

FAXED

10-22-15

Josephine County, Oregon

Board of Commissioners: Simon G. Hare, K.O. Heck, Cheryl Walker

TTD# 1-800-735-2900

Diane L. Hoover, PhD, MPA, Administrator
Josephine County Public Health



715 NW Dimmick
Grants Pass, OR 97526

(541) 474-5325

Fax (541) 474-5353

E-mail: publichealth@co.josephine.or.us

Fax

To: Umpqua Research Co From: DIANE Hoover
 Fax: 541-863-7775 Pages: 3 (includes cover)
 Phone: _____ Date: 10-22-15
 Re: _____ cc: _____

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"Partners In Prevention"



Josephine County, Oregon

Board of Commissioners: Simon G. Hare, K.O. Heck, Cheryl Walker

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To: Eric - GPWL From: DIANE
Fax: 541-476-~~0733~~ Pages: 3 (includes coversheet)
Phone: 8132 Date: Oct 22, 2015
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"Partners In Prevention"

"Josephine County is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973"

Diane Hoover

From: Eric Schaafsma <eric@gpwaterlab.com>
Sent: Friday, October 23, 2015 1:21 PM
To: Diane Hoover
Subject: RFB

Hi Diane,
I received the RFB by fax. Thank you. I do have a few questions and will try to get a hold of you later to ask them.
Best Regards,
Eric



Josephine County, Oregon

Board of Commissioners: Simon G. Hare, K.O. Heck, Cheryl Walker

TTD# 1-800-735-2900 Diane L. Hoover, PhD, MPA, Administrator
Josephine County Public Health

715 NW Dimmick
Grants Pass, OR 97526
(541) 474-5325
Fax (541) 474-5353
E-mail: publichealth@co.josephine.or.us

FAXED
10-22-15

Fax

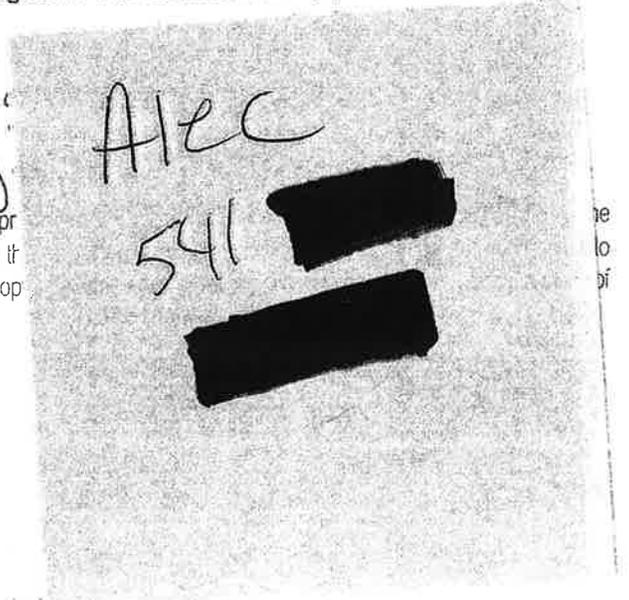
To: Neilson Research Corp From: Diane Hoover
 Fax: 541-770-~~5078~~ Pages: 3 (includes coversheet)
 Phone: 2901 Date: Oct 22, 2015
 Re: _____ cc: _____

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REQUEST FOR PROPOSALS
Josephine County

The Josephine County Public Health Department is accepting proposals for the provision of water testing on Evans Creek along the former location of the Fielder Dam site.

1. **GENERAL INFORMATION AND SCOPE OF WORK:** Josephine County Public Health Department is seeking proposals from certified water laboratories to monitor the effects of the removal of Fielder Dam at Evans Creek. The County is seeking information on any health, safety, and other environmental effects on public drinking water and on the surrounding habitat, both at the location of the former Fielder Dam site, and as it may affect public drinking water.
2. **SUBMISSION OF PROPOSALS:** Interested companies please provide the following information to the Contact Person listed below:
 1. Name of company, contact person, telephone number, and email address
 2. Outline of proposed site testing methods and protocol
 3. List of chemicals and materials to be sampled and analyzed, with an outline as to the number of samples to be taken, frequency, and general location
 4. Whether the proposer has conducted any initial testing of the former Fielder Dam site or other dam removal sites
 5. Outline of habitat surveys
 6. Deliverables over one-year period
 7. Proposed costs of deliverables
 8. Any other information deemed appropriate
3. **CONTACT PERSON:** All proposals must be submitted not later than **Tuesday, October 27, 2015, at 5:00 o'clock p.m.** to the Contact Person at the following address:

Diane Hoover, Director
Josephine County Public Health
715 NW Dimmick Street
Grants Pass, OR 97526

Telephone: (541) 474-5325
Fax: (541) 474-5353
E-mail: dhoover@co.josephine.or.us

Proposals may be submitted either: a) in a sealed envelope; b) by facsimile transmission, or c) by e-mail transmission.

There will be no formal opening of the proposals and an award decision will not be made at the proposal opening. Submissions shall become the property of Josephine County, Oregon, without obligation.

4. **CRITERIA FOR AWARD:** Proposals submitted by the deadline will be evaluated in accordance

with the following criteria:

1.	Proposed site testing methods and protocol	20 points
2.	Proposed chemical analysis	20 points
3.	Experience in conducting any initial testing of the former Fielder Dam site or other dam removal sites	20 points
4.	Outline of habitat surveys	10 points
5.	Deliverables over one-year period	15 points
6.	Proposed costs of deliverables	15 points

TOTAL: 100 pts.

5. **RESERVATION OF RIGHTS:** Josephine County reserves all rights to: (a) amend this solicitation; (b) extend the deadline for submitting proposals; (c) waive minor irregularities, informalities, or failures to conform to the solicitation, if the County determines that such waiver is in the best interest of the County, (d) award one or more contracts, by item or task, or groups of items or tasks, if so provided in this solicitation and if multiple awards are determined by Josephine County to be in the public interest; and (e) reject, for good cause and without liability therefor, any and all proposals and to cancel this solicitation at any time if such cancellation is deemed appropriate.
6. **CONFIDENTIALITY: PLEASE NOTE:** This RFP, all responses and submissions, and all documents pertaining to the award of any ensuing contract are public records and will be open to public inspection after the selection process is completed, except for information that the County determines to be exempt from disclosure under ORS 192.501 or 192.502. **Respondent must clearly identify any information in their Proposal that the respondent contends is exempt from disclosure.** The County will endeavor in good faith to honor appropriate requests for exemption from disclosure, but the County reserves exclusive discretion to determine whether such information submitted qualifies for a statutory exemption.

HP LaserJet M1522nf MFP

Fax Activity Log

HP LASERJET FAX

Oct-22-2015 3:16PM

Job	Date	Time	Type	Identification	Duration	Pages	Result
201	10/21/2015	1:06:25PM	Receive		0:41	0	No fax detected
202	10/22/2015	7:59:08AM	Send	915417417219	0:00	0	Busy
203	10/22/2015	8:00:06AM	Send	95417417219	0:37	0	Stop
204	10/22/2015	8:00:54AM	Send	915417417219	0:00	0	Busy
205	10/22/2015	8:06:23AM	Send	915417417219	0:00	0	Busy
206	10/22/2015	8:11:50AM	Send	915417417219	0:00	0	Busy
207	10/22/2015	8:17:17AM	Send	915417417219	0:00	0	Busy
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214	10/22/2015	9:17:18AM	Send	915417417219	0:00	0	Busy
215	10/22/2015	10:09:14AM	Send	5176	0:28	1	OK
216	10/22/2015	10:43:07AM	Send	5176	0:28	1	OK
217	10/22/2015	10:50:27AM	Send	5176	0:29	1	OK
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230	10/22/2015	2:46:39PM	Send	915418637775	2:53	3	OK
231	10/22/2015	2:50:06PM	Send	95414760733	0:00	0	No answer
232	10/22/2015	2:51:51PM	Send	95414768132	1:13	3	OK
233	10/22/2015	2:53:32PM	Send	95417705678	0:57	0	Stop
234	10/22/2015	2:55:04PM	Send	95417702901	1:11	3	OK
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238	10/22/2015	3:12:54PM	Send	5416641246	0:00	0	Busy
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	10/22/2015	3:18:17PM	Redial	5416641246		0	Pending



ORELAP ACCREDITED LABORATORIES

Tables list Specialties accredited by Matrix

Table 1 ORELAP Accredited Oregon laboratories that DO ACCEPT Commercial Samples. This means a laboratory will accept water specimens or test samples from private individuals or businesses. Always check with the laboratory before submitting any specimen.

Table 2 ORELAP Accredited Oregon laboratories that DO NOT ACCEPT Commercial Samples.

Table 3 ORELAP Accredited out-of-state environmental testing laboratories.

Additional information on laboratories, such as the dates of accreditation and expiration, and the full scope of accreditation is available by contacting the accredited laboratory (or upon request to ORELAP).

Updated December 20, 2013

Table 1 OREGON LABORATORIES THAT <u>ACCEPT</u> COMMERCIAL SAMPLES	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. OR100013 <u>Alexin Analytical Laboratories, Inc.</u> 13035 SW Pacific Hwy. Tigard, OR 97223 PH: 503-639-9311 FX: 503-684-1588	OR		Microbiology		Microbiology Inorganic Chem. Organic Chem.	
Lab ID No. OR100012 <u>Analytical Laboratory & Consultants, Inc.</u> 361 West Fifth Avenue Eugene, OR 97401 PH: 541-485-8404 FX: 541-484-5995	OR				Microbiology Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. OR100062 <u>Apex Laboratories, LLC</u> 12232 SW Garden Place Tigard, OR 97223 PH: 503-718-2323 FX: 503-718-0333	OR		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties		

Table 1 OREGON LABORATORIES THAT ACCEPT COMMERCIAL SAMPLES	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. OR100054 <u>Box R Water Analysis Laboratory LLC</u> 1210 North Main Street Suite F Prineville, OR 97754 PH: 541-447-4911 FX: 541-447-4917	OR		Microbiology Phys. Properties		Microbiology Inorganic Chem. Phys. Properties	
Lab ID No. OR100022 <u>CH2M Hill Applied Sciences</u> <u>Laboratories</u> 1000 NE Circle Blvd. Bldg. 10 Suite 10350 Corvallis, OR 97330 PH: 541-752-4271 FX: 541-752-0276	OR	Organic Chem. Inorganic Chem.	Inorganic Chem. Organic Chem. Phys. Properties Whole Effluent Toxicity	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem.
Lab ID No. OR100051 <u>Chester LabNet</u> 12242 SW Garden Place Tigard, OR 97223 PH: 503-624-2183 FX: 503-624-2653	OR	Inorganic Chem.				
Lab ID No. OR100002 <u>City of The Dalles Water Quality</u> <u>Laboratory</u> 6780 Reservoir Road The Dalles, OR 97058 PH: 541-298-2248 FX: 541-298-2129	OR				Microbiology Inorganic Chem.	
Lab ID No. OR100024 <u>Delta Environmental Services, Inc.</u> 105 E. Hilliard Lane Eugene, OR 97404 PH: 541-689-3177 FX: 541-689-5104	OR		Microbiology		Microbiology Inorganic Chem.	
Lab ID No. OR100026 <u>D.H. McCowan Medical Laboratory</u> 178 W Commercial St. Coos Bay, OR 97420 PH: 541-267-7853 FX: 541-267-4025	OR				Microbiology	

Table 1 OREGON LABORATORIES THAT ACCEPT COMMERCIAL SAMPLES	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. OR100009 <u>Edge Analytical, Inc. - Corvallis</u> 540 SW 3 rd Street Corvallis, OR 97333 PH: 541-753-4946 FX: 541-753-4994	OR				Microbiology Inorganic Chem.	
Lab ID No. OR100063 <u>Edge Analytical, Inc - Portland</u> 9150 SW Pioneer Ct Ste W Wilsonville, OR 97070 PH: 503-682-7802 FX: 503-682-3182	OR		Microbiology Inorganic Chem. Phys. Properties		Microbiology Inorganic Chem. Phys. Properties	
Lab ID No. OR100033 <u>Grants Pass Water Laboratory Inc</u> 964 SE M Street Grants Pass OR 97526 PH: 541-476-0733 FX: 541-476-8132	OR		Microbiology Cryptosporidium/Giardia		Microbiology Inorganic Chem. Phys. Properties Cryptosporidium/Giardia	
Lab ID No. 4010 LabCor Portland 4321 SW Corbett Ave; Suite A Portland, OR 97239 PH: 503-224-5055 FX: 503-228-8282	OR NY				Inorganic Chem.	
Lab ID No. OR100016 <u>Neilson Research Corporation</u> 245 South Grape Street Medford, OR 97501 PH: 541-770-5678 FX: 541-770-2901	OR	Inorganic Chem.	Microbiology Inorganic Chem. Organic Chem. Phys. Properties	Microbiology Inorganic Chem. Organic Chem. Phys. Properties	Microbiology Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. OR100005 <u>OMIC USA Inc.</u> 3344 NW Industrial St. Portland, OR 97210 PH: 503-223-1497 FX: 503-223-9436	OR				Organic Chem.	

Table 1 OREGON LABORATORIES THAT ACCEPT COMMERCIAL SAMPLES	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. OR100028 Pyxis Laboratories - Portland 12423 NE Whitaker Way Portland, OR 97230 PH: 503-254-1794 FX: 503-254-1452	OR		Microbiology Inorganic Chem. Organic Chem. Phys. Properties Whole Effluent Toxicity	Organic Chem.	Microbiology Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. OR100034 <u>Spring Street Analytical Laboratory</u> 350 Spring Street Klamath Falls, OR 97601 PH: 541-882-6286 FX: 541-882-9561	OR				Microbiology Inorganic Chem.	
Lab ID No. OR100061 <u>Table Rock Analytical Laboratory</u> 419 SW 5 th St. Pendleton, OR 97801 PH: 541-276-0385 FX: 541-276-2041	OR				Microbiology	
Lab ID No. OR100021 <u>TestAmerica Portland</u> 9405 SW Nimbus Avenue Beaverton, OR 97008 PH: 503-906-9200 FX: 503-906-9210	OR		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties		
Lab ID No. OR100052 <u>Umpqua Research Company – Bend</u> 738 SE Glenwood Drive Bend, OR 97702 PH: 541-312-9455 FX: 541-312-9456	OR				Microbiology Inorganic Chem.	
Lab ID No. OR100031 <u>Umpqua Research Company – Myrtle Creek</u> 626 NE Division PO Box 609 Myrtle Creek, OR 97457 PH: 541-863-5201 FX: 541-863-6199	OR				Microbiology Inorganic Chem. Organic Chem. Phys. Properties	

Table 1 OREGON LABORATORIES THAT ACCEPT COMMERCIAL SAMPLES	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. OR100039 <u>Waterlab Corp.</u> 2603 12 th Street SE Salem, OR 97302 PH: 503-363-0473 FX: 503-363-8900	OR				Microbiology Inorganic Chem. Phys. Properties	
Lab ID No. OR100011 <u>WyEast Environmental Sciences</u> 2415 SE 11 th Ave. Portland, OR 97214 503-231-9320 503-231-9344	OR		Organic Chem.	Organic Chem.		

Table 2 OREGON LABORATORIES THAT DO NOT ACCEPT COMMERCIAL SAMPLES	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. OR100059 <u>Camp Rilea Laboratory</u> 33168 Patriot Way, Bldg. 7239 Warrenton, OR 97146-7219 PH: 503-861-4179 FX: 503-861-4137	OR		Inorganic Chem. Phys. Properties			
Lab ID No. OR100038 <u>City of Bend Water Quality Laboratory</u> 22395 McGrath Rd. Bend, OR 97701 PH: 541-322-6330 FX: 541-322-6345	OR				Microbiology	

Table 2 OREGON LABORATORIES THAT DO NOT ACCEPT COMMERCIAL SAMPLES	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. OR100048 <u>City of Corvallis Taylor Water Quality Lab</u> 3140 SE Clearwater Drive Corvallis, OR 97333 PH: 541-766-6570 FX: 541-766-6717	OR		Microbiology		Microbiology	
Lab ID No. OR100027 <u>City of Corvallis Water Quality Laboratory</u> 1304 NE 2 nd Street P.O. Box 1083 Corvallis, OR 97339 PH: 541-766-6720 FX: 541-766-6753	OR		Inorganic Chem. Microbiology Phys. Properties	Phys. Properties	Microbiology	
Lab ID No. 4023 <u>City of Portland Water Pollution Control Laboratory</u> 6543 North Burlington Avenue Portland, OR 97203 PH: 503-823-5614 FX: 503-823-5656	OR		Microbiology Inorganic Chem. Phys. Properties Organic Chem.	Microbiology Inorganic Chem. Phys. Properties Organic Chem.		
Lab ID No. OR100064 <u>City of Woodburn</u> 2815 Molalla Road Woodburn, OR 97071 PH: 503-982-5282 FX: 503-982-5285	OR		Inorganic Chem. Microbiology		Microbiology	
Lab ID No. OR100053 <u>Clackamas County Water Environment Services Water Quality Laboratory</u> 15941 S. Agnes Avenue, Bldg. B Oregon City, OR 97045 PH: 503-557-2839 FX: 503-557-2840	OR		Microbiology Inorganic Chem. Phys. Properties		Microbiology	
Lab ID No. OR100017 <u>Clackamas River Water Drinking Water Quality Laboratory</u> 9100 SE Mangan Drive Clackamas, OR 97015 PH: 503-722-9241 FX: 503-722-9245	OR		Microbiology		Microbiology	

Table 2 OREGON LABORATORIES THAT DO NOT ACCEPT COMMERCIAL SAMPLES	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. OR100050 <u>Clean Water Services-Water Quality Lab</u> 2550 SW Hillsboro Hwy. Hillsboro, OR 97123 PH: 503-681-5139 FX: 503-681-5138	OR		Inorganic Chem. Phys. Properties			
Lab ID No. OR100015 <u>Coos Bay - North Bend Water Board</u> 2315 Ocean Blvd. Coos Bay, OR 97420 PH: 541-267-3128 FX: 541-269-5370	OR				Microbiology	
Lab ID No. OR100003 <u>EWEB Water Quality Laboratory</u> 3957 Hayden Bridge Rd. Springfield, OR 97477-1860 PH: 541-434-5783 FX: 541-747-3083	OR				Microbiology	
Lab ID No. OR100056 <u>Pendleton Wastewater Treatment Plant</u> 4225 SW 28 th Dr. Pendleton, OR 97801 PH: 541-276-3372 FX: 541-276-4363	OR				Microbiology	
Lab ID No. OR100014 <u>Portland Water Bureau Laboratory</u> 2010 N Interstate Ave Portland, OR 97227 PH: 503-823-4900 FX: 503-823-4910	OR				Microbiology Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. OR100060 <u>Veolia Water Laboratory-Gresham</u> 20015 NE Sandy Blvd. Portland, OR 97230 PH: 503-618-3457 FX: 503-6657828	OR		Microbiology Inorganic Chem. Organic Chem.			
Lab ID No. OR100010 <u>Willow Lake Laboratory, City of Salem</u> 5915 Windsor Island Rd. North Salem, OR 97303 PH: 503-588-6380 FX: 503-588-6387	OR		Microbiology		Microbiology Inorganic Chem. Phys. Properties	

Table 2 OREGON LABORATORIES THAT DO NOT ACCEPT COMMERCIAL SAMPLES	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue

Commercial samples are accepted unless otherwise noted

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. CA300006 Accutest Laboratories-Northern California 2105 Lundy Avenue San Jose, CA 95131 PH: 408-588-0200 FX: 408-588-0201	OR		Inorganic Chem. Phys. Properties	Inorganic Chem. Phys. Properties		
Lab ID No. CA200011 Accutest Laboratories-Northern California 2105 Lundy Avenue San Jose, CA 95131 PH: 408-588-0200 FX: 408-588-0201	CA		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem.	
Lab ID No. CO200002 ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 PH: 970-879-6590 FX: 970-879-2216	UT		Inorganic Chem. Phys. Properties Radiochemistry Organic Chem.	Inorganic Chem. Phys. Properties Radiochemistry Organic Chem.	Radiochemistry	
Lab ID No. WA100008 Addy Lab, LLC 2517 E. Evergreen Blvd. Vancouver, WA 98661 PH: 360-750-0055 FX: 360-750-0057	OR				Microbiology Inorganic Chem. Phys. Properties	
Lab ID No. CA300003 Advanced Technology 3275 Walnut Ave. Signal Hill, CA 90755 PH: 562-989-4045 FX: 562-989-6348	OR CA	Organic Chem.	Organic Chem.			

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. CA300005 <u>Air Toxics Limited</u> 180 Blue Ravine Rd., Suite B Folsom, CA 95630 PH: 800-985-5955 FX: 916-985-1020	OR	Inorganic Chem. Organic Chem.				
Lab ID No. NV200001 <u>Alpha Analytical, Inc.</u> 255 Glendale Ave., Ste. 21 Sparks, NV 89431 PH: 775-355-1044 FX: 775-355-0406	CA		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Organic Chem. Inorganic Chem. Phys. Properties	
Lab ID No. NV300001 <u>Alpha Analytical, Inc.</u> 255 Glendale Ave., Ste. 21 Sparks, NV 89431 PH: 775-355-1044 FX: 775-355-0406	OR			Organic Chem.		
Lab ID No. 4020 <u>ALS-Environmental – Middletown</u> 34 Dogwood Lane Middletown, PA 17057 PH: 717-944-5541 FX: 717-944-8972	PA				Organic Chem.	
Lab ID No. CA300004 <u>American Analyticals, Inc.</u> 9765 Eton Ave. Chatsworth, CA 91311 PH: 818-998-5547 FX: 818-998-7258	OR	Organic Chem.				
Lab ID No. 4001 <u>Analytical Perspectives, LLC.</u> 2714 Exchange Drive Wilmington NC 28405 PH: 910-794-1613 FX: 910-794-3919	FL	Organic Chem.				
Lab ID No. WA100006 <u>Analytical Resources, Inc.</u> 4611 S 134 th Place Tukwila, WA 98168 PH: 206-695-6205 FX: 206-695-6201	OR		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem.	Inorganic Chem. Organic Chem.

Table 3 ORELAP Accredited Out-of-State Laboratories		AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. ID200001 <u>Anatek Labs, Inc.</u> 1282 Alturas Dr. Moscow, ID 83843 PH: 208-883-2839 FX: 208-882-9246	FL		Inorganic Chem. Organic Chem. Phys. Properties		Inorganic Chem. Organic Chem. Phys. Properties		
Lab ID No. PA200003 <u>Benchmark Analytics, Inc.</u> 4777 Saucon Creek Rd. Center Valley, PA 18034 PH: 610-974-8100 FX: 610-974-8104	PA		Microbiology Organic Chem. Organic Chem. Phys. Properties Radiochemistry	Inorganic Chem. Organic Chem. Phys. Properties Radiochemistry	Inorganic Chem. Organic Chem. Phys. Properties Microbiology Radiochemistry		
Lab ID No. WA200006 <u>Brooks Rand LLC</u> 3958 6 th Ave., NW Seattle, WA 98107 PH: 206-632-6206 FX: 206-632-6017	FL		Inorganic Chem.	Inorganic Chem.	Inorganic Chem.		Inorganic Chem.
Lab ID No. 4017 <u>BSK Associates</u> 1414 Stanislaus St. Fresno, CA 93706 PH: 559-497-2888 FX: 559-485-6935	CA		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem.	
Lab ID No. CA200010 <u>CalScience Environmental Laboratories, Inc.</u> 7440 Lincoln Way Garden Grove, CA 92841-1427 PH: 714-895-5494 FX: 714-894-7501	CA		Inorganic Chem. Organic Chem.	Inorganic Chem. Organic Chem.	Inorganic Chem. Organic Chem.		
Lab ID No. CA300001 <u>CalScience Environmental Laboratories</u> 7440 Lincoln Way Garden Grove, CA 92841-1427 PH: 714-895-5494 FX: 714-894-7501	OR		Organic Chem.	Organic Chem.	Organic Chem.		

