RETEC

FIELD ACTIVITY LOG

PROJECT BNSF-Skykomish
JOB NO. BN050-16423
DAY & DATE Mon Nov. 27th 2007

COMPLETED BY D. Kinney
APPROVED BY
SHEET 1 OF 1

FIELD ACTIVITY SUBJECT:
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS: Water level measurements

TIME	
0800	Arrived onsite w/Elly, Aaron onsite, unloaded equipment & supplies
0835	Quinn arrived & we had safety meeting → slip/trip, snowing, trains, poor visibility
0900	Setting up to gauge wells
1450	Completed gauging, Quinn & Aaron doing surveying Elly & I setup vans & put away supplies
1545	Elly & I left site for Monroe, Quinn & Aaron completing surveying

VISITORS ON SITE:
None

CHANGES FROM PLANS OR IMPORTANT DECISIONS:

WEATHER CONDITIONS:
Snowing, 30-35°F

IMPORTANT TELEPHONE CALLS:
Well MW-38 damaged

PERSONNEL ON SITE: Dean Kinney, Quinn Meehan, Aaron Jambrosic, Elly Leaverton

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FIELD ACTIVITY LOG

PROJECT BNSF-Skykomish
JOB NO. BN050-16423
DAY & DATE Tues Nov 28th, 2006

COMPLETED BY D. Kinney
APPROVED BY
SHEET 1 OF 1

FIELD ACTIVITY SUBJECT: Groundwater Sampling
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

TIME	
0750	Arrived onsite, loading gear
0825	safety meeting, calibrated Horiba meter
0905	Went to get buckets + tubs
0947	Started purging 2A-W-4
1000	Sampled 2A-W-4
1031	Started purging 2A-W-3
1045	Sampled 2A-W-3
1118	Started purging 1A-W-3
1130	Sampled 1A-W-3
1159	Started purging 5-W-1
1210	Sampled 5-W-1 (duplicate for metals, labeled: 5-W-10-1106)
1235	Started purging MW-22
1245	sampled MW-22
1335	Started purging 5-W-3
1345	Sampled 5-W-3
1437	Started purging MW-20
1450	Sampled MW-20
1513	Started purging MW-36
1530	Sampled MW-36
1555	Went to dump purge water
1625	Unloaded equipment & coolers & setup van for Weds
1830	Left site

VISITORS ON SITE: None

CHANGES FROM PLANS OR IMPORTANT DECISIONS: No sample at MW-38, well damaged NT able to locate survey point for creek location — too much snow

WEATHER CONDITIONS: Snowing, 20-25°F

IMPORTANT TELEPHONE CALLS: None

PERSONNEL ON SITE: Dean Kinney, Quinn Meehan, Aaron Jambrosic

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FIELD ACTIVITY LOG

PROJECT BNSF - Skykomish
JOB NO. BNOSD-16423
DAY & DATE Wed 5 Nov. 29th 2006

COMPLETED BY D. Kinney
APPROVED BY
SHEET 1 OF 1

FIELD ACTIVITY SUBJECT:
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS: Groundwater sampling

TIME	
0745	Arrived onsite, Quinn & Aaron already here
0755	Safety meeting
0810	Reiced coolers & setup van
0845	went to start on 5-W-2
0903	Started purging 5-W-2
0915	Sampled 5-W-2
0945	Returned to field office & plugged battery unit in
0958	Went to start on 7A-W-1
1025	Couldn't get lid off well, moved to 1B-W-1
1036	Started purging 1B-W-1
1050	Sampled 1B-W-1, then went to depot for another cooler & more bottles.
1145	started purging MW-27
1210	Sampled MW-27; took duplicate, labeled: MW-27D-110606
1240	Packed samples to go to lab
1310	left site for lab

VISITORS ON SITE: None

CHANGES FROM PLANS OR IMPORTANT DECISIONS: None

WEATHER CONDITIONS: Cloudy, 20-25°F

IMPORTANT TELEPHONE CALLS: None

PERSONNEL ON SITE: Dean Kinney, Quinn Meehan, Aaron Tambroside

RETEC

FIELD ACTIVITY LOG

PROJECT BNSF-Skykomish
JOB NO. BN050-16423
DAY & DATE Thurs Nov. 30th 2006

COMPLETED BY D. Kinney
APPROVED BY
SHEET 1 OF 1

FIELD ACTIVITY SUBJECT: Groundwater Sampling
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

TIME	
0805	Arrived onsite, Quinn & Aaron here & setting up to sample, setup Van
0925	Started purging 2A-W-1
0940	sampled 2A-W-1
1011	started purging 1A-W-2
1025	Sampled 1A-W-2; took extra volume for lab QC
1110	Went to help Quinn get out of driveway - van stuck & then to depot to get more bottles
1239	Started purging MW-39 after clearing a path through snow
1250	Sampled MW-39
1329	Started purging MW-8
1340	Sampled MW-8
1425	Started purging MW-28
1435	Sampled MW-28
1541	Started purging MW-21
1555	Sampled MW-21
1639	Started purging MW-17
1650	Sampled MW-17
1715	Dumped purge water & put equipment away
1740	packed up coolers & equipment
1810	Left site

VISITORS ON SITE: None

CHANGES FROM PLANS OR IMPORTANT DECISIONS: None

WEATHER CONDITIONS: Cloudy to Snowing 20-30°F

IMPORTANT TELEPHONE CALLS: None

PERSONNEL ON SITE: Dean Kinney, Quinn Meehan, Aaron Jambrosic

Field Activity Log

Project Name: BNSF Skykomish
Completed By: Aaron Jankovic
Project Number:
Date: 11/27/06
Field Activity: Gauging surveying
Weather: cloudy snowing

0800 Arrive on site
0830 Conduct health and safety meeting
0845 cordinate gauging
~~0900~~ begin gauging product wells with Quian
1400 begin surveying / end gauging
1600 walk to locate control point ML3 and ML4
1645 walk to locate control point for ML1
1700 Depart site.

Field Activity Log

Project Name: BNSF Skykomish
Completed By: Aaron Jankowski
Project Number:
Date: 11/28/06
Field Activity: Groundwater sampling
Weather: Cloudy 23°C

750 Arrive on site
880 Calibrated meters, Horiba, turbidity
Calibration ok
830 Health Safety Meeting, snow, cold stress, driving
floating, contact with contaminants in groundwater.
840 load up for sampling
900 begin groundwater sampling
1300 Dump purge water in to designated drum and label
1640 end groundwater sampling, begin clean up at
site.
1645 put coolers and meters in trailer so do not
freeze over night.

Field Activity Log

Project Name: BNSF Skykomish
Project Number:
Field Activity: GW Sampling

Completed By: Aaron Jamboua
Date: 11/29/06
Weather: Cloudy 21°C

07:30 arrive on site
07:45 calibrate horiba and turbidity meter. Calibrate OK
07:50 ice cooler with sample from yesterday, load for today.
0800 Conduct Health and safety meeting, trains, traffic, ice, acid, contaminants. cold stress.
0830 set up on MW-26
0934 end purging MW-26 begin sampling MW-26-1106 @ 0940
0955 set up on MW-37
1005 begin purging MW-37
1022 end purging / begin sampling MW-37-1106 @ 1030
1045 begin set up on MW-34
1052 begin purging MW-34
1112 end purging / begin sampling MW-34-1104 @ 1115
1132 set up on MW-35
1138 begin purging MW-35 @
1155 end purging / begin sampling MW-35-1106 @ 1200
1220 ice down sample bulp Dean load to take to Test America
1300 Dean departs site / Dump purge water into drum
1310 set up on MW-32
13:24 begin purging MW 32
1341 end purging begin sampling MW-32-1106 @ 1345
1405 begin set up on MW-19
14:14 begin purging MW-19
14:31 end purging / begin sampling MW-19-1106 @ 1435
1444 set up on MW-40
1450 begin purging MW-40
1467 end purging begin sampling MW-40-1106 @ 1510
1529 begin purging MW-15 after set up
1552 end purging begin sampling MW-15-1106 @ 1606 and duplicate MW-150-1106 @ 1530
1620 begin purging MW-14
1637 end purging begin sampling MW-14-1106 @ 1640
1645 clean up and put supplies in trailer
1705 Depart site.

