. The site has been inactive for many years. Reasonably likely future land use in this area is expected to remain consistent with current land uses. Changes in zoning are unlikely in the foreseeable future.

Beneficial Water

Water wells are not present on the property. Then private wells identified in the vicinity of the site are primarily located upgradient from the site (see Figure 1). The City of John Day obtains water from a deep confined basalt aquifer. Groundwater likely discharges into the John Day River which bisects the site. Beneficial uses of surface water include aquatic life, wildlife, irrigation, livestock watering, and recreation.

Ecological

The west slope cutthroat trout is a federal species of concern and the summer run of steelhead and bull trout are federal listed as threatened. All three have or may have populations present in the John Day River and tributaries within the vicinity of the site.

Risk Evaluation

Soil and groundwater sample results were compared to generic risk-based concentrations (RBCs) and/or regional background levels as an initial screening. Samples that were collected from areas

that were excavated were not included in the screening. The following exceedances were identified.

- Diesel (240 µg/l) and heavy oil (800 µg/l) was detected in the groundwater sample collected from boring BH-12. This concentration exceeds the generic residential/urban residential ingestion and inhalation from tap water RBC of 100 µg/l. The heavy oil concentrations also exceeded the occupational ingestion and inhalation from tap water RBC of 430 µg/l. Diesel and heavy oil were not detected in groundwater samples collected downgradient from boring BH-12 confirming groundwater impacts are limited. In addition, the site has not been and is unlikely to be used for residential purposes.
- Concentrations of total lead were detected in groundwater from boring BH-25 at 41 µg/l. Although this concentration exceeds the generic ingestion and inhalation from tap water RBC of 15 µg/l, the sample is likely biased high as the sample was not filtered.

While human health pathways do not appear to be a concern for the site, ecological pathways for avian and mammal receptors may be a limited concern but in DEQ's opinion, the site is not considered ecological habitat as future development will either remove or alter the current configuration, and remaining contamination is unlikely to migrate to the river or ecological receptors.

Recommendation:

Based on the available data and the preceding discussion, a no further action determination is recommended for the former Oregon Pine Mill site. Localized and limited areas of contamination remain on the site. DEQ approves leaving this contamination because the contamination does not present an unacceptable risk to human health, safety, welfare and the environment.

Attachments:

Figure 1 - Site Location & Water Well Map

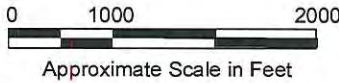
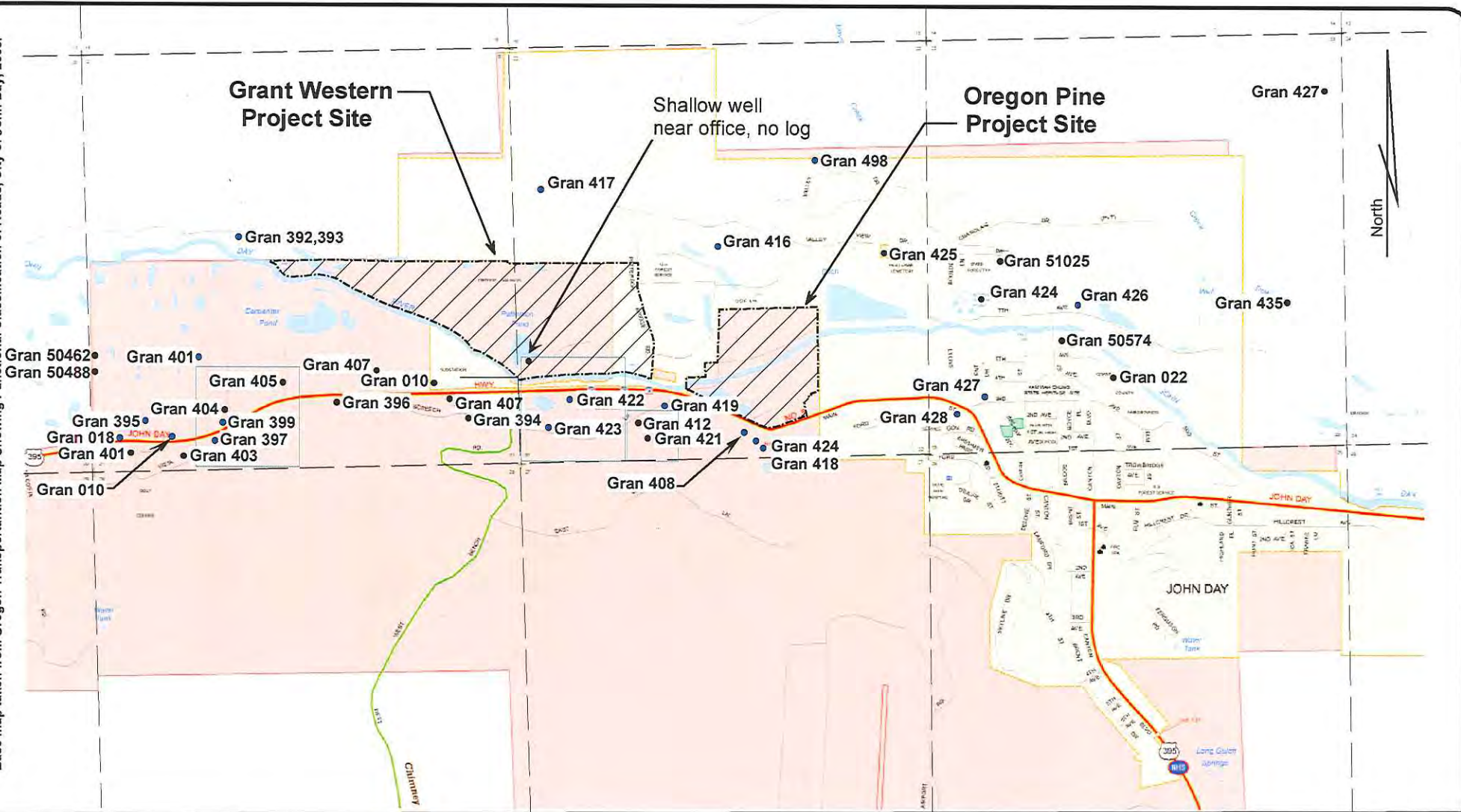
Figure 2 – Site Map & Surface Soil Removal Map

Figure 3 – Truck Shop Area Map

Figure 4 – Millwright Area Map

Figure 5 – Transformer & Kiln Area Map

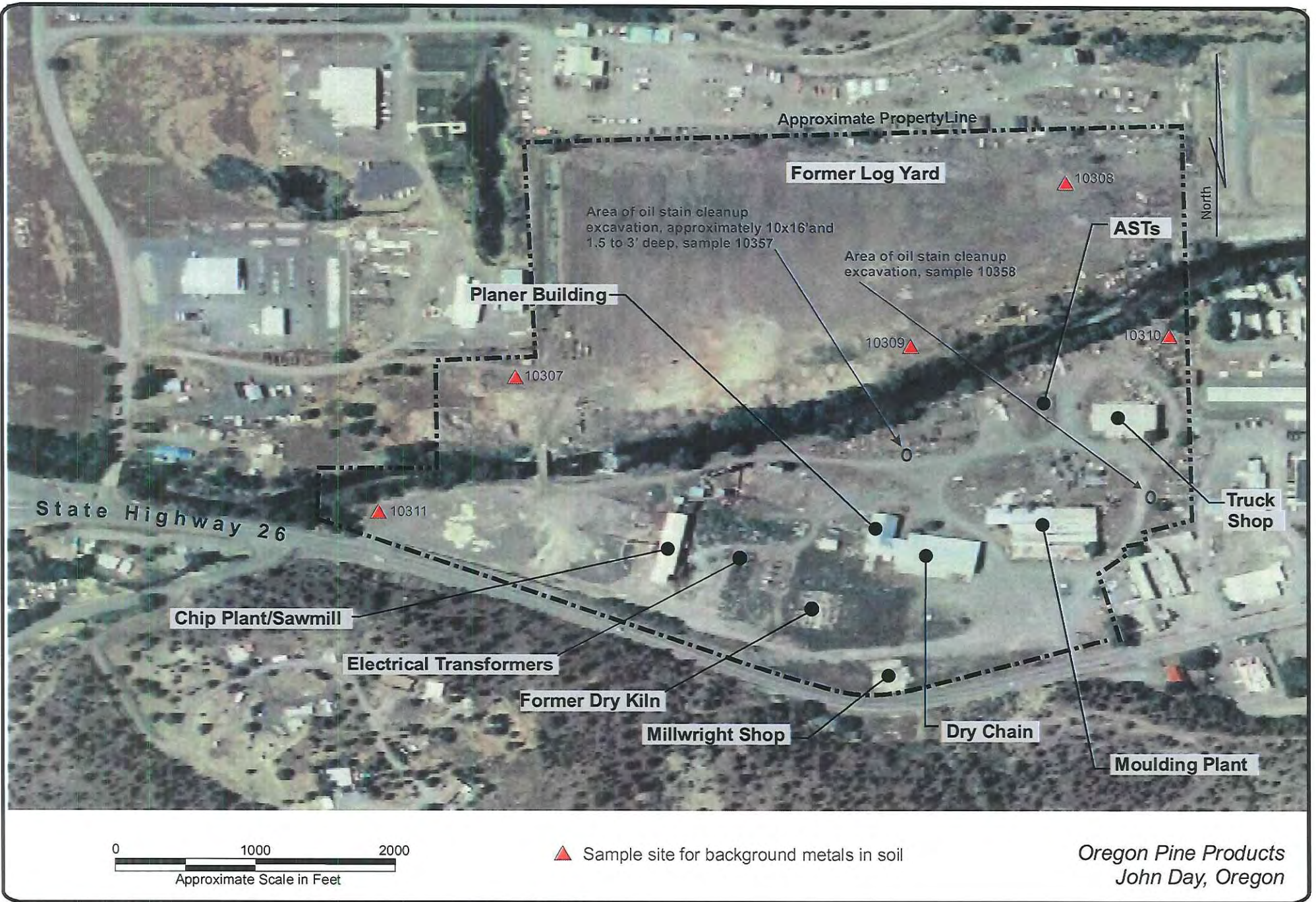
Figure 6 – Transformer Area Excavation Map