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. AZ100002 City of Phoenix Water Services Laboratory NO COMMERCIAL SAMPLES ACCEPTED 2474 South 22 nd Avenue Phoenix, AZ 85009 PH: 602-534-6812 FX: 602-534-1850	OR		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem.	Microbiology Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. TX200002 <u>Columbia Analytical Services-Houston</u> 19408 Park Row Blvd., Suite 320 Houston, TX 77084 PH: 713-266-1599 FX: 713-266-0130	TX		Organic Chem. (Dioxins)	Organic Chem. (Dioxins)	Organic Chem. (Dioxins)	Organic Chem. (Dioxins)
Lab ID No. WA100010 <u>Columbia Analytical Services-Kelso</u> 1317 South 13 th Avenue P.O. Box 479 Kelso, WA 98626 PH: 360-577-7222 FX: 360-636-1068	OR		Microbiology Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Microbiology Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem.
Lab ID No. CA200007 <u>Columbia Analytical Services-Simi Valley</u> 2655 Park Center Dr. Simi Valley, CA 93065 PH: 805-526-7161 FAX: (805)-526-7270	FL	Organic Chem.				
Lab ID No. WA200008 <u>Edge Analytical, Inc.</u> 1620 S. Walnut Street Burlington, WA 98233 PH: 360-757-1400 FX: 360-757-1402	FL				Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. WY200001 <u>Energy Laboratories, Inc.</u> 2393 Salt Creek Hwy. Casper, WY 82609 PH: 307-235-0515 FX: 307-234-1639	FL				Inorganic Chem. (Uranium only)	

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. WY200002 <u>Energy Laboratories, Inc. - Casper #2</u> 2325 Kerzell Lane Casper, WY 82601 PH: 307-235-0515 FX: 307-234-1639	FL				Radiochemistry	
Lab ID No. TN200002 <u>Environmental Science Corporation</u> 12065 Lebanon Road Mt Juliet, TN 37122 PH: 615-758-5863 FX: 615-758-5859	NJ	Organic Chem.	Inorganic Chem. Organic Chem. Phys. Properties Whole Effluent Toxicity	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. CA200003 <u>Eurofins Eaton Analytical, Inc.</u> 750 Royal Oaks Drive, Suite 100 Monrovia, CA 91016-3629 PH: 626-386-1170 FX: 626-386-1139	CA				Microbiology Inorganic Chem. (includes asbestos) Organic Chem. (includes Dioxin) Phys. Properties Radiochemistry	
Lab ID No. WA100009 <u>Fremont Analytical, Inc.</u> 1311 N. 35 th St. Seattle, WA 98103 PH: 206-352-3790 FX: 206-352-7178	OR	Organic Chem.	Inorganic Chem. Organic Chem.	Inorganic Chem. Organic Chem.		
Lab ID No. WA100005 <u>Friedman & Bruya, Inc.</u> 3012 16 th Ave. West Seattle, WA 98119 PH: 206-285-8282 FX: 206-283-5044	OR		Organic Chem.	Organic Chem.	Organic Chem.	
Lab ID No. CA200006 <u>Frontier Analytical Laboratory</u> 5172 Hillsdale Circle El Dorado Hills, CA 95762 PH: 916-934-0900 FX: 916-934-0999	CA		Organic Chem. (Dioxin)	Organic Chem. (Dioxin)	Organic Chem. (Dioxin)	

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. NM100001 <u>Hall Environmental Analysis Laboratory, Inc.</u> 4901 Hawkins NE, Suite A Albuquerque, NM 87109 PH: 505-345-3975 FX: 505-345-4107	OR		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem.		
Lab ID No. CA200014 <u>Kiff Analytical, LLC</u> 2795 2nd Street Suite 300 Davis, CA 95618 PH: 530-297-4800 FX: 530-297-4808	CA		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. CA300002 <u>Kiff Analytical, LLC</u> 2795 2nd Street Suite 300 Davis, CA 95618 PH: 530-297-4800 FX: 530-297-4808	OR		Organic Chem.	Organic Chem.		
Lab ID No. WA200003 <u>Lab/Cor, Inc.</u> 7619 6 th Avenue Seattle, WA 98117 PH: 206-781-0155 FX: 206-789-8424	NY				Inorganic Chem. (Asbestos only)	
Lab ID No. PA200001 <u>Lancaster Laboratories, Inc.</u> 2425 New Holland Pike Lancaster PA 17603-5994 PH: 717-656-2300 FX: 717-656-2681	PA NJ	Organic Chem.	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem.		Organic Chem.
Lab ID No. ID100001 <u>Magic Valley Lab, Inc.</u> 210 Addison Ave. Twin Falls, ID 83301 PH: 208-733-4250 FX: 208-734-2539	OR		Inorganic Chem.		Microbiology Inorganic Chem.	
Lab ID No. LA200001 <u>Pace Analytical Services, Inc.- Louisiana</u> 1000 Riverbend Blvd., Suite F St. Rose, LA 70087 PH: 504-305-3602 FX: 504-469-0555	LA		Organic Chem. Inorganic Chem. Phys. Properties	Organic Chem. Inorganic Chem. Phys. Properties		

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. MN200001 Pace Analytical Services, Inc.- <u>Minneapolis</u> 1700 Elm Street SE, Ste 200 Minneapolis, MN 55414 PH: 612-607-6391 FX: 612-607-6444	FL	Organic Chem.	Organic Chem. Inorganic Chem. Phys. Properties	Organic Chem. Inorganic Chem.	Organic Chem. Inorganic Chem. Phys. Properties	Organic Chem.
Lab ID No. MN300001 Pace Analytical Services, Inc.- <u>Minneapolis</u> 1700 Elm Street SE, Ste 200 Minneapolis, MN 55414 PH: 612-607-6391 FX: 612-607-6444	OR		Organic Chem.	Organic Chem.		
Lab ID No. PA200002 Pace Analytical Services, Inc.- <u>Pittsburgh</u> 1638 Roseytown Road Greentown, PA 15601 PH: 724-850-5620 FX: 724-850-5601	PA				Radiochemistry	
Lab ID No. TX200003 Precision Petroleum Labs, Inc. 5915 Star Lane Houston, TX 77057 PH: 713-680-9425 FX: 713-680-9564	TX		Inorganic Chem. Organic Chem.	Inorganic Chem. Organic Chem. Phys. Properties		
Lab ID No. AK100001 SGS Environmental Services- <u>Alaska</u> 200 W. Potter Drive Anchorage, AK 99518 PH: 907-550-3217 FX: 907-561-5301	OR		Inorganic Chem. Organic Chem.	Inorganic Chem. Organic Chem. Phys. Properties		
Lab ID No. NC200002 SGS Environmental Services- <u>Wilmington</u> 5500 Business Drive Wilmington, NC 28405 PH: 910-350-1903 FX: 910-350-1557	FL		Organic Chem. (Dioxin)	Organic Chem. (Dioxin)	Organic Chem. (Dioxin)	Organic Chem. (Dioxin)
Lab ID No. IL300001 STAT Analysis Corporation 2255 W. Harrison Chicago, IL 60612 PH: 312-783-0551 FX: 312-733-2386	OR	Inorganic Chem. Organic Chem.				

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. 4014 State Hygienic Laboratory University of Iowa 2490 Crosspark Rd Coralville, IA 50023 PH: 319-335-4500 FX: 319-335-4500	OR		Inorganic Chem. Organic Chem. Phys. Properties Microbiology Radio Chem.	Organic Chem.	Inorganic Chem. Organic Chem. Microbiology Radio Chem.	
Lab ID No. 4013 State Hygienic Laboratory University of Iowa 2220 South Ankeny Blvd Ankeny, IA 50023 PH: 515-725-1600 FX: 515-725-1642	OR		Inorganic Chem. Phys. Properties Microbiology Whole Effluent Toxicity	Inorganic Chem. Phys. Properties	Inorganic Chem. Phys. Properties Microbiology	
Lab ID No. OH200001 Summit Environmental Technologies, Inc. 3310 Win Street Cuyahoga Falls, OH 44223 PH: 330-253-8211 FX: 330-253-4489	FL		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Radio Chem.	
Lab ID No. NY200003 TestAmerica – Buffalo 10 Hazelwood Drive Amherst, NY 14228 PH: 716-691-2600 FX: 716-691-7991	NY		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties		
Lab ID No. IA100001 TestAmerica Analytical Testing Corp. - Cedar Falls 704 Enterprise Dr. Cedar Falls, IA 50613 PH: 319-277-2401 FX: 319-277-2425	OR		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Phys. Properties	
Lab ID No. 4025 TestAmerica - Denver 4955 Yarrow Street Arvada, CO 80002 PH: 303-736-0142 FX: 303-431-7171	OR		Inorganic Chem. Organic Chem. Phys. Properties Radio Chem. Whole Effluent Toxicity	Inorganic Chem. Organic Chem. Phys. Properties Radio Chem.	Inorganic Chem. Organic Chem. Phys. Properties Microbiology Radio Chem.	

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. 4005 TestAmerica - Irvine 17461 Derian Ave, Suite 100 Irvine, CA 92614 PH: 949-261-1022 FX: 949-260-3299	CA				Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. CA200013 TestAmerica-Costa Mesa 3585 Cadillac Avenue, Suite A Costa Mesa, CA 92626 PH: 714-258-8610 FX: 714-258-0921	FL	Organic Chem.				
Lab ID No. TN200001 TestAmerica Analytical Testing Corp. — Nashville 2960 Foster Greighton Dr. Nashville, TN 37204 PH: 615-726-0177 FX: 615-345-0973	FL CA NH	Organic Chem.	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. AZ100001 TestAmerica Laboratories, Inc. - Phoenix 4625 East Cotton Center Blvd., Suite 189 Phoenix, AZ 85040 PH: 602-437-3340 FX: 602-454-9303	OR	Inorganic Chem. Organic Chem.	Inorganic Chem. Organic Chem.	Inorganic Chem. Organic Chem.	Inorganic Chem.	
Lab ID No. WA100002 TestAmerica - Richland 2800 George Washington Way Richland, WA 99352 PH: 509-375-3131 FX: 509-375-5590	OR		Radiochemistry	Radiochemistry	Radiochemistry	Radiochemistry
Lab ID No. WA100007 TestAmerica - Seattle 5755 8 th Street East Tacoma, WA 98424 PH: 253-922-2310 FX: 253)922-5047	OR		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Phys. Properties	

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. CA200005 <u>TestAmerica - West Sacramento</u> 880 Riverside Pkwy. West Sacramento, CA 95605 PH: 916-374-4441 FX: 916-372-1059	CA		Organic Chem.	Organic Chem.	Organic Chem. (Dioxin)	Organic Chem. (Dioxin)
Lab ID No. IN200001 <u>Underwriters Laboratories, Inc.</u> 110 South Hill Street South Bend, IN 46617 PH: 574-233-4777 FX: 574-233-8207	FL				Microbiology Inorganic Chem. Organic Chem. Phys. Properties Radiochemistry	
Lab ID No. 4018 <u>US Army Corps of Engineers, Far East Son- Chu Chon</u> <u>NO COMMERCIAL SAMPLES ACCEPTED</u> #40, Uchiro 5-ka, Chung-ku Seoul 100-195, South Korea, KR 100-195 PH: 022-270-7218 FX: 022-270-7053	OR		Organic Chem.	Organic Chem.		
Lab ID No. US100006 <u>U.S.EPA National Air and Radiation Environmental Laboratory (NAREL)</u> <u>NO COMMERCIAL SAMPLES ACCEPTED</u> 540 S Morris Ave – Gunther Annex Montgomery, AL 36115 PH: 334-270-3476 FX: 334-270-3454	OR		Inorganic Chem. Organic Chem. Radiochemistry	Inorganic Chem. Organic Chem. Radiochemistry		
Lab ID No. US100002 <u>U.S.EPA Region 4 Laboratory</u> <u>NO COMMERCIAL SAMPLES ACCEPTED</u> SESD Analytical Support Branch 980 College Station Road Athens, GA 30605 PH: 706-355-8821 FX: 706-355-8803	OR	Organic Chem.	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem. Phys. Properties	

Table 3 ORELAP Accredited Out-of-State Laboratories	AB	Air	Non-Potable Water	Solids & Chemicals	Drinking Water	Biological Tissue
Lab ID No. US100003 <u>U.S. EPA Region 6 Laboratory</u> <u>NO COMMERCIAL SAMPLES ACCEPTED</u> Environmental Services Branch 10625 Fallstone Rd. Houston, TX 77099 PH: 281-983-2107 FX: 281-983-2124	OR	Organic Chem.	Inorganic Chem. Organic Chem. Phys. Properties Whole Effluent Toxicity	Inorganic Chem. Organic Chem.	Microbiology Inorganic Chem. Organic Chem. Phys. Properties	
Lab ID No. US100001 <u>U.S. EPA Region 9 Laboratory</u> <u>NO COMMERCIAL SAMPLES ACCEPTED</u> 1337 South 46 th St. Bldg. 201 Richmond, CA 94804-4698 PH: 510-412-2321 FX: 510-412-2302	OR	Organic Chem.	Microbiology Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem.	Microbiology Inorganic Chem.	Inorganic Chem.
Lab ID No. CA200001 <u>Vista Analytical Laboratory Inc.</u> 1104 Windfield Way El Dorado Hills, CA 95762 PH: 916-933-1640 FX: 916-673-0106	CA LA		Organic Chem. (Dioxins)	Organic Chem. (Dioxins)	Organic Chem. (Dioxin)	
Lab ID No. US100005 <u>WSMR Certified Chemistry Laboratory</u> <u>NO COMMERCIAL SAMPLES ACCEPTED</u> 1414 Dyer Street White Sands Missile Range, NM 88002 PH: 505-678-2992 FAX" 503- 678-1671	OR		Inorganic Chem. Organic Chem. Phys. Properties	Inorganic Chem. Organic Chem.		

*AA = Accrediting Authority

Updated December 20, 2013



Josephine County, Oregon

Board of Commissioners: Simon G. Hare, K.O. Heck, Cherryl Walker

TTD# 1-800-735-2900 **Diane L. Hoover, PhD, MPA, Administrator**
Josephine County Public Health

715 NW Dimmick
Grants Pass, OR 97526
(541) 474-5325
Fax (541) 474-5353
E-mail: publichealth@co.josephine.or.us

Fax

To: Kim Nelson Research Corp From: DIANE HOOVER
Fax: 541-770-2901 Pages: 3 (includes cover)
Phone: _____ Date: 12-1-15
Re: _____ cc: _____

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• If you do not receive the entire number of pages in this transmission, please call Josephine County Health Department at (541) 474-5325.

Refaxing. I verified receipt of original w/Alec @ 541-770-5678. She advised me that your organization does not do sampling so I wasn't

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surprised to not hear from you. In the future I'll call you directly to make sure communications are on track.

"Partners In Prevention"

"Josephine County is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973"

Diane Hoover

From: Brad Carlson
Sent: Friday, November 06, 2015 11:00 AM
To: Diane Hoover
Subject: one more thing

I did forget to mention this. Questions have been raised why no EIS or EA was conducted for the removal of the dams. Essentially there was no NEPA for this project. The question is why?

The very easy and simple answer is because no federal funds or agencies were involved in this project. The project was paid for mostly by OWEB (funded by OR lottery dollars). NEPA and an EIS is only required at the federal level when federal dollars are involved. This was not the case for this project. As with any rule, there are exceptions, but essentially an EIS was not required for this project because no federal dollars or agencies were involved.

Hope that helps answer that question.

Brad

Diane Hoover

From: Diane Hoover
Sent: Tuesday, November 24, 2015 7:11 AM
To: Brad Carlson; David Candelaria
Subject: RE: Fielder dam water samples

This is awesome news! I am so pleased.

David, I would like something more formal from the state toxicologist than an email. Please ask him to put something together- doesn't have to be fancy- on OHA letterhead for me to present to the Commissioners.

Thank you.

Diane

From: Brad Carlson
Sent: Monday, November 23, 2015 5:01 PM
To: David Candelaria
Cc: Diane Hoover
Subject: RE: Fielder dam water samples

Dr. David,

Please let me know about this phone call as I would like to be a part of it.

Essentially his findings are the samples "aren't alarming!" or "something that could be harmful to people!"

Brad

From: Hudson Todd [<mailto:todd.hudson@state.or.us>]
Sent: Monday, November 23, 2015 4:55 PM
To: David Candelaria
Cc: Brad Carlson; Farrer David G; Diane Hoover
Subject: RE: Fielder dam water samples

Dr. Candelaria,

I've finished my screen of this data –the surface water from Day 2 and Day 3 do not appear to have concentrations that could affect a person's health. The Day 1 "slurry" has higher chemical concentrations, but it's difficult to come up with an appropriate screening value for a mixture of sediment and water. For someone to be affected by the slurry that was passing through the dam breach, they would have to be swimming in or drinking it. Our concern was more on the chemical concentrations on Day 2 and Day 3.

One thing we noticed is that things like iron, magnesium, sodium, and sulfates are high – generally, there's a dearth screening values for these because they're essential nutrients and their high levels affect the aesthetics of the water rather than its safety.

My co-worker, Dr. Dave Farrer, is going to double-check my work tomorrow. We talked over my initial findings and we're in agreement that what's in the Day 2 and 3 samples aren't alarming or something that could be harmful to people.

I'd like to fully explain my findings this through a phone call – there's a lot of nuances here and it would be easier for me to walk you through them via telephone. Do you have time on Tuesday or Wednesday?

Todd Hudson

Public Health Toxicologist

Public Health Division

todd.hudson@state.or.us

971-673-0024



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From: David Candelaria [<mailto:DCandelaria@co.josephine.or.us>]

Sent: Monday, November 23, 2015 9:54 AM

To: Hudson Todd <TODD.HUDSON@dhsosha.state.or.us>

Cc: Brad Carlson <BCarlson@co.josephine.or.us>; Diane Hoover <DHoover@co.josephine.or.us>

Subject: Fielder dam water samples

Hi Todd,

Just following up on your e-mail from 11/17.

Have you had a chance to review the data? Any worrisome findings or questions? Our local (Josephine county) water department conducts monthly 'grab samples' and has never found any significant heavy metal levels.

Thanks again for your analysis. Please also cc your thoughts to those cc'd in this e-mail.

David

David D. Candelaria, MD
Medical Director
Josephine County Public Health Department
715 NW Dimmick Street

Diane Hoover

From: Hudson Todd <todd.hudson@state.or.us>
Sent: Tuesday, December 01, 2015 9:09 AM
To: Diane Hoover; Brad Carlson; David Candelaria
Cc: Farrer David G
Subject: RE: Fielder dam water samples
Attachments: Chemical Table.docx

Please see the attached table – I wanted everyone to have this for the call. Hopefully you receive this in the next twenty minutes.

Todd Hudson
Public Health Toxicologist
Public Health Division
todd.hudson@state.or.us
971-673-0024



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From: Diane Hoover [mailto:DHoover@co.josephine.or.us]
Sent: Tuesday, December 01, 2015 7:53 AM
To: Brad Carlson <BCarlson@co.josephine.or.us>; Hudson Todd <TODD.HUDSON@dhsaha.state.or.us>; David Candelaria <DCandelaria@co.josephine.or.us>
Cc: Farrer David G <DAVID.G.FARRER@dhsaha.state.or.us>
Subject: RE: Fielder dam water samples

I'll be there too.

Diane Hoover, Ph.D., FACHE
Josephine County Public Health Director
715 NW Dimmick Street
Grants Pass, OR 97526
541-474-5334

From: Brad Carlson
Sent: Monday, November 30, 2015 3:10 PM
To: Hudson Todd <todd.hudson@state.or.us>; David Candelaria <DCandelaria@co.josephine.or.us>
Cc: Farrer David G <david.g.farrer@state.or.us>; Diane Hoover <DHoover@co.josephine.or.us>
Subject: RE: Fielder dam water samples

9:30 works for me as well, see you then. Thank you everyone.

Brad

From: Hudson Todd [<mailto:todd.hudson@state.or.us>]
Sent: Monday, November 30, 2015 1:07 PM
To: David Candelaria
Cc: Brad Carlson; Farrer David G; Diane Hoover
Subject: RE: Fielder dam water samples

Dr. Candelaria,

9:30 works perfectly for me.

I was going to offer to write-up of my assessment – we can talk about that during the call.

Todd Hudson
Public Health Toxicologist
Public Health Division
todd.hudson@state.or.us
971-673-0024



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From: David Candelaria [<mailto:DCandelaria@co.josephine.or.us>]
Sent: Monday, November 30, 2015 10:49 AM
To: Hudson Todd <TODD.HUDSON@dhsaha.state.or.us>
Cc: Brad Carlson <BCarlson@co.josephine.or.us>; Farrer David G <DAVID.G.FARRER@dhsaha.state.or.us>; Diane Hoover

Chemical	Sample 21503195	Sample 21503194	Sample 21503208	Screening Value (ug/L)
Aluminum		20712	2509	20000
Arsenic	15.8	694	7.4	1000
Barium	3311.5	100	40	40000
Beryllium	11.5	3 (ND)	3 (ND)	400
Boron	30 (ND)	93	74	40000
Cadmium	3 (ND)	3 (ND)	3 (ND)	100
Chromium*		94	65	1000
Cobalt	479	30 (ND)	30 (ND)	2000
Copper	1375	43	6	2000
Fluoride	500 (ND)	500 (ND)	500 (ND)	10000
Lead	53	10 (ND)	10 (ND)	0 [†]
Lithium	388	30 (ND)	30 (ND)	900,000 [‡]
Manganese	20421	450	1003	28000
Mercury	8.9	1 (ND)	1 (ND)	60
Molybdenum	60 (ND)	60 (ND)	60 (ND)	1000
Nickel	150	53	15 (ND)	4000
Nitrate	500 (ND)	500 (ND)	500 (ND)	320000
Selenium	24	5 (ND)	5 (ND)	1000
Silver	15 (ND)	15 (ND)	15 (ND)	1000
Uranium	10	1 (ND)	1 (ND)	40
Vanadium		95	15 (ND)	2000
Zinc	1329	60 (ND)	60 (ND)	60000

All data was obtained from Grants Pass Water Lab via Josephine County Medical Examiner. No sample point information or chain of custody available.

Analytical Data Qualifiers: ND=Non-detect

* = CV for *hexavalent* chromium

‡ = Therapeutic dose for lithium

† = Lead has no comparison value because there is no "safe" level of lead exposure.

Diane Hoover

From: Hudson Todd <todd.hudson@state.or.us>
Sent: Monday, November 23, 2015 12:15 PM
To: David Candelaria
Cc: Brad Carlson; Diane Hoover
Subject: RE: Fielder dam water samples

Good morning Dr. Candelaria,

My apologies for not following up on Friday – I had to leave the office early due to something unexpected.

These sorts of samples require me to create some special screening values, thus the delay. This isn't water people drink, so I am developing some screening values based the assumption of a 20-kg child (a sensitive receptor) going swimming and accidentally swallowing 0.1 liters of this water, daily for a period of less than a year. That's a very conservative (worst-case) scenario, but it's worst-case so it applies to pretty much the whole population.

In one of the samples, arsenic is elevated, but that's because we're in Oregon – arsenic levels in soil/sediment are naturally high everywhere. Even more so for areas of southwestern Oregon – for example, the Sutherlin valley.

I'm going to try and get this finished today, and after that have one of my colleagues check my work.

Todd Hudson

Public Health Toxicologist
Public Health Division
todd.hudson@state.or.us
971-673-0024



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From: David Candelaria [mailto:DCandelaria@co.josephine.or.us]
Sent: Monday, November 23, 2015 9:54 AM
To: Hudson Todd <TODD.HUDSON@dhsoha.state.or.us>
Cc: Brad Carlson <BCarlson@co.josephine.or.us>; Diane Hoover <DHoover@co.josephine.or.us>
Subject: Fielder dam water samples

Hi Todd,

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Have you had a chance to review the data? Any worrisome findings or questions? Our local (Josephine county) water department conducts monthly 'grab samples' and has never found any significant heavy metal levels.

Thanks again for your analysis. Please also cc your thoughts to those cc'd in this e-mail.

David

David D. Candelaria, MD
Medical Director
Josephine County Public Health Department
715 NW Dimmick Street
Grants Pass, OR 97526
541.474.5325 x2244 (work)
[REDACTED] (cell)
541.474.5353 (Fax)



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Bill To

Josephine County Health Dept.
715 NW Dimmick Street
Grants Pass, OR 97526

Invoice

Date	Invoice #
12/28/2015	12695

Date Received / Test	PO	Sample # & Point	Address of Source and/or Project Name	Price
12/14/2015		21504588	Evans Creek Project	
Soil Metal Package		Soil Metal Package		385.00
12/14/2015		21504589	Evans Creek Project	
Soil Metal Package		Soil Metal Package		385.00
12/14/2015		21504590	Evans Creek Project	
Soil Metal Package		Soil Metal Package		385.00
12/14/2015		21504591	Evans Creek Project	
Soil Metal Package		Soil Metal Package		385.00
12/14/2015		21504592	Evans Creek Project	
Soil Metal Package		Soil Metal Package		385.00
12/14/2015		21504593	Evans Creek Project	
Soil Metal Package		Soil Metal Package		385.00

Total	\$2,310.00
Payments / Credits	\$0.00
Balance Due	\$2,310.00

Received 12/29/15 *in*

10-100-4-10



Grants Pass Water Lab

"Fast & Reliable Water Testing Since 1978"

964 SE M Street • Grants Pass, OR 97526 • 541-476-0733 • www.gpwaterlab.com

Bill To

Josephine County Health Dept.
715 NW Dimmick Street
Grants Pass, OR 97526

Invoice

Date	Invoice #
12/1/2015	12513

Date Received / Test	PO	Sample # & Point	Address of Source and/or Project Name	Price
11/20/2015		21504337	Evans Creek Project	
Volital Organic Compound		Reach 1		225.00
Synthetic Organic Compounds		Reach 1		1,350.00
Cyanide		Reach 1		55.00
Macroinvertebrate ID		Reach 1		300.00
Shipping Cost		Reach 1		425.00
Mercury		Reach 1		55.00
Uranium		Reach 1		100.00
Dioxin/ Furan		Reach 1		600.00
Professional Service		Reach 1		500.00
Great 30 (Pump Co)		Great 30		230.00
Date Received / Test	PO	Sample # & Point	Address of Source and/or Project Name	Price
11/20/2015		21504338	Evans Creek Project	
Shipping Cost		Reach #2		425.00
Great 30		Great 30		230.00
Volital Organic Compound		Reach #2		225.00
Synthetic Organic Compounds		Reach #2		1,350.00
Macroinvertebrate ID		Reach #2		300.00
Mercury		Reach #2		55.00
Uranium		Reach #2		100.00
Dioxin/ Furan		Reach #2		600.00
Professional Service		Reach #2		500.00
Cyanide		Reach #2		55.00
Date Received / Test	PO	Sample # & Point	Address of Source and/or Project Name	Price
11/20/2015		21504339	Evans Creek Project	
Professional Service		Reach #3		500.00
Great 30		Great 30		230.00
Volital Organic Compound		Reach #3		225.00

Synthetic Organic Compounds	Reach #3	1,350.00
Cyanide	Reach #3	55.00
Macroinvertebrate ID	Reach #3	300.00
Shipping Cost	Reach #3	425.00
Mercury	Reach #3	55.00
Uranium	Reach #3	100.00
Dioxin/ Furan	Reach #3	600.00

Total	\$11,520.00
Payments / Credits	\$0.00
Balance Due	\$11,520.00



SHANNON & WILSON, INC.

Fed. I.D. #91-0745357
400 N. 34th St., #100

Geotechnical and Environmental Consultants
P.O. Box 300303 Seattle, Washington 98103

Fax #(206) 633-6777
Telephone: (206) 632-8020

03005
GRANTS PASS WATER LAB
Attention: ERIC SCHAAFSMA
964 SE M STREET
GRANTS PASS, OR 97526

**Invoice No :
93498**

JOB REFERENCE

ENVIRONMENTAL ENGINEERING SERVICES
HABITAT MONITORING-EVANS CREEK IN ROGUE RIVER, OR
ROGUE RIVER, JACKSON COUNTY, OREGON

THIS PERIOD FROM: 11/01/2015 TO: 12/12/2015

INVOICE DATE	CONTRACT OR PURCHASE ORDER	AUTHORIZED FEE	JOB NUMBER	
12/17/2015		\$ 88,358.00	21-1-12527 (01)	
PROFESSIONAL SERVICES		TOTAL TO DATE	PREVIOUS BILLINGS	DUE THIS PERIOD
101 - PROJECT MANAGEMENT		5,280.00	0.00	5,280.00
102 - DATA GATHER, REVIEW, PROJ SITINGi		4,719.67	0.00	4,719.67
103 - COMPREHENSIVE SURVEY		34,509.00	0.00	34,509.00
104 - COMPREHENSIVE MONITORING REPORT		19,500.00	0.00	19,500.00
Invoice Totals		<u>64,008.67</u>	<u>0.00</u>	<u>64,008.67</u>

December 16, 2015

Mr. Eric Schaafsma
Technical Director
Grants Pass Water Laboratory
964 SE M St.
Grants Pass, OR 97526

RE: INVOICE FOR EVANS CREEK MONITORING PROGRAM

Dear Eric:

Per your request on December 2, 2015, Shannon & Wilson, Inc. will discontinue billings to the Evans Creek Monitoring Program effective December 28, 2015 at 11:59 p.m. The attached invoice includes billings through December 12, 2015. Additionally, the remaining budget in Tasks 101, 103 and 104 has been pre-invoiced in order to complete work on the comprehensive monitoring report which is expected to extend beyond the December 28th deadline. The total amount invoiced through December 12th and the total amount pre-invoiced are summarized for each of these tasks below:

- Task 101: Invoiced \$3,885. Pre-Invoiced \$1,395.
- Task 103: Invoiced \$29,884.70. Pre-Invoiced \$4,624.30.
- Task 104: Invoiced \$6,670. Pre-Invoiced \$12,830

We will complete the comprehensive monitoring report in early January 2016.

Please don't hesitate to contact me with any questions,

Sincerely,
SHANNON & WILSON, INC.