Field Activity Log

Project Name: BNSF Skykomish
Completed By: Aaron Jonbrook
Project Number:
Date: 11/30/06
Field Activity: GW Sampling
Weather: Cloudy 25°F

7:30 Arrive on site. Unload ice, load equipment
7:45 Calibrate meters. Horiba calibrates ok, turbidity meter not calibrating getting errors that it is not recognizing the calibration solutions. Attempt restoring factory calibration and check calibration. Calibration fails and continues to get error. Change batteries and calibrate again, calibrate for 20 ntu solution but does not recognize 0.02 ntu solution, will check for consistency of reading while using in field and compare to horiba turbidity readings
830 begin set up on MW-13
849 begin purging MW-13
909 end purging begin sampling. Oakton turbidity meter is giving consistent reading on multiple readings on the same sample and on subsequent samples, horiba reading 0.00 ntu for all sample, both reading were recorded for MW-13
920 end sampling MW-13-1106 @ 0915
~~920~~ ~~begins sampling~~ set up on MW-18
934 begin purging MW-18
1020 end purging begin sampling MW-18-1106 @ 1030
1045 begins set up and battery pack into MW-12
11:23 begin purging
1155 end purging / begin sampling MW-12 @ 1200.
1222 set up and begin purging ~~MW~~ 2A-W-11
1232 sample 2A-W-11-1106 @ 1240
1245 clean up and help stay fishing for 2A-W-9 and 2A-W-10
1340 begin purging 2A-W-16
1403 end purging / begin sampling 2A-W-16 @ 1410

Field Activity Log

Project Name: Skykomish
Completed By: Quinn Mahan
Project Number: BN050-16423-710
Date: 11/27/06
Field Activity: LNAPL gauging and River surveying
Weather: Snowing ~30°F

0805 QM on site, Put on PPE and set up van for gauging
0830 HSS meeting continue setting up for gauging
0845 Begin gauging activities. QM and AJ conduct LNAPL gauging
1400 End gauging begin surveying
1700 Finish surveying QM and AJ off site

Field Activity Log

Project Name: Skykomish
Completed By: Quinn Muhan (QM)
Project Number: BN050-16423-710
Date: 11/28/06
Field Activity: GW sampling
Weather: overcast w/ snow flurries 20-25°F

0745 QM on site. Put on warm weather gear and PPE
0800 Begin loading van and setting up van for GW sampling. Aaron J. Calibrates all Horiba U-22 meters.
0830 Health and Safety meeting / scope of work
0840 QM continues to set up van for GW sampling.
0900 Chip ice away from 1A-W-4 well lid. Lid difficult to open due to ice.
0931 Begin purging 1A-W-4
1000 Sample 1A-W-4
1027 Begin purging 1A-W-1
1107 Sample 1A-W-1. Collect blind field duplicate 1A-W-10
1155 Begin purging 2A-W-6; 1218 (QM) Discuss 0.00 mg/L DO measurement w/ Dean (QM)
1237 Sample 2A-W-6. Collect extra sample volume for lab QC.
1336 Begin purging 1A-W-5
1356 Sample 1A-W-5
1415 ~~[illegible]~~ Locate and chip ice away from 2A-W-2 Collect blind field dup. 2A-W-20
1534 Begin purging 5-W-4
1545 Sample 5-W-4
1620 put purge H_2O in drum on BN yard
1635 unload coolers and equip from van into RETEC trailer. complete notes
1710 QM and AJ off site. Quinn Muhan

Field Activity Log

Project Name: SkyKomish
Completed By: Quinn Markham
Project Number: ~~EN~~ 050-16423-710
Date: 11/29/06
Field Activity: GW sampling
Weather: ~20- °F partially sunny - overcast

0730 QM and AJ on site. Put on PPE and warm weather gear. Set up vans for GW sampling.
0745 Calibrate YSI-556 and Orion T-100 turbidity meter. Meters calibrate OK.
0800 re-ice coolers in RETEC trailer
0815 H&S meeting (cold stress, ice-slips, driving safety, train safety).
0825 QM organizes paperwork.
0835 Set up on IC-W-3 (battery pack well)
0925 Sample IC-W-3
1103 Sample IC-W-4
1225 Sample IC-W-1
1240 Bring samples to Dean so he can courier them to Test America
1338 Sample IC-W-2

1444 Sample IB-W-3
1603 Sample 2A-W-8
1630 drum QM and AJ's purge H2O in new labeled 55-gal drum.
1645 put equip. in trailer
1700 lock up trailer
1706 QM and AJ off site
— Quinn Markham —

Field Activity Log

Project Name: Skykomish
Completed By: Quinn Mahan
Project Number: BN050-16423-710
Date: 11/30/06
Field Activity: GW Sampling
Weather: ~30°F overcast / snow / rain

0725 QM and AJ on site. Set up vans for GW sampling
0800 calibrate Horiba U-22. / Oakton turbidity meters gives errors while calibrating. Error message indicates the wrong cal. fluid is used but correct fluids are used for each point. Use Horiba turbidity probe for purge data.
0835 set up on 1B-W-2 (Battery pack well)
0904 Begin purging 1B-W-2
0939 sample 1B-W-2
1100 Sample 1B-W-4
1242 sample 2A-W-5
1343 sample 2A-W-9
~~1500 Sample MW-2~~ QM
1443 QM able to calibrate oakton turbidity meter using 20 NTU solution for one point calibration. Use oakton for all wells after 1443. Use Horiba turbidity for all prior wells. Note Horiba turbidities possibly inaccurate (most where 0.0 NTU for entire purge time).
1500 sample MW-2
1557 Sample MW-1
1644 Sample MW-6
1655 drum purge H_2O
1710 Organize equipment
1800 QM off site

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Fluid Level Gauging Form

Project Name: BNSF Skykomish

Project Number: BN050-16423-711

Collected by:

	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
w	1A-W-1	11/27/06	1326		12.67				15.15		13.07			
w	1A-W-3	11/27/06	1336		7.60				9.06		6.46			
w	1A-W-4	11/27/06	1325		8.03				9.51		7.33			
w	1A-W-5	11/27/06	1400		8.30				10.27		7.48			
w	1B-W-2	11/27/06	1140		11.79				13.93		12.24			
w	1B-W-3	11/27/06	1125		13.38				15.3		13.29			
w	1C-W-1	11/27/06	1202		11.87				13.76		11.71			
w	1C-W-2	11/27/06	1050		8.66				10.95		8.04			
w	1C-W-3	11/27/06	1210		9.88				11.52		9.20			
w	1C-W-4	11/27/06	1220		9.30				10.73		8.93			
w	2A-W-2	11/27/06	1423		9.50				13.40		11.55			
e	2A-W-5	11/27/06	0935		11.35				15.40		13.45			
w	2A-W-6	11/27/06	1105		10.18				---		10.34			Didn't gauge, near houses
e	2A-W-7	11/27/06	1010		10.49				12.98		10.36			
e	2A-W-8	11/27/06	1016		13.50				16.73		13.72			
e	2A-W-9	11/27/06	1149		7.87				12.69		10.23			
e	2A-W-10	11/27/06	1154		8.41				13.34		10.73			
e	2B-W-4	11/27/06	1146		1.52				6.18		3.70			
w	5-W-4	11/27/06	1408		4.93				7.25		3.70			

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	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
e	DW-1	11/27/06	1020		14.73				17.67		14.69			
e	DW-2	11/27/06	0949		10.92				13.43		11.29			
w	DW-3	11/27/06	0930		11.94				13.75		11.72			
w	DW-5	11/27/06	1310		10.18				11.92		9.32			
e	MW-1	11/27/06	1025		11.21				14.35		11.58			
e	MW-2	11/27/06	1058		8.57				14.12		11.20			
e	MW-3	11/27/06	1054		7.93				12.71		10.11			
e	MW-4	11/27/06	1051		7.32				12.1		9.45			
e	MW-5	11/27/06	0931		4.89				9.57		7.14			
e	MW-7	11/27/06	1131		11.11		trace	T&P	14.97		13.01			
e	MW-9	11/27/06	0950		10.98				14.84		12.53			
e	MW-10	11/27/06	1004		11.13				14.67		12.22			
e	MW-12	11/27/06	1143		3.05				8.04		6.42			
e	MW-13	11/27/06	0925		8.21				12.04		10.38			
e	MW-14	11/27/06	0922	13.5	10.18				dry		12.21			
e	MW-15	11/27/06	0947		11.40				15.29		13.20			
w	MW-16	11/27/06	1010		13.65				15.92		14.22			
e	MW-18	11/27/06	0939		12.98				16.54		13.98			
w	MW-19	11/27/06	1415		10.31				13.00		10.77			

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	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
w	MW-26	11/27/06	1420		6.95				16.46		7.84			
e	MW-29	11/27/06	1033		17.72				20.02		16.51			
w	MW-30	11/27/06	0945		14.52				16.02		14.44			
w	MW-31	11/27/06	1025		14.09				16.01		14.49			PVC cap broken
w	MW-32	11/27/06	1430		8.69				10.17		8.60			
w	MW-34	11/27/06	1025		10.38				12.24		10.05			
w	MW-35	11/27/06	1115		11.01				13.86		11.57			
w	MW-37	11/27/06	1117		9.75				11.20		9.00			
w	MW-38	11/27/06	1412		NM				6.21		4.65			
e	MW-40	11/27/06	0952		10.86				14.86		12.73			