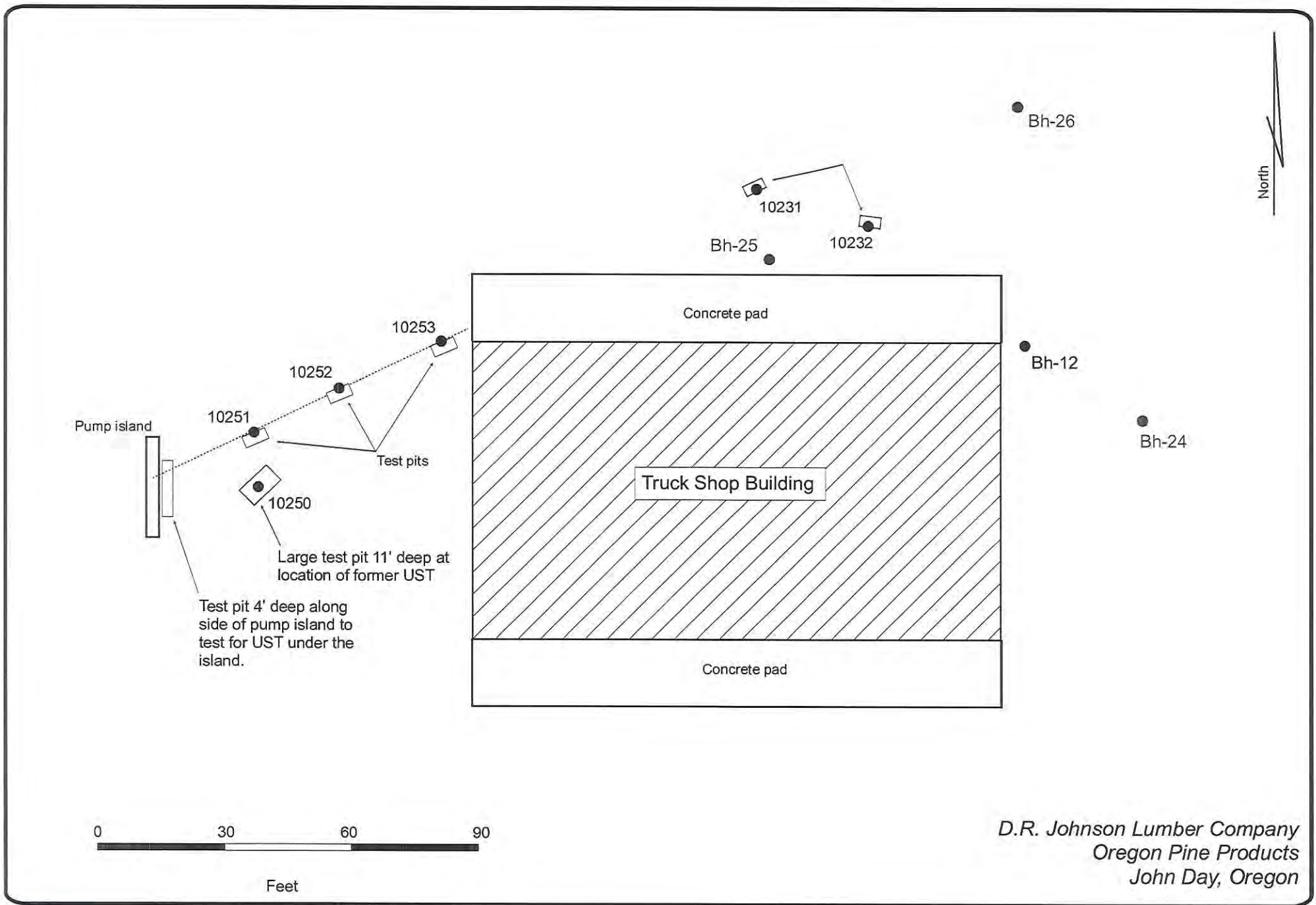


Key

- Well located generally by 1/4 - 1/4 section on well log
- Well with more specific location on well log

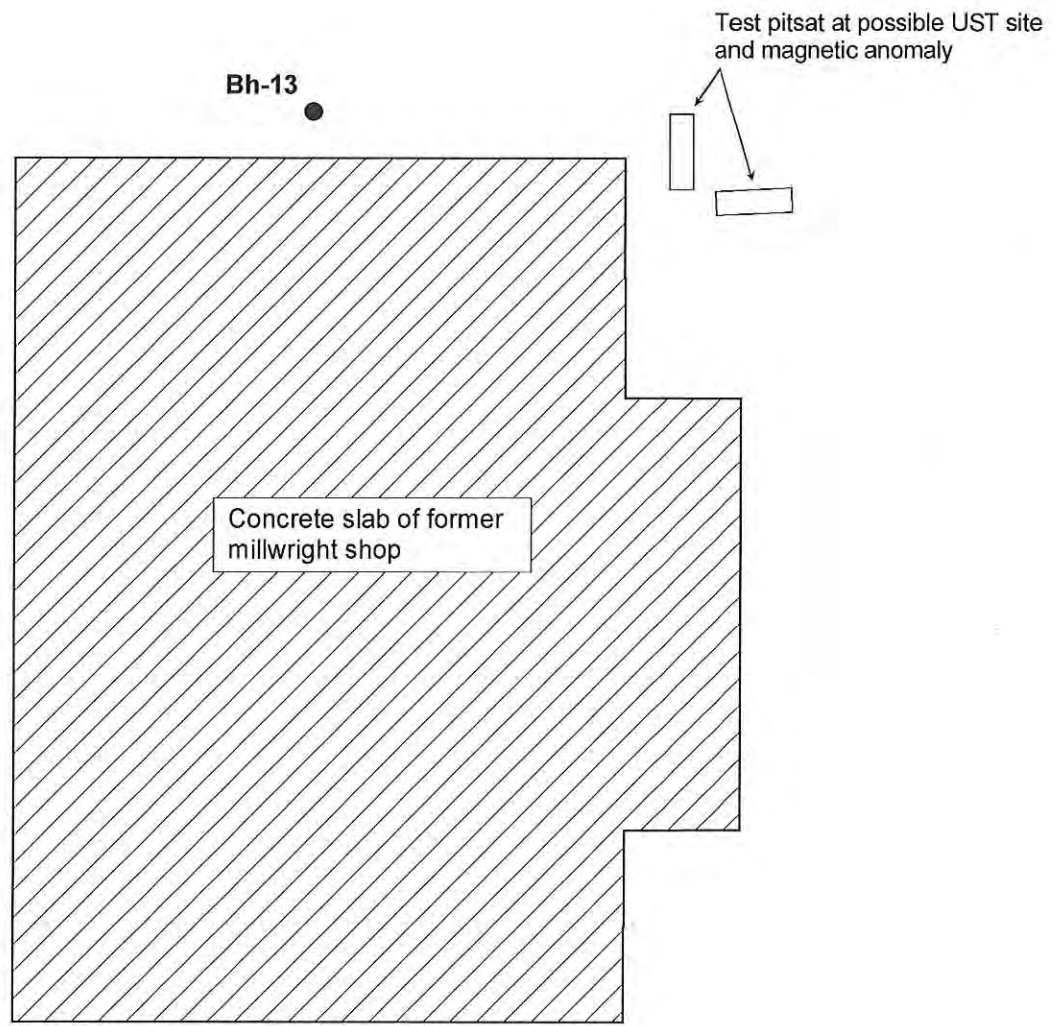
*Grant Western & Oregon Pine Products
John Day, Oregon*



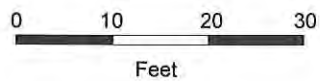


*D.R. Johnson Lumber Company
Oregon Pine Products
John Day, Oregon*

North

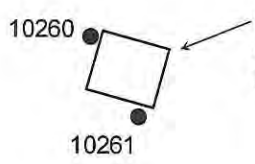


NFA Decision Doc Figure 4 - Millwright Area Map



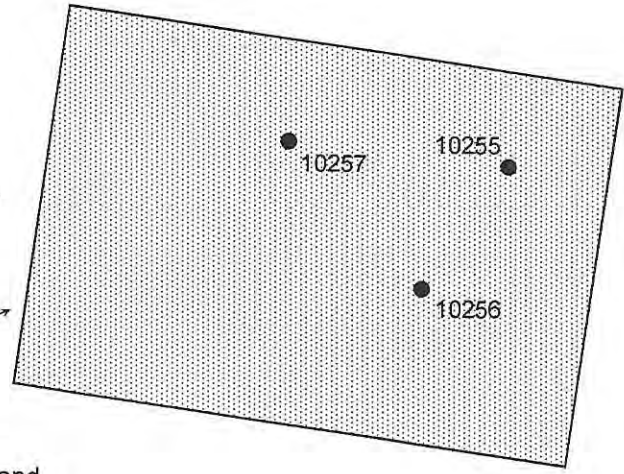
*D.R. Johnson Lumber Company
Oregon Pine
John Day, Oregon*





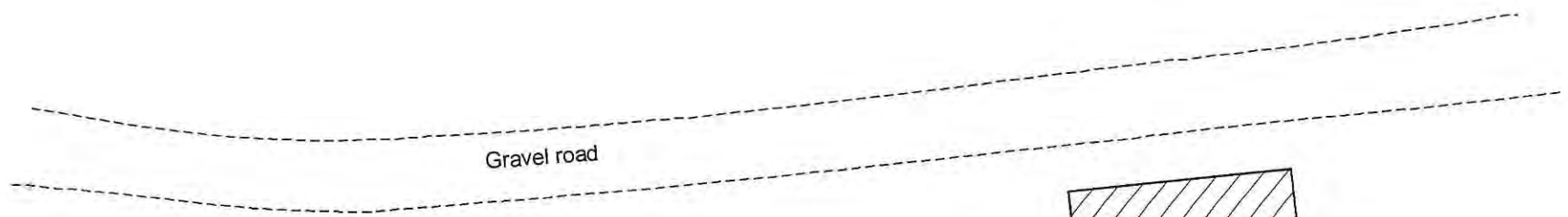
Six electrical transformers on concrete slab, soil samples collected nearest leaky transformers.

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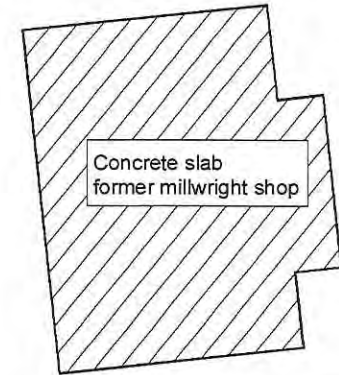


Approximate foot print of dry kiln, concrete runners and foundation

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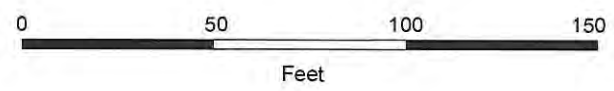