Chad Krofta, P.E.
Senior Engineer

CJK/drc

Enc: Enclosure – Invoice for Evans Creek Monitoring Program (11/1 to 12/12/15)



SHANNON & WILSON, INC.

Fed. I.D. #91-0745357
400 N. 34th St., #100

Geotechnical and Environmental Consultants
P.O. Box 300303 Seattle, Washington 98103

Fax #(206) 633-6777
Telephone: (206) 632-8020

03005

GRANTS PASS WATER LAB
Attention: ERIC SCHAAFSMA
964 SE M STREET
GRANTS PASS, OR 97526

**Invoice No :
93498**

JOB REFERENCE

ENVIRONMENTAL ENGINEERING SERVICES
HABITAT MONITORING-EVANS CREEK IN ROGUE RIVER, OR
ROGUE RIVER, JACKSON COUNTY, OREGON

THIS PERIOD FROM: 11/01/2015 TO: 12/12/2015

INVOICE DATE	CONTRACT OR PURCHASE ORDER	AUTHORIZED FEE	JOB NUMBER	
12/17/2015		\$ 88,358.00	21-1-12527 (01)	
PROFESSIONAL SERVICES		TOTAL TO DATE	PREVIOUS BILLINGS	DUE THIS PERIOD
101 - PROJECT MANAGEMENT		5,280.00	0.00	5,280.00
102 - DATA GATHER, REVIEW, PROJ SITINGi		4,719.67	0.00	4,719.67
103 - COMPREHENSIVE SURVEY		34,509.00	0.00	34,509.00
104 - COMPREHENSIVE MONITORING REPORT		19,500.00	0.00	19,500.00
Invoice Totals		64,008.67	0.00	64,008.67

Please pay from this invoice. Net 30 days. Late charge of 1.5% per month on past due accounts

Billing Analysis Through 12/12/2015



Project : 21-1-12527 EVANS CREEK MONITORING PROGRAM
 Inv Group : 01 PHASE 101, 102, 103, 104, 105
 Client : 03005 GRANTS PASS WATER LAB
 Rate Sched : GH15P 2015 GENERAL HOURLY-PORTLAND

Bill Cycle : 2
 Biller : 05186
 Invoice Mask: INSWONE3
 Fee Type: CPM

Phase : 101 PROJECT MANAGEMENT

Rate Schedule Labor

Employee Name	Org	Class	Activity	OT Ind	Transaction Date	Period End Date	Hours	Rate	Amount
Vice President									
05151 DAVID R. CLINE	2100	T25	****	Reg	11/05/2015	11/07/2015	1.0	200.00	200.00
05151 DAVID R. CLINE	2100	T25	****	Reg	11/19/2015	11/21/2015	0.5	200.00	100.00
05151 DAVID R. CLINE	2100	T25	****	Reg	12/01/2015	12/05/2015	0.5	200.00	100.00
05151 DAVID R. CLINE	2100	T25	****	Reg	12/02/2015	12/05/2015	1.0	200.00	200.00
05151 DAVID R. CLINE	2100	T25	****	Reg	12/03/2015	12/05/2015	1.0	200.00	200.00
05151 DAVID R. CLINE	2100	T25	****	Reg	12/04/2015	12/05/2015	2.0	200.00	400.00
05151 DAVID R. CLINE	2100	T25	****	Reg	12/08/2015	12/12/2015	1.0	200.00	200.00
Senior Principal Professional									
05212 ROGER T. GRESH	2100	T25	****	Reg	11/05/2015	11/07/2015	7.0	200.00	1,400.00
05212 ROGER T. GRESH	2100	T25	****	Reg	11/06/2015	11/07/2015	2.0	200.00	400.00
05212 ROGER T. GRESH	2100	T25	****	Reg	11/06/2015	11/07/2015	1.0	200.00	200.00
05212 ROGER T. GRESH	2100	T25	****	Reg	11/06/2015	11/07/2015	3.0	200.00	600.00
Senior Principal Professional									
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/04/2015	11/07/2015	3.0	145.00	435.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/12/2015	11/14/2015	4.0	145.00	580.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/25/2015	11/28/2015	1.0	145.00	145.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	12/01/2015	12/05/2015	2.0	145.00	290.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	12/02/2015	12/05/2015	2.0	145.00	290.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	12/03/2015	12/05/2015	1.0	145.00	145.00
							13.0		1,885.00
Total Rate Schedule Labor							23.0		3,885.00

Phase Total 101 PROJECT MANAGEMENT 3,885.00

Phase : 102 DATA GATHER, REVIEW, PROJ SITING

Rate Schedule Labor

Employee Name	Org	Class	Activity	OT Ind	Transaction Date	Period End Date	Hours	Rate	Amount
Senior Principal Professional									
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/05/2015	11/07/2015	3.5	145.00	507.50
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/06/2015	11/07/2015	3.0	145.00	435.00

Billing Analysis Through 12/12/2015



SHAWKON & SONS, INC.
Geotechnical and Environmental Consulting

Project : 21-112527 EVANS CREEK MONITORING PROGRAM
Inv Group : 01 PHASE 101, 102, 103, 104, 105
Client : 03005 GRANTS PASS WATER LAB
Rate Sched : GH15P 2015 GENERAL HOURLY-PORTLAND

Bill Cycle : 2
Bill# : 05186
Invoice Mask: INSWONE3
Fee Type: CPM

Phase : 102 DATA GATHER, REVIEW, PROU SITINGI

Employee Name	Org	Class	Activity	OT Ind	Transaction Date	Period End Date	Hours	Rate	Amount
Senior Professional									
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/12/2015	11/14/2015	2.0	145.00	290.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/24/2015	11/28/2015	1.5	145.00	217.50
							10.0		1,450.00
Senior Professional									
05187 CHRISTOPHER M. HELLAND	2100	T18	****	Reg	11/01/2015	11/07/2015	2.0	115.00	230.00
05187 CHRISTOPHER M. HELLAND	2100	T18	****	Reg	11/05/2015	11/07/2015	2.0	115.00	230.00
05187 CHRISTOPHER M. HELLAND	2100	T18	****	Reg	11/11/2015	11/14/2015	8.0	115.00	920.00
05187 CHRISTOPHER M. HELLAND	2100	T18	****	Reg	11/12/2015	11/14/2015	8.0	115.00	920.00
05187 CHRISTOPHER M. HELLAND	2100	T18	****	Reg	11/13/2015	11/14/2015	8.0	115.00	920.00
							28.0		3,220.00
Total Rate Schedule Labor							38.0		4,670.00

Vendor Name	Org	Doc Nbr	Transaction Date	Period End Date	Cost	Multiplier	Amount	
DC - Other Job Costs	2100	311369	12/1/2015	11/28/2015	43.19	1.15	49.67	
02530 FEDEX	2100	311369			43.19	1.15	49.67	
Total Regular Expenses							43.19	49.67
Phase Total 102 DATA GATHER, REVIEW, PROU SITINGI								4,719.67

Phase : 103 COMPREHENSIVE SURVEY

Employee Name	Org	Class	Activity	OT Ind	Transaction Date	Period End Date	Hours	Rate	Amount
Senior Principal Professional									
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/11/2015	11/14/2015	4.0	145.00	580.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/12/2015	11/14/2015	2.0	145.00	290.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	11/13/2015	11/14/2015	8.0	145.00	1,160.00
05219 CHAD J. KROFTA	2100	T20	**	Reg	11/16/2015	11/21/2015	12.0	145.00	1,740.00
05219 CHAD J. KROFTA	2100	T20	**	Reg	11/17/2015	11/21/2015	10.0	145.00	1,450.00
05219 CHAD J. KROFTA	2100	T20	**	Reg	11/18/2015	11/21/2015	10.0	145.00	1,450.00

Billing Analysis Through 12/12/2015



Project : 21-1-12527 EVANS CREEK MONITORING PROGRAM
 Inv Group : 01 PHASE 101, 102, 103, 104, 105
 Client : 03005 GRANTS PASS WATER LAB
 Rate Sched : GH15P 2015 GENERAL HOURLY-PORTLAND

Bill Cycle : 2
 Biller : 05186
 Invoice Mask: INSWONES
 Fee Type: CPM

Phase : 103 COMPREHENSIVE SURVEY

Rate Schedule Labor

Employee Name	Org	Class	Activity	OT	Transaction Date	Period End Date	Hours	Rate	Amount
Senior Principal Professional									
05219 CHAD J. KROFTA	2100	T20	**	Reg	11/19/2015	11/21/2015	10.0	145.00	1,450.00
05219 CHAD J. KROFTA	2100	T20	**	Reg	11/20/2015	11/21/2015	12.0	145.00	1,740.00
05219 CHAD J. KROFTA	2100	T20	**	Reg	11/24/2015	11/28/2015	4.5	145.00	652.50
05219 CHAD J. KROFTA	2100	T20	**	Reg	11/25/2015	11/28/2015	5.0	145.00	725.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	12/01/2015	12/05/2015	2.0	145.00	290.00
05219 CHAD J. KROFTA	2100	T20	****	Reg	12/02/2015	12/05/2015	2.0	145.00	290.00
							81.5		11,817.50

Regular Expenses									
Vendor Name	Org	Doc Nbr	Transaction Date	Period End Date	Cost	Multiplier	Amount		
Senior Professional									
05187 CHRISTOPHER M. HELLAND	2100	T18	11/15/2015	11/21/2015	5.0	115.00	575.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	11/16/2015	11/21/2015	15.0	115.00	1,725.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	11/17/2015	11/21/2015	10.0	115.00	1,150.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	11/18/2015	11/21/2015	10.0	115.00	1,150.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	11/19/2015	11/21/2015	12.0	115.00	1,380.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	11/20/2015	11/21/2015	13.0	115.00	1,495.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	11/23/2015	11/28/2015	8.0	115.00	920.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	11/24/2015	11/28/2015	4.0	115.00	460.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	12/03/2015	12/05/2015	4.0	115.00	460.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	12/07/2015	12/12/2015	4.0	115.00	460.00		
05187 CHRISTOPHER M. HELLAND	2100	T18	12/11/2015	12/12/2015	8.0	115.00	920.00		
					93.0		10,695.00		
							22,512.50		

DC - Travel & Subsistence									
Vendor Name	Org	Doc Nbr	Transaction Date	Period End Date	Cost	Multiplier	Amount		
05187 CHRISTOPHER M. HELLAND	2100	311759	12/7/2015	12/5/2015	1,060.65	1.00	1,060.65		
05219 CHAD J. KROFTA	2100	311760	12/7/2015	12/5/2015	1,617.32	1.00	1,617.32		
							2,677.97		

DC - Other Job Costs
 02442 EQUIPCO RENTALS 2100 311772 12/7/2015 12/5/2015 90.00 1.15 103.50
 03512 IN-HOUSE REPRODUCTION 2100 310692 11/16/2015 11/14/2015 15.00 1.15 17.25

Billing Analysis Through 12/12/2015



Project : 21-1-12527 EVANS CREEK MONITORING PROGRAM
 Inv Group : 01 PHASE 101, 102, 103, 104, 105
 Client : 03005 GRANTS PASS WATER LAB
 Rate Sched : GH15P 2015 GENERAL HOURLY-PORTLAND

Bill Cycle : 2
 Biller : 05186
 Invoice Mask: INSWONE3
 Fee Type: CPM

Phase : 103 COMPREHENSIVE SURVEY

Regular Expenses		Org	Doc Nbr	Transaction Date	Period End Date	Cost	Multiplier	Amount
DC - Other Job Costs								
Vendor Name								
05187 CHRISTOPHER M. HELLAND		2100	311759	12/7/2015	12/5/2015	323.70	1.15	372.26
05219 CHAD J. KROFTA		2100	311760	12/7/2015	12/5/2015	110.06	1.15	126.57
05635 PACIFIC SURVEY SUPPLY		2100	311447	12/1/2015	11/28/2015	2,891.00	1.15	3,324.65
DC - Other Job Costs Total:								3,944.23
Total Regular Expenses						6,107.73		6,622.20

Unit Pricing Expenses		Org	Doc Nbr	Transaction Date	Period End Date	Unit Quantity	Cost	Multiplier	Amount
Vendor / Employee Name									
DC - Unit Pricing									
7030 SIEVE ANALYSIS (INCL. WASH)		2400	5173	12/9/2015	12/12/2015	7030	125.00	1.00	750.00
Total Unit Pricing							750.00		750.00
Phase Total 103 COMPREHENSIVE SURVEY									29,884.70

Phase : 104 COMPREHENSIVE MONITORING REPORT

Rate Schedule Labor		Org	Class	Activity	OT Ind	Transaction Date	Period End Date	Hours	Rate	Amount
Senior Principal Professional										
Employee Name										
05219 CHAD J. KROFTA		2100	T20	****	Reg	12/01/2015	12/05/2015	4.0	145.00	580.00
05219 CHAD J. KROFTA		2100	T20	****	Reg	12/02/2015	12/05/2015	4.0	145.00	580.00
05219 CHAD J. KROFTA		2100	T20	****	Reg	12/03/2015	12/05/2015	4.0	145.00	580.00
05219 CHAD J. KROFTA		2100	T20	****	Reg	12/04/2015	12/05/2015	3.0	145.00	435.00
05219 CHAD J. KROFTA		2100	T20	****	Reg	12/08/2015	12/12/2015	4.0	145.00	580.00
05219 CHAD J. KROFTA		2100	T20	****	Reg	12/09/2015	12/12/2015	9.0	145.00	1,305.00
05219 CHAD J. KROFTA		2100	T20	****	Reg	12/10/2015	12/12/2015	9.0	145.00	1,305.00
05219 CHAD J. KROFTA		2100	T20	****	Reg	12/11/2015	12/12/2015	9.0	145.00	1,305.00
Total Rate Schedule Labor								46.0		6,670.00
Total Rate Schedule Labor								46.0		6,670.00

Billing Analysis Through 12/12/2015



Project : 21-1-12527 EVANS CREEK MONITORING PROGRAM
Inv Group : 01 PHASE 101, 102, 103, 104, 105
Client : 03005 GRANTS PASS WATER LAB
Rate Sched : GH15P 2015 GENERAL HOURLY-PORTLAND

Bill Cycle : 2
Bill# : 05186
Invoice Mask: INSWONE3
Fee Type: CPM

Phase Total 104 COMPREHENSIVE MONITORING REPORT

6,670.00

Invoice Total 21-1-12527 EVANS CREEK MONITORING PROGRAM (01)

45,159.37

EXHIBIT
EVANS CREEK MONITORING PROGRAM - PRE-INVOICED DETAIL.

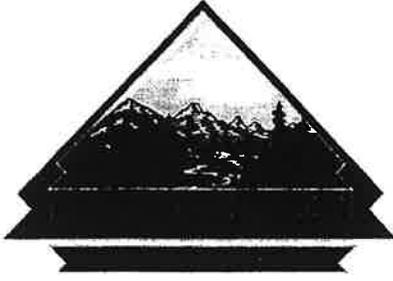
SHANNON & WILSON, INC.

Tasks	Description	Labor							Expenses		Total
		VP (PIC)	VP (PM)	Sr. Princ. (ATPM)	Sr. Prof	Prof IV.	Sr. Admin	Hour Total	Labor Cost	S&W Exp	
1.01	Project Management	\$200.00	\$200.00	\$145.00	\$115.00	\$105.00	\$90.00	10	\$1,395		\$1,395
1.02	Existing Data Gather, Review, and Project Siting	0	3	3			4	28	\$0		\$0
1.03	Comprehensive Survey (3 SITES)			12	16		0.5	88	\$3,624		\$4,624
1.04	Comprehensive Monitoring Report	16		30	40		2		\$12,330		\$12,830
1.05	Seasonal Monitoring (2 EVENTS, 3 SITES)		3		56		6.5	126	\$0		\$0
	Phase I Total			45	56	0	6.5	126	\$17,349	\$1,500	\$18,849

**TABLE
PHASE 1 PRE-INVOICE EXPENSE DETAIL**

SHANNON & WILSON, INC.

Task	Name	Description	Unit	Amount	Unit Price	Total
1.03	Comprehensive Survey	Equipment - Level Loggers	EA	1	\$1,000.00	\$1,000
1.04	Comprehensive Monitoring Report	Reproduction - B&W and Color reports, maps, etc.	LS	1	\$500.00	\$500
Total						\$1,500



Josephine County, Oregon

TTD# 1-800-735-2900

Diane L. Hoover, Ph.D., FACHE

Josephine County Public Health Director

715 NW Dimmick

Grants Pass, OR 97526

(541) 474-5325

Fax (541) 474-5353

E-mail : publichealth@co.josephine.or.us

November 24, 2015

To: Eric Schaafsma/The Grants Pass Water Lab
964 SE "M" Street
Grants Pass, OR 97526

Subj: CONTRACT OVERSIGHT ACTIVITIES

1. For this contract period, Brad Carlson will be providing scientific oversight to ensure that the interests of Josephine County residents are being adequately safeguarded. Brad will be developing an evaluation plan for monitoring this contract. Toward that end, please submit to him the following documents by December 31, 2015:
 - a. The contract between the water lab and the subcontractor Shannon & Wilson, Inc.
 - b. Documentation from both The Grants Pass Water Laboratory and Shannon & Wilson, Inc. that samples are collected, handled and analyzed from the stated project site in accordance with accepted scientific protocols and all quality assurance quality control (QA/QC) requirements.
 - c. Back up documentation to justify the budget for years 2-5.
 - d. Initial results from November sampling.
2. Brad Carlson's point of contact information is bcarlson@co.josephine.or.us. His telephone number is 541-474-5336.

Respectfully,

Cc
Brad Carlson
Legal Dept.



**Grants Pass
Water Lab**

964 SE M Street
Grants Pass, OR 97526
541-476-0733
www.gpwaterlab.com

January 12, 2016

To: Dr. Diane Hoover
715 NW Dimmick
Grants Pass, OR 97526

Subject: Contract Oversight Document Request

Dear Dr. Diane Hoover,

Please find in the enclosed package the documents you requested on November 24, 2015.

1. The contract between Grants Pass Water Laboratory, Inc. and the subcontractor Shannon & Wilson, Inc.
2. Documentation supporting proper protocols were followed for sample collection, handling, and analysis for the project site meeting QA/QC requirements.

I look forward to answering any questions you may have.

Respectfully,

Eric Schaafsma

Received
JC PH
1/20/16
BWC



Grants Pass Water Lab

964 SE M Street
Grants Pass, OR 97526
541-476-0733
www.gpwaterlab.com

Received
JCPH
1/20/16
BWC

**RE: QUALITY ASSURANCE/ QUALITY CONTROL FOR EVANS CREEK
MONITORING PROGRAM**

Dear Dr. Diane Hoover:

Grants Pass Water Laboratory, Inc. and its staff are educated, trained, credentialed and experienced in the application of good laboratory procedures (GLP) for the work it performs. As such the QA/QC Manual protocols utilized by the laboratory are the sum of the actions the laboratory takes to assure precise, accurate measurement of samples and involves all aspects of the laboratory including sample collection and receipt, analysis, review and reporting procedures.

For the Evans Creek project, DEQ FSRG field sample collection guidelines were followed. Appropriate laboratory provided sample containers were labeled at the time of sample collection. The Chain-of-custody was properly filled out and remained with samples until received by the laboratory. During transport, sample security and integrity was maintained utilizing coolers with ice packs. Samples remained in the control of the sample collector until submission of samples to laboratory.

The chain-of-custody with the sample containers were submitted to and received by the laboratory. Sample submission protocols were followed. The test requested entered into the LIMNs system and the bottles labeled with sample ID number and requested analysis.

All analysis was conducted following EPA or Standard Methods 22nd Edition found in the SOP Manual (G1020). For each appropriate analyte, internal laboratory QA/QC procedures for Method Blank, ICV, LCS, CCV, Matrix Spike (MS) and MS Duplicate were performed.

The analytical data sheet generated contains the sample number, the laboratory identification number, analysis method type or number, detection limits, and the date of analysis. Any problems encountered regarding sample container, chain-of-custody, sample holding times, sample analyses or lab contamination would be discussed in the report.

Grants Pass Water Laboratory, Inc. is accredited by ORELAP and ISO/IEC 17025:2005. The stringent requirements for accreditation are dully followed in all the work we do, including those analytes which OAR's do not require ORELAP accreditation.

Sincerely,

Eric Schaafsma
Technical Director

September 4, 2015

Mr. Eric Schaafsma
Technical Director
Grants Pass Water Laboratory
964 SE M Street
Grants Pass, OR 97526

*Received
JCPH
1/20/16
BWC*

**RE: SCOPE AND COST ESTIMATE PROPOSAL FOR EVANS CREEK
MONITORING PROGRAM**

Dear Eric:

Per your request on August 25, 2015, Shannon & Wilson, Inc. has prepared and is pleased to submit this scope and cost estimate proposal for the five-year Evans Creek Monitoring Program. The primary objective of this program is to observe, evaluate, and document baseline physical and biological habitat parameters in a 4-mile reach of Evans Creek in Jackson County, Oregon, following the summer 2015 removal of the Fielder Dam, and monitor changes in these habitat parameters upstream and downstream from the former dam location relative to salmon habitat restoration over the five-year duration of the monitoring program.

The specific scope and field activities of this monitoring program detailed in the enclosed Scope of Services, Schedule, and Cost Estimate are based on the Columbia Habitat Monitoring Program protocol recently developed by multiple federal and state agencies (including the National Oceanic Atmospheric Administration, the Bonneville Power Administration, and the Oregon Department of Fish and Wildlife) specifically for monitoring salmon habitat recoveries following in-stream dam removals.

The scope of services and cost estimates for this Evans Creek Monitoring Program have been divided into five Phases: Phase 1 (the baseline year) and four subsequent years of monitoring identified as Phases 2 through 5. We can perform the scope of services described herein for Phase 1 on a time-and-materials basis for an estimate cost of \$88,358. This estimated cost will not be exceeded without prior written authorization from you. For budgeting purposes only, and based on our 2015 fee schedule for the employee categories anticipated to be utilized on the program, estimated costs for Phases 2 through 5 also are provided, but are not intended to serve as a final cost proposal from Shannon & Wilson, Inc. Our services will be performed in accordance with our Standard General Terms and Conditions, which also are enclosed with this



SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

Received 1/20/16 SCPH BWC

Attachment to and part of our Proposal: 24-2-04886-001
Date: September 4, 2015
To: Mr. Eric Schaafsma
Grants Pass Water Laboratory
Re: Evans Creek Monitoring Program

STANDARD GENERAL TERMS AND CONDITIONS (ALL PURPOSE)

ARTICLE 1 – SERVICES OF SHANNON & WILSON

Shannon & Wilson's services shall be limited to those Services expressly set forth in the Task Order and is subject to the terms and conditions set forth herein. Shannon & Wilson shall procure and maintain all business and professional licenses and registrations necessary to perform its Services. Upon Client's request (and for additional Compensation, if not already included in the Task Order), Shannon & Wilson shall assist Client in attempting to obtain, or on behalf of Client and in Client's name attempt to obtain, those permits and approvals required for the Project relating to Shannon & Wilson's services.

Client acknowledges, depending on field conditions encountered and subsurface conditions discovered, the number and location of borings, the number and type of field and laboratory tests, and other similar items, as deemed necessary by Shannon & Wilson in the exercise of due care, may need to be increased or decreased; if such modifications are approved by Client, Shannon & Wilson's Compensation and Schedule shall be equitably adjusted.

If conditions actually encountered at the Project site differ materially from those represented by Client and/or shown or indicated in the contract documents, or are of an unusual nature which materially differ from those ordinarily encountered and generally recognized as inherent for the locality and character of the Services, Shannon & Wilson's Compensation and Schedule shall be equitably adjusted.

Without increasing the Services, Compensation, or Schedule contained in any subsequently issued Task Order, Shannon & Wilson may employ such subcontractors as Shannon & Wilson deems necessary to assist in performing its Services.

If Shannon & Wilson's Services are increased or decreased by Client, Shannon & Wilson's Compensation and Schedule shall be equitably adjusted.

ARTICLE 2 – FEES AND EXPENSES FOR RENDERING SERVICES

Fees for Shannon & Wilson's services are based on the actual time expended on the project, including travel, by our personnel and will be computed by multiplying the actual number of hours worked times the following rates. These rates are for the 2015 calendar year. At the end of each calendar year, our rates will be adjusted for the next calendar year.

<u>OFFICERS/ASSOCIATES</u>	<u>ENG./GEOL./HYDRO./ENVIRON.</u>	<u>FIELD & LAB TECH./DRAFTER/TECH ASST</u>	<u>Overtime</u>
VP/Sr. VP/Pres \$200.00	Sr. Principal Professional \$145.00	Sr. Technical Services (Sr., IV) \$100.00	\$125.00
Sr. Associate \$185.00	Principal Professional \$130.00	Technical Services (III, II, I) \$65.00	\$81.25
Associate \$160.00	Sr. Professional \$115.00		
	Professional IV \$105.00	<u>WORD PROC./REPRO/RECORDS/CLERICAL</u>	
<u>SPECIAL SERVICES</u>	Professional III \$95.00	Sr. Office Services (Sr., V, IV) \$90.00	\$112.50
Computer Analyst \$145.00	Professional II \$85.00	Office Services (III, II, I) \$50.00	\$62.50
Info Resources Spec \$120.00	Professional I \$80.00		

Expert Testimony. Hourly rates will be doubled for time spent actually providing Expert Testimony.

REIMBURSABLE EXPENSES

Expenses other than salary costs that are directly attributable to our professional services will be invoiced at our cost plus 15 percent. Examples include, but are not limited to, expenses for out-of-town travel and living, information processing equipment, instrumentation and field equipment rental, special fees and permits, premiums for additional or special insurance where required, long distance telephone charges, local mileage and parking, use of rental vehicles, taxi, reproduction, local and out-of-town delivery service, express mail, photographs, film, laboratory equipment fees, shipping charges and supplies.

ARTICLE 3 – TIMES FOR RENDERING SERVICES

Invoices shall be prepared in accordance with Shannon & Wilson's standard invoicing practices and shall be submitted to Client by Shannon & Wilson monthly. The amount billed in each invoice shall be calculated as set forth in the Task Order.

Unless the Task Order contains a fixed lump-sum price, Shannon & Wilson's actual total Compensation may be more or less than the estimate contained in the Task Order. Shannon & Wilson shall not exceed the estimate contained in the Task Order by more than ten percent (10%) without the prior written consent of Client; provided however, unless the Client authorizes additional funds in excess of the estimate contained in the Task Order, Shannon & Wilson shall have no obligation to continue Services on the Project.

Invoices are due and payable within 30 days of receipt. If Client fails to pay Shannon & Wilson's invoice within 30 days after receipt, the amounts due Shannon & Wilson shall accrue interest at the rate of one and one-half percent (1.5%) per month (or the maximum rate of interest permitted by law, if less) after the 30th day. In addition, Shannon & Wilson may, after giving seven (7) days written notice to Client, suspend all Services under this Agreement until Shannon & Wilson has been paid in full.

If Client disputes Shannon & Wilson's invoice, only the disputed portion(s) may be withheld from payment, and the undisputed portion(s) shall be paid.