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	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
X	1B-W-1	11/27/06	1240		9.44		Hvy trace	T&P	13.02	0.07	10.51	trace		
X	2A-W-1	11/27/06	1228		8.70		trace		12.55	trace	10.29	trace		
X	2A-W-3	11/27/06	1302		11.49		NP		12.87	trace	10.71			
X	2A-W-11	11/27/06	1356		5.79		Hvy trace		10.12	hvy trace	8.17	hvy trace		
X	MW-11	11/27/06	1248		12.22		NP		15.48		12.82			
X	MW-17	11/27/06	1337		10.33		trace		14.55	trace	11.92	trace		
X	MW-27	11/27/06	1234		9.66		NP		14.22		10.45			
X	MW-28	11/27/06	1255		12.14		NP		15.73		12.80			
X	MW-39	11/27/06	1323		7.36		NP		11.85		9.85			
	1A-W-2	11/27/06	1136		10.10	10.01	0.09	Pump	14.06	0.25	11.30	hvy trace		
	2A-W-4	11/27/06	1340		9.20	9.20	trace	T&P	NM	NM	10.87	hvy trace		
	5-W-1	11/27/06	1227		6.19	6.19	trace	T&P	8.47	hvy trace	6.00	hvy trace		
	5-W-2	11/27/06	1045		6.28	6.28	trace	T&P	8.81	0.93	4.99	hvy trace		
	5-W-3	11/27/06	1237		6.18	6.18	Hvy Trace	T&P	8.46	0.61	4.99	0.89		
	MW-6	11/27/06	1320		11.53	11.53		← Hvy Trace Pump	16.07	0.63	13.11	trace		
	MW-8	11/27/06	1300		13.37	11.04	2.33	Pump	16.27	1.28	14.28	0.59		
	MW-20	11/27/06	1113		8.97	8.42	0.55	Pump	12.93	0.61	10.02	hvy trace		
	MW-21	11/27/06	1200		12.79	12.79	Hvy Trace	T&P	16.01	0.26	13.35	hvy trace		
	MW-22	11/27/06	1004		8.03	7.26	0.77	Pump	9.00	1.31	6.34	1.35		
	MW-36	11/27/06	1211		6.18	6.18	Hvy Trace	T&P	8.72	0.21	6.88	0.77		
	1A-W-3	11/27/06	1352		7.60	7.60	trace	T&P						

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River Gauging Form

Project Name: BNSF Skykomish

Project Number: BN050-16423-711

Measured by: Aaron Jurabovich / Kevin Meekins

stake ID	date	time	backsight	foresight	water level	comments
SK-1	11/27/2006	15:00	5.89	15.66		WD = 1.58
SK-2	11/27/2006	14:40	2.85	20.79		WD = 0.97
SK-3	11/27/2006	1420	9.0	19.18		WD = 0.49
SK-4	11/27/2006	1548	7.54	21.33		WD = 2.04
SK-5	11/27/2006					
ML-1	11/27/2006					
ML-2	11/27/2006	16:15	0.65	9.05		WD = 0.65
ML-3	11/27/2006					
ML-4	11/27/2006					

stake ID: SK# = Skykomish River gauging locations, ML# = Former Maloney Creek channel gauging locations
all measurements in feet
backsight: height of level above surveyed point (staff placed at PK nail)
foresight: height of level above gauging point (staff placed in stream bed at SKx, MLx)
water level: depth of water at gauging point

RETEC

Fluid Level Gauging Form

Project Name: BNSF Skykomish

Project Number: BN050-16423-711

Collected by:

	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
w	1A-W-1	11/27/06	1320		12.67				15.15		13.07		Ef	
w	1A-W-3	11/27/06	1335		7.60				9.06		6.46		Ef	Probe was coated with Bunker C
w	1A-W-4	11/27/06	1325		8.03				9.51		7.33		Ef	
w	1A-W-5	11/27/06	1400		8.20				10.27		7.48		Ef	
w	1B-W-2	11/27/06	1140		11.79				13.93		12.24		Ef	
w	1B-W-3	11/27/06	1125		13.38				15.3		13.29		Ef	
w	1C-W-1	11/27/06	1002		11.27				13.76		11.71		Ef	
w	~~1C-W-2~~ MW-34	11/27/06	1025		18.00	#2 - 10.40	#3 - 10.38		10.95		8.04		Ef	Switched w/MW-34
w	1C-W-3	11/27/06	210		9.88				11.52		9.20		Ef	
w	1C-W-4	11/27/06	1220		9.30				10.73		8.93		Ef	
w	2A-W-2	11/27/06							13.40		11.55			
e	2A-W-5	11/27/06							15.40		13.45			
w	2A-W-6	11/27/06	1105		10.18				---		10.34		Ef	Didn't gauge, near houses
e	2A-W-7	11/27/06							12.98		10.36			
e	2A-W-8	11/27/06							16.73		13.72			
e	2A-W-9	11/27/06							12.69		10.23			
e	2A-W-10	11/27/06							13.34		10.73			
e	2B-W-4	11/27/06							6.18		3.70			
w	5-W-4 ✓	11/27/06							7.25		3.70			

RETEC

Fluid Level Gauging Form

Project Name: BNSF Skykomish **Project Number:** BN050-16423-711 **Collected by:**

	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
w	1A-W-1	11/27/06							15.15		13.07			
w	1A-W-3	11/27/06							9.06		6.46			
w	1A-W-4	11/27/06							9.51		7.33			
w	1A-W-5	11/27/06							10.27		7.48			
w	1B-W-2	11/27/06							13.93		12.24			
w	1B-W-3	11/27/06							15.3		13.29			
w	1C-W-1	11/27/06							13.76		11.71			
w	1C-W-2	11/27/06							10.95		8.04			
w	1C-W-3	11/27/06							11.52		9.20			
w	1C-W-4	11/27/06							10.73		8.93			
w	2A-W-2	11/27/06	1423		9.50				13.40		11.55		DWK	
e	2A-W-5	11/27/06	0935		11.35				15.40		13.45		DWK	
w	2A-W-6	11/27/06							—		10.34			Didn't gauge, near houses
e	2A-W-7	11/27/06	1010		10.49				12.98		10.36		DWK	
e	2A-W-8	11/27/06	1016		13.50				16.73		13.72		DWK	
e	2A-W-9	11/27/06	1149		7.87				12.69		10.23		DWK	
e	2A-W-10	11/27/06	1154		8.41				13.34		10.73		DWK	
e	2B-W-4	11/27/06	1046		1.52				6.18		3.70		DWK	
w	5-W-4	11/27/06	1408		4.93				7.25		3.70		DWK	

PAGE 2

RETEC

	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
e	DW-1	11/27/06							17.67		14.69			
e	DW-2	11/27/06							13.43		11.29			
w	DW-3	11/27/06	950	~~9.30~~	11.91				13.75		11.72		EJ	
w	DW-5	11/27/06	1310		10.18				11.92		9.32		EJ	
e	MW-1	11/27/06							14.35		11.58			
e	MW-2	11/27/06							14.12		11.20			
e	MW-3	11/27/06							12.71		10.11			
e	MW-4	11/27/06							12.1		9.45			
e	MW-5	11/27/06							9.57		7.14			
e	MW-7	11/27/06							14.97		13.01			
e	MW-9	11/27/06							14.84		12.53			
e	MW-10	11/27/06							14.67		12.22			
e	MW-12	11/27/06							8.04		6.42			
e	MW-13	11/27/06							12.04		10.38			
e	MW-14	11/27/06		13.5					dry		12.21			
e	MW-15	11/27/06							15.29		13.20			
w	MW-16	11/27/06	1010		13.65				15.92		14.22		EJ	
e	MW-18	11/27/06							16.54		13.98			
w	MW-19 ✓	11/27/06							13.00		10.77			

RETEC

	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
e	DW-1	11/27/06	1020		14.73				17.67		14.69		DWK	
e	DW-2	11/27/06	0949		10.92				13.43		11.29		DWK	
w	DW-3	11/27/06							13.75		11.72			
w	DW-5	11/27/06							11.92		9.32			
e	MW-1	11/27/06	1025		11.21				14.35		11.58		DWK	
e	MW-2	11/27/06	1058		6.57				14.12		11.20		DWK	
e	MW-3	11/27/06	1054		7.93				12.71		10.11		DWK	
e	MW-4	11/27/06	1051		7.32				12.1		9.45		DWK	
e	MW-5	11/27/06	0931		4.89				9.57		7.14		DWK	
e	MW-7	11/27/06	1131		11.11		trace		14.97		13.01		DWK	
e	MW-9	11/27/06	0959		10.98				14.84		12.53		DWK	
e	MW-10	11/27/06	1004		11.13				14.67		12.22		DWK	
e	MW-12	11/27/06	1143		3.85				8.04		6.42		DWK	
e	MW-13	11/27/06	0925		8.21				12.04		10.38		DWK	
e	MW-14	11/27/06	0922	13.5	10.18				dry		12.21		DWK	
e	MW-15	11/27/06	0947		11.40				15.29		13.20		DWK	
w	MW-16	11/27/06							15.92		14.22		DWK	
e	MW-18	11/27/06	0939		12.98				16.54		13.98		DWK	
w	MW-19	11/27/06	1415		10.31				13.00		10.77		DWK	