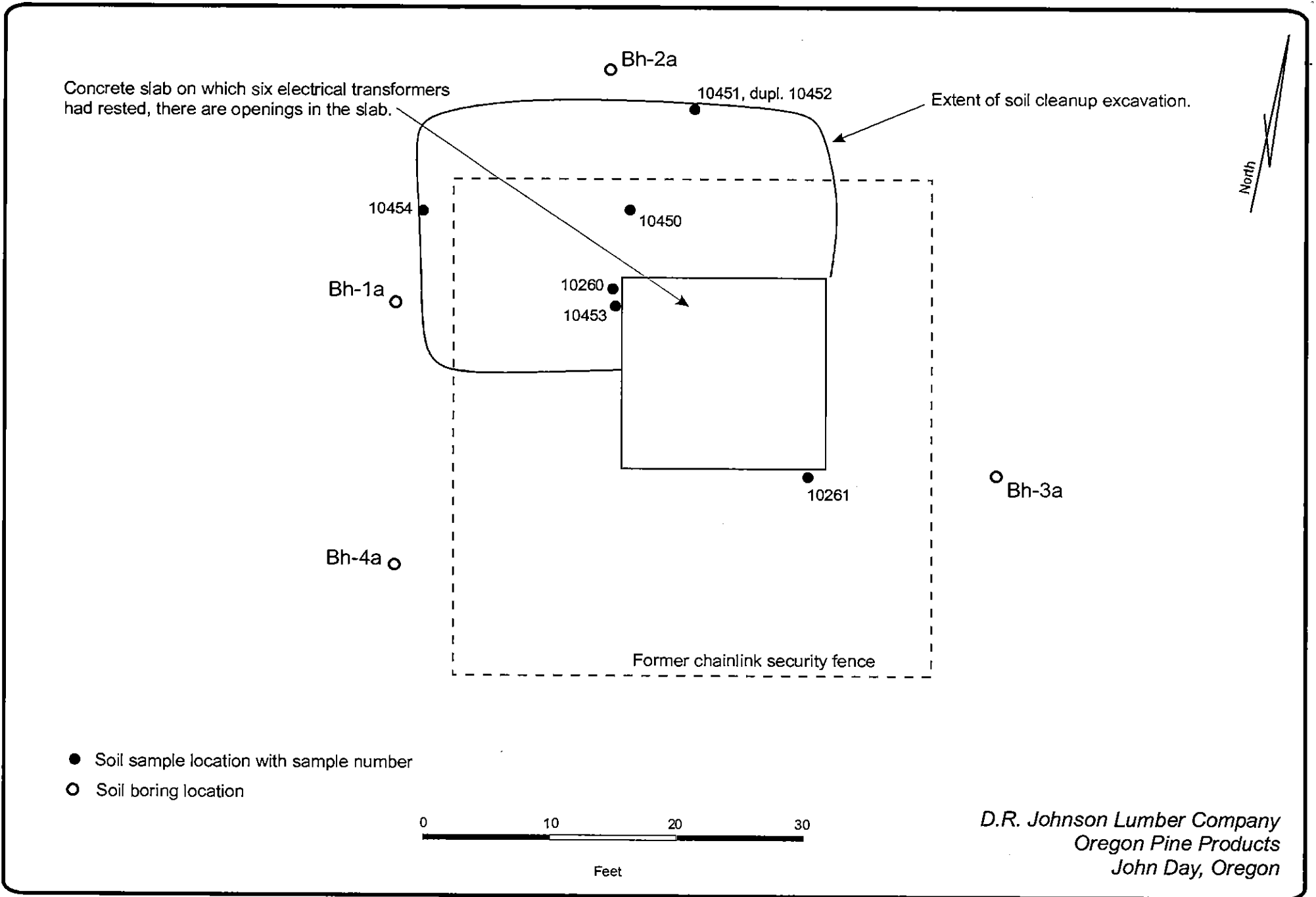
Gravel road



Concrete slab former millwright shop

D.R. Johnson Lumber Company
Oregon Pine Products
John Day, Oregon





Groundwater & Environmental Consultants
Mark Yinger Associates

69860 Camp Polk Road, Sisters, OR 97759 – 541-549-3030

March 20, 2012

Randy Crockett
D.R. Johnson Lumber Company
P.O. Box 66
Riddle, OR 97469

Ref.: Oregon Pine PSA follow-up investigation, ESCI #2739.

Dear Mr. Crockett:

This is a letter report concerning additional investigation work done at the Oregon Pine site in John Day, Oregon, as follow-up to a preliminary site assessment (PSA). The initial PSA report is dated October 24, 2010. The work described herein was proposed in work plan dated August 30, 2011.

The investigation of polychlorinated biphenyls (PCBs) detected in shallow soil near electrical transformers during the initial PSA was not part of the August 30th work plan. It was later added, but this work has not yet been done. This report is organized based on the items listed in the August 30th work plan.

Asbestos Survey

On October 18, 2012, Steve Paulsen, with Paulsen Environmental, and I visited the site. Using historical aerial photographs and landmarks we established the location of the former kilns and power plant. We walked back and forth across the entire area and were able to locate much of the concrete foundation of the kilns. We found no suspect asbestos containing material (ACM) other than what I had found and sampled during the initial PSA work. This material is tar with a fiber that proved not to be asbestos. No samples were collected for analysis.

Former Waste Oil Tank at Truck Shop

Diesel and heavy oil concentrations in a groundwater sample collected initially at the location of the former waste oil tank exceed risk-based concentration (RBCs) screening levels. Lead concentrations in soil samples exceed the leaching to groundwater RBC. To follow-up soil and groundwater samples were collected from three soil borings. The logs for the soil borings are attached and the locations of the borings are shown on the attached map of the truck shop area. Groundwater sample analytical results are presented on attached Tables 4 and 10.



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Boring Bh-24 is located so as to be up gradient of the former waste oil tank site based on the assumption that groundwater flows to the west-northwest. Borings Bh-25 and Bh-26 are downgradient. No evidence of petroleum impact was observed in the borings. Temporary ¾-inch diameter PVC screens with risers were placed in the borings for sample collection using a peristaltic pump. New screens and tubing were used at each boring. The borings were purged until the turbidity had significantly been reduced. The water samples were analyzed for diesel and residual heavier hydrocarbons by the NWTPH-Dx method. No petroleum hydrocarbons were detected in the three water samples. The water samples were also analyzed for total cadmium, chromium and lead. Concentrations of chromium and lead in the water sample from Bh-25 exceed RBCs for tapwater and national drinking water standards.

Metals in Soil at Truck Shop

To evaluate the background concentrations of metals in soil in the area ten soil samples were collected in the vicinity of the Oregon Pine mill site and the nearby Grant Western mill site and analyzed for the RCRA-8 metals. The samples were collected in areas with no or little disturbance. Truly undisturbed ground is not available on the valley floor as the entire area has been dredged and graded. The locations of the soil samples are shown on the attached site maps. The analytical results are summarized in the attached Table 11. A duplicate soil sample was collected and, with the exception of lead, the concentrations of metals are reasonably close to the concentrations in the original sample. The concentration of lead in the original sample was 140 milligrams per kilogram (mg/kg) and in the duplicated sample it is 8.8 mg/kg. This difference in lead concentration is likely not due to laboratory error. The soil samples generally consisted of coarse sand and gravel with silt and clay accounting for 5 to 20 percent. A large range in metal concentrations is possible in such coarse grained soil.

The EPA's statistical software for calculating upper limits was used to calculate the 95% upper confidence limits (UCLs) of the mean concentration for the eight metals (ProCUL v.4.0). The 95% UCLs are included at the bottom of Table 11. Previous shallow soil samples collected just north of the Truck Shop contained concentrations of barium and lead that exceed ecological risk assessment Level II Screening Level Values for birds. However, the 95% UCL for these two metals in shallow soil are greater than the concentrations detected in the two shallow soil samples collected a short distance north of the Truck Shop.

The coarse soils in the vicinity of the Truck Shop are so permeable that surface runoff of storm water is unlikely. No evidence of storm water runoff was observed. Soil erosion and transport by storm water is not occurring. The Truck Shop area is the highest ground of the site on the south of the John Day River. There is no evidence that the high water flow event of the spring of 2011 resulted in overbank flows in the vicinity of the Truck Shop.

Two Areas of Stained Soil

In the August 30th work plan it was proposed that two areas of oil stain soil would be characterized by excavating test pits and collecting soil samples for analysis. Instead it was decided to do a simple removal cleanup of the impacted soil. On December 12, 2012, the stained soil was excavated and temporarily stockpiled on plastic sheeting covering asphalt and then



covered with plastic sheeting. This soil was disposed of at the Crook County Landfill, which is approved to accept petroleum contaminated soil. A total of approximately 7 tons of soil was excavated at the two stained areas. The locations of the cleanup excavations are shown on the attached site map.

Excavation was guided by soil discoloration, sheen testing and odor. Sheen testing proved to be the best screening method as the old oil had little odor, and beneath the surface the discoloration of the coarse sand and gravel was faint. Soil samples were collected from the bottom of the cleanup excavations. The soil samples were analyzed for diesel and heavier range hydrocarbons by the NWTPH-Dx method and polynuclear aromatic hydrocarbons (PAHs). The analytical results are summarized in Table 2 (attached).

The soil sample from the bottom of the cleanup excavation 1,200 feet to the west of the Truck Shop contained 30 milligrams/kilogram (mg/kg) diesel and 120 mg/kg heavier range hydrocarbons. Phenanthrene was the only PAH detected in the sample and it was detected at a very low estimated concentration (J-flagged). The soil sample from the cleanup excavation 360 feet south of the Truck Shop contained 180 mg/kg diesel and 1,800 mg/kg heavier range hydrocarbons. Seven PAHs were detected in this soil sample at very low estimated concentrations. The concentrations of petroleum and PAHs are well below the RBCs for urban residential and occupational exposure scenarios.

Conclusions and Recommendation

No suspect ACM was discovered during the site inspection. No further investigation for asbestos is recommended.

Petroleum impact to groundwater at the location of the former waste oil tank appears to be of limited extent. Concentrations of total chromium and lead in one of the groundwater samples down gradient of the former waste oil tank exceed the RBC for tapwater and drinking water standards. Potential exposure to the groundwater could be controlled by preventing the installation of water well in the vicinity of the Truck Shop.

The concentrations of barium and lead in shallow soil north of the Truck Shop do not exceed background metal concentrations. No further ecological risk assessment is warranted in connection with the barium and lead concentrations detected in the shallow soil.

The excavation of oil stained surface soil in two locations is completed and residual concentrations remaining in the soil are below applicable RBCs.

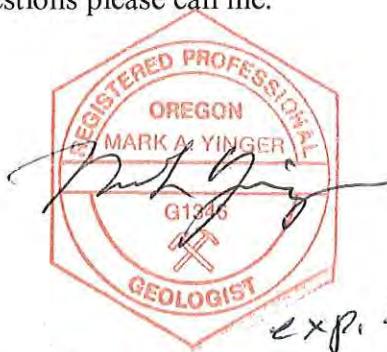
The investigation of extent and magnitude of PCBs in soil and groundwater at the location of the former electrical transformers has still to be done. The electrical transformers have been removed from the site.



If you have any questions please call me.