Records of Shannon & Wilson's direct and indirect costs and expenses pertinent to its Compensation under this Agreement shall be kept in accordance with generally accepted accounting practices and applicable federal, state, or local laws and regulations. Upon request, such records shall be made available to Client for inspection on Shannon & Wilson's premises and copies provided to Client at cost.

ARTICLE 4 – CLIENT'S RESPONSIBILITIES

Client shall grant or obtain free access to the Project site for all equipment and personnel necessary for Shannon & Wilson to perform its Services.

ARTICLE 5 – STANDARD OF CARE / ABSENCE OF WARRANTIES / NO RESPONSIBILITY FOR SITE SAFETY OR CONTRACTOR'S PERFORMANCE**Standard of Care**

The standard of care for all professional Services performed or furnished by Shannon & Wilson under this Agreement shall be the skill and care ordinarily exercised by other members of Shannon & Wilson's profession, providing the same or similar Services, under the same or similar circumstances, at the same time and locality as the Services were provided by Shannon & Wilson. The installation, construction, alteration, or repair of any object or structure by Shannon & Wilson performed in a good and workmanlike manner in accordance with general industry standards, and conform to the specifications contained in the Task Order.

Subsurface explorations and testing identify actual subsurface conditions only at those points where samples are taken, at the time they are taken. Actual conditions at other locations of the Project site, including those inferred to exist between the sample points, may differ significantly from conditions that exist at the sampling locations. The passage of time or intervening causes may cause the actual conditions at the sampling locations to change as well. Interpretations and recommendations made by Shannon & Wilson shall be based solely upon information available to Shannon & Wilson at the time the interpretations and recommendations are made.

Shannon & Wilson shall be responsible for the technical accuracy of its Services, data, interpretations, and recommendations resulting therefrom, and Client shall not be responsible for discovering deficiencies therein. Shannon & Wilson shall correct any substandard Services without additional Compensation, except to the extent that such inaccuracies are directly attributable to deficiencies in Client-furnished information.

Warranties

Shannon & Wilson makes no guarantees or warranties, express or implied, under this Agreement or otherwise, about Shannon & Wilson's professional Services. Shannon & Wilson warrants for one (1) year from substantial completion of its Services, all goods delivered hereunder shall be new and free from defects in material or workmanship, and shall conform to the specifications, drawings, or sample(s) specified or furnished, if any, and shall be merchantable and fit for their intended purpose(s). Shannon & Wilson warrants that Shannon & Wilson has good and marketable title to all goods delivered hereunder, and that all goods delivered hereunder shall be free and clear of all claims of superior title, liens, and encumbrances of any kind.

Client-Furnished Documents

Shannon & Wilson may use requirements, programs, instructions, reports, data, and information furnished by Client to Shannon & Wilson in performing its Services under each Task Order. Shannon & Wilson may rely on the accuracy and completeness of requirements, programs, instructions, reports, data, and other information furnished by Client to Shannon & Wilson. Client shall, only to the fullest extent permitted by law, waive any claims against Shannon & Wilson and its subcontractors, and indemnify and hold Shannon & Wilson and its subcontractors harmless from any claims, liability, or expenses (including reasonable attorneys' fees and costs) arising from Shannon & Wilson's reliance on Client-furnished information, except to the extent of Shannon & Wilson's and its subcontractor's negligent or wrongful acts, errors, omissions, or breach of contract.

Site Damage

Shannon & Wilson shall take reasonable precautions to minimize damage to the Project site, but it is understood by Client that, in the normal course of Shannon & Wilson's Services, some Project site damage may occur, and the correction of such damage is not part of Shannon & Wilson's services unless so stated in the Task Order. Client shall, only to the fullest extent permitted by law, waive any claims against Shannon & Wilson and its subcontractors, and indemnify and hold Shannon & Wilson and its subcontractors harmless from any claims, liability, or expenses (including reasonable attorneys' fees and costs) arising from any Project site damage caused by Shannon & Wilson, except to the extent of Shannon & Wilson's and its subcontractor's negligent or wrongful acts, errors, omissions, or breach of contract.

Buried Structures

If there are any buried structures and/or utilities on the Project site where subsurface explorations are to take place, Client shall provide Shannon & Wilson with a plan showing their existing locations. Shannon & Wilson shall contact the one-number locator service to request that they identify any underground utilities. Shannon & Wilson shall use reasonable care and diligence to avoid contact with buried structures and/or utilities as shown. Shannon & Wilson shall not be liable for any loss or damage to buried structures and/or utilities resulting from inaccuracy of the plans, or lack of plans, or errors by the locator service relating to the location of buried structures and/or utilities. Client shall, only to the fullest extent permitted by law, waive any claims against Shannon & Wilson and its subcontractors, and indemnify, and hold Shannon & Wilson and its subcontractors harmless from any claims, liability, or expenses (including reasonable attorneys' fees and costs) arising from damage to buried structures and/or utilities caused by Shannon & Wilson's sampling, except to the extent of Shannon & Wilson's and its subcontractor's negligent or wrongful acts, errors, omissions, or breach of contract.

Aquifer Cross-Contamination

Despite the use of due care, unavoidable contamination of soil or groundwater may occur during subsurface exploration when drilling or sampling tools are advanced through a contaminated area, linking it to an aquifer, underground stream, or other hydrous body not previously contaminated and capable of spreading contaminants off the Project site. Because Shannon & Wilson is powerless to totally eliminate this risk despite use of due care, and because sampling is an essential element of Shannon & Wilson's Services, Client shall, only to the fullest extent permitted by law, waive any claims against Shannon & Wilson and its subcontractors, and indemnify and hold Shannon & Wilson and its subcontractors harmless from any claims, liability, or expenses (including reasonable attorneys' fees and costs) arising from cross-contamination caused by Shannon & Wilson's sampling, except to the extent of Shannon & Wilson's and its subcontractor's negligent or wrongful acts, errors, omissions, or breach of contract.

Opinions of Probable Construction Costs

If opinions of probable construction costs are included in the Task Order, Shannon & Wilson's opinions of probable construction costs shall be made on the basis of its experience and qualifications and represent its judgment as a professional generally familiar with the industry. Opinions of probable construction costs are based, in part, on approximate quantity evaluations that are not accurate enough to permit contractors to prepare bids. Further, since Shannon & Wilson has no control over: the cost of labor, materials, equipment, or Services furnished by others; the contractor's actual or proposed construction methods or methods of determining Compensations; competitive bidding; or market conditions, Shannon & Wilson cannot and does not guarantee that proposals, bids, or actual construction cost shall not vary from opinions of the components of probable construction cost prepared by Shannon & Wilson. If Client or any contractor wishes greater assurance as to probable construction cost, Client or contractor shall employ an independent cost estimator.

Review of Contractor's Shop Drawings and Submittals

If review of a contractor's shop drawings and submittals are included in the Task Order, Shannon & Wilson shall review and take appropriate action on the contractor's submittals, such as shop drawings, product data, samples, and other data, which the contractor is required to submit, but solely for the limited purpose of checking for general overall conformance with Shannon & Wilson's design concept. This review shall not include a review of the accuracy or completeness of details, such as quantities; dimensions; weights or gauges; fabrication processes; construction means, methods, sequences or procedures; coordination of work with other trades; or construction safety precautions, all of which are the sole responsibility of the contractor. Shannon & Wilson's review shall be conducted with reasonable promptness while allowing sufficient time, in Shannon & Wilson's judgment, to permit adequate review. Review of a specific item shall not be construed to mean that Shannon & Wilson has reviewed the entire assembly of which the item is a component. Shannon & Wilson shall not be responsible for any deviations by the contractor in the shop drawings and submittals from the construction documents, which are not brought to the attention of Shannon & Wilson in writing by the contractor.

Construction Observation

If construction observation is included in the Task Order, Shannon & Wilson shall visit the Project site at intervals Shannon & Wilson deems appropriate, or as otherwise agreed to in writing by Client and Shannon & Wilson, in order to observe and keep Client generally informed of the progress and quality of the work. Such visits and observations are not intended to be an exhaustive check or a detailed inspection of any contractor's work, but rather are to allow Shannon & Wilson, as a professional, to become generally familiar with the work in progress in order to determine, in general, whether the work is progressing in a manner indicating that the work, when fully completed, shall be in accordance with Shannon & Wilson's general overall design concept. Shannon & Wilson's authority shall be limited to observing, making technical comments regarding general overall compliance with Shannon & Wilson's design concept, and rejecting any work which it becomes aware of that does not comply with Shannon & Wilson's general overall design concept. Shannon & Wilson's acceptance of any non-conforming work containing latent defects or failure to reject any non-conforming work not inspected by Shannon & Wilson shall not impose any liability on Shannon & Wilson or relieve any contractor from complying with their contract documents. All construction contractors shall be solely responsible for construction site safety, the quality of their work, and adherence to their contract documents. Shannon & Wilson shall have no authority to direct any contractor's actions or stop any contractor's work.

If Shannon & Wilson is not retained to provide construction observation of the implementation of its design recommendations, Client shall, only to the fullest extent permitted by law, waive any claims against Shannon & Wilson, and indemnify and hold Shannon & Wilson harmless from any claims, liability, or expenses (including reasonable attorneys' fees and costs) arising from the implementation of Shannon & Wilson's design recommendations, except to the extent of Shannon & Wilson's and its subcontractor's negligent or wrongful acts, errors, omissions, or breach of contract.

No Responsibility for Site Safety

Except for its own subcontractors and employees, Shannon & Wilson shall not: supervise, direct, have control over, or authority to stop any contractor's work; have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected by any contractor; be responsible for safety precautions and programs incident to any contractor's work; or be responsible for any failure of any contractor to comply with laws and regulations applicable to the contractor, all of which are the sole responsibility of the construction contractors. This requirement shall apply continuously, regardless of time or place, and shall in no way be altered because a representative of Shannon & Wilson is present at the Project site performing his/her duties. Notwithstanding anything to the contrary, Shannon & Wilson shall never be deemed to have assumed responsibility for the Project's site safety by either contract or conduct. No act or direction by Shannon & Wilson shall be deemed the exercise of supervision or control of any contractor's employees or the direction of any contractor's performance. Any direction provided by Shannon & Wilson shall be deemed solely to ensure the contractor's general overall compliance with Shannon & Wilson's design concept.

No Responsibility for Contractor's Performance

Except for its own subcontractors and employees, Shannon & Wilson shall not be responsible for safety precautions, the quality of any contractor's work, or any contractor's failure to furnish or perform their work in accordance with their contract documents.

Except Shannon & Wilson's own employees and its subcontractors, Shannon & Wilson shall not: be responsible for the acts or omissions of any contractor, subcontractor or supplier, or other persons at the Project site, or otherwise furnishing or performing any work; or for any decision based on interpretations or clarifications of Shannon & Wilson's design concept given without the consultation and concurrence of Shannon & Wilson.

Approval of Contractor's Applications for Payment

If approval of a contractor's applications for payment are included in the Task Order, Shannon & Wilson shall review the amounts due the contractor and issue a recommendation about payment to Client. Shannon & Wilson's review and approval shall be limited to an evaluation of the general progress of the work and the information contained in the contractor's application for payment and a representation by Shannon & Wilson that to the best of the Shannon & Wilson's knowledge, the contractor has performed work for which payment has been requested, subject to further testing and inspection upon substantial completion. The issuance of a recommendation for payment shall not be construed as a representation that: Shannon & Wilson has made an exhaustive check or a detailed or continuous inspection check of the quality or quantity of the contractor's work; approved the contractor's means, methods, sequences, procedures, or safety precautions; or that contractor's subcontractors, laborers, and suppliers have been paid.

ARTICLE 6 – CONFIDENTIALITY AND USE OF DOCUMENTS**Confidentiality**

Shannon & Wilson agrees to keep confidential and to not disclose to any person or entity (other than Shannon & Wilson's employees and subcontractors), without the prior consent of Client, all information furnished to Shannon & Wilson by Client or learned by Shannon & Wilson as a result of its Services on the Project; provided however, that these provisions shall not apply to information that: is in the public domain through no fault of Shannon & Wilson; was previously known to Shannon & Wilson; or was independently acquired by Shannon & Wilson from third-parties who were under no obligation to Client to keep said information confidential. This paragraph shall not be construed to in any way restrict Shannon & Wilson from making any disclosures required by law. Client agrees that Shannon & Wilson may use and publish Client's name and a general description of Shannon & Wilson's Services with respect to the Project in describing Shannon & Wilson's experience and qualifications to others.

Copyrights and Patents – Shannon & Wilson shall indemnify, hold harmless, and defend Client from any and all actions, damages, demands, expenses (including reasonable attorneys' fees and costs), losses, and liabilities arising out of any claims that any goods or Services furnished by Shannon & Wilson infringe any patent, trademark, trade name, or copyright.

Use of Documents

All documents prepared by Shannon & Wilson are instruments of service with respect to the Project, and Shannon & Wilson shall retain a copyrighted ownership and property interest therein (including the right of reuse) whether or not the Project is completed.

Shannon & Wilson grants to Client a non-exclusive, irrevocable, unlimited, royalty-free license to use any documents prepared by Shannon & Wilson for Client. Client may make and retain copies of such documents for their information and use. Such documents are not intended or represented to be suitable for reuse by Client, or others, after the passage of time, on extensions of the Project, or on any other Project. Any such reuse without written verification or adaptation by Shannon & Wilson, as appropriate for the specific purpose intended, shall be at Client's sole risk, and Client shall, only to the fullest extent permitted by law, waive any claims against Shannon & Wilson and its subcontractors, and indemnify and hold Shannon & Wilson and its subcontractors harmless from any claims, liability, or expenses (including reasonable attorneys' fees and costs) arising from such reuse, except to the extent of Shannon & Wilson's and its subcontractor's negligent or wrongful acts, errors, omissions, or breach of contract. Any verification or adaptation of the documents for extensions of the Project or for any other project by Shannon & Wilson shall entitle Shannon & Wilson to additional Compensation to be agreed upon by Client and Shannon & Wilson.

Copies of documents that may be relied upon by Client are limited to the printed copies (also known as hard copies) that are signed or sealed by Shannon & Wilson. Text, data, or graphics files in electronic media format are furnished solely for the convenience of Client. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

Because data stored in electronic media can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving an electronic file agrees that it shall perform acceptance tests or procedures within 60 days after its receipt, after which, unless notice of any errors are given in writing to the delivering party, the receiving party shall be deemed to have accepted the data thus transferred. Any errors reported within the 60-day acceptance period shall be corrected by the party delivering the electronic files at their sole expense. Shannon & Wilson shall not be responsible for maintaining documents stored in electronic media format after acceptance by Client.

When transferring documents in electronic media format, neither Client nor Shannon & Wilson makes any representations as to long-term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used for the document's creation.

ARTICLE 7 - INSURANCE

Shannon & Wilson shall purchase and maintain during the term of this Agreement, the following insurance coverage at its sole expense:

Commercial General Liability - \$1,000,000 each occurrence/\$2,000,000 annual aggregate Bodily Injury/Property Damage Combined Single Limit including Blanket Contractual Liability, Broad Form Products and Completed Operations, Explosion/Collapse/Underground (XCU) Exposures, and Washington Stop Gap coverage.

Auto Liability - \$1,000,000 Bodily Injury/Property Damage Combined Single Limit including Owned, Hired, and Non-Owned Liability coverage

Umbrella Liability - \$10,000,000 Bodily Injury/Property Damage combined Single Limit in excess of Commercial General Liability, Auto Liability, and Employers' Liability

Workers' Compensation - Statutory in monopolistic states and \$500,000 per accident/\$500,000 per disease/\$500,000 disease policy aggregate Employers' Liability in non-monopolistic including if applicable, U.S. Longshore & Harbor workers' coverage.

Professional Liability - \$5,000,000 per claims/\$5,000,000 annual aggregate for professional errors and omissions including Pollution Liability coverage.

If requested in writing by Client, Shannon & Wilson shall name Client as an additional insured on its Commercial General Liability policy.

If requested in writing by Client, Shannon & Wilson shall deliver to Client certificates of insurance evidencing such coverage. Such certificates shall be furnished before commencement of Shannon & Wilson's Services.

Client shall cause Shannon & Wilson and its subcontractors to be listed as additional insureds on any Commercial General Liability insurance carried by Client that is applicable to the Project.

Client shall require the Project owner to require the general contractor on the Project to purchase and maintain Commercial General Liability, Automobile Liability, Workers' Compensation, and Employers Liability insurance, with limits no less than set forth above, and to cause Shannon & Wilson and its subcontractors to be listed as additional insureds on that Commercial General Liability insurance. Client shall require the Project owner include the substance of this paragraph in the prime construction contract.

All insurance policies shall contain a waiver of subrogation.

ARTICLE 8 - HAZARDOUS ENVIRONMENTAL CONDITIONS**Disclosure of the Existence of Hazardous Environmental Conditions**

Client has disclosed to Shannon & Wilson all data known to Client concerning known or suspected hazardous environmental conditions, including but not limited to, the existence of all asbestos, PCBs, petroleum, hazardous waste, or radioactive material, if any, located at or near the Project site, including its type, quantity, and location, or has represented to Shannon & Wilson that, to the best of Client's knowledge, no hazardous environmental conditions exist at or near the Project site.

If any hazardous environmental condition is encountered or believed to exist, Shannon & Wilson shall notify Client and, to the extent required by applicable laws and regulations, the Project site owner, and appropriate governmental officials.

Disposal of Non-Hazardous Samples and Hazardous or Toxic Substances

All substances on, in, or under the Project site, or obtained from the Project site as samples or as byproducts (e.g., drill cuttings and fluids) of the sampling process are the Project site owner's property. Shannon & Wilson shall preserve such samples for forty-five (45) calendar days after Shannon & Wilson's issuance to Client of the final instrument of service that relates to the data obtained from them. Shannon & Wilson shall dispose of all non-hazardous samples and sampling process byproducts in accordance with applicable law; provided however, any samples or sampling process byproducts that are, or are believed to be, affected by regulated contaminants shall be packaged by Shannon & Wilson in accordance with applicable law and turned over to Client or left on the Project site. Shannon & Wilson shall not transport, store, treat, dispose of, or arrange for the transportation, storage, treatment, or disposal of, any substances known, believed, or suspected to be affected by regulated contaminants, nor shall Shannon & Wilson subcontract for such activities.

Shannon & Wilson shall, at Client's request (and for additional Compensation, if not already included the Task Order), help Client or the Project site owner identify appropriate alternatives for transportation, storage, treatment, or disposal of such substances, but Shannon & Wilson shall not make any independent determination about the selection of a transportation, storage, treatment, or disposal facility.

Client or the Project site owner shall sign all manifests for the transportation, storage, treatment, or disposal of substances affected by regulated contaminants, provided however, notwithstanding any other provisions of this Agreement to the contrary if Client directs Shannon & Wilson, its employees, or agents to sign such manifests and/or to hire for Client or the Project site owner a contractor to transport, store, treat, or dispose of the contaminated substances, Shannon & Wilson shall do so only as Client's disclosed agent.

Contaminated Equipment and Consumables

Client shall reimburse Shannon & Wilson for the cost of decontaminating field or laboratory equipment that is contaminated by regulated materials encountered at the Project site and for the cost of disposal and replacement of contaminated consumables. In some instances, the cost of decontamination may exceed the fair market value of the equipment, were it not contaminated, together with the cost of properly transporting and disposing of the equipment. In such instances, Shannon & Wilson shall notify Client and give Client the option of paying for decontamination or purchasing the equipment at its fair market value immediately prior to contamination. If Client elects to purchase equipment, Client and Shannon & Wilson shall enter into a specific agreement for that purpose. Any equipment that cannot be decontaminated shall be considered a consumable.

Client's Liability for Hazardous or Toxic Materials

Except to the extent caused by Shannon & Wilson's and its subcontractor's negligent or wrongful acts, errors, omissions, or breach of contract, and only to the maximum extent permitted by law, Client shall indemnify and hold harmless Shannon & Wilson, its subcontractors and their partners, officers, directors, employees, and agents; from and against any and all actions (whether sounding in tort, contract (express or implied), warranty (express or implied), statutory liability, strict liability, or otherwise), claims (including, but not limited to, claims for bodily injury, death, property damage (including bodily injury, death, or property damage to Shannon & Wilson's own employees), or arising under CERCLA, MTCA, or similar federal, state, or local environmental laws), costs, damages (including without limitation, economic, non-economic, general, special, incidental, consequential), demands, expenses (including, but not limited to, reasonable attorneys' fees and costs of defense), fines, judgments, liens, liabilities, and penalties of any kind whatsoever; arising from the arrangement for and/or ownership, operation, generation, labeling, transportation, storage, disposal, treatment, release, or threatened release of any hazardous or toxic materials, as defined by CERCLA, MTCA, or similar federal, state, or local environmental laws, on and/or from the Project site.

ARTICLE 9 - ALLOCATION OF RISK

Indemnification of Client

To the maximum extent permitted by law, Shannon & Wilson shall indemnify and hold harmless Client, its appointed and elected officials, partners, officers, directors, employees, and agents; from and against any and all actions (whether sounding in tort, contract (express or implied), warranty (express or implied), statutory liability, strict liability, or otherwise), claims (including, but not limited to, claims for bodily injury, death, property damage, (including bodily injury, death, or property damage to Shannon & Wilson's own employees) or arising under CERCLA, MTCA, or similar federal, state, or local environmental laws), costs, damages (including without limitation, economic, non-economic, general, special, incidental, consequential), demands, expenses (including, but not limited to, reasonable attorneys' fees and costs of defense), fines, judgments, liens, liabilities, and penalties of any kind whatsoever; arising from the negligent or wrongful acts, errors, or omissions, or breach of contract or warranty express or implied, by Shannon & Wilson or any of its subcontractors; but only to the extent of Shannon & Wilson's and its subcontractor's relative degree of fault. In furtherance of these obligations, and only with respect to Client, its appointed and elected officials, partners, officers, directors, employees and agents, Shannon & Wilson waives any immunity it may have or limitation on the amount or type of damages imposed under any industrial insurance, Workers' Compensation, disability, employee benefit, or similar laws. Shannon & Wilson acknowledges that this waiver of immunity was mutually negotiated.

Limitation on Shannon & Wilson's Liability for Damages

A. Total Liability for Damages Limited to Insurance Proceeds

Notwithstanding any other provisions of this Agreement, and only to the maximum extent permitted by law, the total liability for damages under this Agreement of Shannon & Wilson, its subcontractors, and their partners, officers, directors, employees, agents and, or any of them, to Client and/or anyone claiming by, through, or under Client, for any and all actions (whether sounding in tort, contract (express or implied), warranty (express or implied), statutory liability, strict liability, or otherwise), claims (including, but not limited to, claims for bodily injury, death, property damage, (including bodily injury, death, or property damage to Shannon & Wilson's own employees) or arising under CERCLA, MTCA, or similar federal, state, or local environmental laws), costs, damages (including without limitation, economic, non-economic, general, special, incidental, consequential), demands, expenses (including, but not limited to, reasonable attorneys' fees and costs of defense), fines, judgments, liens, liabilities, and penalties of any kind whatsoever, arising out of, resulting from, or in any way related to the Project or this Agreement, shall be limited to the insurance proceeds payable on behalf of or to Shannon & Wilson by any insurance policies applicable thereto. If you are unwilling or unable to limit our liability for damages in this manner, we shall negotiate this limitation and its associated impact on our approach, Services, Schedule, and Compensation, with you. You must notify us in writing before we commence any Services under this Agreement of your intention to negotiate this limitation and its associated impact on our approach, Services, Schedule, and Compensation. Absent your prior written notification to the contrary, we shall proceed on the basis that our total liability for damages are limited as set forth above.

B. Professional Liability for Damages Limited to \$50,000 or 10% of Fee

With respect to professional errors or omissions only, notwithstanding any other provisions of this Agreement, and only to the maximum extent permitted by law, the total professional liability for damages, in the aggregate, under this Agreement of Shannon & Wilson, its subcontractors, and their partners, officers, directors, employees, agents, or any of them, to Client and/or anyone claiming by, through, or under Client, for any and all actions (whether sounding in tort, contract (express or implied), warranty (express or implied), statutory liability, strict liability, or otherwise), claims (including, but not limited to, claims for bodily injury, death, property damage (including bodily injury, death, or property damage to Shannon & Wilson's own employees) or arising under CERCLA, MTCA, or similar federal, state, or local environmental laws), costs, damages (including without limitation, economic, non-economic, general, special, incidental, consequential), demands, expenses (including, but not limited to, reasonable attorneys' fees and costs of defense), fines, judgments, liens, liabilities, and penalties of any kind whatsoever, arising out of, resulting from, or in any way related to the professional errors or omissions of Shannon & Wilson, its subcontractors, or their partners, officers, directors, employees, agents or, or any of them, shall be capped in the aggregate total amount of \$50,000.00, or ten percent (10%) of the total Compensation actually paid to Shannon & Wilson under this Agreement, whichever is greater. If you are unwilling or unable to limit our professional liability for damages to these sums, we shall negotiate the amount of this limitation and its associated impact on our approach, Services, Schedule, and Compensation, with you. You must notify us in writing before we commence any Services under this Agreement of your intention to negotiate the amount of this limitation and its associated impact on our approach, Services, Schedule and Compensation. Absent your prior written notification to the contrary, we shall proceed on the basis that our total professional liability for damages under this Agreement in the aggregate, shall be limited to \$50,000.00 or ten percent (10%) of the total Compensation actually paid to Shannon & Wilson under this Agreement, whichever is greater.

ARTICLE 10 – MISCELLANEOUS**Termination**

This Agreement may be terminated without further obligation or liability by either party, with or without cause (for convenience), upon 30 days prior written notice to the other. Shannon & Wilson shall be entitled to Compensation for all Services performed prior to the termination of this Agreement. This Agreement may be terminated by the non-breaching party upon any breach of this Agreement that remains uncured after 10 days notice to the breaching party by the non-breaching party. Upon payment of all amounts due Shannon & Wilson, Client shall be entitled to copies of Shannon & Wilson's files and records pertaining to Services performed prior to the termination of this Agreement.

Successors, Assigns, and Beneficiaries

This Agreement shall be binding upon each party's assigns, successors, executors, administrators, and legal representatives.

Neither Client nor Shannon & Wilson may assign or transfer any rights under or interest in this Agreement without the written consent of the other. No assignment shall release or discharge the assignor from any duty or responsibility under this Agreement.

Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Client or Shannon & Wilson to any third party. All duties and responsibilities undertaken under this Agreement shall be for the sole and exclusive benefit of Client and Shannon & Wilson. There are no intended third-party beneficiaries. Notwithstanding the foregoing, should a court find a third party to be a beneficiary of this Agreement, it is the intent of the parties that the judicially created third-party beneficiary be bound by and subject to all of the terms and conditions of this Agreement.