RETEC

	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
w	MW-26	11/27/06	1420		6.95				16.46		7.84		EJ	Double Checked *
e	MW-29	11/27/06							20.02		16.51		–	
w	MW-30	11/27/06	945		14.52				16.02		14.44		EJ	rusted lock
w	MW-31	11/27/06	1005		14.09				16.01		14.49		EJ	PVC cap broken
w	MW-32	11/27/06	1430		8.64				10.17		8.60		EJ	
1C-W-2 w	MW-34	11/27/06	1050		8.66				12.24		10.05		EJ	switched w/1C-W-2
w	MW-35	11/27/06	1115		11.01				13.86		11.57		EJ	
w	MW-37 ✓	11/27/06							11.20		9.00			
w	MW-38 ✓	11/27/06							6.21		4.65			
e	MW-40	11/27/06							14.86		12.73			

* Top of well came off w/ lid

RETEC

	Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006		5/22/2006		Sign Off	Comments
									DTW (ft)	Prod. Thick. (ft)	DTW (ft)	Prod. Thick. (ft)		
w	MW-26	11/27/06							16.46		7.84			
e	MW-29	11/27/06	1033		17.72				20.02		16.51		DWK	
w	MW-30	11/27/06							16.02		14.44			
w	MW-31	11/27/06							16.01		14.49			
w	MW-32	11/27/06							10.17		8.60			
w	MW-34	11/27/06							12.24		10.05			
w	MW-35	11/27/06							13.86		11.57			
w	MW-37	11/27/06	1417		7.75				11.20		9.00		DWK	
w	MW-38	11/27/06	1412		N.M				6.21		4.65		DWK	Well damaged
e	MW-40	11/27/06	0952		10.86				14.86		12.73		DWK	

RETEC

Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
1B-W-1	11/27/06	1240		9.44		Hvy trace	T&P	13.02	0.07	10.51	trace	DWK	
2A-W-1	11/27/06	1228		8.70		trace	T&P	12.55	trace	10.29	trace	DWK	
2A-W-3	11/27/06	1302		11.49		NP	T&P	12.87	trace	10.71		DWK	
2A-W-11	11/27/06	1356		5.79		Hvy trace	T&P	10.12	hvy trace	8.17	hvy trace	DWK	
MW-11	11/27/06	1248		12.77		NP	T&P	15.48		12.82		DWK	
MW-17	11/27/06	1337		10.33		trace	T&P	14.55	trace	11.92	trace	DWK	
MW-27	11/27/06	1234		9.66		NP	T&P	14.22		10.45		DWK	
MW-28	11/27/06	1255		12.14		NP	T&P	15.73		12.80		DWK	
MW-39	11/27/06	1323		7.36		NP	T&P	11.85		9.85		DWK	
1A-W-2	11/27/06							14.06	0.25	11.30	hvy trace		
2A-W-4	11/27/06							NM	NM	10.87	hvy trace		
5-W-1	11/27/06							8.47	hvy trace	6.00	hvy trace		
5-W-2	11/27/06							8.81	0.93	4.99	hvy trace		
5-W-3	11/27/06							8.46	0.61	4.99	0.89		
MW-6	11/27/06							16.07	0.63	13.11	trace		
MW-8	11/27/06							16.27	1.28	14.28	0.59		
MW-20	11/27/06							12.93	0.61	10.02	hvy trace		
MW-21	11/27/06							16.01	0.26	13.35	hvy trace		
MW-22	11/27/06							9.00	1.31	6.34	1.35		
MW-36	11/27/06							8.72	0.21	6.88	0.77		

RETEC

Well Number	Date	Time	Total Casing Depth	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness	Method	8/31/2006 DTW (ft)	8/31/2006 Prod. Thick. (ft)	5/22/2006 DTW (ft)	5/22/2006 Prod. Thick. (ft)	Sign Off	Comments
1B-W-1	11/27/06							13.02	0.07	10.51	trace		
2A-W-1	11/27/06							12.55	trace	10.29	trace		
2A-W-3	11/27/06							12.87	trace	10.71			
2A-W-11	11/27/06							10.12	hvy trace	8.17	hvy trace		
MW-11	11/27/06							15.48		12.82			
MW-17	11/27/06							14.55	trace	11.92	trace		
MW-27	11/27/06							14.22		10.45			
MW-28	11/27/06							15.73		12.80			
MW-39	11/27/06							11.85		9.85			
1A-W-2	11/27/06	1136		10.10	*10.01	0.09	Pump	14.06	0.25	11.30	hvy trace	QM	* 11.0 - 8.99
2A-W-4	11/27/06	1340		* 9.20	*9.20	TRACE	T/P	NM	NM	10.87	hvy trace	AJ	*11.0 - 1.80
5-W-1	11/27/06	1227		* 6.19	* 6.19	TRACE	T/P	8.47	hvy trace	6.00	hvy trace	QM	*7.0 - 0.81
5-W-2	11/27/06	1045		*6.28	*6.28	TRACE	T/P	8.81	0.93	4.99	hvy trace	QM	*7.0 - 0.72
5-W-3	11/27/06	1237		*6.18	* 6.18	HEAVY TRACE	T/P	8.46	0.61	4.99	0.89	QM	*8.0 - 1.82
MW-6	11/27/06	1320		* 11.53	*11.53		Heavy trace	16.07	0.63	13.11	trace	AJ	*14.0 - 2.47
MW-8	11/27/06	1300		** 13.37	* 11.04	2.33	Pump	16.27	1.28	14.28	0.59	QM	* 12.0 - 0.96 ** 14 - 0.63
MW-20	11/27/06	1113		8.97	* 8.42	0.55	pump	12.93	0.61	10.02	hvy trace	QM	*9.0 - 0.58
MW-21	11/27/06	1200		*12.79	*12.79	heavy trace	T/P	16.01	0.26	13.35	hvy trace	QM	* 13.5 - 0.71
MW-22	11/27/06	1004		8.03	* 7.26	0.77	Pump	9.00	1.31	6.34	1.35	QM	*8.0 - 0.74
MW-36	11/27/06	12:11		* 6.18	* 6.18	heavy trace	T/P	8.72	0.21	6.88	0.77	QM	*7.0 - .82
1A-W-3	11/27/06	13:52		* 7.60	*7.60	TRACE						AJ	8.0 - 0.40

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: Test America
Project Manager: Kate Haney
Address: 11720 North Creek Pkwy N, Ste 400
Phone: (425) 420-9200
City/State/ZIP: Bothell, WA 98011
Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method: Hand delivered
Tracking Number: NA

BNSF PROJECT INFORMATION

Project State of Origin: WA
BNSF Project Number:
Project City: Skykomish
BNSF Project Name: Skykomish
BNSF Contact: Bruce Sheppard
BNSF Work Order No.: TT0100E02

CONSULTANT INFORMATION

Project Number: BN050-16423-710
Company: RETEC
Project Manager: Steve Howard
Address: 1011 SW Klickitat Way, Ste 207
Email: showard@retec.com
City/State/ZIP: Seattle, WA 98134
Phone: (206) 624-9349
Fax: (206) 624-7839

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 5- to 8-day Rush
- [ ] 2-day Rush
- [x] Standard 10-Day
- [ ] 3-day Rush
- [ ] Other

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [x] EDD Req, Format? RETEC-Equis

SAMPLE INFORMATION

	Sample identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	NWTPH-Dx	PAHs (Method 8270C)	Total As & Pb	Dissolved As & Pb							COMMENTS	LAB USE
1	MW-9 — 1106	4	11/28/06	1415	AMJ	N		W	X	X										
2	MW-90 —	4		1330		N			X	X										
3	MW-31 —	2		1555		N/Y					X	X								
4	MW-310 —	2		1530		N/Y					X	X								
5	1A-W-4 —	4		1000	QM	N/Y			X		X	X								
6	1A-W-1 —	4		1107		N			X	X										
7	1A-W-10 —	4		1200		N			X	X										
8	2A-W-6 —	8		1237		N			X	X									Extra sample volume for Lab QC	
9	1A-W-5 —	4		1356		N			X	X										
10	2A-W-2 —	4		1500		N			X	X										
11	2A-W-20 —	4		1600		N			X	X										
12	5-W-4 —	4		1545		N			X	X										
13	5-W-2 —	6	11/29/06	0915	DWK	N/Y			X	X	X	X								
14	1B-W-1 —	4		1050					X	X										
15	MW-35 —			1200	AMJ				X	X										