Sincerely,

Mark Yinger, RG
Hydrogeologist

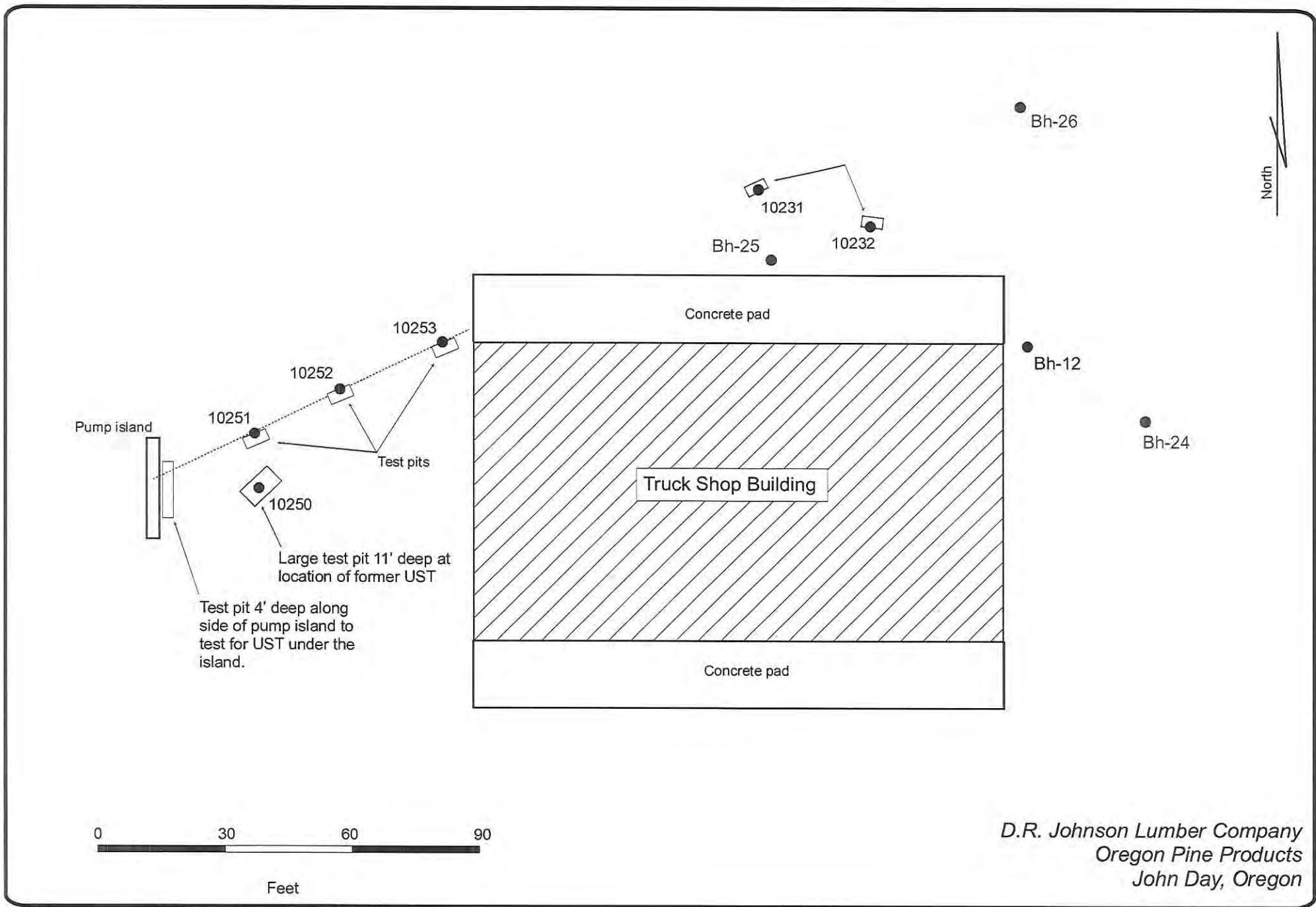


Attachments:

- Site Maps
- Tables 2, 4, 10, and 11
- Boring logs
- Laboratory reports and chain-of-custodies
- Landfill receipt for petroleum impacted soil

Cc: Marcy Kirk, DEQ, Bend, Oregon





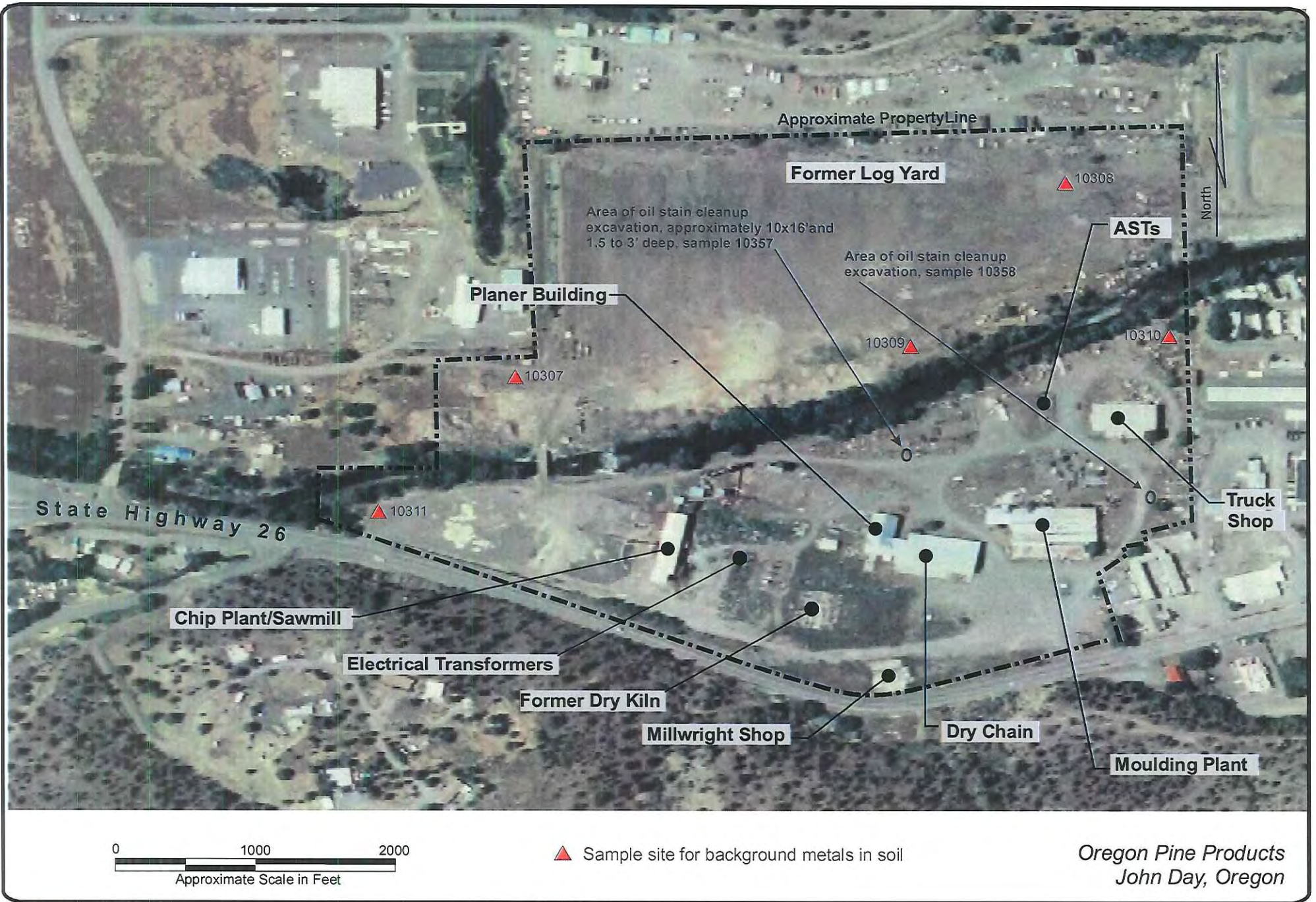


Table 2: Soil Sample Analytical Results - Diesel - Heavy Oil and PAHs

Sample Number	Date Sampled	Sample Location	Depth feet	Diesel mg/kg	Heavy Oil mg/kg	Anthracene mg/kg	Acenaphthene mg/kg	Acenaphthylene mg/kg	Benzo(a)anthracene mg/kg	Benzo(a)pyrene mg/kg	Benzo(b)fluoranthene mg/kg	Benzo(ghi)perylene mg/kg	Benzo(k)fluoranthene mg/kg	Chrysene mg/kg	Dibenz(ah)anthracene mg/kg	Fluoranthene mg/kg	Fluorene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Naphthalene mg/kg	Phenanthrene mg/kg	Pyrene mg/kg	1-Methylnaphthalene mg/kg	2-Methylnaphthalene mg/kg	2-Chloronaphthalene mg/kg	
AST Area																									
10250	5/27/10	TP-2	10	5.9	23																				
10251	5/27/10	TP-2	2.5	7.2	22																				
10252	5/27/10	TP-3	2.5	3.9 _J	4.9 _J																				
10253	5/27/10	TP-4	2.5	16	41	0.0021 _J	<0.0013	0.027	0.002 _J	0.0016 _J	0.0049 _J	0.0023 _J	0.0013 _J	0.0046 _J	<0.0089	0.022 _J	0.0028 _J	0.0014 _J	0.054	0.037	0.011	0.0094	0.023	<0.0010	
Truck Shop Area																									
10227	5/26/10	9h-12	10-12	53	180	0.0076	0.0023	0.0019 _J	<0.00096	<0.00083	<0.0014	<0.00098	<0.0012	<0.00087	<0.00089	0.0014 _J	0.0077	<0.00088	0.0030 _J	0.0062 _J	0.0073	<0.0015	<0.0020	0.0019 _J	
10231	5/26/10	TP-5	1.5	24	110	<0.0013	<0.0013	0.0040 _J	<0.00096	<0.00083	<0.0014	<0.00098	<0.0012	<0.00087	<0.00089	0.0028 _J	<0.001	<0.00088	0.013	0.0068	0.0032	0.0023 _J	0.006 _J	<0.0010	
10232	5/26/10	TP-6	1.5	34	160	<0.0013	<0.0013	0.0092	0.0026 _J	0.0029 _J	0.0077	0.005 _J	0.007	0.0036 _J	<0.00089	0.011	0.0012 _J	0.003	0.036	0.015	0.0056 _J	0.0055 _J	0.012	<0.0010	
10357	1/12/12	Soil stain cleanup	2.5	32	120	<0.00076	<0.00071	<0.00057	<0.00092	<0.00062	<0.00082	<0.0012	<0.0013	<0.0011	<0.0011	<0.0010	<0.00055	<0.0012	<0.00065	0.00079 _J	<0.00059	<0.00079	<0.00059	<0.00060	
10358	1/12/12	Soil stain cleanup	2.5	180	1800	<0.00076	<0.00071	0.0012 _J	<0.00092	<0.00062	<0.00082	<0.0012	<0.0013	<0.0011	<0.0011	0.0026 _J	<0.00055	<0.0012	0.0030 _J	0.0034 _J	0.0021 _J	0.00093 _J	0.0020 _J	<0.00060	
Millwright Shop																									
10229	5/26/10	9h-13	5-6	<1.3	<1.3																				
Wigwam Burner Area																									
10255	5/27/10		1.5			<0.0013	<0.0013	0.0053 _J	<0.00096	<0.00083	<0.0014	<0.00098	<0.0012	<0.00087	<0.00089	0.0023 _J	<0.001	<0.00088	0.026	0.0094	0.0026 _J	0.0048 _J	0.01	<0.0010	
Electical Transformer area																									
10260	7/7/10		0.5	12000	2000																				
10261	7/7/10		0.5	21	34																				
Risk-Based Screening Values																									
RBC _{SS}	urban residential			8300	8300	47000	9400		0.34	0.034	0.34	3.4	34	0.034	4600	6300	0.34	25		3400					
	occupational			70000	70000	>MAX	61000		2.70	0.27	2.70	27	270	0.27	29000	41000	2.70	23		21000					
	construction			23000	23000	93000	19000		21.0	2.10	21	210	2100	2.10	8900	12000	21	580		6700					
	excav worker			>MAX	>MAX	>MAX	>MAX		590	59	590	5,900	59,000	59	>MAX	>MAX	590	16000		>MAX					
RBC _{SO}	urban residential			>MAX	>MAX	>MAX	>MAX		NV	NV	NV	NV	NV	NV	NV	NV	>MAX	NV	15		NV				
	occupational			>MAX	>MAX	>MAX	>MAX		NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	27		NV				
RBC _{SI}	urban residential			>MAX	>MAX	>MAX	>MAX		NV	NV	NV	NV	NV	NV	NV	NV	>MAX	NV	18		NV				
	occupational			>MAX	>MAX	>MAX	>MAX		NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	99		NV				
RBC _{SW}	Urban residential			3,200	3,200	>Csat	>Csat		10	2.7	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	0.47		>Csat				
	occupational			>MAX	>MAX	>Csat	>Csat		>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	0.44		>Csat			
EPA-SL	Residential																					22	310		
	Industrial																					99	4100		
	Protection of groundwater																					0.012	0.75		
Notes:																									
PAHs = polynuclear aromatic hydrocarbons																									
mg/kg = milligrams per kilograms																									
"J" subscripted values are below the reporting limit and above the method detection limit, estimated concentration.																									
Bolded numbers are greater than one or more RBC.																									
AST = Aboveground fuel storage tank																									
RBC = Risk Based Concentrations from "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Site" dated September 22, 2003 and updated September 2009.																									
RBC _{SS} = Risk based concentration for soil ingestion, dermal contact, and inhalation pathway																									
RBC _{SO} = Risk based concentration for volatilization to outdoor air pathway																									
RBC _{SI} = Risk based concentration for vapor intrusion into buildings pathway																									
RBC _{SW} = Risk based concentration for leaching to groundwater pathway																									
EPA-SL = screening levels December 2009																									
>Csat = This soil RBC exceeds the limit of three-phase equilibrium partitioning. Soil concentrations in excess of Csat indicate that free product might be present.																									
>MAX = The constituent RBC for this pathway is >100,000 mg/kg. Highly unlikely that such concentrations will ever be encountered.																									
NV = non-volatile chemical																									