Jurisdiction, Venue, and Choice of Law

Any applicable Statute of Limitation shall be deemed to commence running on the date which the claimant knew, or should have known, of the facts giving rise to their claims, but in no event later than the date of substantial completion of Shannon & Wilson's Services under the Task Order. To the maximum extent permitted by law, as a condition precedent to commencing a judicial proceeding, a party shall give written notice of their claims, including all amounts claimed, and the factual basis for their claims, to the other party within one (1) year of when the claimant knew, or should have known, of the facts giving rise to their claims, but in no event later than one (1) year from the date of substantial completion of Shannon & Wilson's Services under the Task Order. As a condition precedent to commencing a judicial proceeding, a party shall first submit their claims to non-binding mediation through and in accordance with the rules of the American Arbitration Association.

This Agreement shall be construed in accordance with and governed by the laws (except choice and conflict of law provisions) of the state in which the Project is located.

Any judicial action shall be brought in the state in which the Project is located.

Attorneys' Fees

Should any dispute or claims arise out of this Agreement, whether sounding in tort, contract (express or implied), warranty (express or implied), statutory liability, strict liability, or otherwise, the prevailing party shall be entitled to an award of their reasonable attorneys' fees and costs, including upon appeal and in the enforcement of any judgment. Should neither party prevail on all of their claims or receive all of the relief they sought, then the substantially prevailing party shall be awarded their reasonable attorneys' fees and costs, including upon appeal and in the enforcement of any judgment.

Waiver

A waiver of any of the terms and conditions or breaches of this Agreement shall not operate as a subsequent waiver.

Headings

The headings used in this Agreement are for general ease of reference only. They have no meaning and are not part of this Agreement.

Integration

This Agreement, together with the Task Order, are incorporated by reference into each other, and supercede all prior written and oral discussions, representations, negotiations, and agreements on the subject matter of the Task Order and represent the parties' complete, entire, and final understanding of the subject matter of the Task Order.

Survival

Notwithstanding completion or termination of this Agreement for any reason, all representations, warranties, limitations of liability, and indemnification obligations contained in this Agreement shall survive such completion or termination and remain in full force and effect until fulfilled.

Severability

If any of the terms or conditions of this Agreement are found to be void or unenforceable for any reason, the remainder of this Agreement shall continue in full force and effect, and the court shall attempt to judicially reform the void or unenforceable provisions to the maximum extent possible, consistent with the original intent expressed in the provisions, to render it valid and enforceable. If the court is unable to reform the provisions to render it valid and enforceable, the court shall strike only that portion which is invalid or unenforceable, and this Agreement shall then be construed without reference to the void or unenforceable provisions.



Date: September 4, 2015
To: Mr. Eric Schaafsma
Grants Pass Water Laboratory

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL PROPOSAL

More construction problems are caused by site subsurface conditions than any other factor. The following suggestions and observations are offered to help you manage your risks.

HAVE REALISTIC EXPECTATIONS.

If you have never before dealt with geotechnical or environmental issues, you should recognize that site exploration identifies actual subsurface conditions at those points where samples are taken, at the time they are taken. The data derived are extrapolated by the consultant, who then applies judgment to render an opinion about overall subsurface conditions; their reaction to construction activity; appropriate design of foundations, slopes, impoundments, recovery wells; and other construction and/or remediation elements. Even under optimal circumstances, actual conditions may differ from those inferred to exist, because no consultant, no matter how qualified, and no subsurface program, no matter how comprehensive, can reveal what is hidden by earth, rock, and time.

DEVELOP THE SUBSURFACE EXPLORATION PLAN WITH CARE.

The nature of subsurface explorations—the types, quantities, and locations of procedures used—in large measure determines the effectiveness of the geotechnical/environmental report and the design based upon it. The more comprehensive a subsurface exploration and testing program, the more information it provides to the consultant, helping to reduce the risk of unanticipated conditions and the attendant risk of costly delays and disputes. Even the cost of subsurface construction may be lowered.

Developing a proper subsurface exploration plan is a basic element of geotechnical/environmental design, which should be accomplished jointly by the consultant and the client (or designated professional representatives). This helps the parties involved recognize mutual concerns and makes the client aware of the technical options available. Clients who develop a subsurface exploration plan without the involvement and concurrence of a consultant may be required to assume responsibility and liability for the plan's adequacy.

READ GENERAL CONDITIONS CAREFULLY.

Most consultants include standard general contract conditions in their proposals. One of the general conditions most commonly employed is to limit the consulting firm's liability. Known as a "risk allocation" or "limitation of liability," this approach helps prevent problems at the beginning and establishes a fair and reasonable framework for handling them, should they arise.

Various other elements of general conditions delineate your consultant's responsibilities. These are used to help eliminate confusion and misunderstandings, thereby helping all parties recognize who is responsible for different tasks. In all cases, read your consultant's general conditions carefully and ask any questions you may have.

HAVE YOUR CONSULTANT WORK WITH OTHER DESIGN PROFESSIONALS.

Costly problems can occur when other design professionals develop their plans based on misinterpretations of a consultant's report. To help avoid misinterpretations, retain your consultant to work with other project design professionals who are affected by the geotechnical/environmental report. This allows a consultant to explain report implications to design professionals affected by them, and to review their plans and specifications so that issues can be dealt with adequately. Although some other design professionals may be familiar with geotechnical/environmental concerns, none knows as much about them as a competent consultant.

OBTAIN CONSTRUCTION MONITORING SERVICES.

Most experienced clients also retain their consultant to serve during the construction phase of their projects. Involvement during the construction phase is particularly important because this permits the consultant to be on hand quickly to evaluate unanticipated conditions, to conduct additional tests if required, and when necessary, to recommend alternative solutions to problems. The consultant can also monitor the geotechnical/environmental work performed by contractors. It is essential to recognize that the construction recommendations included in a report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site.

Because actual subsurface conditions can be discerned only during earthwork and/or drilling, design consultants need to observe those conditions in order to provide their recommendations. Only the consultant who prepares the report is fully familiar with the background information needed to determine whether or not the report's recommendations are valid. The consultant submitting the report cannot assume responsibility or liability for the adequacy of preliminary recommendations if another party is retained to observe construction.

REALIZE THAT ENVIRONMENTAL ISSUES MAY NOT HAVE BEEN ADDRESSED.

If you have requested only a geotechnical engineering proposal, it will not include services needed to evaluate the likelihood of contamination by hazardous materials or other pollutants. Given the liabilities involved, it is prudent practice to always have a site reviewed from an environmental viewpoint. A consultant cannot be responsible for failing to detect contaminants when the services needed to perform that function are not being provided.

ONE OF THE OBLIGATIONS OF YOUR CONSULTANT IS TO PROTECT THE SAFETY, PROPERTY, AND WELFARE OF THE PUBLIC.

A geotechnical/environmental investigation will sometimes disclose the existence of conditions that may endanger the safety, health, property, or welfare of the public. Your consultant may be obligated under rules of professional conduct, or statutory or common law, to notify you and others of these conditions.

RELY ON YOUR CONSULTANT FOR ADDITIONAL ASSISTANCE.

Your consulting firm is familiar with several techniques and approaches that can be used to help reduce risk exposure for all parties to a construction project, from design through construction. Ask your consultant, not only about geotechnical and environmental issues, but others as well, to learn about approaches that may be of genuine benefit.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland

Received
1/20/16
BWC
JCPH

January 8, 2016

Mr. Eric Schaafsma
Technical Director
Grants Pass Water Laboratory
964 SE M Street
Grants Pass, OR 97526

**RE: QUALITY ASSURANCE/QUALITY CONTROL FOR EVANS CREEK
MONITORING PROGRAM**

Dear Eric:

Per your request on January 4, 2016, Shannon & Wilson, Inc. (Shannon & Wilson) has prepared a copy of the quality assurance (QA) and quality control documentation completed in association with the sampling, handling, and analysis of samples collected as part of the Evans Creek Monitoring Program. All work completed by Shannon & Wilson was completed in accordance with our QA Manual dated May 2015. Specifically, Chapter 5 contains QA requirements for sampling and testing activities. This chapter outlines several quality procedures (QPs), which were followed for samples which were collected, handled, and analyzed by Shannon & Wilson. QPs performed for specific tasks are summarized as follows:

- QP No. 06 – Field Equipment Use and Calibration
 - Topographic Survey – Shannon & Wilson completed a topographic survey within the project area using an RTK Global Positioning System survey unit calibrated and maintained by Pacific Survey Supply of Medford, Oregon. All completed surveys were field-calibrated to permanent survey control monuments established by the National Geodetic Survey. The resulting horizontal and vertical error associated with the survey relative to these control monuments was less than 0.1 foot.
 - Water Level Gages – Three Schlumberger CTD Diver water level loggers were installed within the river. These water level loggers were factory calibrated by Schlumberger Water Services USA of Denver, Colorado, and checked in the office for proper operation prior to installation by measuring the depth of water in a bucket and comparing it to the depth measured by tape measure. All water level loggers measured the water level to within 0.05 foot of the manual measurement.

Mr. Eric Schaafsma
Grants Pass Water Laboratory
January 8, 2016
Page 2 of 2

SHANNON & WILSON, INC.

- QP No. 07 – Laboratory Testing
 - Grain Size – Shannon & Wilson completed grain size analysis of sediment samples collected from within the project area in accordance with the Shannon & Wilson Quality Systems Manual for the Portland, Oregon, laboratory and ASTM International D6913.
- QP No. 11 – Sample Control and Retention
 - Chain of Custody – Samples were collected in the field and delivered to Grants Pass Water Lab under chain of custody for chemical testing.

A copy of the applicable QPs has been enclosed with this letter in addition to the chain of custody records associated with the project. Please call me directly at (206)-695-6841 if you have any questions.

Sincerely,

SHANNON & WILSON, INC.



Chad Krofta, P.E.
Senior Engineer

CJK/drc

Enc: Enclosure A – Shannon & Wilson, Inc. Quality Assurance Procedures
Enclosure B – Chain of Custody

SHANNON & WILSON, INC.

ENCLOSURE A

**SHANNON & WILSON, INC.
QUALITY ASSURANCE PROCEDURES**

Chapter 5. **SAMPLING AND TESTING**

Many projects require obtaining samples of soil, rock, water, and other physical items for identification and testing. Samples must be identifiable and traceable. Each sample is identified with a unique identifier, which remains on the sample and/or sample container in accordance with QP No. 11.

Shannon & Wilson performs field and laboratory testing in accordance with applicable published standards by the American Society for Testing of Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), or similar organizations. In cases where deviations from the test procedures are required, the staff performing the test acquire approval for the test deviation from the PM prior to performing the test. Each Shannon & Wilson laboratory has a Quality Systems Manual (QSM) which details laboratory testing procedures, laboratory equipment calibration, laboratory technician training, and finalization of laboratory results (see QP No. 07).

Tests are performed using calibrated equipment. Procedures for laboratory testing and calibration are described in the QSMs in each Shannon & Wilson laboratory. Procedures for calibration of field equipment are included in QP No. 06.

Tests are performed by trained personnel. Training for laboratory personnel is provided by the laboratory supervisor in accordance with laboratory QSMs. For field tests, the PM assigns staff who are competent to perform the field tests required. The PM can evaluate staff qualifications in several ways:

- Talk with the staff member and/or their supervisor about their experience and training.
- Review the “Skills Profile” of the staff member on the Marketing page on SWI.
- Review the “Training & Safety Profile” of the staff member on SWI.

In some cases, outside vendors, subcontractors, or subconsultants perform field or laboratory testing under contract to Shannon & Wilson. The selection and management of outside vendors or subcontractors is discussed in Chapters 7 and 8. To the extent these outside companies perform field or laboratory testing, they are required to follow appropriate standards as discussed above.

FIELD EQUIPMENT USE AND CALIBRATION PROCEDURE NO. QP 06

1.0 PURPOSE

This procedure describes the requirements for use of field equipment to obtain measurements that will be used for design or evaluations. All field equipment must be calibrated in accordance with manufacturers' recommendations prior to use.

2.0 SCOPE

The quality of project evaluation and design depends on reliable data. The selection and proper use of the appropriate field equipment is essential in obtaining useful field results. Regular maintenance and calibration of field equipment is required to ensure measurements are reliable. Following are some examples of field equipment that require periodic calibration: pocket penetrometers, air/gas meters, photoionization detectors (PIDs), flame ionization detectors (FID), pH/conductivity/turbidity/meters, water level indicators, resistivity meters, nuclear densometers, concrete thermometers, SPT hammers, and survey equipment.

3.0 RESPONSIBILITY

Each office shall have one individual named as equipment manager. This individual shall maintain copies of all field equipment calibrations performed by outside companies. For equipment that is not to be calibrated before each use, this individual shall ensure that the equipment is either calibrated as required by the manufacturer or tagged as not being calibrated.

The Project Manager (PM) will specify the equipment required to collect the data necessary to complete the project. The PM is also responsible for verifying that the field representative is using the correct equipment and that properly calibrated equipment is being used.

The field representative using the equipment is responsible for being familiar with the equipment and either performing any required calibration or verifying that the equipment has been calibrated before use. If the equipment is to be calibrated before each use, then the field representative shall document that the required calibration(s) were performed.

4.0 PROCEDURE

Calibration procedures shall be developed for field equipment specific to each office and should consider factors such as frequency of use and required precision of results. For example, survey equipment used in boring layout may only need to be serviced and calibrated every few years or

when problems are observed; whereas survey equipment used for precision surveys should be checked and serviced before work begins and may need to be checked and serviced at intervals throughout the project life.

Calibration procedures and schedule shall, at a minimum, follow the manufacturer's instructions regarding required frequency of calibration and step-by-step procedures in the calibration process. Some calibrations require specialized gases or solutions, while others can only be calibrated by the manufacturer or a certified technician. Use of some equipment is restricted to personnel trained specifically to use the equipment (e.g. nuclear densometer, concrete testing equipment). Frequency of calibration can vary during the course of a field project (e.g. PIDs, pH meters, gas meters) from daily to annually or longer intervals depending upon equipment type, sensitivity of measurements, and other factors.

Calibration procedures should also include procedures for periodic check testing of equipment that can and should be performed internally by Shannon & Wilson staff. The purpose of check testing shall be to provide assurance of proper equipment performance at intervals between calibration and service or replacement events. Check testing methods should be kept simple such that they can be accomplished quickly and at frequent intervals such as monthly, weekly, or even daily depending upon the type of equipment.

4.1 Example Calibration Procedures

- PIDs, used for field-screening soils for the presence of petroleum hydrocarbons, are calibrated daily, typically using 100-ppm isobutylene gas, and following manufacturer's instructions.
- Air/gas meters, used to detect toxic or combustible gases are calibrated using cylinders containing gases being monitored (or equivalent gases), and at the frequency specified by the manufacturer.
- pH/conductivity meters are calibrated daily during field activities, using solutions specially formulated for calibration purposes.
- Pocket penetrometer is a spring-operated device used to measure compressive strength of cohesive soils. In many cases the stainless-steel spring can be checked for calibration on a scale following manufacturer's instructions. Alternately, two pocket penetrometers can be checked against each other by placing the tips together, pushing, and comparing the readings.
- Nuclear densometers are to be used only by trained and monitored personnel to test soil compaction. They must be calibrated annually by the manufacturer or qualified servicer.
- Concrete thermometers, used to measure the temperature of concrete at the time of placement; accuracy can be checked with a reference thermometer.

- Survey equipment can be checked using points at the office established immediately following calibration of the equipment or in the field periodically using known points. Faulty equipment must be repaired or replaced.
- Calibration of an auto Standard Penetration Test Hammer can only be performed by qualified technicians using calibrated equipment. Note that these calibrations are sometimes required for specific projects, and the requirements of the project contract shall govern.

5.0 RECORDS

Calibrations not performed for a specific project, i.e. periodic calibrations of equipment used on multiple projects, shall be documented and the records maintained by the equipment manager in each office. Records of calibrations daily or weekly shall be maintained in the project files by the PM. Copies can also be maintained by the equipment manager as determined necessary by the office manager.

At a minimum records should include:

- The date.
- Who performed the calibration.
- Calibration methods and results.
- Certificates of calibration and maintenance by other firms; e.g. the equipment manufacturer.
- Documentation of repairs or adjustments by Shannon & Wilson staff.
- Documentation of periodic check tests accomplished between calibration events.
- Documentation of calibration procedures to be used including recommended frequency and record management procedures.

6.0 REFERENCES

- Shannon & Wilson Corporate QA Manual
- SPTCAL, <http://www.sptcal.com/spt-calibration-home>
ASTM D4633-10 Standard Test Method for Energy Measurement for Dynamic Penetrometers

LABORATORY TESTING PROCEDURE NO. QP 07

1.0 PURPOSE

This procedure describes the requirements for performing laboratory testing in Shannon & Wilson, Inc. laboratories. Testing performed by outside laboratories is covered by Chapter 7 of the QAM.

2.0 SCOPE

This procedure applies to laboratory testing procedures, laboratory equipment calibration, laboratory technician training, and finalization of laboratory results.

3.0 RESPONSIBILITY

Each laboratory has a written Quality Systems Manual (QSM) which details laboratory testing procedures, laboratory equipment calibration, laboratory technician training, and finalization of laboratory results. Each Shannon & Wilson laboratory has a Leader (Technical Group Leader, Lab Manager, Lead Technician, or similar designation) who is responsible for carrying out those steps laid forth by the QSM. The Leader, or his/her designee, shall follow QSM procedures for reporting and shall update, as necessary, portions of the QSM, in order to remain in compliance with applicable government, industry, and accrediting body regulations.

4.0 PROCEDURE

The QSM contains laboratory policies, laboratory procedures, laboratory training records, laboratory technician evaluation records, laboratory inventory records, laboratory calibration records, laboratory maintenance records, and laboratory external complaint records. All laboratory employees are required to follow QSM procedures and adhere to applicable government, industry, and accrediting body regulations.

Test assignment should be carried out by competent persons with knowledge of the specifications and details of the project at hand. Proper assignment of testing must consider testing standards applicability and the viability of the samples chosen. Advice may be sought from laboratory employees about suitability of testing programs and test specimens. Test assignment and soil storage procedures are discussed during new-hire orientations to the laboratory.

5.0 RECORDS

The QSM and all laboratory testing, calibration and training records shall be maintained according to the QSM and by the Leader in a designated location of his/her choosing.

6.0 REFERENCES

- AASHTO Standard Specifications
- ASTM International Standards
- Shannon & Wilson Anchorage Soils Laboratory Quality Systems Manual
- Shannon & Wilson Denver Soils Laboratory Quality Systems Manual
- Shannon & Wilson Fairbanks Soils Laboratory Quality Systems Manual
- Shannon & Wilson Portland Soils Laboratory Quality Systems Manual
- Shannon & Wilson St. Louis Soils Laboratory Quality Systems Manual
- Shannon & Wilson Seattle Soils Laboratory Quality Systems Manual
- State, County or Local Testing Standards
- USACE EM 1110-2-1906

SAMPLE CONTROL AND RETENTION PROCEDURE NO. QP 11

1.0 PURPOSE

This procedure provides the basis for implementation of project sample management procedures related to control and retention policy and practice.

2.0 SCOPE

This procedure addresses the minimum requirements for identification, control, and retention of all samples (e.g. soil, rock, groundwater, air, biological, vegetation, waste, construction materials, etc.) collected for a project.

3.0 RESPONSIBILITY

The Project Manager (PM) provides instruction regarding project sample management policies and procedures to project staff and testing facilities.

4.0 PROCEDURE

4.1 Preparation

Determine regulatory and contractual requirements for sample identification, collection, handling, tracking, documentation, storage, and retention. Samples should be listed on a tracking form so they are properly considered/evaluated/utilized during the duration of the project. This form could be a laboratory testing assignment form, chain of custody form or other form developed for the purpose of tracking samples.

4.2 Performance

The collection of all samples shall be recorded on a field sampling form, such as a boring log or field activity report. At a minimum, all samples shall be clearly labeled with the following information. Additional information may be included as determined necessary by the PM to meet the requirements of a specific project.

- Project Number
- Sample ID unique to the sample (note that the sample ID can be a combination of multiple pieces of information, for example Boring Number and Sample Number).
- Date sample collected

Generally, samples collected from borings, test pits, test trenches and other explorations should also include the depth the sample was collected from.

4.3 Sample Storage

During the project, soil samples should be stored in a climate controlled area where changes in temperature and moisture content are reduced. Following submittal of our report or once additional testing is determined to be unlikely, the samples can be moved to a less controlled location. Rock core determined not susceptible to degradation from temperature and/or moisture content changes can be stored in any secure location.

4.4 Sample Retention

All samples are to be retained in accordance with the requirements of the project contract. If sample retention is not explicitly addressed, all samples are to be retained for a minimum of 45 days following submission of the final report for the project. Samples may be retained longer to simplify the process of sample disposal.

4.5 Sample Disposal

Unless otherwise required by contract or governing law/regulations, samples may be disposed of as determined by the local office. While not required, it is good practice to check with a client before disposing of samples.

5.0 RECORDS

The following records are maintained in the Shannon & Wilson project files according to the Corporate Document Retention Policy:

- Field sampling field form
- Chain of Custody, if used
- Lab Request, if used

6.0 REFERENCES

- Shannon & Wilson Corporate QA Manual
- Client Project/Contract Requirements

ENCLOSURE B
CHAIN OF CUSTODY

1/20/16
BWC Rocco

(pH, specific conductivity, eH, temperature, etc.) of each well volume helps to identify when adequate purging has occurred. Groundwater samples should be representative of the aquifer being considered.

8.1.2. Surface water

Samples for many analyses may be collected using a stainless steel bucket. The collection container should first be rinsed with sample, to wash out previous sample. Collect a fresh sample. Avoid dipping bottle into sample, if possible; pour from collection container, with minimal agitation, into sample bottle. Residue from the outside surface of the container, or your hands, could contaminate samples and/or expose you to hazardous materials. If a stainless sampling container is not available, dip bottle directly into sample, install lid, and wipe off outside of container with paper towel.

8.2 AIR

The Air Quality Monitoring (AQM) section collects samples for AQ Program projects. The AQM Procedures Manual contains sampling procedures for pollutant gases (CO, SO₂, O₃, NO_x), PM₁₀ and Suspended Particulate, and canister gas sampling. Air sampling/monitoring equipment is highly specialized, requires considerable logistic support, and is not generally available for use outside of AQM. Anyone interested in proposing a monitoring/sampling project, should contact AQM Supervisor.

DEQ LEAD has sampling capability for PUF and Bubbler samples, and subsequent analyses for PAH (TO-4), volatile toxics (TO-14), and carbonyls (aldehydes & ketones using TO-11).

Air particulate material can be analyzed for specific source-related chemicals, wood fiber, asbestos, etc.. Techniques for particulate sampling include Particle Fallout Samplers and "Sticky Paper." Evacuated Stainless Steel canisters passively sample ambient air which is returned to the laboratory and subjected to gas chromatographic analyses for trace organics (e.g. solvents, gasoline, BTEX, etc).

8.3 SOIL/SEDIMENT

Use a stainless steel spoon or disposable plastic scoop to collect soil/sediment samples. The plastic scoops are useful for soft soils and those contaminated with organics which are difficult to clean off. It is common practice to composite several subsamples of soil to obtain a representative sample of an environmental condition. Composite sampling is achieved by collecting several roughly equal sub-samples and thoroughly mixing to form one sample. Soil samples should contain as few cobbles or stones as possible, unless the sampler wishes them to be included in the analysis.

It is important to note that traditional soil and sediment sampling methods do not address differences in particle sizes and spatial heterogeneity, even over short distances. These differences can result in substantial difference in chemical concentration to difference in spatial distribution of contaminants and differences in surface area on soil or sediment particles, which provide more adsorptive surface. These differences can result in significant differences in concentration, even on sub-samples within the same sample jar. This is important, because analytical results obtained from as little a few grams of extracted material from a sample jar are often used to make decisions on much larger areas in the field.

If certainty is needed that the soil or sediment sampled is representative of the chemical concentration in the area sampled in the field, then incremental sampling methods (ISM), which may be considered a type of compositing, is required to obtain this level of confidence. These sampling methods are required to obtain reproducible samples with high confidence that they represent the sampled unit. For detailed information on ISM, see the ITRC (Interstate Technology & Regulatory Council). 2012. Incremental Sampling Methodology. ISM-1 (<http://www.itrcweb.org/ism-1/>).