Relinquished By:	Date/Time: 11/29/06 14:15	Received By: Kathy Gamble	Date/Time: 11/29/06 14:15
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? [ ] Yes [ ] No

Comments and Special Analytical Requirements: Dissolved samples for As & Pb were field filtered

Custody Seal No.:
BNSF COC No.:

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
DUPLICATE - CONSULTANT
Rev 10/02/05

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: Test America
Address: 11720 North Creek Pkwy N, Ste 400
City/State/ZIP: Bothell, WA 98011
Project Manager: Kate Handy
Phone: (425) 420-9200
Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method: Hand delivered
Tracking Number: NA

BNSF PROJECT INFORMATION

BNSF Project Number:
BNSF Project Name: Skykomish
BNSF Contact: Bruce Sheppard
Project State of Origin: WA
Project City: Skykomish
BNSF Work Order No.: TT0100E07

CONSULTANT INFORMATION

Company: RETEC
Address: 1011 SW Klickitat Way, Ste 207
City/State/ZIP: Seattle, WA 98134
Project Number: BN050-16473-710
Project Manager: Steve Howard
Email: showard@retec.com
Phone: (206) 624-9349
Fax: (206) 624-2839

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 5- to 8-day Rush
- [ ] 2-day Rush
- [x] Standard 10-Day
- [ ] 3-day Rush
- [ ] Other _____

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables? _____
- [x] EDD Req. Format? RETEC - Equis

SAMPLE INFORMATION

	Sample identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	NWTPH-DX	PAH's (method 8270D)	Total As & Pb	Dissolved As & Pb					COMMENTS	LAB USE
1	2A-W-4 - 1106	6	11/28/06	1000	DWK	N/Y		W	X	X	X	X						
2	2A-W-3 -	4		1045		N			X	X								
3	1A-W-3 -	2		1130		N			X									
4	5-W-1 -	4		1210		N/Y			X		X	X						
5	5-W-10 -	2		1220		N/Y					X	X						
6	MW-22 -	4		1245		N			X	X								
7	5-W-3 -	4		1345		N			X	X								
8	MW-20 -	4		1450		N			X	X								
9	MW-36 -	4		1530		N			X	X								
10	2A-W-7 -	2		0955	AMJ	N			X									
11	2A-W-70 -	2		0930		N			X									
12	MW-29 -	2		1045		N/Y					X	X						
13	MW-11 -	4		1140		N			X	X								
14	MW-10 -	2		1315		N			X									
15	MW-16 -	2		1640		N			X									

	Date/Time		Date/Time
Relinquished By:	11/29/06 14:15	Received By: Kathy Crumble	11/29/06 17:15
Relinquished By:		Received By:	
Relinquished By:		Received By:	
Received by Laboratory:		Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No

Comments and Special Analytical Requirements:
Dissolved samples for As & Pb were field filtered

Custody Seal No.:
BNSF COC No.:

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
DUPLICATE - CONSULTANT

Rev 10/02/05

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: Test America
Project Manager: Kate Haven
Address: 11720 North Creek Pkwy, Ste 400
Phone: (425) 420-9200
City/State/ZIP: Bothell, WA 98011
Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method: Hand delivered
Tracking Number: NA

BNSF PROJECT INFORMATION

BNSF Project Number:
Project State of Origin: WA
Project City: Skykomish
BNSF Project Name: Skykomish
BNSF Contact: Bruce Sheppard
BNSF Work Order No.: TT0100E02

CONSULTANT INFORMATION

Company: RETEC
Project Number: BN050-16423-710
Project Manager: Steve Howard
Address: 1011 SW Klickitat Way, Ste 207
Email: showard@retec.com
City/State/ZIP: Seattle, WA 98134
Phone: (206) 624-9349
Fax: (206) 624-2839

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 5- to 8-day Rush
- [ ] 2-day Rush
- [x] Standard 10-Day
- [ ] 3-day Rush
- [ ] Other _____

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables? _____
- [x] EDD Req. Format? RETEC-Equis

SAMPLE INFORMATION

	Sample identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	NWTPH-Dx	PAHs (Method 8270C)	Total As & Pb	Dissolved As & Pb					COMMENTS	LAB USE
1	MW-27-1106	4	11/29/06	1210	DWC	N		W	X	X								
2	MW-270-	4		1220		N			X	X								
3	MW-34-	4		1115	AMJ	N/Y			X		X	X						
4	MW-37-	4		1030		N			X	X								
5	MW-26-	4		0940		N			X	X								
6	IC-W-1-	4		1225	QIN	N			X	X								
7	IC-W-4-	6		1103		N/Y			X	X	X	X						
8	IC-W-3-	4		0925		N			X	X								
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	11/29/06 14:15	Cathy Cambell	11/29/06 14:15
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No

Comments and Special Analytical Requirements: Dissolved samples for As & Pb were field filtered

Custody Seal No.:

BNSF COC No.:

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

DUPLICATE - CONSULTANT

Rev 10/02/05

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: Test America
Project Manager:
Address: 11720 North Creek Pkwy N, Ste 400
Phone: (425) 420-9200
City/State/ZIP: Bothell, WA 98011
Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method: Hand delivered
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number:
Project State of Origin: WA
Project City: Skykomish
BNSF Project Name: Skykomish
BNSF Contact: Bruce Sheppard
BNSF Work Order No: TT0100E02

CONSULTANT INFORMATION

Company: RETEC
Project Number: BN050-16423-710
Project Manager: Steve Howard
Address: 1011 SW Klickitat Way, Ste 207
Email: showard@retec.com
City/State/ZIP: Seattle, WA 98134
Phone: (206) 624-9349
Fax: (206) 624-2839

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 5- to 8-day Rush
- [ ] 2-day Rush
- [x] Standard 10-Day
- [ ] 3-day Rush
- [ ] Other

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [x] EDD Req, Format? RETEC-Equis

SAMPLE INFORMATION

	Sample identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	NWTPH-Dx	PAH's (Method 8270C)	Total As & Pb	Dissolved As & Pb					COMMENTS	LAB USE
1	MW-18-1106	4	11/30/06	1030	AMJ	N		W	X	X								
2	MW-13- ↓	2	↓	0915		N		↓	X									
3	MW-500- ↓	6	↓	1630		N/F		↓	X	X	X	X						
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished By: [signature]	Date/Time: 12/1/06 10:00	Received By: Cathy Crumbl	Date/Time: 12/1/06 10:00
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No

Comments and Special Analytical Requirements: Dissolved samples for As & Pb were field filtered

Custody Seal No.:

BNSF COC No.:

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES

DUPLICATE - CONSULTANT

Rev 10/02/05

BNSF RAILWAY

CHAIN OF CUSTODY

LABORATORY INFORMATION

Laboratory: Test America
Address: 11720 North Creek Pkwy N, Ste 400
City/State/ZIP: Bothell, WA 98011
Project Manager: Kate Haney
Phone: (425) 420-9200
Fax:

LAB WORK ORDER:

SHIPMENT INFORMATION

Shipment Method: Hand delivered
Tracking Number:

BNSF PROJECT INFORMATION

BNSF Project Number:
BNSF Project Name: Skykomish
BNSF Contact: Bruce Sheppard
Project State of Origin: WA
Project City: Skykomish
BNSF Work Order No.: TT0100E02

CONSULTANT INFORMATION

Company: RETEC
Address: 1011 SW Klickitat Way, Ste 207
City/State/ZIP: Seattle, WA 98134
Project Number: BN050-16423-710
Project Manager: Steve Howard
Email: showard@retec.com
Phone: (206) 624-9349
Fax: (206) 624-7839

TURNAROUND TIME

- [ ] 1-day Rush
- [ ] 5- to 8-day Rush
- [ ] 2-day Rush
- [x] Standard 10-Day
- [ ] 3-day Rush
- [ ] Other

DELIVERABLES

- [x] BNSF Standard (Level II)
- [ ] Level III
- [ ] Level IV
- [ ] Other Deliverables?
- [x] EDD Req. Format? RETEC EDWIS

SAMPLE INFORMATION

	Sample identification	Containers	Sample Collection Date	Time	Sampler	Filtered Y/N	Type (Comp/Grab)	Matrix	NWTPH-Dx	PAH's (Method 8270C)	Total As & Pb	Dissolved As & Pb					COMMENTS	LAB USE
1	1B-W-2-1106	4	11/30/06	0939	QM	N		W	X	X								
2	MW-21-	6		1555	DWK	N/Y			X	X	X	X						
3	MW-28-	6		1435		N/Y			X	X	X	X						
4	MW-8-	4		1340		N			X	X								
5	MW-39-	4		1250		N			X	X								
6	2A-W-1-	4		0940		N			X	X								
7	1A-W-2-	12		1025		N/Y			X	X	X	X					Extra Volume for lab QC	
8	MW-17-	4		1650		N			X	X								
9	MW-7-	2		1615	AMT	N			X									
10	MW-3-	2		1540		N			X									
11	MW-4-	2		1455		N			X									
12	MW-400-	2		1430		N			X									
13	2A-W-10-	2		1410		N			X									
14	2A-W-11-	4		1240		N			X	X								
15	MW-12-	4		1200		N			X	X								