DRJ - Oregon Pine, John Day, Oregon

Table 4: Water Sample Analytical Results - Diesel - Heavy Oil and PAHs

Sample Number	Date Sampled	Sample Location	Diesel	Heavy Oil	Anthracene	Acena- phthene	Acenaph- thylene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Fluor- anthene	Fluorene	Indeno(1,2,3- cd)pyrene	Naphthalene	Phenan- threne	Pyrene	1-Methyl naphthalene	2-Methyl naphthalene	2-Chloro naphthalene		
			ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
AST Area																									
10250	5/27/10	Tp-2	89 _J	<82																					
Truck Shop Area																									
10228	5/26/10	Bh-12	240	800	0.011 _J	<0.014	<0.015 _J	<0.0053	<0.0029	<0.0067	<0.0052	<0.0046	<0.016	<0.0045	<0.0038	0.020 _J	<0.0054	0.023 _J	0.023 _J	<0.0055	0.019 _J	0.032 _J	<0.0054		
10322	10/28/11	Bh-24	<33	<82																					
10324	10/28/11	Bh-25	<33	<82																					
10323	10/28/11	Bh-26	<33	<82																					
Millwright Shop																									
10230	5/26/10	Bh-13	60 _J	<160																					
Risk-Based Screen Values																									
RBCtw	urban residential		90	90	>S	>S		0.088	0.0088	0.088		>S	>S	0.0088	>S	>S	>S	0.78		>S					
	occupational	-	360	360	>S	>S		0.56	0.056	0.56		>S	>S	0.056	310	>S	>S	0.72		>S					
RBCwo	urban residential		>S	>S	>S	>S		NV	NV	NV		NV	NV	NV	>S	NV	8400		NV						
	occupational	-	>S	>S	>S	>S		NV	NV	NV		NV	NV	NV	830	NV	>S	16000		NV					
RBCwi	urban residential		>S	>S	>S	>S		NV	NV	NV		NV	NV	NV	NV	>S	NV	1800		NV					
	occupational	-	>S	>S	>S	>S		NV	NV	NV		NV	NV	NV	20	NV	>S	10000		NV					
RBCwe	construction/excav.	-	>S	>S	>S	>S		9.1	0.53	>S		>S	>S	0.21	0.23	>S	>S	500		>S					
EPA-SL	tapwater																					2.3	150		
Notes:																									
PAHs = polynuclear aromatic hydrocarbons																									
ug/l = micrograms per liter																									
Bolded numbers are greater than one or more RBC and exceed RBCs bolded.																									
J subscripted values are below the reporting limit and above the method detection limit, estimated concentration.																									
RBC = Risk Based Concentrations from "Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Site" dated September 22, 2003 and updated October 3, 2005.																									
RBCtw = Risk based concentration for ingestion and inhalation tapwater pathway																									
RBCwo = Risk based concentration for volatilization to outdoor air pathway																									
RBCwi = Risk based concentration for vapor intrusion into buildings pathway																									
RBCwe = Risk based concentration for groundwater in excavation construction/excavation worker pathway																									
EPA-SL = screening level for tapwater, December 2009																									
>S = exceeds solubility limit																									
NV = non-volatile chemical																									

DRJ - Oregon Pine, John Day, Oregon

Table 10: Water Sample Analytical Results - Metals

Sample Number	Date Sampled	Sample Location		Cadmium ug/l	Chromium ug/l	Lead ug/l
Truck Shop Area						
10322	10/28/11	Bh-24		1.9 _j	14	<1.7
10324	10/28/11	Bh-25		4.3 _j	220	41
10323	10/28/11	Bh-26		<1.4	<4.0	<1.7
RBC _{tw}	urban residential			37	110000 _a	15
	occupational			73	220000 _a	15
Nat. Primary				5	100	15
OR Numerical				10	50	50

Notes:

RBC_{tw} = Risk based concentration for groundwater ingestion from tapwater

Nat. Primary = National Primary Drinking Water Standards

OR Numerical = Oregon Numerical Groundwater Quality Reference Levels

a = Chromium III RBCs

Table 11: Background Soil Sample Analytical Results - Metals

Sample Number	Date Sampled	Depth feet		Mercury mg/kg	Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Selenium mg/kg	Silver mg/kg
10301	10/3/2011			0.022	<1.6	190	<0.04	50	2.8	9.6	4.2
10302	10/3/2011			0.020 _J	<1.6	200	<0.04	69	3	9.8	4.8
10303	10/3/2011			0.028	<0.32	96	<0.04	49	3.2	6.1	2.1
10304	10/3/2011			0.033	<1.6	170	0.11 _J	110	140	8.4	3.3
10305	10/3/2011			0.016 _J	<0.32	150	<0.04	70	8.8	9.8	3.5
10306	10/3/2011			0.038	<0.32	220	0.21 _J	60	140	32	3
10307	10/3/2011			0.051	<0.32	130	0.055 _J	120	5.6	29	2.9
10308	10/3/2011			0.061	<0.32	140	0.26 _J	110	7.2	28	2.8
10309	10/3/2011			0.072	<0.32	74	0.26 _J	160	2.5	26	2.3
10310	10/3/2011			0.054	<0.32	280	2.9	97	52	28	2.4
10311	10/3/2011			0.069	<0.32	180	0.097 _J	130	37	28	2.2
95% UCL (ProUCL v.4.00.05)				0.056		203	0.186	117.2	56.69	34.95	3.5

Outlier samples not used in calculating the 95% upper confidence limits (UCL)

Duplicate sample of sample 10304, values not included in data set used for calculation of UCLs

Project: DRJ - Oregon Pine, John Day, Oregon

Boring method: Direct-push

Logged by: Mark Yinger, RG, 10/28/11

Ground surface elev.: n/a

Boring No.: **Bh-24**

Borehole Diameter: 2.5"

Sheet: 1 of 1

Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 15' Brown coarse gravel 80% with sand and boulders, very soft.						
5							
10		GP				▼	Bentonite chips, 3/8" hydrated
15							
20	Water sample 10322 clear water						
25							
30							



Groundwater & Environmental Consultants
Mark Yinger Associates
69860 Camp Polk Road, Sisters, OR, 97759 - 541-549-3030

DRJ Lumber Co.
Oregon Pine
John Day, Oregon

Project: DRJ - Oregon Pine, John Day, Oregon

Boring method: Direct-push

Logged by: Mark Yinger, RG, 10/28/11


Ground surface elev.: n/a

Boring No.: **Bh-26**

Borehole Diameter: 2.5"

Sheet: 1 of 1

Casing elev.: n/a

Depth Feet	Geologic Description	USC	Sample No.	Blow Count	Vapor ppm	Ground Water Level	Completion Design
0	0 - 12' Brown coarse gravel 80% with sand and boulders, very soft.						
5		GP					 Bentonite chips, 3/8" hydrated
10	12 - 15' Brown silty coarse gravel 80% with sand and boulders, very soft.	GP-GM				▼	
15							
20	Water sample 10323 clear water						
25							
30							





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Est. 1970

Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

Report Summary

Wednesday November 09, 2011

Report Number: L544563


Samples Received: 11/02/11

Client Project: 09-954

Description: DRJ Oregon Pine

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915, PA - 68-02979

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REPORT OF ANALYSIS

Mark Yinger
 Mark Yinger Associates - OR
 69860 Camp Polk Road
 Sisters, OR 97759

November 09, 2011

Date Received : November 02, 2011
 Description : DRJ Oregon Pine
 Sample ID : 10322
 Collected By : M. Yinger
 Collection Date : 10/28/11 08:30

ESC Sample # : L544563-01

Site ID :

Project # : 09-954

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Cadmium	1.9	1.4	5.0	ug/l	J	6010B	11/04/11	1
Chromium	14.	4.0	10.	ug/l		6010B	11/04/11	1
Lead	U	1.7	5.0	ug/l		6010B	11/04/11	1
Diesel Range Organics (DRO)	U	33.	100	ug/l		NWTPHDX	11/08/11	1
Residual Range Organics (RRO)	U	82.	250	ug/l		NWTPHDX	11/08/11	1
Surrogate Recovery o-Terphenyl	72.7			% Rec.		NWTPHDX	11/08/11	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL

MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 11/08/11 16:10 Revised: 11/09/11 09:14



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REPORT OF ANALYSIS

Mark Yinger
 Mark Yinger Associates - OR
 69860 Camp Polk Road
 Sisters, OR 97759

November 09, 2011

Date Received : November 02, 2011
 Description : DRJ Oregon Pine
 Sample ID : 10323
 Collected By : M. Yinger
 Collection Date : 10/28/11 11:00

ESC Sample # : L544563-02

Site ID :