Note: Composite sampling, achieved by collecting several roughly equal sub-samples and thoroughly mixing in a jar to form one sample, is **not acceptable for the analysis of volatile organics**. Sampling for VOCs in soil is recommended to be completed by USEPA SW-846 Method 5035A, to prevent volatilization prior to analysis. Note that the ITRC incremental sampling (ISM) guidance discussed

Deborah Williams

Grants Pass Water Laboratory, Inc

Chain of Custody

"Fast and Reliable Water Testing Since 1978"

Tur, Ag, Al, Ass2, B, Ba, Be, Ca, Cd, Cl, Co, COND, Cr, Cu, Fe, Fl,

Collected: 8/13/2015 12:04 PM



21503194AA



Grants Pass Water Laboratory, Inc

964 SE "M" Street

Grants Pass, OR 97526

Phone: (541) 882-8677 Fax: (541) 476-8132

Company / Client

Name: _____

Address: _____

City: _____

Phone: _____

State: _____

Zip: _____

Sample Collected by: *Spurc*

Notes: _____

Project Name: *Fielder Dam #1*

PWS Number: *75' below dam*

Sample Location *42°28'30" N 123°10'57" W*

Collection Date

Time

Chlorine / Residual

Matrix*

Analysis Requested

8/13/15 12:04p - SW Turb, cat 30 Hg

12330-

*Matrix: DW - Drinking Water, WW - Wastewater, A - Aqueous, S - Soil
Please wrap completed paper work around bottle and place in refrigerator.
Samples are picked up Monday - Thursday at 3:00pm. Some samples

Relinquished by: *ES*

Date: *8-13-15*

Time: *1:55*

Received by Lab: *DS*

Date: *8-13-15*

Time: *2:55*

Temp: *19.6*

On ICE:

Grants Pass Water Laboratory, Inc

Chain of Custody

"Fast and Reliable Water Testing Since 1978"

Tur, Ag, Al, As2, B, Ba, Be, Ca, Cd, Cl, Co, COND, Cr, Cu, Fe, Fl,

Collected: 8/13/2015 12:40 PM

21503195

21503195AA

Grants Pass Water Laboratory, Inc

964 SE "W" Street

Grants Pass, OR 97526

Phone: (541) 882-8677 Fax: (541) 476-8132

Company / Client

Name: _____

Address: _____

City: _____

Phone: _____

Sample Collected by: 6Pur

State: _____

Zip: _____

Email: _____

Notes: _____

Project Name: Field Creek Dam

PWS Number: _____

Sample Location 1/4 mile upstream from Dam

Collection Date _____ Time _____

Chlorine Residual

Matrix* Analysis Requested

1/4 mile upstream from Dam 8-13-15 12:40 - SW Turb, Cat 30 Hg

#2

12:33 pm Debbie (w/one granted permission to access river bottom on her property)

*Matrix: DW - Drinking Water, WW - Wastewater, A - Aqueous, S - Soil

Please wrap completed paper work around bottle and place in refrigerator. Samples are picked up Monday - Thursday at 3:00pm. Some samples

Relinquished by: DS

Received by Lab: DS

Temp: 19.6

On ICE:

Date: 8-13-15

Date: 8-13-15

Time: 1:55

Time: 1:55



21503209



21503208

Grants Pass Water Chain of C

"Fast and Reliable Water

Ag, Al, As₂, B, Ba, Be, Ca, Cd, Cl, Co, COND, Cr, Cu, Fe, Fl,

Hardness Cal, K, Li, Mg, Mn, Mo, Na, Ni, NO₃, Pb, Se, SO₄, V, Zn, Hg, COL3 8/14/2015

Ag, Al, As₂, B, Ba, Be, Ca, Cd, Cl, Co, COND, Cr, Cu, Fe, Fl,

Hardness Cal, K, Li, Mg, Mn, Mo, Na, Ni, NO₃, Pb, pH, Se, SO₄, V, Zn, Hg, U1 8/14/2015

Grants Pass Water Laboratory, Inc
964 SE "M" Street
Grants Pass, OR 97526
Phone: (541) 882-8677 Fax: (541) 476-8132

Project Name: Fielder Dam Removal
PWS Number:

Sample Location: 42°48'32" N 173°10'58" W

at dam - water flowing atop of bedrock thru sediment

Sediment sample at base of dam 8/14/15 6:10p - sediment

permission granted to cross private property by Steve Keaton

*Matrix: DW - Drinking Water, WW - Wastewater, A - Aqueous, S - Soil
Please wrap completed paper work around bottle and place in refrigerator.
Samples are picked up Monday - Thursday at 3:00pm. Some samples

Company / Client

Name:

Address:

City:

Phone:

Sample Collected by: SPW

Notes:

Collection Date

Time

Chlorine Residual

Matrix*

Analysis Requested

Reinquished by: ES
Received by Lab: JS
Temp: 17.2°C

Date: 8-14-15
Date: 8-14-15

Time: 8:00
Time: 8:00 pm
On ICE:



RIVER DESIGN GROUP INC
 Oregon Office

Scott A. Wright, P.E.
 Water Resources Engineer

311 SW Jefferson Avenue
 Corvallis, OR 97333
 T (541) 738-2920
 F (541) 758-8524
 swright@riverdesigngroup.net
 www.riverdesigngroup.net

Grants Pass Water Laboratory, Inc
Chain of Custody
"Fast and Reliable Water Testing Since 1978"

Ag, Al, As2, B, Ba, Be, Ca, Cd, Cl,
 Co, COND, Cr, Cu, Fe, Fl,

*Brian Baird 541-664-1070 bx 433
 baird@riverdesign.com*



21503325

Grants Pass Water Laboratory, Inc
 964 SE "M" Street
 Grants Pass, OR 97526
 Phone: (541) 882-8677 Fax: (541) 476-8132

Project Name: *Flecker Creek Run Remov*

PWS Number:

Sample Location: *15' below catch & L dem*

Company / Client: *To Co Mark*

Name: _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

Phone: _____ **Email:** _____

Sample Collected by: *E Schaefer*

Notes:

Collection Date	Time	Chlorine Residual	Matrix* Analysis Requested
<i>8-25-15</i>	<i>9:16am</i>		<i>Sediment Sediment 630 Hg. Ur</i>

Relinquished by: *SS* **Date:** *8-26-15* **Time:** *2:50P*

Received by Lab: *SS* **Date:** *8-26-15* **Time:** *2:50pm*

Temp: _____ **On ICE:** *N/A*

*Matrix: DW - Drinking Water, WW - Wastewater, A - Aqueous, S - Soil
 Please wrap completed paper work around bottle and place in refrigerator.
 Samples are picked up Monday - Thursday at 3:00pm. Some samples



UMPQUA Research Company

626 NE Division St. - P.O. Box 609
Myrtle Creek, Oregon 97457
(541) 863-5201 Fax: (541) 863-6199
E-mail: Lab@URCmail.net
Internet: http://ChemLab.cc
ORELAP ID# OR100031

Subcontractor

ANALYSIS REPORT

URC # 5081905

Quality Control Report

Metals by EPA 6020

Date Reported: **8/20/2015 4:24:00PM**

Analyte	Result	MRL	Units	% Recovery	% Recovery Limits	RPD	RPD Limit	Notes
Blank								
Mercury	ND	0.0010	mg/L	NA	NA	NA	NA	
Blank								
Mercury	ND	0.0010	mg/L	NA	NA	NA	NA	
LCS								
Mercury	0.00241	0.0010	mg/L	96.4	85-115	NA	NA	
Matrix Spike Source: 5081905-01								
Mercury	0.02500	0.0100	mg/L	96.4	70-130	NA	NA	
Matrix Spike Dup Source: 5081905-01								
Mercury	0.02490	0.0100	mg/L	96.0	70-130	0.401	20	
Reference								
Mercury	0.00254	0.0010	mg/L	102	85-115	NA	NA	
Blank								
Mercury	ND	0.0010	mg/kg wet	NA	NA	NA	NA	
Blank								
Mercury	ND	0.0010	mg/kg wet	NA	NA	NA	NA	
LCS								
Mercury	0.00241	0.0010	mg/kg wet	96.4	85-115	NA	NA	
Reference								
Mercury	0.00254	0.0010	mg/kg wet	102	85-115	NA	NA	
Blank								
Selenium	ND	0.005	mg/L	NA	NA	NA	NA	

UMPQUA Research Company/MC

The results in this report apply to the samples analyzed in accordance with the chain of custody document.

This analytical report must be reproduced in its entirety.

Tom Williams

Tom Williams, Laboratory Manager



UMPQUA Research Company

626 NE Division St. - P.O. Box 609
Myrtle Creek, Oregon 97457
(541) 863-5201 Fax: (541) 863-6199
E-mail: Lab@URCmail.net
Internet: http://ChemLab.cc
ORELAP ID# OR100031

ANALYSIS REPORT

URC # 5081905

Quality Control Report

Date 8/20/2015 4:24:00PM
Reported:

Metals by EPA 6020

Analyte	Result	MRL	Units	% Recovery	% Recovery Limits	RPD	RPD Limit	Notes
Blank								
Selenium	ND	0.005	mg/L	NA	NA	NA	NA	
LCS								
Selenium	0.11220	0.005	mg/L	112	85-115	NA	NA	
Matrix Spike Source: 5081905-01								
Selenium	1.0830	0.050	mg/L	108	70-130	NA	NA	
Matrix Spike Dup Source: 5081905-01								
Selenium	1.0950	0.050	mg/L	109	70-130	1.10	30	
Reference								
Selenium	0.09106	0.005	mg/L	103	90-110	NA	NA	
Blank								
Selenium	ND	0.005	mg/kg wet	NA	NA	NA	NA	
Blank								
Selenium	ND	0.005	mg/kg wet	NA	NA	NA	NA	
LCS								
Selenium	0.1122	0.005	mg/kg wet	112	85-115	NA	NA	
Duplicate Source: 5081905-04								
Selenium	0.5895	0.500	mg/kg dry	NA	NA	6.56	20	
Reference								
Selenium	0.0911	0.005	mg/kg wet	103	90-110	NA	NA	

UMPQUA Research Company/MC

Tom Williams, Laboratory Manager

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 ORELAP ID# OR100031

ANALYSIS REPORT

URC # 5081905

Quality Control Report

Date 8/20/2015 4:24:00PM
 Reported:

Radionuclides

Analyte	Result	MRL	Units	% Recovery	% Recovery Limits	RPD	RPD Limit	Notes
Blank								
Uranium	ND	0.0010	mg/L	NA	NA	NA	NA	
Blank								
Uranium	ND	0.0010	ug/L	NA	NA	NA	NA	
LCS								
Uranium	0.09820	0.0010	mg/L	98.2	85-115	NA	NA	
Matrix Spike Source: 5081905-01								
Uranium	0.9879	0.0010	mg/L	98.7	85-115	NA	NA	
Matrix Spike Dup Source: 5081905-01								
Uranium	0.9873	0.0010	mg/L	98.7	85-115	0.0608	200	
Reference								
Uranium	0.02369	0.0010	mg/L	93.6	90-110	NA	NA	
Blank								
Uranium	ND	0.0500	mg/L wet	NA	NA	NA	NA	
Blank								
Uranium	ND	0.0500	mg/L wet	NA	NA	NA	NA	
LCS								
Uranium	0.09820	0.0500	mg/L wet	98.2	85-115	NA	NA	
Duplicate Source: 5081905-04								
Uranium	0.4596	0.0500	mg/L dry	NA	NA	0.00	200	
Reference								
Uranium	0.02369	0.0500	mg/L wet	93.6	90-110	NA	NA	

UMPQUA Research Company/MC

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Tom Williams, Laboratory Manager



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ORELAP ID# OR100031

ANALYSIS REPORT

URC # 5081905

Qualifiers and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the MRL (minimum reporting limit)
NA	Not Applicable
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MRL	Minimum Reporting Limit
MDL	Minimum Detection Limit
BML	Benchmark Level
(‡)	ORELAP Accredited Analyte
(~)	Due to rounding of individual analytes, the "total" may vary slightly from the sum of the individual analyte values.

UMPQUA Research Company/MC

Tom Williams, Laboratory Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document.

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Copy
Received
1/20/16
BWC



Grants Pass Water Lab

"Fast & Reliable Water Testing Since 1978"

964 SE M Street · Grants Pass, OR 97526 · 541-476-0733 · www.gpwaterlab.com

Mail To:

Josephine County Health Dept.

Attn:

715 NW Dimmick Street
Grants Pass, OR 97526

Date:

January 19, 2016

Sample ID #:

21503208

Project Name:

Fielder Creek Dam Removal

Analysis Report

The following results pertain only to the samples submitted, and are for the sole and exclusive use of the above named client.

This report shall not be reproduced, except in full, without written approval of the laboratory.

The following accredited results meet all requirements of ISO/IEC17025:2005 unless otherwise noted by data flag indicators or comments.

The color coded key is only a guide for interpreting results. All evaluations should be compared to the limitations set by the EPA and/or your primary care physician.

Please do not hesitate to call to discuss results or ask any questions. We are at your service!

Sincerely,

Jessica Stark
Senior Chemist

Sample Information

Sample ID: 21503208	Collectors Name: GPWL
Address of Source:	Sample Point: Base of Dam- upstream side of breach
Project Name: Fielder Creek Dam Removal	Source: N/A
Received Date: 08/14/2015	Treatment System: None

Results of Chemical Analysis

Sample Notes: Water on Bedrock under sediment	Collection Date: 08/14/15 6:00 PM								
Contaminate	Method	LOQ	RESULTS	Units	EPA Limit	Date Analyzed	Analyst	ID	Data Flags
Aluminum	EPA 200.7	0.04	2.5097	mg/L		08/19/15 11:51 am	JNS	AB	
Arsenic	SM 3113 B	0.004	0.0074	mg/L		08/19/15 9:18 am	EJS	AC	
Barium	EPA 200.7	0.003	0.0407	mg/L		08/19/15 11:51 am	JNS	AE	
Beryllium	EPA 200.7	0.003	ND	mg/L		08/19/15 11:51 am	JNS	AF	
Boron	EPA 200.7	0.03	0.0737	mg/L		08/19/15 11:51 am	JNS	AD	
Cadmium	EPA 200.7	0.003	ND	mg/L		08/19/15 11:51 am	JNS	AH	
Calcium	EPA 200.7	0.3	18.96	mg/L		08/19/15 9:33 am	JNS	AG	
Chloride	EPA 300.0	0.5	10.3	mg/L		08/14/15 8:54 pm	PVS	AI	
Chromium	EPA 200.7	0.015	0.0656	mg/L		08/19/15 11:51 am	JNS	AL	
Cobalt	EPA 200.7	0.03	ND	mg/L		08/19/15 9:33 am	JNS	AJ	
Conductivity	SM 2510 B	1.0	205.4	umhos/cm		08/19/15 10:29 am	JNS	AK	
Copper	EPA 200.7	0.006	ND	mg/L		08/19/15 11:51 am	JNS	AM	
Fluoride	EPA 300.0	0.5	ND	mg/L		08/14/15 8:54 pm	PVS	AO	
Iron	EPA 200.7	0.03	11.1531	mg/L		08/19/15 11:51 am	JNS	AN	
Lead	SM 3113 B	0.01	ND	mg/L		08/20/15 10:33 am	EJS	AY	
Lithium	EPA 200.7	0.03	ND	mg/L		08/19/15 9:33 am	JNS	AR	
Magnesium	EPA 200.7	0.3	8.90	mg/L		08/19/15 9:33 am	JNS	AS	
Manganese	EPA 200.7	0.03	1.0033	mg/L		08/19/15 11:51 am	JNS	AT	
Mercury	EPA 6020	0.001	ND	mg/L		08/19/15 12:00 am	DJP	BH	S
Molybdenum	EPA 200.7	0.06	ND	mg/L		08/19/15 11:51 am	JNS	AU	
Nickel	EPA 200.7	0.015	ND	mg/L		08/19/15 11:51 am	JNS	AW	
Nitrate	EPA 300.0	0.5	ND	mg/L		08/14/15 8:54 pm	PVS	AX	
pH	EPA 150.1		6.60	S.U.		08/14/15 7:21 pm	PVS	AZ	
Potassium	SM 3111B	0.100	1.27	mg/L		08/19/15 12:00 am	DJP	BJ	S
Selenium	EPA 6020	0.005	ND	mg/L		08/20/15 12:00 am	DJP	BK	S
Silver	EPA 200.7	0.015	ND	mg/L		08/19/15 11:51 am	JNS	AA	
Sodium	EPA 200.7	3.0	12.14	mg/L		08/19/15 9:33 am	JNS	AV	
Sulfates	EPA 300.0	0.5	2.01	mg/L		08/14/15 8:54 pm	PVS	BB	
Uranium	EPA 6020	0.001	ND	mg/L		08/20/15 12:00 am	DJP	BI	S
Vanadium	EPA 200.7	0.015	ND	mg/L		08/19/15 11:51 am	JNS	BC	
Zinc	EPA 200.7	0.06	ND	mg/L		08/19/15 11:51 am	JNS	BD	

DEFINITIONS AND DATA FLAGS

- | | |
|---|---------------------|
| A Analysis is covered under ORELAP scope of Accreditation | E Estimated Value |
| AA Analysis is covered under ISO scope of Accreditation | LOQ Reporting Limit |
| C Sample did not meet acceptance criteria | N/A Not Applicable |
| H Analysis performed outside method hold time | ND None Detected |
| ID Subsample identifier for each Sample number | S Sample Outsourced |
| M Matrix Spike recovery is out of control limits due to matrix interference | |
- The LCS was in acceptance limits showing the analysis is in control and the data is acceptable

**Grants Pass Water Laboratory, INC
Analytical QC Summary Report**

Sample ID #: 21503208
Matrix: Aqueous

Test Method: EPA 150.1
Run Number: 40675

Initial Calibration Verification (ICV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
pH	ICV	4.08		S.U.			1.98%	≤10%	

Laboratory Control Sample

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
pH	A0CE91E9F64A	7.95		S.U.	100.0%	90-110%			

Continued Calibration Verification (CCV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
pH	CCV	10.01		S.U.			0.13%	≤10%	

Matrix Duplicate

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
pH	Dup21503207	6.88		S.U.			1.76%	≤10%	

**Grants Pass Water Laboratory, INC
Analytical QC Summary Report**

Sample ID #: 21503208
Matrix: Aqueous

Test Method: SM 2510B
Run Number: 40673

Method Blank

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Conductivity	Blank	0.61	1.0	umhos/cm		≤1			

Laboratory Control Sample

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Conductivity	FEC26970F03A	713.0	1.0	umhos/cm	99.3%	90-110%			

Matrix Duplicate

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Conductivity	Dup21503207	201.6	1.0	umhos/cm			0.20%	≤10%	

**Grants Pass Water Laboratory, INC
Analytical QC Summary Report**

Sample ID #: 21503208
Matrix: Aqueous

Test Method: EPA 300.0
Run Number: 81415

Method Blank

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Flouride	Method Blank	ND	0.5	mg/L		≤1.0			
Chloride	Method Blank	ND	0.5	mg/L		≤1.0			
Nitrate	Method Blank	ND	0.5	mg/L		≤1.0			
Sulfate	Method Blank	ND	0.5	mg/L		≤1.0			

Initial Calibration Verification (ICV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Flouride	Initial Calib Verif	6.2693	0.5	mg/L			0.1%	≤10%	
Chloride	Initial Calib Verif	111.6860	0.5	mg/L			2.1%	≤10%	
Nitrate	Initial Calib Verif	3.6075	0.5	mg/L			2.3%	≤10%	
Sulfate	Initial Calib Verif	59.0555	0.5	mg/L			3.1%	≤10%	

Laboratory Control Sample

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Flouride	D12CE2EE597B	6.2085	0.5	mg/L	99.2%	90-110%			
Chloride	D12CE2EE597B	111.1185	0.5	mg/L	97.5%	90-110%			
Nitrate	D12CE2EE597B	3.5694	0.5	mg/L	96.7%	90-110%			
Sulfate	D12CE2EE597B	58.8093	0.5	mg/L	96.6%	90-110%			

Continued Calibration Verification (CCV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Flouride	CCV	4.9194	0.5	mg/L			1.60%	≤10%	
Chloride	CCV	4.6753	0.5	mg/L			6.70%	≤10%	
Nitrate	CCV	1.0852	0.5	mg/L			4.00%	≤10%	
Sulfate	CCV	4.7291	0.5	mg/L			5.60%	≤10%	

Matrix Spike

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Flouride	MS21503195	6.4188	0.5	mg/L	123.50%	75-125%			
Chloride	MS21503195	15.6523	0.5	mg/L	89.50%	75-125%			
Nitrate	MS21503195	1.3997	0.5	mg/L	123.90%	75-125%			
Sulfate	MS21503195	7.5111	0.5	mg/L	107.80%	75-125%			

Matrix Spike Duplicate

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Flouride	Dup21503195	6.4267	0.5	mg/L			0.1%	≤20%	
Chloride	Dup21503195	15.6170	0.5	mg/L			0.2%	≤20%	
Nitrate	Dup21503195	1.3996	0.5	mg/L			0.0%	≤20%	
Sulfate	Dup21503195	7.5262	0.5	mg/L			0.2%	≤20%	

Grants Pass Water Laboratory, INC
Analytical QC Summary Report

Sample ID #: 21503208
 Matrix: Aqueous

Test Method: EPA 200.7
 Run Number: 81915

Initial Calibration Blank (ICB)									
Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Initial Calib. Blank	ND	0.04	mg/L		≤0.04			
Barium	Initial Calib. Blank	ND	0.003	mg/L		≤0.003			
Beryllium	Initial Calib. Blank	ND	0.003	mg/L		≤0.003			
Boron	Initial Calib. Blank	ND	0.03	mg/L		≤0.03			
Cadmium	Initial Calib. Blank	ND	0.003	mg/L		≤0.003			
Calcium	Initial Calib. Blank	ND	0.3	mg/L		≤0.3			
Chromium	Initial Calib. Blank	ND	0.015	mg/L		≤0.015			
Cobalt	Initial Calib. Blank	ND	0.03	mg/L		≤0.03			
Copper	Initial Calib. Blank	ND	0.006	mg/L		≤0.006			
Iron	Initial Calib. Blank	ND	0.03	mg/L		≤0.03			
Lithium	Initial Calib. Blank	ND	0.03	mg/L		≤0.03			
Magnesium	Initial Calib. Blank	ND	0.3	mg/L		≤0.3			
Manganese	Initial Calib. Blank	ND	0.03	mg/L		≤0.03			
Molybdenum	Initial Calib. Blank	ND	0.06	mg/L		≤0.06			
Nickel	Initial Calib. Blank	ND	0.015	mg/L		≤0.015			
Silver	Initial Calib. Blank	ND	0.015	mg/L		≤0.015			
Sodium	Initial Calib. Blank	ND	3	mg/L		≤3.0			
Vanadium	Initial Calib. Blank	ND	0.015	mg/L		≤0.015			
Zinc	Initial Calib. Blank	ND	0.06	mg/L		≤0.06			

Method Blank									
Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Prep Blank	ND	0.04	mg/L		≤0.04			
Barium	Prep Blank	ND	0.003	mg/L		≤0.003			
Beryllium	Prep Blank	ND	0.003	mg/L		≤0.003			
Boron	Prep Blank	ND	0.03	mg/L		≤0.03			
Cadmium	Prep Blank	ND	0.003	mg/L		≤0.003			
Calcium	Prep Blank	ND	0.3	mg/L		≤0.3			
Chromium	Prep Blank	ND	0.015	mg/L		≤0.015			
Cobalt	Prep Blank	ND	0.03	mg/L		≤0.03			
Copper	Prep Blank	ND	0.006	mg/L		≤0.006			
Iron	Prep Blank	ND	0.03	mg/L		≤0.03			
Lithium	Prep Blank	ND	0.03	mg/L		≤0.03			
Magnesium	Prep Blank	ND	0.3	mg/L		≤0.3			
Manganese	Prep Blank	ND	0.03	mg/L		≤0.03			
Molybdenum	Prep Blank	ND	0.06	mg/L		≤0.06			
Nickel	Prep Blank	ND	0.015	mg/L		≤0.015			
Silver	Prep Blank	ND	0.015	mg/L		≤0.015			
Sodium	Prep Blank	ND	3	mg/L		≤3.0			
Vanadium	Prep Blank	ND	0.015	mg/L		≤0.015			
Zinc	Prep Blank	ND	0.06	mg/L		≤0.06			

Continued Calibration Blank (CCB)									
Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Cont Calib Blank	ND	0.04	mg/L		≤0.04			
Barium	Cont Calib Blank	ND	0.003	mg/L		≤0.003			
Beryllium	Cont Calib Blank	ND	0.003	mg/L		≤0.003			
Boron	Cont Calib Blank	ND	0.03	mg/L		≤0.03			
Cadmium	Cont Calib Blank	ND	0.003	mg/L		≤0.003			
Calcium	Cont Calib Blank	ND	0.3	mg/L		≤0.3			
Chromium	Cont Calib Blank	ND	0.015	mg/L		≤0.015			
Cobalt	Cont Calib Blank	ND	0.03	mg/L		≤0.03			
Copper	Cont Calib Blank	ND	0.006	mg/L		≤0.006			
Iron	Cont Calib Blank	ND	0.03	mg/L		≤0.03			
Lithium	Cont Calib Blank	ND	0.03	mg/L		≤0.03			
Magnesium	Cont Calib Blank	ND	0.3	mg/L		≤0.3			
Manganese	Cont Calib Blank	ND	0.03	mg/L		≤0.03			
Molybdenum	Cont Calib Blank	ND	0.06	mg/L		≤0.06			
Nickel	Cont Calib Blank	ND	0.015	mg/L		≤0.015			
Silver	Cont Calib Blank	ND	0.015	mg/L		≤0.015			
Sodium	Cont Calib Blank	ND	3	mg/L		≤3.0			
Vanadium	Cont Calib Blank	ND	0.015	mg/L		≤0.015			
Zinc	Cont Calib Blank	ND	0.06	mg/L		≤0.06			

Initial Calibration Verification (ICV)									
Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Initial Calib Verif	0.2377	0.04	mg/L			0.9%	≤5%	
Barium	Initial Calib Verif	2.0693	0.003	mg/L			0.9%	≤5%	
Beryllium	Initial Calib Verif	0.0092	0.003	mg/L			4.0%	≤5%	
Boron	Initial Calib Verif	1.1225	0.03	mg/L			0.7%	≤5%	
Cadmium	Initial Calib Verif	0.0097	0.003	mg/L			4.6%	≤5%	
Calcium	Initial Calib Verif	48.9496	0.3	mg/L			2.4%	≤5%	
Chromium	Initial Calib Verif	0.1610	0.015	mg/L			3.1%	≤5%	
Cobalt	Initial Calib Verif	0.9821	0.03	mg/L			1.8%	≤5%	
Copper	Initial Calib Verif	1.7668	0.006	mg/L			1.9%	≤5%	
Iron	Initial Calib Verif	1.3667	0.03	mg/L			1.2%	≤5%	
Lithium	Initial Calib Verif	0.9514	0.03	mg/L			5.0%	≤5%	
Magnesium	Initial Calib Verif	12.2374	0.3	mg/L			1.1%	≤5%	
Manganese	Initial Calib Verif	0.5303	0.03	mg/L			3.5%	≤5%	
Molybdenum	Initial Calib Verif	0.0326	0.06	mg/L			2.9%	≤5%	
Nickel	Initial Calib Verif	0.0982	0.015	mg/L			0.5%	≤5%	
Silver	Initial Calib Verif	0.2426	0.015	mg/L			1.8%	≤5%	
Sodium	Initial Calib Verif	47.4224	3	mg/L			0.8%	≤5%	
Vanadium	Initial Calib Verif	0.9605	0.015	mg/L			0.8%	≤5%	
Zinc	Initial Calib Verif	1.7210	0.06	mg/L			1.2%	≤5%	

Grants Pass Water Laboratory, INC
Analytical QC Summary Report

Sample ID #: 21503208
 Matrix: Aqueous

Test Method: EPA 200.7
 Run Number: 81915

Laboratory Control Sample (LCS)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	94B4DBA82BF2	0.2484	0.04	mg/L	103.5%	90-110%			
Barium	94B4DBA82BF2	2.0628	0.003	mg/L	100.6%	90-110%			
Beryllium	94B4DBA82BF2	0.0090	0.003	mg/L	102.9%	90-110%			
Boron	94B4DBA82BF2	1.1067	0.03	mg/L	97.9%	90-110%			
Cadmium	94B4DBA82BF2	0.0096	0.003	mg/L	94.2%	90-110%			
Calcium	1584BE054AA2	49.4776	0.3	mg/L	103.5%	90-110%			
Chromium	94B4DBA82BF2	0.1606	0.015	mg/L	96.7%	90-110%			
Cobalt	043AEC8C88A7	1.0748	0.03	mg/L	107.5%	90-110%			
Copper	94B4DBA82BF2	1.7489	0.006	mg/L	97.2%	90-110%			
Iron	94B4DBA82BF2	1.3499	0.03	mg/L	100.0%	90-110%			
Lithium	043AEC8C88A7	1.0437	0.03	mg/L	104.4%	90-110%			
Magnesium	1584BE054AA2	11.9996	0.3	mg/L	99.2%	90-110%			
Manganese	94B4DBA82BF2	0.5263	0.03	mg/L	102.8%	90-110%			
Molybdenum	94B4DBA82BF2	0.0307	0.06	mg/L	91.5%	90-110%			
Nickel	94B4DBA82BF2	0.0973	0.015	mg/L	98.6%	90-110%			
Silver	94B4DBA82BF2	0.2422	0.015	mg/L	98.0%	90-110%			
Sodium	1584BE054AA2	47.6768	3	mg/L	99.7%	90-110%			
Vanadium	94B4DBA82BF2	0.9676	0.015	mg/L	101.5%	90-110%			
Zinc	94B4DBA82BF2	1.7310	0.06	mg/L	101.8%	90-110%			