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	12/1/06 10:00	Cathy Gamble	12/1/06 10:00
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Received by Laboratory:	Date/Time:	Lab Remarks:	Lab: Custody Intact? ☐ Yes ☐ No

Comments and Special Analytical Requirements: Dissolved samples for As & Pb were field filtered

Custody Seal No.:
BNSF COC No.:

ORIGINAL - RETURN TO LABORATORY WITH SAMPLES
DUPLICATE - CONSULTANT
Rev 10/02/05

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-1
Project No.	BN050-16423-710	Sampled By	QM
Date	11/30/06	weather	overcast 30 °F

WELL INFORMATION		
Depth to water	11.64	(ft)
Depth of well:	N.m.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS
Tubing Inlet @ 12.6'

PURGE DATA								
start purge time	1535							
time		1545	1548	1551	1554			
TMW ~~volume purged~~	~~(gal)~~ (ft)	N.m.	N.m.	N.m.	11.65			
purge rate	(L/min)	0.265	0.265	0.265	0.265			
pH	(Units)	6.02	6.06	6.05	6.06			
conductivity mS/m	~~(umhos/cm)~~	10.8	10.5	10.2	10.3			
temperature	(deg C)	3.14	3.23	3.26	3.22			
D.O.	(mg/L)	7.79	6.04	5.73	6.20			
ORP	(mv)	214	215	217	219			
turbidity	(NTU)	0.79	0.74	0.65	0.58			
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-1-1106	1557	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-2
Project No.	BN050-16423-710	Sampled By	QM
Date	11/30/06	weather	overcast ~30°F

WELL INFORMATION		
Depth to water	11.07	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS
Tubing Inlet @ 12.0'
1443 able to complete one-point calibration for oakton turb. meter using 20 NTU solution used oakton for turbidity.

Note: Horiba turb = 0.0 for all purge data

PURGE DATA								
start purge time	1429							
time		1446	1449	1452	1455	1458		
DTW ~~volume purged (gal)~~ (Ft)		N.M.	N.M.	N.M.	N.M.	11.08		
purge rate mL/min ~~(L/min)~~		265	265	265	265	265		
pH	(Units)	5.37	5.36	5.38	5.41	5.40		
conductivity mS/m ~~(umhos/cm)~~		12.9	12.9	12.9	12.7	12.7		
temperature	(deg C)	2.42	2.53	2.64	2.78	2.84		
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00		
ORP	(mv)	181	182	182	182	183		
turbidity	(NTU)	1.80	1.09	1.07	1.18	1.42		
purge and sample equip.		Peristaltic Pump & silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-2-1106	1500	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	Total As & Pb	500 mL Poly	1	HNO3
↓	↓	Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-3
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/30/06	weather	Cloudy 30 °F

WELL INFORMATION		
Depth to water	8.69	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA								
start purge time	1516							
time		1526	1529	1532				
volume purged	(gal)							
purge rate	(L/min)	0.150	0.15	0.15				
pH	(Units)	6.72	6.79	6.82				
conductivity	(umhos/cm)	19.1	19.1	19.1				
temperature	(deg C)	4.44	4.42	4.41				
D.O.	(mg/L)	9.82	9.65	9.54				
ORP	(mv)	53	50	48				
turbidity	(NTU)	6.34	5.44	4.09				
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-3-1106	1540	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-4
Project No.	BN050-16423-710	Sampled By	AMS
Date	11/30/06	weather	Cloudy 30 °F

WELL INFORMATION		
Depth to water	7.75	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	Good	

COMMENTS
Duplicate sample collected

PURGE DATA								
start purge time	14:24							
time		1434	1437	1440	1443	1446		
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25		
pH	(Units)	5.79	5.80	5.80	5.82	5.81		
conductivity	(umhos/cm)	31.0	37.8	37.8	42.1	42.2		
temperature	(deg C)	5.16	5.15	5.21	5.09	5.06		
D.O.	(mg/L)	7.46	7.14	6.29	6.08	5.69		
ORP	(mv)	109	102	93	91	88		
turbidity	(NTU)	2.00	1.92	1.77	2.05	1.84		
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-4-1106	1455	NWTPH-Dx	1L Gl. Amber	2	HCl
MW-400-1106	1430	NWTPH-Dx	"	"	"

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-6
Project No.	BN050-16423-710	Sampled By	AM
Date	11/30/06	weather	overcast ~~30°F~~ ~35°F

WELL INFORMATION		
Depth to water	11.53	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	trace	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS
Put tubing
inlet at 12.5'
LNAPL blebs in
purge H2O. No
purge data collected.
- Purge for 10 min
and collect sample

PURGE DATA								
start purge time	1639							
time								
volume purged	(gal)							
purge rate	(L/min)							
pH	(Units)							
conductivity	(umhos/cm)							
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.	Peristaltic Pump + Silicone/polyethylene tubing							

No purge data recorded
LNAPL blebs in purge H2O

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-6-1106	1649	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-7
Project No.	BN050-16423-710	Sampled By	AMS
Date	11/30/06	weather	Cloudy 32 °F

WELL INFORMATION		
Depth to water	11.11	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:		

COMMENTS
Product
No parameters taken

PURGE DATA								
start purge time	1602							
time								
volume purged	(gal)	Product, No Parameters taken.						
purge rate	(L/min)							
pH	(Units)							
conductivity	(umhos/cm)							
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
MW-7-1106	1615	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-8
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/30/06	weather	Cloudy, 30 °F

WELL INFORMATION		
Depth to water	13.37	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	2.33	(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet at ~14.75'

PURGE DATA								
start purge time	1329							
time								
volume purged	(gal)		No parameters —					
purge rate	(L/min)							
pH	(Units)		product in discharge					
conductivity	(umhos/cm)							
temperature	(deg C)		line					
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-8-1106	1340	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-9
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/28/06	weather	cloudy 23 °F

WELL INFORMATION		
Depth to water	11.23	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS
Duplicate Sample collected

PURGE DATA												
start purge time	13:29											
time		13:39	13:42	13:45	13:48	13:51	13:54	1357	1400	1403	1407	1410
volume purged	(gal)											
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
pH	(Units)	6.32	6.32	6.33	6.34	6.33	6.34	6.35	6.36	6.36	6.36	6.36
conductivity mS/m	(umhos/cm)	99.9	633	321	99.9	97.2	43.9	23.8	20.3	17.8	17.7	18.1
temperature	(deg C)	8.18	8.05	7.86	7.87	8.20	8.40	8.17	7.99	8.06	7.81	8.08
D.O.	(mg/L)	0.00	0.00	2.86	3.35	3.40	2.95	2.60	2.09	1.49	1.51	1.45
ORP	(mv)	11	9	7	5	3	1	0	-1	-2	-2	-3
turbidity	(NTU)	2.95	3.10	2.27	1.90	1.81	1.82	1.45	1.28	1.13	1.00	0.90
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing										

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-9-1106	14:15	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None
MW-9D-1106	1330	NWTPH-Dx	↓	↓	HCl
		PAHs (Method 8270)			None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-10
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/28/06	weather	cloudy 26 °F

WELL INFORMATION		
Depth to water	11.35 ~~[illegible]~~	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA											
start purge time	12.31										
time		12:41	12:44	12:47	12:50	12:53	1256	1259	1302	1305	1308
volume purged	(gal)										
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
pH	(Units)	6.12	6.12	6.14	6.14	6.13	6.14	6.15	6.14	6.14	6.14
conductivity	(umhos/cm)	49.3	87.1	99.9	137	199	287	318	361	344	370
temperature	(deg C)	7.75	7.66	7.60	7.53	7.58	7.51	7.47	7.48	7.55	7.51
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ORP	(mv)	112	108	109	107	106	107	107	105	106	105
turbidity	(NTU)	3.57	1.21	1.56	1.25	1.15	1.21	1.55	1.03	0.78	0.67
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing									

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-10-1106	13:15	NWTPH-Dx	1L Gl. Amber	2	HCl
		~~PAH's (Method 8270)~~	~~1L Gl. Amber~~	~~2~~	~~None~~

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	~~MW-10~~ MW-11
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/28/06	weather	Cloudy 23 °F

WELL INFORMATION		
Depth to water	12.39	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	Good	