Project # : 09-954

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Cadmium	U	1.4	5.0	ug/l		6010B	11/04/11	1
Chromium	U	4.0	10.	ug/l		6010B	11/04/11	1
Lead	U	1.7	5.0	ug/l		6010B	11/04/11	1
Diesel Range Organics (DRO)	U	33.	100	ug/l		NWTPHDX	11/08/11	1
Residual Range Organics (RRO)	U	82.	250	ug/l		NWTPHDX	11/08/11	1
Surrogate Recovery o-Terphenyl	70.6			% Rec.		NWTPHDX	11/08/11	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL

MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:

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Reported: 11/08/11 16:10 Revised: 11/09/11 09:14



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REPORT OF ANALYSIS

Mark Yinger
 Mark Yinger Associates - OR
 69860 Camp Polk Road
 Sisters, OR 97759

November 09, 2011

Date Received : November 02, 2011
 Description : DRJ Oregon Pine
 Sample ID : 10324
 Collected By : M. Yinger
 Collection Date : 10/28/11 11:40

ESC Sample # : L544563-03
 Site ID :
 Project # : 09-954

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Cadmium	4.3	1.4	5.0	ug/l	J	6010B	11/04/11	1
Chromium	220	4.0	10.	ug/l		6010B	11/04/11	1
Lead	41.	1.7	5.0	ug/l		6010B	11/07/11	1
Diesel Range Organics (DRO)	U	33.	100	ug/l		NWTPHDX	11/08/11	1
Residual Range Organics (RRO)	U	82.	250	ug/l		NWTPHDX	11/08/11	1
Surrogate Recovery o-Terphenyl	71.8			% Rec.		NWTPHDX	11/08/11	1

U = ND (Not Detected)
 RDL = Reported Detection Limit = LOQ = PQL = EQL
 MDL = Minimum Detection Limit = LOD = SQL (TRRP)

Note:
 The reported analytical results relate only to the sample submitted.
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Reported: 11/08/11 16:10 Revised: 11/09/11 09:14

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L544563-01	WG563666	SAMP	Cadmium	R1922033	J
L544563-03	WG563666	SAMP	Cadmium	R1922033	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



YOUR LAB OF CHOICE

Mark Yinger Associates - OR
 Mark Yinger
 69860 Camp Polk Road
 Sisters, OR 97759

Quality Assurance Report
 Level II
 L544563

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November 09, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Cadmium	< .005	mg/l			WG563666	11/04/11 18:27
Chromium	< .01	mg/l			WG563666	11/04/11 18:27
Lead	< .005	mg/l			WG563666	11/04/11 18:27
Diesel Range Organics (DRO)	< .1	ppm			WG563909	11/08/11 03:43
Residual Range Organics (RRO)	< .25	ppm			WG563909	11/08/11 03:43
o-Terphenyl		% Rec.	73.83	50-150	WG563909	11/08/11 03:43
Lead	< .005	mg/l			WG564338	11/07/11 22:38

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Cadmium	mg/l	0	0.000460	NA	20	L544432-08	WG563666
Chromium	mg/l	0	0.00250	NA	20	L544432-08	WG563666
Lead	mg/l	0	0	0	20	L544432-08	WG563666
Lead	mg/l	0.00910	0	NA	20	L545207-11	WG564338

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Cadmium	mg/l	1.13	1.16	103.	85-115	WG563666
Chromium	mg/l	1.13	1.22	108.	85-115	WG563666
Lead	mg/l	1.13	1.25	111.	85-115	WG563666
Diesel Range Organics (DRO)	mg/l	.75	0.652	86.9	50-150	WG563909
Residual Range Organics (RRO)	mg/l	.75	0.621	82.8	50-150	WG563909
o-Terphenyl				66.10	50-150	WG563909
Lead	mg/l	1.13	1.09	96.5	85-115	WG564338

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Diesel Range Organics (DRO)	mg/l	0.641	0.652	85.0	50-150	1.75	20	WG563909
Residual Range Organics (RRO)	mg/l	0.635	0.621	85.0	50-150	2.26	20	WG563909
o-Terphenyl				64.60	50-150			WG563909

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Cadmium	mg/l	1.08	0.000460	1.13	95.5	75-125	L544432-08	WG563666
Chromium	mg/l	1.13	0.00250	1.13	99.8	75-125	L544432-08	WG563666
Lead	mg/l	1.15	0	1.13	102.	75-125	L544432-08	WG563666
Lead	mg/l	1.10	0	1.13	97.3	75-125	L545207-11	WG564338

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
Cadmium	mg/l	1.08	1.08	95.5	75-125	0	20	L544432-08	WG563666
Chromium	mg/l	1.14	1.13	101.	75-125	0.881	20	L544432-08	WG563666

* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

Mark Yinger Associates - OR
Mark Yinger
69860 Camp Polk Road

Sisters, OR 97759

Quality Assurance Report
Level II

L544563

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

November 09, 2011

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Lead	mg/l	1.15	1.15	102.	75-125	0	20	L544432-08	WG563666
Lead	mg/l	1.09	1.10	96.5	75-125	0.913	20	L545207-11	WG564338

Batch number /Run number / Sample number cross reference

WG563666: R1922033: L544563-01 02 03
WG563909: R1923814: L544563-01 02 03
WG564338: R1924273: L544563-03

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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November 09, 2011

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Mark Yinger Associates - OR

69860 Camp Polk Road
Sisters, OR 97759

Accounts Payable
69860 Camp Polk Road
Sisters, OR 97759

Report to: **Mark Yinger** Email: **marky@bendbroadband.com**
 Project Description: **DRJ Oregon Pine** City/State Collected: **John Day, OR**
 Client Project #: **09-954** Lab Project #: **YINGERSOR-DRJOHNSON**
 Site/Facility ID#: _____ P.O.#: _____

Collected by (print): **M. Yinger**
 Collected by (signature): *M. Yinger*
 Immediately Packed on Ice Yes No

Rush? (Lab MUST Be Notified)
 Same Day 200%
 Next Day 100%
 Two Day 50%
 Three Day 25%

Date Results Needed
 Email? No Yes
 FAX? No Yes

Sample ID	Comp/Grab	Matrix	Depth	Date	Time	No. of Cnts
10322		GW		10/28/11	8:30	6
10323		GW			11:00	6
10324		GW			11:40	6

Analysis/Container/Preservative

Analysis/Container/Preservative	Metals- Cd, Cr, Pb 500mIHDPF-HNO3	EXTRACT-HOLD- PAHs 40mIamb-NOPres-WT	NWTPHDX IL-Amb-Add-HCl
	X	X	X
	X	X	X
	X	X	X

Chain of Custody
Page 1 of 1



Phone: (900) 767-5859
 Phone: (615) 758-5858
 Fax: (615) 758-5859

B104

Account: **YINGERSOR** (lab use only)
 Template/Protocol: **T74844 P372296**
 Cooler #: **35 10/21**
 Shipped Via: **FedEX Ground**

Remarks/Contaminant	Sample # (lab only)
	LS44563 rd
	02
	03

pH _____ Temp _____
 Flow _____ Other _____

*Matrix: SS - Soil *GW - Groundwater *WW - WasteWater *DW - Drinking Water *OT - Other
 Remarks: Extract and Hold for SVPASIMLVI.
 The sample with the highest NWTPHDX hit will be analyzed for SVPASIMLVI.

5040 0621 1066

Requested by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:	Condition:
<i>M. Yinger</i>	11/2/11	2:00 PM	<i>[Signature]</i>	11/2/11	08:00	Condition: <i>[Signature]</i>
Relinquished by (Signature)			Received by (Signature)			COC Seal Intact <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by (Signature)			Received for lab by (Signature)			pH Checked: <i>12</i> NCF



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Mark Yinger
Mark Yinger Associates - OR
69860 Camp Polk Road
Sisters, OR 97759

Report Summary

Thursday January 26, 2012

Report Number: L555922

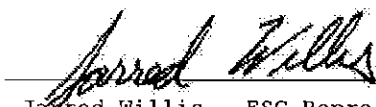
Samples Received: 01/14/12

Client Project: 09-954

Description: DRJ Grant Western

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

January 26, 2012

Mark Yinger
 Mark Yinger Associates - OR
 69860 Camp Polk Road
 Sisters, OR 97759

Date Received : January 14, 2012
 Description : DRJ Grant Western
 Sample ID : 10356
 Collected By : M. Yinger
 Collection Date : 01/12/12 11:45

ESC Sample # : L555922-01

Site ID :

Project # : 09-954

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	78.			%		2540G	01/19/12	1
Diesel Range Organics (DRO)	U	1.3	5.1	mg/kg		NWTPHDX	01/19/12	1
Residual Range Organics (RRO)	U	3.3	13.	mg/kg	J3J5	NWTPHDX	01/19/12	1
Surrogate Recovery o-Terphenyl	46.7			% Rec.		NWTPHDX	01/19/12	1

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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L555922-01 (NWTPHDX) - confirms low surrogate from 1st extraction



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REPORT OF ANALYSIS

January 26, 2012

Mark Yinger
 Mark Yinger Associates - OR
 69860 Camp Polk Road
 Sisters, OR 97759

Date Received : January 14, 2012
 Description : DRJ Grant Western
 Sample ID : 10357
 Collected By : M. Yinger
 Collection Date : 01/12/12 12:00

ESC Sample # : L555922-02
 Site ID :
 Project # : 09-954

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	97.			%		2540G	01/19/12	1
Cadmium	0.060	0.040	0.26	mg/kg	J	6010B	01/23/12	1
Chromium	40.	0.085	0.51	mg/kg		6010B	01/23/12	1
Lead	0.60	0.090	0.26	mg/kg		6010B	01/23/12	1
Diesel Range Organics (DRO)	32.	1.3	4.1	mg/kg		NWTPHDX	01/18/12	1
Residual Range Organics (RRO)	120	3.3	10.	mg/kg		NWTPHDX	01/18/12	1
Surrogate Recovery o-Terphenyl	63.1			% Rec.		NWTPHDX	01/18/12	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0062	mg/kg		8270D-SI	01/24/12	1
Acenaphthene	U	0.00071	0.0062	mg/kg		8270D-SI	01/24/12	1
Acenaphthylene	U	0.00057	0.0062	mg/kg		8270D-SI	01/24/12	1
Benzo(a)anthracene	U	0.00092	0.0062	mg/kg		8270D-SI	01/24/12	1
Benzo(a)pyrene	U	0.00062	0.0062	mg/kg		8270D-SI	01/24/12	1
Benzo(b)fluoranthene	U	0.00082	0.0062	mg/kg		8270D-SI	01/24/12	1
Benzo(g,h,i)perylene	U	0.0012	0.0062	mg/kg		8270D-SI	01/24/12	1
Benzo(k)fluoranthene	U	0.0013	0.0062	mg/kg		8270D-SI	01/24/12	1
Chrysene	U	0.0011	0.0062	mg/kg		8270D-SI	01/24/12	1
Dibenz(a,h)anthracene	U	0.0011	0.0062	mg/kg		8270D-SI	01/24/12	1
Fluoranthene	U	0.0010	0.0062	mg/kg		8270D-SI	01/24/12	1
Fluorene	U	0.00055	0.0062	mg/kg		8270D-SI	01/24/12	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0062	mg/kg		8270D-SI	01/24/12	1
Naphthalene	U	0.00065	0.0062	mg/kg		8270D-SI	01/24/12	1
Phenanthrene	0.00079	0.00074	0.0062	mg/kg	J	8270D-SI	01/24/12	1
Pyrene	U	0.00059	0.0062	mg/kg		8270D-SI	01/24/12	1
1-Methylnaphthalene	U	0.00079	0.0062	mg/kg		8270D-SI	01/24/12	1
2-Methylnaphthalene	U	0.00059	0.0062	mg/kg		8270D-SI	01/24/12	1
2-Chloronaphthalene	U	0.00060	0.0062	mg/kg		8270D-SI	01/24/12	1
Surrogate Recovery								
Nitrobenzene-d5	87.5			% Rec.		8270D-SI	01/24/12	1
2-Fluorobiphenyl	90.5			% Rec.		8270D-SI	01/24/12	1
p-Terphenyl-d14	112.			% Rec.		8270D-SI	01/24/12	1