Continued Calibration Verification (CCV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Cont Calib Verif	0.0460	0.04	mg/L			8.2%	≤10%	
Barium	Cont Calib Verif	0.0105	0.003	mg/L			5.3%	≤10%	
Beryllium	Cont Calib Verif	0.0105	0.003	mg/L			4.6%	≤10%	
Boron	Cont Calib Verif	0.0513	0.03	mg/L			2.5%	≤10%	
Cadmium	Cont Calib Verif	0.0101	0.003	mg/L			0.8%	≤10%	
Calcium	Cont Calib Verif	5.0962	0.3	mg/L			1.9%	≤10%	
Chromium	Cont Calib Verif	0.0102	0.015	mg/L			2.4%	≤10%	
Cobalt	Cont Calib Verif	0.0907	0.03	mg/L			9.7%	≤10%	
Copper	Cont Calib Verif	0.0101	0.006	mg/L			0.5%	≤10%	
Iron	Cont Calib Verif	0.0504	0.03	mg/L			0.8%	≤10%	
Lithium	Cont Calib Verif	0.1003	0.03	mg/L			0.3%	≤10%	
Magnesium	Cont Calib Verif	4.6255	0.3	mg/L			7.8%	≤10%	
Manganese	Cont Calib Verif	0.0543	0.03	mg/L			8.2%	≤10%	
Molybdenum	Cont Calib Verif	0.1032	0.06	mg/L			3.2%	≤10%	
Nickel	Cont Calib Verif	0.0103	0.015	mg/L			2.6%	≤10%	
Silver	Cont Calib Verif	0.0498	0.015	mg/L			0.4%	≤10%	
Sodium	Cont Calib Verif	5.3917	3	mg/L			7.5%	≤10%	
Vanadium	Cont Calib Verif	0.0107	0.015	mg/L			7.2%	≤10%	
Zinc	Cont Calib Verif	0.1033	0.06	mg/L			3.3%	≤10%	

Matrix Spike Duplicate

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	MSDup21503207	0.9045	0.04	mg/L			0.10%	≤20%	
Barium	MSDup21503207	0.9424	0.003	mg/L			0.8%	≤20%	
Beryllium	MSDup21503207	1.0198	0.003	mg/L			0.10%	≤20%	
Boron	MSDup21503207	0.9561	0.03	mg/L			0.5%	≤20%	
Cadmium	MSDup21503207	0.9758	0.003	mg/L			0.1%	≤20%	
Calcium	MSDup21503207	47.2280	0.3	mg/L			1.10%	≤20%	
Chromium	MSDup21503207	0.9583	0.015	mg/L			0.1%	≤20%	
Cobalt	MSDup21503207	4.6719	0.03	mg/L			1.60%	≤20%	
Copper	MSDup21503207	0.9026	0.006	mg/L			0.10%	≤20%	
Iron	MSDup21503207	0.9460	0.03	mg/L			0.1%	≤20%	
Lithium	MSDup21503207	4.9873	0.03	mg/L			1.3%	≤20%	
Magnesium	MSDup21503207	38.9130	0.3	mg/L			0.50%	≤20%	
Manganese	MSDup21503207	0.9742	0.03	mg/L			2.0%	≤20%	
Molybdenum	MSDup21503207	1.9540	0.06	mg/L			0.40%	≤20%	
Nickel	MSDup21503207	0.9089	0.015	mg/L			0.0%	≤20%	
Silver	MSDup21503207	0.0420	0.015	mg/L			0.3%	≤20%	
Sodium	MSDup21503207	31.5460	3	mg/L			0.90%	≤20%	
Vanadium	MSDup21503207	1.0713	0.015	mg/L			0.3%	≤20%	
Zinc	MSDup21503207	1.9919	0.06	mg/L			0.10%	≤20%	

Matrix Spike (MS)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	MS21503207	0.9038	0.04	mg/L	87.3%	75-125%			
Barium	MS21503207	0.9346	0.003	mg/L	92.2%	75-125%			
Beryllium	MS21503207	1.0209	0.003	mg/L	100.7%	75-125%			
Boron	MS21503207	0.9613	0.03	mg/L	95.1%	75-125%			
Cadmium	MS21503207	0.9763	0.003	mg/L	96.0%	75-125%			
Calcium	MS21503207	46.7230	0.3	mg/L	97.9%	75-125%			
Chromium	MS21503207	0.9573	0.015	mg/L	94.3%	75-125%			
Cobalt	MS21503207	4.5962	0.03	mg/L	115.2%	75-125%			
Copper	MS21503207	0.9038	0.006	mg/L	87.2%	75-125%			
Iron	MS21503207	0.9465	0.03	mg/L	92.3%	75-125%			
Lithium	MS21503207	4.9229	0.03	mg/L	123.7%	75-125%			
Magnesium	MS21503207	38.7240	0.3	mg/L	110.7%	75-125%			
Manganese	MS21503207	0.9936	0.03	mg/L	96.2%	75-125%			
Molybdenum	MS21503207	1.9464	0.06	mg/L	97.6%	75-125%			
Nickel	MS21503207	0.9088	0.015	mg/L	88.2%	75-125%			
Silver	MS21503207	0.0421	0.015	mg/L	96.7%	75-125%			
Sodium	MS21503207	31.2680	3	mg/L	122.6%	75-125%			
Vanadium	MS21503207	1.0682	0.015	mg/L	107.2%	75-125%			
Zinc	MS21503207	2.0004	0.06	mg/L	98.6%	75-125%			

Grants Pass Water Laboratory, INC
Analytical QC Summary Report

Sample ID #: 21503208
 Matrix: Aqueous

Test Method: SM 3113B
 Run Number: 81915

Initial Calibration Blank (ICB)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Initial Calib. Blank	ND	0.01	mg/L		≤0.01			
Arsenic	Initial Calib. Blank	ND	0.004	mg/L		≤0.004			

Method Blank

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Initial Calib. Blank	ND	0.01	mg/L		≤0.01			
Arsenic	Initial Calib. Blank	ND	0.004	mg/L		≤0.004			

Continued Calibration Blank (CCB)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Initial Calib. Blank	ND	0.01	mg/L		≤0.01			
Arsenic	Initial Calib. Blank	ND	0.004	mg/L		≤0.004			

Initial Calibration Verification (ICV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Initial Calib Verif	0.0294	0.01	mg/L			2.1%	≤5%	
Arsenic	Initial Calib Verif	0.0306	0.004	mg/L			2.0%	≤5%	

Laboratory Control Sample (LCS)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	94B4DBA82BF2	0.0415	0.01	mg/L	107.6%	90-110%			
Arsenic	4434FCA5AD3B	0.0411	0.004	mg/L	91.8%	90-110%			

Continued Calibration Verification (CCV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Cont Calib Verif	0.02986	0.01	mg/L			0.5%	≤10%	
Lead	Cont Calib Verif	0.02806	0.01	mg/L			6.7%	≤10%	
Arsenic	Cont Calib Verif	0.02810	0.004	mg/L			6.5%	≤10%	

Matrix Spike Duplicate

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	MSDup21503249	0.0064	0.01	mg/L			5.1%	≤20%	
Lead	MSDup21503250	0.0059	0.01	mg/L			6.3%	≤20%	
Arsenic	MSDup21503250	0.0256	0.004	mg/L			9.7%	≤20%	

Matrix Spike (MS)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	MS21503250	0.0055	0.01	mg/L	30.0%	75-125%			M
Lead	MSBlank	0.0165	0.01	mg/L	109.7%	75-125%			
Arsenic	MS21503250	0.0282	0.004	mg/L	119.3%	75-125%			

Abbreviations:

MRL: Method Reporting Limit
 ND: None Detected at or above the MRL
 RPD: Relative Percent Difference

Data Qualifiers:

H: Holding Time Exceeded
 M: Matrix Spike recovery was outside acceptance limits due to matrix interference. The LCS was within acceptance limits showing the analysis is in control and the data is acceptable.

1/20/16
Received
JCPH
BWC



Grants Pass Water Lab

"Fast & Reliable Water Testing Since 1978"

964 SE M Street • Grants Pass, OR 97526 • 541-476-0733 • www.gpwaterlab.com

Mail To:

Josephine County Health Dept.

Attn:
715 NW Dimmick Street
Grants Pass, OR 97526

Date:

January 19, 2016

Sample ID #:

21503209

Project Name:

Fielder Creek Dam Removal

Analysis Report

The following results pertain only to the samples submitted, and are for the sole and exclusive use of the above named client.

This report shall not be reproduced, except in full, without written approval of the laboratory.

The following accredited results meet all requirements of ISO/IEC17025:2005 unless otherwise noted by data flag indicators or comments.

The color coded key is only a guide for interpreting results. All evaluations should be compared to the limitations set by the EPA and/or your primary care physician.

Please do not hesitate to call to discuss results or ask any questions. We are at your service!

Sincerely,

Jessica Stark
Senior Chemist

Sample Information

Sample ID: 21503209	Collectors Name: GPWL
Address of Source:	Sample Point: Base of Dam- upstream side of breach
Project Name: Fielder Creek Dam Removal	Source: N/A
Received Date: 08/14/2015	Treatment System: None

Results of Chemical Analysis

Sample Notes: Sediment At Dam on upstream side	Collection Date: 08/14/15 6:00 PM
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Contaminate	Method	LOQ	RESULTS	Units	EPA Limit	Date Analyzed	Analyst	ID	Data Flags
Aluminum	EPA 200.7	0.04	17065.00	mg/kg		08/19/15 12:02 pm	JNS	CO	
Arsenic	SM3113B	0.004	21.2398	mg/kg		08/19/15 9:18 am	EJS	CP	
Barium	EPA 200.7	0.003	69.61	mg/kg		08/19/15 12:02 pm	JNS	BO	
Beryllium	EPA 200.7	0.003	0.33	mg/kg		08/19/15 12:02 pm	JNS	BP	
Boron	EPA 200.7	0.03	ND	mg/kg		08/19/15 12:02 pm	JNS	BN	
Cadmium	EPA 200.7	0.003	ND	mg/kg		08/19/15 12:02 pm	JNS	BR	
Calcium	EPA 200.7	0.3	7083.21	mg/kg		08/19/15 9:41 am	JNS	BQ	
Chromium	EPA 200.7	0.015	79.16	mg/kg		08/19/15 12:02 pm	JNS	BV	
Cobalt	EPA 200.7	0.03	27.82	mg/kg		08/19/15 9:41 am	JNS	BT	
Copper	EPA 200.7	0.006	31.43	mg/kg		08/19/15 12:02 pm	JNS	BW	
Iron	EPA 200.7	0.03	19716.30	mg/kg		08/19/15 12:02 pm	JNS	BX	
Lead	SM 3113 B	0.01	2.30	mg/kg		08/20/15 10:33 am	EJS	CI	
Lithium	EPA 200.7	0.03	6.89	mg/kg		08/19/15 9:41 am	JNS	CB	
Magnesium	EPA 200.7	0.3	5580.93	mg/kg		08/19/15 9:41 am	JNS	CC	
Manganese	EPA 200.7	0.03	248.74	mg/kg		08/19/15 12:02 pm	JNS	CD	
Mercury	EPA 6020	0.1	ND	mg/kg		08/19/15 12:00 am	DJP	BG	S
Molybdenum	EPA 200.7	0.06	ND	mg/kg		08/19/15 12:02 pm	JNS	CE	
Nickel	EPA 200.7	0.15	47.91	mg/kg		08/19/15 12:02 pm	JNS	CG	
Potassium	SM 3111B	10.0	1180.00	mg/kg		08/19/15 12:00 am	DJP	BI	S
Selenium	EPA 6020	0.5	0.63	mg/kg		08/20/15 12:00 am	DJP	BJ	S
Silver	EPA 200.7	0.15	ND	mg/kg		08/19/15 12:02 pm	JNS	BK	
Sodium	EPA 200.7	3.0	213.04	mg/kg		08/19/15 9:41 am	JNS	CF	
Uranium	EPA 6020	0.05	0.46	mg/kg		08/20/15 12:00 am	DJP	BH	S
Vanadium	EPA 200.7	0.15	90.95	mg/kg		08/19/15 12:02 pm	JNS	CM	
Zinc	EPA 200.7	0.6	27.25	mg/kg		08/19/15 12:02 pm	JNS	CN	

DEFINITIONS AND DATA FLAGS

- | | |
|---|---------------------|
| A Analysis is covered under ORELAP scope of Accreditation | E Estimated Value |
| AA Analysis is covered under ISO scope of Accreditation | LOQ Reporting Limit |
| C Sample did not meet acceptance criteria | N/A Not Applicable |
| H Analysis performed outside method hold time | ND None Detected |
| ID Subsample identifier for each Sample number | S Sample Outsourced |
| M Matrix Spike recovery is out of control limits due to matrix interference
The LCS was in acceptance limits showing the analysis is in control and the data is acceptable | |

**Grants Pass Water Laboratory, INC
Analytical QC Summary Report**

Sample ID #: 21503209
Matrix: Soil

Test Method: EPA 200.7
Run Number: 81915

Initial Calibration Blank (ICB)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Initial Calib. Blank	ND	0.04	mg/kg		≤0.04			
Barium	Initial Calib. Blank	ND	0.003	mg/kg		≤0.003			
Beryllium	Initial Calib. Blank	ND	0.003	mg/kg		≤0.003			
Boron	Initial Calib. Blank	ND	0.03	mg/kg		≤0.03			
Cadmium	Initial Calib. Blank	ND	0.003	mg/kg		≤0.003			
Calcium	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Chromium	Initial Calib. Blank	ND	0.015	mg/kg		≤0.015			
Cobalt	Initial Calib. Blank	ND	0.03	mg/kg		≤0.03			
Copper	Initial Calib. Blank	ND	0.006	mg/kg		≤0.006			
Iron	Initial Calib. Blank	ND	0.03	mg/kg		≤0.03			
Lithium	Initial Calib. Blank	ND	0.03	mg/kg		≤0.03			
Magnesium	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Manganese	Initial Calib. Blank	ND	0.03	mg/kg		≤0.03			
Molybdenum	Initial Calib. Blank	ND	0.06	mg/kg		≤0.06			
Nickel	Initial Calib. Blank	ND	0.015	mg/kg		≤0.015			
Silver	Initial Calib. Blank	ND	0.015	mg/kg		≤0.015			
Sodium	Initial Calib. Blank	ND	3	mg/kg		≤3.0			
Vanadium	Initial Calib. Blank	ND	0.015	mg/kg		≤0.015			
Zinc	Initial Calib. Blank	ND	0.6	mg/kg		≤0.6			

Method Blank

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Prep Blank	ND	0.04	mg/kg		≤0.04			
Barium	Prep Blank	ND	0.003	mg/kg		≤0.003			
Beryllium	Prep Blank	ND	0.003	mg/kg		≤0.003			
Boron	Prep Blank	ND	0.03	mg/kg		≤0.03			
Cadmium	Prep Blank	ND	0.003	mg/kg		≤0.003			
Calcium	Prep Blank	ND	0.3	mg/kg		≤0.3			
Chromium	Prep Blank	ND	0.015	mg/kg		≤0.015			
Cobalt	Prep Blank	ND	0.03	mg/kg		≤0.03			
Copper	Prep Blank	ND	0.006	mg/kg		≤0.006			
Iron	Prep Blank	ND	0.03	mg/kg		≤0.03			
Lithium	Prep Blank	ND	0.03	mg/kg		≤0.03			
Magnesium	Prep Blank	ND	0.3	mg/kg		≤0.3			
Manganese	Prep Blank	ND	0.03	mg/kg		≤0.03			
Molybdenum	Prep Blank	ND	0.06	mg/kg		≤0.06			
Nickel	Prep Blank	ND	0.015	mg/kg		≤0.015			
Silver	Prep Blank	ND	0.015	mg/kg		≤0.015			
Sodium	Prep Blank	ND	3	mg/kg		≤3.0			
Vanadium	Prep Blank	ND	0.015	mg/kg		≤0.015			
Zinc	Prep Blank	ND	0.6	mg/kg		≤0.6			

Continued Calibration Blank (CCB)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Cont Calib Blank	ND	0.04	mg/kg		≤0.04			
Barium	Cont Calib Blank	ND	0.003	mg/kg		≤0.003			
Beryllium	Cont Calib Blank	ND	0.003	mg/kg		≤0.003			
Boron	Cont Calib Blank	ND	0.03	mg/kg		≤0.03			
Cadmium	Cont Calib Blank	ND	0.003	mg/kg		≤0.003			
Calcium	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Chromium	Cont Calib Blank	ND	0.015	mg/kg		≤0.015			
Cobalt	Cont Calib Blank	ND	0.03	mg/kg		≤0.03			
Copper	Cont Calib Blank	ND	0.006	mg/kg		≤0.006			
Iron	Cont Calib Blank	ND	0.03	mg/kg		≤0.03			
Lithium	Cont Calib Blank	ND	0.03	mg/kg		≤0.03			
Magnesium	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Manganese	Cont Calib Blank	ND	0.03	mg/kg		≤0.03			
Molybdenum	Cont Calib Blank	ND	0.06	mg/kg		≤0.06			
Nickel	Cont Calib Blank	ND	0.015	mg/kg		≤0.015			
Silver	Cont Calib Blank	ND	0.015	mg/kg		≤0.015			
Sodium	Cont Calib Blank	ND	3	mg/kg		≤3.0			
Vanadium	Cont Calib Blank	ND	0.015	mg/kg		≤0.015			
Zinc	Cont Calib Blank	ND	0.6	mg/kg		≤0.6			

Initial Calibration Verification (ICV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Initial Calib Verif	0.2377	0.04	mg/kg			0.9%	≤5%	
Barium	Initial Calib Verif	2.0693	0.003	mg/kg			0.9%	≤5%	
Beryllium	Initial Calib Verif	0.0092	0.003	mg/kg			4.0%	≤5%	
Boron	Initial Calib Verif	1.1225	0.03	mg/kg			0.7%	≤5%	
Cadmium	Initial Calib Verif	0.0097	0.003	mg/kg			4.6%	≤5%	
Calcium	Initial Calib Verif	48.9496	0.3	mg/kg			2.4%	≤5%	
Chromium	Initial Calib Verif	0.1610	0.015	mg/kg			3.1%	≤5%	
Cobalt	Initial Calib Verif	0.9821	0.03	mg/kg			1.8%	≤5%	
Copper	Initial Calib Verif	1.7668	0.006	mg/kg			1.9%	≤5%	
Iron	Initial Calib Verif	1.3667	0.03	mg/kg			1.2%	≤5%	
Lithium	Initial Calib Verif	0.9514	0.03	mg/kg			5.0%	≤5%	
Magnesium	Initial Calib Verif	12.2374	0.3	mg/kg			1.1%	≤5%	
Manganese	Initial Calib Verif	0.5303	0.03	mg/kg			3.5%	≤5%	
Molybdenum	Initial Calib Verif	0.0326	0.06	mg/kg			2.9%	≤5%	
Nickel	Initial Calib Verif	0.0982	0.015	mg/kg			0.5%	≤5%	
Silver	Initial Calib Verif	0.2426	0.015	mg/kg			1.8%	≤5%	
Sodium	Initial Calib Verif	47.4224	3	mg/kg			0.8%	≤5%	
Vanadium	Initial Calib Verif	0.9605	0.015	mg/kg			0.8%	≤5%	
Zinc	Initial Calib Verif	1.7210	0.6	mg/kg			1.2%	≤5%	

Grants Pass Water Laboratory, INC
Analytical QC Summary Report

Sample ID #: 21503209
Matrix: Soil

Test Method: EPA 200.7
Run Number: 81915

Laboratory Control Sample (LCS)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	94B4DBA82BF2	0.2484	0.04	mg/kg	103.5%	90-110%			
Barium	94B4DBA82BF2	2.0628	0.003	mg/kg	100.6%	90-110%			
Beryllium	94B4DBA82BF2	0.0090	0.003	mg/kg	102.9%	90-110%			
Boron	94B4DBA82BF2	1.1067	0.03	mg/kg	97.9%	90-110%			
Cadmium	94B4DBA82BF2	0.0096	0.003	mg/kg	94.2%	90-110%			
Calcium	1584BE054AA2	49.4776	0.3	mg/kg	103.5%	90-110%			
Chromium	94B4DBA82BF2	0.1606	0.015	mg/kg	96.7%	90-110%			
Cobalt	043AEC8C88A7	1.0748	0.03	mg/kg	107.5%	90-110%			
Copper	94B4DBA82BF2	1.7489	0.006	mg/kg	97.2%	90-110%			
Iron	94B4DBA82BF2	1.3499	0.03	mg/kg	100.0%	90-110%			
Lithium	043AEC8C88A7	1.0437	0.03	mg/kg	104.4%	90-110%			
Magnesium	1584BE054AA2	11.9996	0.3	mg/kg	99.2%	90-110%			
Manganese	94B4DBA82BF2	0.5263	0.03	mg/kg	102.8%	90-110%			
Molybdenum	94B4DBA82BF2	0.0307	0.06	mg/kg	91.5%	90-110%			
Nickel	94B4DBA82BF2	0.0973	0.015	mg/kg	98.6%	90-110%			
Silver	94B4DBA82BF2	0.2422	0.015	mg/kg	98.0%	90-110%			
Sodium	1584BE054AA2	47.6768	3	mg/kg	99.7%	90-110%			
Vanadium	94B4DBA82BF2	0.9676	0.015	mg/kg	101.5%	90-110%			
Zinc	94B4DBA82BF2	1.7310	0.6	mg/kg	101.8%	90-110%			

Continued Calibration Verification (CCV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Cont Calib Verif	0.0460	0.04	mg/kg			8.2%	≤10%	
Barium	Cont Calib Verif	0.0105	0.003	mg/kg			5.3%	≤10%	
Beryllium	Cont Calib Verif	0.0105	0.003	mg/kg			4.6%	≤10%	
Boron	Cont Calib Verif	0.0513	0.03	mg/kg			2.5%	≤10%	
Cadmium	Cont Calib Verif	0.0101	0.003	mg/kg			0.8%	≤10%	
Calcium	Cont Calib Verif	5.0962	0.3	mg/kg			1.9%	≤10%	
Chromium	Cont Calib Verif	0.0102	0.015	mg/kg			2.4%	≤10%	
Cobalt	Cont Calib Verif	0.0907	0.03	mg/kg			9.7%	≤10%	
Copper	Cont Calib Verif	0.0101	0.006	mg/kg			0.5%	≤10%	
Iron	Cont Calib Verif	0.0504	0.03	mg/kg			0.8%	≤10%	
Lithium	Cont Calib Verif	0.1003	0.03	mg/kg			0.3%	≤10%	
Magnesium	Cont Calib Verif	4.6255	0.3	mg/kg			7.8%	≤10%	
Manganese	Cont Calib Verif	0.0543	0.03	mg/kg			8.2%	≤10%	
Molybdenum	Cont Calib Verif	0.1032	0.06	mg/kg			3.2%	≤10%	
Nickel	Cont Calib Verif	0.0103	0.015	mg/kg			2.6%	≤10%	
Silver	Cont Calib Verif	0.0498	0.015	mg/kg			0.4%	≤10%	
Sodium	Cont Calib Verif	5.3917	3	mg/kg			7.5%	≤10%	
Vanadium	Cont Calib Verif	0.0107	0.015	mg/kg			7.2%	≤10%	
Zinc	Cont Calib Verif	0.1033	0.6	mg/kg			3.3%	≤10%	

Matrix Spike Duplicate

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	MSDup21503207	0.9045	0.04	mg/kg			0.10%	≤20%	
Barium	MSDup21503207	0.9424	0.003	mg/kg			0.8%	≤20%	
Beryllium	MSDup21503207	1.0198	0.003	mg/kg			0.10%	≤20%	
Boron	MSDup21503207	0.9561	0.03	mg/kg			0.5%	≤20%	
Cadmium	MSDup21503207	0.9758	0.003	mg/kg			0.1%	≤20%	
Calcium	MSDup21503207	47.2280	0.3	mg/kg			1.10%	≤20%	
Chromium	MSDup21503207	0.9583	0.015	mg/kg			0.1%	≤20%	
Cobalt	MSDup21503207	4.6719	0.03	mg/kg			1.60%	≤20%	
Copper	MSDup21503207	0.9026	0.006	mg/kg			0.10%	≤20%	
Iron	MSDup21503207	0.9460	0.03	mg/kg			0.1%	≤20%	
Lithium	MSDup21503207	4.9873	0.03	mg/kg			1.3%	≤20%	
Magnesium	MSDup21503207	38.9130	0.3	mg/kg			0.50%	≤20%	
Manganese	MSDup21503207	0.9742	0.03	mg/kg			2.0%	≤20%	
Molybdenum	MSDup21503207	1.9540	0.06	mg/kg			0.40%	≤20%	
Nickel	MSDup21503207	0.9089	0.015	mg/kg			0.0%	≤20%	
Silver	MSDup21503207	0.0420	0.015	mg/kg			0.3%	≤20%	
Sodium	MSDup21503207	31.5460	3	mg/kg			0.90%	≤20%	
Vanadium	MSDup21503207	1.0713	0.015	mg/kg			0.3%	≤20%	
Zinc	MSDup21503207	1.9919	0.6	mg/kg			0.10%	≤20%	

Matrix Spike (MS)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	MS21503207	0.9038	0.04	mg/kg	87.3%	75-125%			
Barium	MS21503207	0.9346	0.003	mg/kg	92.2%	75-125%			
Beryllium	MS21503207	1.0209	0.003	mg/kg	100.7%	75-125%			
Boron	MS21503207	0.9613	0.03	mg/kg	95.1%	75-125%			
Cadmium	MS21503207	0.9763	0.003	mg/kg	96.0%	75-125%			
Calcium	MS21503207	46.7230	0.3	mg/kg	97.9%	75-125%			
Chromium	MS21503207	0.9573	0.015	mg/kg	94.3%	75-125%			
Cobalt	MS21503207	4.5962	0.03	mg/kg	115.2%	75-125%			
Copper	MS21503207	0.9038	0.006	mg/kg	87.2%	75-125%			
Iron	MS21503207	0.9465	0.03	mg/kg	92.3%	75-125%			
Lithium	MS21503207	4.9229	0.03	mg/kg	123.7%	75-125%			
Magnesium	MS21503207	38.7240	0.3	mg/kg	110.7%	75-125%			
Manganese	MS21503207	0.9936	0.03	mg/kg	96.2%	75-125%			
Molybdenum	MS21503207	1.9464	0.06	mg/kg	97.6%	75-125%			
Nickel	MS21503207	0.9088	0.015	mg/kg	88.2%	75-125%			
Silver	MS21503207	0.0421	0.015	mg/kg	96.7%	75-125%			
Sodium	MS21503207	31.2680	3	mg/kg	122.6%	75-125%			
Vanadium	MS21503207	1.0682	0.015	mg/kg	107.2%	75-125%			
Zinc	MS21503207	2.0004	0.6	mg/kg	98.6%	75-125%			

**Grants Pass Water Laboratory, INC
Analytical QC Summary Report**

Sample ID #: 21503209
Matrix: Soil

Test Method: SM 3113B
Run Number: 81915

Initial Calibration Blank (ICB)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Initial Calib. Blank	ND	0.01	mg/kg		≤0.01			
Arsenic	Initial Calib. Blank	ND	0.004	mg/kg		≤0.004			

Method Blank

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Initial Calib. Blank	ND	0.01	mg/kg		≤0.01			
Arsenic	Initial Calib. Blank	ND	0.004	mg/kg		≤0.004			

Continued Calibration Blank (CCB)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Initial Calib. Blank	ND	0.01	mg/kg		≤0.01			
Arsenic	Initial Calib. Blank	ND	0.004	mg/kg		≤0.004			

Initial Calibration Verification (ICV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Initial Calib Verif	0.0294	0.01	mg/kg			2.1%	≤5%	
Arsenic	Initial Calib Verif	0.0306	0.004	mg/kg			2.0%	≤5%	

Laboratory Control Sample (LCS)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	94B4DBA82BF2	0.0415	0.01	mg/kg	107.6%	90-110%			
Arsenic	4434FCA5AD3B	0.0411	0.004	mg/kg	91.8%	90-110%			

Continued Calibration Verification (CCV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	Cont Calib Verif	0.02986	0.01	mg/kg			0.5%	≤10%	
Lead	Cont Calib Verif	0.02806	0.01	mg/kg			6.7%	≤10%	
Arsenic	Cont Calib Verif	0.02810	0.004	mg/kg			6.5%	≤10%	

Matrix Spike Duplicate

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	MSDup21503249	0.0064	0.01	mg/kg			5.1%	≤20%	
Lead	MSDup21503250	0.0059	0.01	mg/kg			6.3%	≤20%	
Arsenic	MSDup21503250	0.0256	0.004	mg/kg			9.7%	≤20%	

Matrix Spike (MS)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Lead	MS21503250	0.0055	0.01	mg/kg	30.0%	75-125%			M
Lead	MSBlank	0.0165	0.01	mg/kg	109.7%	75-125%			
Arsenic	MS21503250	0.0282	0.004	mg/kg	119.3%	75-125%			

Abbreviations:

MRL: Method Reporting Limit
ND: None Detected at or above the MRL
RPD: Relative Percent Difference

Data Qualifiers:

H: Holding Time Exceeded
M: Matrix Spike recovery was outside acceptance limits due to matrix interference. The LCS was within acceptance limits showing the analysis is in control and the data is acceptable.