COMMENTS

PURGE DATA								
start purge time	1106							
time		1116	1119	1122	1125	1128	1131	1134
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
pH	(Units)	6.15	6.19	6.22	6.23	6.25	6.25	6.25
conductivity	(umhos/cm)	67.0	57.0	45.8	40.5	33.8	32.4	30.1
temperature	(deg C)	8.50	8.56	8.59	8.75	8.70	8.74	8.84
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ORP	(mv)	-8	-12	-14	-17	-20	-20	-22
turbidity	(NTU)	0.70	0.36	0.30	0.37	0.42	0.21	0.17
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-11-1106	1140	NWTPH-Dx	1L Gl. Amber	2	HCl
MW-11-1106	1140	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-12
Project No.	BN050-16423-710	Sampled By	[illegible]
Date	11/30/06	weather	Cloudy 25 °F

WELL INFORMATION		
Depth to water	5.04	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	Good	

COMMENTS

PURGE DATA									
start purge time	11:22								
time		11:33	11:36	11:39	11:42	11:45	11:48	11:51	11:54
volume purged	(gal)								
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
pH	(Units)	5.87	5.87	5.87	5.86	5.86	5.86	5.86	5.85
conductivity ms/m	(umhos/cm)	10.3	13.9	21.2	25.6	30.9	36.8	38.8	37.9
temperature	(deg C)	6.32	6.32	6.24	6.09	6.19	6.09	5.94	6.04
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ORP	(mv)	138	134	133	135	133	133	134	135
turbidity	(NTU)	1.57	1.68	1.63	1.85	1.72	1.63	2.00	1.79
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing							

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-12-1106	1200	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-13
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/30/06	weather	Cloudy 25 °F

WELL INFORMATION		
Depth to water	9.16	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	Good	

COMMENTS
oakton turbidity meter only calibrated
for 20.0 ntu solution yielding errors
for other, comparing to horiba
turb measurements recorded
oakton measurement/horiba
in turbidity field.

PURGE DATA								
start purge time	0849							
time		0859	0902	0905	0908			
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25	0.25			
pH	(Units)	5.92	5.91	5.89	5.91			
conductivity	(umhos/cm)	7.2	7.1	7.0	6.9			
temperature	(deg C)	3.68	3.57	3.54	3.55			
D.O.	(mg/L)	0.36	0.00	0.00	0.00			
ORP	(mv)	229	231	234	236			
turbidity	(NTU)	3.39/0.00	2.99/0.00	2.73/0.00	1.99/0.00			
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-13-1106	0915	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-14
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/29/06	weather	Cloudy 75 °F

WELL INFORMATION		
Depth to water	10.80	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	Good	

COMMENTS

PURGE DATA								
start purge time	1620							
time		1630	1633	1636				
volume purged	(gal)							
purge rate	(L/min)	0.3	0.3	0.3				
pH	(Units)	5.94	5.90	5.89				
conductivity	(umhos/cm)	6.1	5.8	5.8				
temperature	(deg C)	3.97	4.12	4.08				
D.O.	(mg/L)	0.22	0.22	0.22				
ORP	(mv)	189	195	198				
turbidity	(NTU)	1.74	1.68	1.55				
purge and sample equip.		Peristaltic Pump & Silicone/poly. ethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-14-1106	1640	NWTPH-Dx	1L Gl. Amber	2	HCl
"	"	Total As & Pb	500 mL Poly	1	HNO3
"	"	Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-15
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/29/06	weather	Cloudy, flurries 27°F

WELL INFORMATION		
Depth to water	11.92	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	Good	

COMMENTS
Duplicate sample collected

PURGE DATA								
start purge time	1529							
time		1539	1542	1545	1548	1551		
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25		
pH	(Units)	5.92	5.97	6.01	6.04	6.06		
conductivity	(umhos/cm)	27.4	29.3	32.7	32.8	33.2		
temperature	(deg C)	7.34	7.37	7.32	7.19	7.25		
D.O.	(mg/L)	7.74	7.51	7.18	6.85	6.55		
ORP	(mv)	183	179	173	169	163		
turbidity	(NTU)	2.03	2.35	2.28	2.12	2.22		
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-15-1106	1600	NWTPH-Dx	1L Gl. Amber	2	HCl
MW-150-1106	1530	NWTPH-Dx	"	"	"

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-16
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/28/06	weather	Cloudy 23 °F

WELL INFORMATION		
Depth to water	13.75	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA								
start purge time	1618							
time		1628	1631	1634				
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25				
pH	(Units)	5.84	5.83	5.82				
conductivity mS/cm	~~(umhos/cm)~~	11.5	11.5	11.4				
temperature	(deg C)	8.51	8.60	8.34				
D.O.	(mg/L)	7.70	7.46	7.20				
ORP	(mv)	168	174	178				
turbidity	(NTU)	0.97	0.35	0.46				
purge and sample equip.		Peristaltic Pump & silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-16-1106	1640	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-17
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/30/06	weather	Raining, 30°F

WELL INFORMATION		
Depth to water	10.33	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet at ~11.25'

PURGE DATA								
start purge time	1639							
time								
volume purged	(gal)							
purge rate	(L/min)							
pH	(Units)							
conductivity	(umhos/cm)							
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-17-1106	1650	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-18
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/30/06	weather	Cloudy/snowing 25 °F

WELL INFORMATION		
Depth to water	13.56	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA										
start purge time	0948									
time		0958	1001	1004	1007	1010	1013	1016	1019	
volume purged	(gal)									
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
pH	(Units)	5.72	5.79	5.75	5.76	5.78	5.78	5.77	5.78	
conductivity S/m	~~(umhos/cm)~~	0.100	0.090	0.067	0.055	0.050	0.045	0.046	0.042	
temperature	(deg C)	7.93	8.02	7.93	7.97	8.10	7.85	7.93	7.83	
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ORP	(mv)	176	177	182	185	186	188	190	189	
turbidity	(NTU)	1.44	1.56	1.58	1.41	1.50	1.60	1.70	1.81	
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing								

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-18-1106	1630	NWTPH-Dx	1L Gl. Amber	2	HCl
"	"	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-19
Project No.	BN050-16423-710	Sampled By	AMS
Date	11/29/06	weather	Cloudy 28 °F

WELL INFORMATION		
Depth to water	10.61	(ft)
Depth of well:		(ft)
Well diameter:	2	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA								
start purge time	14:14							
time		14:24	14:27	14:30				
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25				
pH	(Units)	5.79	5.80	5.82				
conductivity mS/cm	~~(umhos/cm)~~	6.8	6.7	6.7				
temperature	(deg C)	6.88	6.80	6.98				
D.O.	(mg/L)	7.81	7.62	7.48				
ORP	(mv)	180	184	189				
turbidity	(NTU)	1.27	1.19	1.12				
purge and sample equip.		Peristaltic Pump & Silicon/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-19-1106	14:35	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-20
Project No.	BN050-16423-710	Sampled By	DWC
Date	11/28/06	weather	25 °F

WELL INFORMATION		
Depth to water	8.97	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	0.55	(ft)
Screen interval:		
well condition:		

COMMENTS
tubing inlet at ~9.75'

PURGE DATA								
start purge time	1437							
time								
volume purged	(gal)		No parameters — product in discharge line					
purge rate	(L/min)							
pH	(Units)							
conductivity	(umhos/cm)							
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
MW-20-1106	1450	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-21
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/30/06	weather	Raining, 30 °F

WELL INFORMATION		
Depth to water	12.79	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet set at ~13.75'

PURGE DATA								
start purge time	1551							
time								
volume purged	(gal)		No parameters –					
purge rate	(L/min)							
pH	(Units)		product in discharge					
conductivity	(umhos/cm)							
temperature	(deg C)				line			
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-21-1106	1555	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None
		Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-22
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/28/06	weather	Cloudy, 25 °F

WELL INFORMATION		
Depth to water	8.03	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	0.77	(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet at ~9'

PURGE DATA								
start purge time	1235							
time								
volume purged	(gal)		No parameters -					
purge rate	(L/min)		product in discharge					
pH	(Units)							
conductivity	(umhos/cm)				line			
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-22-1106	1245	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-26
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/29/06	weather	cloudy 21 °F

WELL INFORMATION		
Depth to water	7.37	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA

start purge time	0844														
time		0854	0857	0900	0903	0906	0909	0912	0915	0918	0921	0924	0927	0930	0933
volume purged	(gal)														
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
pH	(Units)	5.87	5.86	5.87	5.88	5.89	5.90	5.91	5.91	5.92	5.94	5.96	5.89	5.90	5.9
conductivity S/m	~~(umhos/cm)~~	3.86	2.84	2.22	1.65	1.14	0.404	0.301	0.245	0.175	0.131	0.102	0.090	0.090	0.09
temperature	(deg C)	8.94	8.94	8.86	8.72	8.85	8.88	8.93	8.96	9.04	9.01	9.09	9.09	9.16	9.0
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
ORP	(mv)	76	74	66	58	54	50	46	44	41	37	35	31	31	29
turbidity	(NTU)	7.74	8.59	5.87	3.59	4.19	4.11	3.92	3.91	3.79	3.57	3.29	2.68	2.41	2.4
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing													