Results listed are dry weight basis.
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 MDL = Minimum Detection Limit = LOD
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REPORT OF ANALYSIS

January 26, 2012

Mark Yinger
 Mark Yinger Associates - OR
 69860 Camp Polk Road
 Sisters, OR 97759

ESC Sample # : L555922-03

Date Received : January 14, 2012
 Description : DRJ Grant Western

Site ID :

Sample ID : 10358

Project # : 09-954

Collected By : M. Yinger
 Collection Date : 01/12/12 12:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	94.			%		2540G	01/19/12	1
Cadmium	0.26	0.040	0.26	mg/kg	J	6010B	01/23/12	1
Chromium	75.	0.085	0.53	mg/kg		6010B	01/23/12	1
Lead	1.9	0.090	0.26	mg/kg		6010B	01/23/12	1
Diesel Range Organics (DRO)	190	1.3	4.2	mg/kg	V	NWTFPHDX	01/18/12	1
Residual Range Organics (RRO)	1800	66.	210	mg/kg		NWTFPHDX	01/18/12	20
Surrogate Recovery								
o-Terphenyl	76.6			% Rec.		NWTFPHDX	01/18/12	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0064	mg/kg		8270D-SI	01/25/12	1
Acenaphthene	U	0.00071	0.0064	mg/kg		8270D-SI	01/25/12	1
Acenaphthylene	0.0012	0.00057	0.0064	mg/kg	J	8270D-SI	01/25/12	1
Benzo(a)anthracene	U	0.00092	0.0064	mg/kg		8270D-SI	01/25/12	1
Benzo(a)pyrene	U	0.00062	0.0064	mg/kg		8270D-SI	01/25/12	1
Benzo(b)fluoranthene	U	0.00082	0.0064	mg/kg		8270D-SI	01/25/12	1
Benzo(g,h,i)perylene	U	0.0012	0.0064	mg/kg		8270D-SI	01/25/12	1
Benzo(k)fluoranthene	U	0.0013	0.0064	mg/kg		8270D-SI	01/25/12	1
Chrysene	U	0.0011	0.0064	mg/kg		8270D-SI	01/25/12	1
Dibenz(a,h)anthracene	U	0.0011	0.0064	mg/kg		8270D-SI	01/25/12	1
Fluoranthene	0.0026	0.0010	0.0064	mg/kg	J	8270D-SI	01/25/12	1
Fluorene	U	0.00055	0.0064	mg/kg		8270D-SI	01/25/12	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0064	mg/kg		8270D-SI	01/25/12	1
Naphthalene	0.0030	0.00065	0.0064	mg/kg	J	8270D-SI	01/25/12	1
Phenanthrene	0.0034	0.00074	0.0064	mg/kg	J	8270D-SI	01/25/12	1
Pyrene	0.0021	0.00059	0.0064	mg/kg	J	8270D-SI	01/25/12	1
1-Methylnaphthalene	0.00093	0.00079	0.0064	mg/kg	J	8270D-SI	01/25/12	1
2-Methylnaphthalene	0.0020	0.00059	0.0064	mg/kg	J	8270D-SI	01/25/12	1
2-Chloronaphthalene	U	0.00060	0.0064	mg/kg		8270D-SI	01/25/12	1
Surrogate Recovery								
Nitrobenzene-d5	76.5			% Rec.		8270D-SI	01/25/12	1
2-Fluorobiphenyl	76.3			% Rec.		8270D-SI	01/25/12	1
p-Terphenyl-d14	90.3			% Rec.		8270D-SI	01/25/12	1

Results listed are dry weight basis.

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RDL = Reported Detection Limit = LOQ = PQL = EQL

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L555922-01	WG574794	SAMP	Residual Range Organics (RRO)	R2006515	J3J5
L555922-02	WG575084	SAMP	Cadmium	R2009512	J
	WG575102	SAMP	Phenanthrene	R2012072	J
L555922-03	WG574198	SAMP	Diesel Range Organics (DRO)	R2003715	V
	WG575084	SAMP	Cadmium	R2009512	J
	WG575102	SAMP	Acenaphthylene	R2012072	J
	WG575102	SAMP	Fluoranthene	R2012072	J
	WG575102	SAMP	Naphthalene	R2012072	J
	WG575102	SAMP	Phenanthrene	R2012072	J
	WG575102	SAMP	Pyrene	R2012072	J
	WG575102	SAMP	1-Methylnaphthalene	R2012072	J
	WG575102	SAMP	2-Methylnaphthalene	R2012072	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
V	(ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
01/26/12 at 12:47:34

TSR Signing Reports: 358
R5 - Desired TAT

Report in MDL/RDL format. Watch for follow-up analysis.

Sample: L555922-01 Account: YINGERSOR Received: 01/14/12 09:00 Due Date: 01/27/12 00:00 RPT Date: 01/26/12 12:47

Sample: L555922-02 Account: YINGERSOR Received: 01/14/12 09:00 Due Date: 01/27/12 00:00 RPT Date: 01/26/12 12:47
added SV8270PAHSIM, CDICP, CRICP, and PBICP per JW MS 1/20. Changed due date per JW

Sample: L555922-03 Account: YINGERSOR Received: 01/14/12 09:00 Due Date: 01/27/12 00:00 RPT Date: 01/26/12 12:47
added SV8270PAHSIM, CDICP, CRICP, and PBICP per JW MS 1/20. Changed due date per JW



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Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Diesel Range Organics (DRO)	< 4	ppm			WG574198	01/18/12 06:14
Residual Range Organics (RRO)	< 10	ppm			WG574198	01/18/12 06:14
o-Terphenyl		% Rec.	78.24	50-150	WG574198	01/18/12 06:14
Total Solids	< .1	%			WG574402	01/19/12 09:23
Diesel Range Organics (DRO)	< 4	ppm			WG574794	01/19/12 19:29
Residual Range Organics (RRO)	< 10	ppm			WG574794	01/19/12 19:29
o-Terphenyl		% Rec.	73.21	50-150	WG574794	01/19/12 19:29
Cadmium	< .25	mg/kg			WG575084	01/23/12 10:09
Chromium	< 5	mg/kg			WG575084	01/23/12 10:09
Lead	< .25	mg/kg			WG575084	01/23/12 10:09
1-Methylnaphthalene	< .006	mg/kg			WG575102	01/24/12 15:55
2-Chloronaphthalene	< .006	mg/kg			WG575102	01/24/12 15:55
2-Methylnaphthalene	< .006	mg/kg			WG575102	01/24/12 15:55
Acenaphthene	< .006	mg/kg			WG575102	01/24/12 15:55
Acenaphthylene	< .006	mg/kg			WG575102	01/24/12 15:55
Anthracene	< .006	mg/kg			WG575102	01/24/12 15:55
Benzo (a) anthracene	< .006	mg/kg			WG575102	01/24/12 15:55
Benzo (a) pyrene	< .006	mg/kg			WG575102	01/24/12 15:55
Benzo (b) fluoranthene	< .006	mg/kg			WG575102	01/24/12 15:55
Benzo (g, h, i) perylene	< .006	mg/kg			WG575102	01/24/12 15:55
Benzo (k) fluoranthene	< .006	mg/kg			WG575102	01/24/12 15:55
Chrysene	< .006	mg/kg			WG575102	01/24/12 15:55
Dibenz (a, h) anthracene	< .006	mg/kg			WG575102	01/24/12 15:55
Fluoranthene	< .006	mg/kg			WG575102	01/24/12 15:55
Fluorene	< .006	mg/kg			WG575102	01/24/12 15:55
Indeno (1, 2, 3-cd) pyrene	< .006	mg/kg			WG575102	01/24/12 15:55
Naphthalene	< .006	mg/kg			WG575102	01/24/12 15:55
Phenanthrene	< .006	mg/kg			WG575102	01/24/12 15:55
Pyrene	< .006	mg/kg			WG575102	01/24/12 15:55
2-Fluorobiphenyl		% Rec.	71.12	34-129	WG575102	01/24/12 15:55
Nitrobenzene-d5		% Rec.	70.29	14-141	WG575102	01/24/12 15:55
p-Terphenyl-d14		% Rec.	107.0	25-139	WG575102	01/24/12 15:55

Analyte	Units	Duplicate			Limit	Ref Samp	Batch
		Result	Duplicate	RPD			
Total Solids	%	91.0	94.2	3.41	5	L555922-03	WG574402
Cadmium	mg/kg	0	0.124	NA	20	L556742-13	WG575084
Chromium	mg/kg	13.0	20.3	42.4*	20	L556742-13	WG575084
Lead	mg/kg	19.0	25.2	28.1*	20	L556742-13	WG575084

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Diesel Range Organics (DRO)	mg/kg	30	25.3	84.2	50-150	WG574198
Residual Range Organics (RRO)	mg/kg	30	24.0	79.9	50-150	WG574198
o-Terphenyl				60.56	50-150	WG574198

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Quality Assurance Report
 Level II