964 SE M Street · Grants Pass, OR 97526 · 541-476-0733 · www.gpwaterlab.com

Analysis Report

Lab ID# OR100033

Mail to:

Josephine County Health Dept.
Attn: Diane Hoover
715 NW Dimmick St.
Grants Pass, OR 97526

Report Date: 10/5/15

Address of Source: N/A

Sample ID #: 21503325

Project Name: Fielder Creek Dam Removal

The following results pertain only to the samples submitted, and are for the sole and exclusive use of the above named client.

This report shall not be reproduced, except in full, without written approval of the laboratory.

The following accredited results meet all requirements of NELAC unless otherwise noted by data flag indicators or comments.

If you have questions or need further assistance, please do not hesitate to call.

Sincerely,

Doree Schaafsma
Laboratory Director

Sample Information:

Sample ID #: 21503325
 Address of Source: N/A
 Project Name: Fielder Creek Dam Removal
 Received Date: 08/26/2015

Collectors Name: Eric Schaafsma
 Sample Point: Fielder Creek
 Source: Fielder Creek
 Treatment System: None

Results of Chemical Analysis

Sample Notes:

Collection Date: 08/25/15 9:16 AM

Contaminate	Method	Detection Limits	RESULTS	Units	EPA Limit	Date Analyzed	Analyst	Data Flags
Aluminum	EPA 200.7	0.40	11102.90	mg/kg		9/09/15 11:18 AM	JNS	
Arsenic	EPA 6020	0.30	1.40	mg/kg		9/08/15	DJP	S
Barium	EPA 200.7	0.30	58.7979	mg/kg		9/09/15 11:18 AM	JNS	
Beryllium	EPA 200.7	0.30	0.2190	mg/kg		9/09/15 11:18 AM	JNS	
Boron	EPA 200.7	0.30	26.19	mg/kg		9/09/15 11:18 AM	JNS	
Cadmium	EPA 200.7	0.30	0.9218	mg/kg		9/09/15 11:18 AM	JNS	
Calcium	EPA 200.7	1.0	8902.79	mg/kg		9/04/15 09:41 AM	JNS	
Chromium	EPA 200.7	0.15	159.76	mg/kg		9/09/15 11:18 AM	JNS	
Cobalt	EPA 200.7	0.30	10.90	mg/kg		9/04/15 09:41 AM	JNS	
Copper	EPA 200.7	0.60	23.46	mg/kg		9/09/15 11:18 AM	JNS	
Iron	EPA 200.7	0.30	11668.10	mg/kg		9/09/15 11:18 AM	JNS	
Lead	EPA 200.7	0.25	27.26	mg/kg		9/16/15 12:02 PM	JNS	
Lithium	EPA 200.7	0.30	5.88	mg/kg		9/04/15 09:41 AM	JNS	
Magnesium	EPA 200.7	1.0	3935.39	mg/kg		9/04/15 09:41 AM	JNS	
Manganese	EPA 200.7	0.30	208.77	mg/kg		9/04/15 09:41 AM	JNS	
Mercury	EPA 6020	0.10	ND	mg/kg		9/08/15	DJP	S
Molybdenum	EPA 200.7	0.60	0.4322	mg/kg		9/09/15 11:18 AM	JNS	
Nickel	EPA 200.7	0.15	90.94	mg/kg		9/09/15 11:18 AM	JNS	
Potassium	EPA 200.7	1.0	872.80	mg/kg		9/04/15 09:41 AM	JNS	
Selenium	EPA 200.7	0.30	69.49	mg/kg		9/04/15 09:41 AM	JNS	
Silver	EPA 200.7	0.15	3.48	mg/kg		9/09/15 11:18 AM	JNS	
Sodium	EPA 200.7	3.0	324.42	mg/kg		9/04/15 09:41 AM	JNS	
Uranium	EPA 6020	0.05	0.39	mg/kg		9/08/15	DJP	S
Vanadium	EPA 200.7	0.15	36.83	mg/kg		9/09/15 11:18 AM	JNS	
Zinc	EPA 200.7	0.60	25.81	mg/kg		9/09/15 11:18 AM	JNS	

Data Flags:

ND None Detected
 C Sample did not meet acceptance criteria
 S Sample Outsourced to Umpqua Research Co.
 M Matrix Spike recovery is out of control limits due to matrix interference

E Estimated Value
 A Analysis is covered under the ORELAP scope of Accreditation
 H Analysis performed outside method hold time
 N/A Not Applicable

Grants Pass Water Laboratory, INC
Analytical QC Summary Report

Sample ID #: 21503325
 Matrix: Soil

Test Method: EPA 200.7
 Run Number: 90915

Initial Calibration Blank (ICB)									
Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Initial Calib. Blank	ND	0.4	mg/kg		≤0.4			
Barium	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Beryllium	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Boron	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Cadmium	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Calcium	Initial Calib. Blank	ND	1	mg/kg		≤1.0			
Chromium	Initial Calib. Blank	ND	0.15	mg/kg		≤0.15			
Cobalt	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Copper	Initial Calib. Blank	ND	0.6	mg/kg		≤0.6			
Iron	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Lead	Initial Calib. Blank	ND	0.25	mg/kg		≤0.25			
Lithium	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Magnesium	Initial Calib. Blank	ND	1	mg/kg		≤1.0			
Manganese	Initial Calib. Blank	ND	0.3	mg/kg		≤0.3			
Molybdenum	Initial Calib. Blank	ND	0.6	mg/kg		≤0.6			
Nickel	Initial Calib. Blank	ND	0.15	mg/kg		≤0.15			
Potassium	Initial Calib. Blank	ND	1	mg/kg		≤1.0			
Selenium	Initial Calib. Blank	ND	0.3	mg/kg		≤0.30			
Silver	Initial Calib. Blank	ND	0.15	mg/kg		≤0.15			
Sodium	Initial Calib. Blank	ND	3	mg/kg		≤3.0			
Vanadium	Initial Calib. Blank	ND	0.15	mg/kg		≤0.15			
Zinc	Initial Calib. Blank	ND	0.6	mg/kg		≤0.6			

Method Blank									
Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Prep Blank	ND	0.4	mg/kg		≤0.4			
Barium	Prep Blank	ND	0.3	mg/kg		≤0.3			
Beryllium	Prep Blank	ND	0.3	mg/kg		≤0.3			
Boron	Prep Blank	ND	0.3	mg/kg		≤0.3			
Cadmium	Prep Blank	ND	0.3	mg/kg		≤0.3			
Calcium	Prep Blank	ND	1	mg/kg		≤1.0			
Chromium	Prep Blank	ND	0.15	mg/kg		≤0.15			
Cobalt	Prep Blank	ND	0.3	mg/kg		≤0.3			
Copper	Prep Blank	ND	0.6	mg/kg		≤0.6			
Iron	Prep Blank	ND	0.3	mg/kg		≤0.3			
Lead	Prep Blank	ND	0.25	mg/kg		≤0.25			
Lithium	Prep Blank	ND	0.3	mg/kg		≤0.3			
Magnesium	Prep Blank	ND	1	mg/kg		≤1.0			
Manganese	Prep Blank	ND	0.3	mg/kg		≤0.3			
Molybdenum	Prep Blank	ND	0.6	mg/kg		≤0.6			
Nickel	Prep Blank	ND	0.15	mg/kg		≤0.15			
Potassium	Prep Blank	ND	1	mg/kg		≤1.0			
Selenium	Prep Blank	ND	0.3	mg/kg		≤0.30			
Silver	Prep Blank	ND	0.15	mg/kg		≤0.15			
Sodium	Prep Blank	ND	3	mg/kg		≤3.0			
Vanadium	Prep Blank	ND	0.15	mg/kg		≤0.15			
Zinc	Prep Blank	ND	0.6	mg/kg		≤0.6			

Continued Calibration Blank (CCB)									
Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Cont Calib Blank	ND	0.4	mg/kg		≤0.4			
Barium	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Beryllium	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Boron	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Cadmium	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Calcium	Cont Calib Blank	ND	1	mg/kg		≤1.0			
Chromium	Cont Calib Blank	ND	0.15	mg/kg		≤0.15			
Cobalt	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Copper	Cont Calib Blank	ND	0.6	mg/kg		≤0.6			
Iron	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Lead	Cont Calib Blank	ND	0.25	mg/kg		≤0.25			
Lithium	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Magnesium	Cont Calib Blank	ND	1	mg/kg		≤1.0			
Manganese	Cont Calib Blank	ND	0.3	mg/kg		≤0.3			
Molybdenum	Cont Calib Blank	ND	0.6	mg/kg		≤0.6			
Nickel	Cont Calib Blank	ND	0.15	mg/kg		≤0.15			
Potassium	Cont Calib Blank	ND	1	mg/kg		≤1.0			
Selenium	Cont Calib Blank	ND	0.3	mg/kg		≤0.30			
Silver	Cont Calib Blank	ND	0.15	mg/kg		≤0.15			
Sodium	Cont Calib Blank	ND	3	mg/kg		≤3.0			
Vanadium	Cont Calib Blank	ND	0.15	mg/kg		≤0.15			
Zinc	Cont Calib Blank	ND	0.6	mg/kg		≤0.6			

Grants Pass Water Laboratory, INC
Analytical QC Summary Report

Sample ID #: 21503325
Matrix: Soil

Test Method: EPA 200.7
Run Number: 90915

Initial Calibration Verification (ICV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Initial Calib Verif	0.2343	0.4	mg/kg			2.4%	≤5%	
Barium	Initial Calib Verif	2.0577	0.3	mg/kg			0.4%	≤5%	
Beryllium	Initial Calib Verif	0.0092	0.3	mg/kg			4.7%	≤5%	
Boron	Initial Calib Verif	1.1544	0.3	mg/kg			2.1%	≤5%	
Cadmium	Initial Calib Verif	0.0098	0.3	mg/kg			3.6%	≤5%	
Calcium	Initial Calib Verif	58.7028	1	mg/kg			3.3%	≤5%	
Chromium	Initial Calib Verif	0.1604	0.15	mg/kg			3.4%	≤5%	
Cobalt	Initial Calib Verif	0.2413	0.3	mg/kg			3.6%	≤5%	
Copper	Initial Calib Verif	1.8395	0.6	mg/kg			2.2%	≤5%	
Iron	Initial Calib Verif	1.4174	0.3	mg/kg			4.9%	≤5%	
Lead	Initial Calib Verif	244.54	0.25	mg/kg			4.6%	≤5%	
Lithium	Initial Calib Verif	1.0064	0.3	mg/kg			4.8%	≤5%	
Magnesium	Initial Calib Verif	17.2824	1	mg/kg			3.7%	≤5%	
Manganese	Initial Calib Verif	0.5334	0.3	mg/kg			4.1%	≤5%	
Molybdenum	Initial Calib Verif	0.0336	0.6	mg/kg			0.1%	≤5%	
Nickel	Initial Calib Verif	0.0964	0.15	mg/kg			2.4%	≤5%	
Potassium	Initial Calib Verif	24.9882	1	mg/kg			1.0%	≤5%	
Selenium	Initial Calib Verif	0.9779	0.3	mg/kg			0.5%	≤5%	
Silver	Initial Calib Verif	0.2436	0.15	mg/kg			1.4%	≤5%	
Sodium	Initial Calib Verif	17.1244	3	mg/kg			4.4%	≤5%	
Vanadium	Initial Calib Verif	0.9487	0.15	mg/kg			0.5%	≤5%	
Zinc	Initial Calib Verif	1.7405	0.6	mg/kg			2.4%	≤5%	

Laboratory Control Sample (LCS)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	6E199DCAB6C6	9179.61	0.4	mg/kg	91.8%	90-110%			
Barium	6E199DCAB6C6	166.50	0.3	mg/kg	101.5%	90-110%			
Beryllium	6E199DCAB6C6	131.69	0.3	mg/kg	91.5%	90-110%			
Boron	6E199DCAB6C6	151.60	0.3	mg/kg	93.6%	90-110%			
Cadmium	6E199DCAB6C6	121.46	0.3	mg/kg	97.9%	90-110%			
Calcium	6E199DCAB6C6	5545.02	1	mg/kg	98.3%	90-110%			
Chromium	6E199DCAB6C6	150.53	0.15	mg/kg	90.1%	90-110%			
Cobalt	6E199DCAB6C6	167.48	0.3	mg/kg	93.6%	90-110%			
Copper	6E199DCAB6C6	178.53	0.6	mg/kg	91.6%	90-110%			
Iron	6E199DCAB6C6	5155.55	0.3	mg/kg	90.6%	90-110%			
Lead	6E199DCAB6C6	261.02	0.25	mg/kg	102.0%	90-110%			
Lithium	6E199DCAB6C6	70.78	0.3	mg/kg	94.2%	90-110%			
Magnesium	6E199DCAB6C6	5440.67	1	mg/kg	99.3%	90-110%			
Manganese	6E199DCAB6C6	187.69	0.3	mg/kg	102.6%	90-110%			
Molybdenum	6E199DCAB6C6	66.59	0.6	mg/kg	98.5%	90-110%			
Nickel	6E199DCAB6C6	142.39	0.15	mg/kg	93.1%	90-110%			
Potassium	6E199DCAB6C6	9420.22	1	mg/kg	98.5%	90-110%			
Selenium	6E199DCAB6C6	161.29	0.3	mg/kg	99.6%	90-110%			
Silver	6E199DCAB6C6	21.42	0.15	mg/kg	91.1%	90-110%			
Sodium	6E199DCAB6C6	6199.03	3	mg/kg	94.2%	90-110%			
Vanadium	6E199DCAB6C6	133.00	0.15	mg/kg	95.7%	90-110%			
Zinc	6E199DCAB6C6	175.55	0.6	mg/kg	94.9%	90-110%			

Continued Calibration Verification (CCV)

Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags
Aluminum	Cont Calib Verif	0.0485	0.4	mg/kg			3.0%	≤10%	
Barium	Cont Calib Verif	0.0108	0.3	mg/kg			8.1%	≤10%	
Beryllium	Cont Calib Verif	0.0106	0.3	mg/kg			5.8%	≤10%	
Boron	Cont Calib Verif	0.0496	0.3	mg/kg			0.8%	≤10%	
Cadmium	Cont Calib Verif	0.1037	0.3	mg/kg			3.6%	≤10%	
Calcium	Cont Calib Verif	5.4532	1	mg/kg			7.9%	≤10%	
Chromium	Cont Calib Verif	0.0096	0.15	mg/kg			3.8%	≤10%	
Cobalt	Cont Calib Verif	0.1069	0.3	mg/kg			7.6%	≤10%	
Copper	Cont Calib Verif	0.0105	0.6	mg/kg			5.2%	≤10%	
Iron	Cont Calib Verif	0.0501	0.3	mg/kg			0.1%	≤10%	
Lead	Cont Calib Verif	10.0148	0.25	mg/kg			0.1%	≤10%	
Lithium	Cont Calib Verif	0.1037	0.3	mg/kg			0.3%	≤10%	
Magnesium	Cont Calib Verif	5.4816	1	mg/kg			9.3%	≤10%	
Manganese	Cont Calib Verif	0.5334	0.3	mg/kg			4.2%	≤10%	
Molybdenum	Cont Calib Verif	0.0929	0.6	mg/kg			0.3%	≤10%	
Nickel	Cont Calib Verif	0.0094	0.15	mg/kg			6.6%	≤10%	
Potassium	Cont Calib Verif	5.2865	1	mg/kg			5.7%	≤10%	
Selenium	Cont Calib Verif	0.1058	0.3	mg/kg			0.6%	≤10%	
Silver	Cont Calib Verif	0.0490	0.15	mg/kg			2.0%	≤10%	
Sodium	Cont Calib Verif	5.2570	3	mg/kg			6.2%	≤10%	
Vanadium	Cont Calib Verif	0.0098	0.15	mg/kg			2.4%	≤10%	
Zinc	Cont Calib Verif	0.1087	0.6	mg/kg			8.4%	≤10%	

Grants Pass Water Laboratory, INC
Analytical QC Summary Report

Sample ID #: 21503325
Matrix: Soil

Test Method: EPA 200.7
Run Number: 90915

Matrix Spike Duplicate										
Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags	
Aluminum	MSDup21503454	0.9299	0.4	mg/kg			3.0%	≤20%		
Barium	MSDup21503454	0.9644	0.3	mg/kg			2.6%	≤20%		
Beryllium	MSDup21503454	0.9926	0.3	mg/kg			1.5%	≤20%		
Boron	MSDup21503454	0.9875	0.3	mg/kg			1.5%	≤20%		
Cadmium	MSDup21503454	0.9503	0.3	mg/kg			2.0%	≤20%		
Calcium	MSDup21503433	83.8353	1	mg/kg			0.5%	≤20%		
Chromium	MSDup21503454	0.9305	0.15	mg/kg			1.9%	≤20%		
Cobalt	MSDup21503433	4.3600	0.3	mg/kg			0.6%	≤20%		
Copper	MSDup21503454	0.9300	0.6	mg/kg			2.4%	≤20%		
Iron	MSDup21503454	1.1123	0.3	mg/kg			1.3%	≤20%		
Lead	MSDup21503536	0.8845	0.25	mg/kg			7.6%	≤20%		
Lithium	MSDup21503433	4.0742	0.3	mg/kg			0.3%	≤20%		
Magnesium	MSDup21503433	39.8243	1	mg/kg			1.7%	≤20%		
Manganese	MSDup21503454	0.9521	0.3	mg/kg			1.3%	≤20%		
Molybdenum	MSDup21503454	1.8648	0.6	mg/kg			0.6%	≤20%		
Nickel	MSDup21503454	0.8851	0.15	mg/kg			2.1%	≤20%		
Potassium	MSDup21503433	25.1544	1	mg/kg			1.2%	≤20%		
Selenium	MSDup21503433	4.3443	0.3	mg/kg			1.4%	≤20%		
Silver	MSDup21503454	0.1159	0.15	mg/kg			2.9%	≤20%		
Sodium	MSDup21503433	35.6166	3	mg/kg			0.6%	≤20%		
Vanadium	MSDup21503454	1.0011	0.15	mg/kg			2.1%	≤20%		
Zinc	MSDup21503454	1.9300	0.6	mg/kg			0.5%	≤20%		

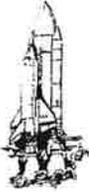
Matrix Spike (MS)										
Analyte	Sample ID	Result	MRL	Units	% Recovery	Acceptable Limits	RPD	RPD Acceptable Limit	Data Flags	
Aluminum	MS21503454	0.9027	0.4	mg/kg	87.7%	75-125%				
Barium	MS21503454	0.9392	0.3	mg/kg	93.6%	75-125%				
Beryllium	MS21503454	0.9780	0.3	mg/kg	97.8%	75-125%				
Boron	MS21503454	0.9730	0.3	mg/kg	93.8%	75-125%				
Cadmium	MS21503454	0.9318	0.3	mg/kg	93.2%	75-125%				
Calcium	MS21503433	84.3013	1	mg/kg	89.6%	75-125%				
Chromium	MS21503454	0.9133	0.15	mg/kg	91.3%	75-125%				
Cobalt	MS21503433	4.3333	0.3	mg/kg	113.3%	75-125%				
Copper	MS21503454	0.9075	0.6	mg/kg	91.3%	75-125%				
Iron	MS21503454	0.9465	0.3	mg/kg	92.3%	75-125%				
Lead	MS21503536	0.9549	0.25	mg/kg	95.5%	75-125%				
Lithium	MS21503433	4.0512	0.3	mg/kg	105.1%	75-125%				
Magnesium	MS21503433	39.8463	1	mg/kg	109.9%	75-125%				
Manganese	MS21503454	0.9645	0.3	mg/kg	95.1%	75-125%				
Molybdenum	MS21503454	1.8544	0.6	mg/kg	92.4%	75-125%				
Nickel	MS21503454	0.8669	0.15	mg/kg	87.1%	75-125%				
Potassium	MS21503433	25.2374	1	mg/kg	106.7%	75-125%				
Selenium	MS21503433	4.3287	0.3	mg/kg	107.5%	75-125%				
Silver	MS21503454	0.1126	0.15	mg/kg	75.5%	75-125%				
Sodium	MS21503433	35.8863	3	mg/kg	96.3%	75-125%				
Vanadium	MS21503454	0.9804	0.15	mg/kg	97.8%	75-125%				
Zinc	MS21503454	1.9209	0.6	mg/kg	95.6%	75-125%				

Abbreviations:

- MRL: Method Reporting Limit
- ND: None Detected at or above the MRL
- RPD: Relative Percent Difference

Data Qualifiers:

- H: Holding Time Exceeded
- M: Matrix Spike recovery was outside acceptance limits due to matrix interference. The LCS was within acceptance limits showing the analysis is in control and the data is acceptable.



UMPQUA Research Company

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ANALYSIS REPORT

URC # 5090407

Quality Control Report
Metals by EPA 6020

Date Reported:

9/22/2015 3:51:00PM

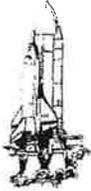
Analyte	Result	MRL	Units	% Recovery	% Recovery Limits	RPD	RPD Limit	Notes
Blank								
Arsenic	ND	0.003	mg/kg wet	NA	NA	NA	NA	
Blank								
Arsenic	ND	0.003	mg/kg wet	NA	NA	NA	NA	
LCS								
Arsenic	0.1030	0.003	mg/kg wet	103	85-115	NA	NA	
Duplicate Source: 5090407-03								
Arsenic	1.080	0.300	mg/kg dry	NA	NA	0.922	20	
Blank								
Mercury	ND	0.0010	mg/L	NA	NA	NA	NA	
Blank								
Mercury	ND	0.0010	mg/L	NA	NA	NA	NA	
LCS								
Mercury	0.00249	0.0010	mg/L	99.6	85-115	NA	NA	
Matrix Spike Source: 5090407-01								
Mercury	0.02440	0.0100	mg/L	96.0	70-130	NA	NA	
Matrix Spike Dup Source: 5090407-01								
Mercury	0.02470	0.0100	mg/L	97.2	70-130	1.22	20	
Reference								
Mercury	0.00236	0.0010	mg/L	94.4	85-115	NA	NA	
Blank								
Mercury	ND	0.0010	mg/kg wet	NA	NA	NA	NA	

UMPQUA Research Company/MC

Tom Williams, Laboratory Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document.

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ANALYSIS REPORT

URC # 5090407

Quality Control Report

Date 9/22/2015 3:51:00PM
Reported:

Metals by EPA 6020

Analyte	Result	MRL	Units	% Recovery	% Recovery Limits	RPD	RPD Limit	Notes
Blank								
Mercury	ND	0.0010	mg/kg wet	NA	NA	NA	NA	
LCS								
Mercury	0.00249	0.0010	mg/kg wet	99.6	85-115	NA	NA	
Duplicate Source: 5090407-03								
Mercury	0.03000	0.1000	mg/kg dry	NA	NA	50.0	20	
Reference								
Mercury	0.00236	0.0010	mg/kg wet	94.4	85-115	NA	NA	

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ANALYSIS REPORT

URC # 5090407

Quality Control Report

Date 9/22/2015 3:51:00PM
 Reported:

Radionuclides

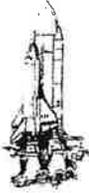
Analyte	Result	MRL	Units	% Recovery	% Recovery Limits	RPD	RPD Limit	Notes
Blank								
Uranium	ND	0.0010	mg/L	NA	NA	NA	NA	
Blank								
Uranium	ND	0.0010	mg/L	NA	NA	NA	NA	
LCS								
Uranium	0.09568	0.0010	mg/L	95.7	85-115	NA	NA	
Matrix Spike Source: 5090407-01								
Uranium	1.009	0.0010	mg/L	101	85-115	NA	NA	
Matrix Spike Dup Source: 5090407-01								
Uranium	0.9912	0.0010	mg/L	99.1	85-115	1.78	200	
Reference								
Uranium	0.02373	0.0010	mg/L	93.8	90-110	NA	NA	
Blank								
Uranium	ND	0.0500	mg/L wet	NA	NA	NA	NA	
Blank								
Uranium	ND	0.0500	mg/L wet	NA	NA	NA	NA	
LCS								
Uranium	0.09568	0.0500	mg/L wet	95.7	85-115	NA	NA	
Duplicate Source: 5090407-03								
Uranium	0.2700	0.0500	mg/L dry	NA	NA	3.64	200	
Reference								
Uranium	0.02373	0.0500	mg/L wet	93.8	90-110	NA	NA	

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ORELAP ID# OR100031

ANALYSIS REPORT

URC # 5090407

Qualifiers and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the MRL (minimum reporting limit)
NA	Not Applicable
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MRL	Minimum Reporting Limit
MDL	Minimum Detection Limit
BML	Benchmark Level
(‡)	ORELAP Accredited Analyte
(~)	Due to rounding of individual analytes, the "total" may vary slightly from the sum of the individual analyte values.

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Tom Williams, Laboratory Manager