L555922

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Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Total Solids	%	50	50.0	100.	85-155	WG574402
Diesel Range Organics (DRO)	mg/kg	.75	0.663	88.4	50-150	WG574794
Residual Range Organics (RRO)	mg/kg	.75	0.614	81.8	50-150	WG574794
o-Terphenyl				65.36	50-150	WG574794
Cadmium	mg/kg	61.8	63.6	103.	83.3-117	WG575084
Chromium	mg/kg	71.3	72.4	102.	81.8-118	WG575084
Lead	mg/kg	92.4	98.0	106.	83.3-117	WG575084
1-Methylnaphthalene	mg/kg	.033	0.0296	89.6	48-113	WG575102
2-Chloronaphthalene	mg/kg	.033	0.0315	95.4	51-114	WG575102
2-Methylnaphthalene	mg/kg	.033	0.0316	95.8	44-109	WG575102
Acenaphthene	mg/kg	.033	0.0273	82.7	52-108	WG575102
Acenaphthylene	mg/kg	.033	0.0285	86.5	51-110	WG575102
Anthracene	mg/kg	.033	0.0326	98.9	58-120	WG575102
Benzo(a)anthracene	mg/kg	.033	0.0336	102.	54-110	WG575102
Benzo(a)pyrene	mg/kg	.033	0.0307	92.9	56-118	WG575102
Benzo(b)fluoranthene	mg/kg	.033	0.0293	88.7	55-114	WG575102
Benzo(g,h,i)perylene	mg/kg	.033	0.0310	94.0	48-130	WG575102
Benzo(k)fluoranthene	mg/kg	.033	0.0330	99.9	55-122	WG575102
Chrysene	mg/kg	.033	0.0327	99.2	57-118	WG575102
Dibenz(a,h)anthracene	mg/kg	.033	0.0313	94.8	53-122	WG575102
Fluoranthene	mg/kg	.033	0.0318	96.4	58-118	WG575102
Fluorene	mg/kg	.033	0.0304	92.2	54-109	WG575102
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.0312	94.4	51-125	WG575102
Naphthalene	mg/kg	.033	0.0284	86.1	45-105	WG575102
Phenanthrene	mg/kg	.033	0.0295	89.5	53-114	WG575102
Pyrene	mg/kg	.033	0.0299	90.6	53-121	WG575102
2-Fluorobiphenyl				88.69	34-129	WG575102
Nitrobenzene-d5				78.05	14-141	WG575102
p-Terphenyl-d14				108.7	25-139	WG575102

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Diesel Range Organics (DRO)	mg/kg	26.3	25.3	88.0	50-150	4.04	20	WG574198
Residual Range Organics (RRO)	mg/kg	24.7	24.0	82.0	50-150	2.97	20	WG574198
o-Terphenyl				63.44	50-150			WG574198
Diesel Range Organics (DRO)	mg/kg	0.731	0.663	98.0	50-150	9.83	20	WG574794
Residual Range Organics (RRO)	mg/kg	0.676	0.614	90.0	50-150	9.63	20	WG574794
o-Terphenyl				68.42	50-150			WG574794
1-Methylnaphthalene	mg/kg	0.0303	0.0296	92.0	48-113	2.32	24	WG575102
2-Chloronaphthalene	mg/kg	0.0310	0.0315	94.0	51-114	1.57	24	WG575102
2-Methylnaphthalene	mg/kg	0.0313	0.0316	95.0	44-109	0.887	24	WG575102
Acenaphthene	mg/kg	0.0306	0.0273	93.0	52-108	11.4	22	WG575102
Acenaphthylene	mg/kg	0.0287	0.0285	87.0	51-110	0.548	21	WG575102
Anthracene	mg/kg	0.0324	0.0326	98.0	58-120	0.800	20	WG575102
Benzo(a)anthracene	mg/kg	0.0335	0.0336	102.	54-110	0.309	22	WG575102
Benzo(a)pyrene	mg/kg	0.0311	0.0307	94.0	56-118	1.54	21	WG575102
Benzo(b)fluoranthene	mg/kg	0.0306	0.0293	93.0	55-114	4.42	20	WG575102
Benzo(g,h,i)perylene	mg/kg	0.0317	0.0310	96.0	48-130	2.26	20	WG575102

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L.A.B S.C.I.E.N.C.E.S

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Level II

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Table with columns: Analyte, Units, Laboratory Control Result, Ref, Sample Duplicate %Rec, Limit, RPD, Limit, Batch. Lists various polycyclic aromatic hydrocarbons and their concentrations.

Table with columns: Analyte, Units, Matrix Spike MS Res, Ref Res, TV, % Rec, Limit, Ref Samp, Batch. Lists Diesel Range Organics, Residual Range Organics, and various PAHs.

Table with columns: Analyte, Units, Matrix Spike MSD, Ref, Duplicate %Rec, Limit, RPD, Limit, Ref Samp, Batch. Focuses on Diesel Range Organics (DRO) and o-Terphenyl.

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Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
Diesel Range Organics (DRO)	mg/kg	0.866	0.783	115.	50-150	10.0	20	L555922-01	WG574794
Residual Range Organics (RRO)	mg/kg	3.45	2.64	460.*	50-150	26.6*	20	L555922-01	WG574794
o-Terphenyl				55.82	50-150				WG574794
Cadmium	mg/kg	48.4	46.4	96.6	75-125	4.22	20	L556742-13	WG575084
Chromium	mg/kg	65.7	66.4	90.8	75-125	1.06	20	L556742-13	WG575084
Lead	mg/kg	72.4	83.0	94.4	75-125	13.6	20	L556742-13	WG575084
1-Methylnaphthalene	mg/kg	0.0329	0.0329	99.7	25-155	0.0526	27	L556830-03	WG575102
2-Chloronaphthalene	mg/kg	0.0318	0.0322	96.3	31-153	1.39	22	L556830-03	WG575102
2-Methylnaphthalene	mg/kg	0.0390	0.0381	118.	22-172	2.32	29	L556830-03	WG575102
Acenaphthene	mg/kg	0.0291	0.0292	88.3	43-133	0.0786	26	L556830-03	WG575102
Acenaphthylene	mg/kg	0.0288	0.0298	87.4	42-146	3.31	22	L556830-03	WG575102
Anthracene	mg/kg	0.0312	0.0330	94.4	38-153	5.69	27	L556830-03	WG575102
Benzo(a)anthracene	mg/kg	0.0333	0.0357	101.	31-142	6.96	31	L556830-03	WG575102
Benzo(a)pyrene	mg/kg	0.0305	0.0329	92.5	26-152	7.38	32	L556830-03	WG575102
Benzo(b)fluoranthene	mg/kg	0.0329	0.0358	99.6	10-188	8.55	33	L556830-03	WG575102
Benzo(g,h,i)perylene	mg/kg	0.0313	0.0335	94.9	10-176	6.87	30	L556830-03	WG575102
Benzo(k)fluoranthene	mg/kg	0.0310	0.0327	93.8	22-163	5.59	29	L556830-03	WG575102
Chrysene	mg/kg	0.0308	0.0333	93.4	26-146	7.70	30	L556830-03	WG575102
Dibenz(a,h)anthracene	mg/kg	0.0308	0.0328	93.4	10-160	6.19	39	L556830-03	WG575102
Fluoranthene	mg/kg	0.0784	0.0346	238.*	23-160	77.5*	22	L556830-03	WG575102
Fluorene	mg/kg	0.0331	0.0330	100.	44-143	0.259	23	L556830-03	WG575102
Indeno(1,2,3-cd)pyrene	mg/kg	0.0319	0.0338	96.6	10-157	5.95	40	L556830-03	WG575102
Naphthalene	mg/kg	0.0329	0.0327	99.5	22-156	0.482	27	L556830-03	WG575102
Phenanthrene	mg/kg	0.0359	0.0350	109.	23-164	2.56	25	L556830-03	WG575102
Pyrene	mg/kg	0.0316	0.0323	95.8	12-170	2.21	24	L556830-03	WG575102
2-Fluorobiphenyl				86.72	34-129				WG575102
Nitrobenzene-d5				99.22	14-141				WG575102
p-Terphenyl-d14				101.5	25-139				WG575102

Batch number / Run number / Sample number cross reference

WG574198: R2003715: L555922-02 03
 WG574402: R2005552: L555922-01 02 03
 WG574794: R2006515: L555922-01
 WG575084: R2009512: L555922-02 03
 WG575102: R2012072: L555922-02 03

* * Calculations are performed prior to rounding of reported values.
 * Performance of this Analyte is outside of established criteria.
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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Mark Yinger Associates - OR

69860 Camp Polk Road
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Accounts Payable
69860 Camp Polk Road
Sisters, OR 97759

Billing information:

Report to: **Mark Yinger**
 Project Description: **DRS Grant Western**
 Phone: (541) 549-3030
 FAX:
 Collected by (print): **M. Yinger**
 Collected by (signature): *[Signature]*
 Immediately Packed on Ice N Y

Email: **marky@bendbroadband.com**
 City/State Collected
 Lab Project #
YINGERSOR-DRJOHNSON
 P.O.#:

Rush? (Lab MUST Be Notified)
 Same Day
 Next Day
 Two Day
 Three Day
 Date Results Needed
 Email? No Yes
 FAX? No Yes
 No. of Cntrs

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs
103586		SS		11/12/12	11:45	2
10357		SS			NOON	2
10358		SS			12:30	2
		SS				2

Analysis/Container/Preservative

Analysis/Container/Preservative	TS 4ozClr-NoPres	NW1PHDX 4ozClr-NoPres
	X	X
	X	X
	X	X
	X	X

Chain of Custody
Page 1 of 1



L.A.B S.C.I.E.N.C.E.S
 12065 Lebanon Road
 Mt Juliet, TN 37122

Phone: (800) 767-3859
 Phone: (615) 758-3858
 Fax: (615) 758-3859
 F138

Account: **YINGERSOR** (lab use only)
 Template/Preform: **174846 P372298**
 Cooker #: **36 10/31**
 Shipped Via: **FedEX Ground**

Remarks/Contaminant: **L**
 Sample # (lab only): **SS59260**
-02
03

*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: Samples with the highest-NWTPHDX hit will be analyzed for SV8270PAHSIM, and Cd, Cr, Pb.

Note this change

5040 0621 1136

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Condition:
<i>[Signature]</i>	11/13/12	Noon	<i>[Signature]</i>	OK
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by (Signature)	Date:	Time:	Received for lab by (Signature)	pH Checked: <input type="checkbox"/> NCF

R Lumber Co. (GRANT CO.

CROOK COUNTY LANDFILL

5601 SW Houston Lake Road
Prineville, OR 97754
447-2398

ID 99 SCALE 4
GROSS 80260 lb INBOUND
02/21/2012 11:48AM

John Day

ID 99 SCALE 4
GROSS 80260 lb RECALLED
TARE 36400 lb
NET 43860 lb
02/21/2012 12:09PM

50XC
876

DUE

928.00

VISA

No 520199

CROOK COUNTY LANDFILL
200 NE 2ND ST
PRINEVILLE, OR. 97754-0

TERMINAL I.D.: 00055600005343233001

MERCHANT #: 0053432333

VISA PCARD
*****0067 *

SALE
RECORD #: 8 INU: 00000
DATE: FEB 21, 12 TIME: 10:5
BATCH: 600 AUTH: 00520

CVU2 RESPONSE: P

TOTAL \$928.01

I AGREE TO PAY ABOVE TOTAL AMOUNT
ACCORDING TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF CREDIT VOUCHER)

CUSTOMER COPY

CROOK COUNTY LANDFILL
200 NE 2ND ST
PRINEVILLE, OR. 97754-0

TERMINAL I.D.: 00055600005343233

MERCHANT #: 005343

VISA PCARD
*****0067 *

VOID
RECORD #: 7 INU: 0
DATE: FEB 21, 12 TIME: 0

AUS RESPONSE: Z AUTH: 0
CVU2 RESPONSE: P

5 DIGIT ZIP MATCHES, ADDRESS DOES

TOTAL -\$928.

VOID
- AUS CANCELED
MERCHANT COPY