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
MW-26-1106	0940	NWTPH-Dx	1L Gl. Amber	2	HCl
MW-26-1106	0940	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-27
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/29/06	weather	Cloudy, 25 °F

WELL INFORMATION	
Depth to water	9.66 (ft)
Depth of well:	(ft)
Well diameter:	(in)
Feet of water:	(ft)
Product thickness:	(ft)
Screen interval:	
well condition:	

COMMENTS
Duplicate sample collected
Tubing inlet at ~10.5'

PURGE DATA								
start purge time	1145							
time		1158	1201	1204				
volume purged	(gal)							
purge rate	(L/min)	0.30	→	→				
pH	(Units)	5.86	5.88	5.89				
conductivity mS/m	(~~umhos/cm~~)	9.4	9.5	9.6				
temperature	(deg C)	9.1	9.2	9.2				
D.O.	(mg/L)	0.0	0.0	0.0				
ORP	(mv)	72	69	67				
turbidity	(NTU)	16	18	16				
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-27-1106	1210	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None
MW-270-1106	1220	NWTPH-Dx	↓	↓	HCl
		PAH's (Method 8270)			None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-28
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/30/06	weather	Cloudy, 30 °F

WELL INFORMATION		
Depth to water	12.14	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet at ~13'

PURGE DATA								
start purge time	1425							
time								
volume purged	(gal)			No parameters –				
purge rate	(L/min)	0.10						
pH	(Units)			product in discharge				
conductivity	(umhos/cm)							
temperature	(deg C)							
D.O.	(mg/L)					flow		
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-28-1106	1435	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None
		Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-29
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/28/06	weather	cloudy 25 °F

WELL INFORMATION		
Depth to water	17.95	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	Good	

COMMENTS

PURGE DATA								
start purge time	1018							
time	~~10~~	1028	1031	1034	1037			
volume purged	(gal)							
purge rate	(L/min)	0.2	0.2	0.2	0.2			
pH	(Units)	5.70	5.68	5.67	5.64			
conductivity	(umhos/cm)	38.2	39.0	39.1	39.1			
temperature	(deg C)	7.61	7.93	7.84	8.00			
D.O.	(mg/L)	5.97	6.53	6.90	7.02			
ORP	(mv)	265	268	271	273			
turbidity	(NTU)	1.02	1.20	0.65	0.58			
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-29-1106	1045	Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-31
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/28/06	weather	Cloudy 23 °F

WELL INFORMATION		
Depth to water	14.24	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS
Duplicate sample collected

PURGE DATA								
start purge time		1525						
time		1535	1538	1541	1544	1547	1550	
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25	0.25	
pH	(Units)	6.36	6.37	6.35	6.36	6.34	6.33	
conductivity	(umhos/cm)	10.2	10.2	10.2	10.2	10.2	10.3	
temperature	(deg C)	9.19	8.80	8.96	8.97	8.97	8.90	
D.O.	(mg/L)	7.75	7.61	7.47	7.20	6.84	6.80	
ORP	(mv)	76	86	93	99	106	107	
turbidity	(NTU)	28.3	18.60	13.50	9.60	8.68	7.70	
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-31-1106	1555	Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3
MW-310-1106	1530	Total As & Pb	↓	↓	↓
		Diss. As & Pb			

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-32
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/29/06	weather	Cloudy 23 °F

WELL INFORMATION		
Depth to water	8.85	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA								
start purge time	13:24							
time		13:34	13:37	1340				
volume purged	(gal)							
purge rate	(L/min)	0.3	0.3	0.3				
pH	(Units)	5.78	5.70	5.72				
conductivity mS/M	(umhos/cm)	12.1	12.0	12.2				
temperature	(deg C)	8.52	8.68	8.57				
D.O.	(mg/L)	0.00	0.00	0.00				
ORP	(mv)	145	153	155				
turbidity	(NTU)	2.85	1.68	1.83				
purge and sample equip.	Peristaltic Pump & Silicone/polyethylene tubing							

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-32-1106	1345	Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-34
Project No.	BN050-16423-710	Sampled By	AMS
Date	11/29/06	weather	Cloudy 21 °F

WELL INFORMATION		
Depth to water	10.62	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:		

COMMENTS

PURGE DATA								
start purge time	1052							
time		1102	1105	1108	1111			
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25	0.25			
pH	(Units)	5.62	5.62	5.63	5.65			
conductivity	(umhos/cm)	10.9	10.0	9.7	9.7			
temperature	(deg C)	8.66	8.60	8.63	9.16			
D.O.	(mg/L)	1.70	3.01	3.20	3.69			
ORP	(mv)	94	101	107	110			
turbidity	(NTU)	1.47	1.66	1.99	1.70			
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-34-1106	1115	NWTPH-Dx	1L Gl. Amber	2	HCl
MW-34-1106	1115	Total As & Pb	500 mL Poly	1	HNO3
MW-34-1106	1115	Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-35
Project No.	BN050-16423-710	Sampled By	AAJ
Date	11/29/06	weather	cloudy 23 °F

WELL INFORMATION		
Depth to water	11.35	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA								
start purge time	1138							
time		1148	1151	1154				
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25				
pH	(Units)	5.95	5.98	5.99				
conductivity S/m	~~(umhos/cm)~~	0.090	0.092	0.090				
temperature	(deg C)	11.16	11.14	11.23				
D.O.	(mg/L)	7.65	7.53	7.24				
ORP	(mv)	90	89	87				
turbidity	(NTU)	2.03	1.53	1.28				
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-35-1106	1200	NWTPH-Dx	1L Gl. Amber	2	HCl
MW-35-1106	1200	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-36
Project No.	BN050-16423-710	Sampled By	DWC
Date	11/28/06	weather	Cloudy, 25 °F

WELL INFORMATION		
Depth to water	6.18	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet at ~ 7'

PURGE DATA								
start purge time	1513							
time			No parameters →					
volume purged	(gal)							
purge rate	(L/min)		product in discharge					
pH	(Units)							
conductivity	(umhos/cm)							
temperature	(deg C)		Line					
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
MW-36-1106	1530	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-37
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/29/06	weather	Cloudy 21 °F

WELL INFORMATION		
Depth to water	8.13	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	Good	

COMMENTS

PURGE DATA								
start purge time	1005							
time		1015	1018	1021				
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25				
pH	(Units)	6.06	6.06	6.06				
conductivity	mS/m ~~(umhos/cm)~~	38.7	36.6	36.1				
temperature	(deg C)	8.32	8.37	8.45				
D.O.	(mg/L)	0.00	0.00	0.00				
ORP	(mv)	-10	-12	-11				
turbidity	(NTU)	1.74	1.24	1.32				
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-37-1106	1030	NWTPH-Dx	1L Gl. Amber	2	HCl
MW-37-1106	1030	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-38
Project No.	BN050-16423-710	Sampled By	DWC
Date	11/28/06	weather	°F

WELL INFORMATION		
Depth to water	No WL	(ft)
Depth of well:	taken -	(ft)
Well diameter:		(in)
Feet of water:	well	(ft)
Product thickness:		(ft)
Screen interval:	damaged	
well condition:		

COMMENTS

PURGE DATA								
start purge time								
time								
volume purged	(gal)		No	Sample				
purge rate	(L/min)							
pH	(Units)							
conductivity	(umhos/cm)							
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-38-1106		NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-39
Project No.	BN050-16423-710	Sampled By	JWK
Date	11/30/06	weather	Cloudy 30 °F

WELL INFORMATION		
Depth to water	7.36	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet set at ~8.25'

PURGE DATA								
start purge time	1239							
time								
volume purged	(gal)		No parameters —					
purge rate	(L/min)			product in discharge				
pH	(Units)							
conductivity	(umhos/cm)			line				
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-39-1106	1250	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	MW-40
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/29/06	weather	Cloudy 27 °F

WELL INFORMATION		
Depth to water	11.38	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA								
start purge time	1450							
time		1500	1503	1506				
volume purged	(gal)							
purge rate	(L/min)	0.3	0.3	0.3				
pH	(Units)	5.75	5.74	5.75				
conductivity mS/m	(~~umhos/cm~~)	5.7	5.6	5.6				
temperature	(deg C)	5.67	5.60	5.53				
D.O.	(mg/L)	9.71	9.52	9.30				
ORP	(mv)	206	209	211				
turbidity	(NTU)	1.20	1.70	1.99				
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-40-1106	15:10	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	1A-W-1
Project No.	BN050-16423-710	Sampled By	QM
Date	11/28/06	weather	overcast ~20 °F

WELL INFORMATION		
Depth to water	12.83	(ft)
Depth of well:	N.m.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	missing 4 bolts	

COMMENTS
Duplicate sample collected
Tubing Inlet @ ~ 13.8'
1102 check calibration of DO probe: Calibration ok.
Used Horiba U-22 for all purge data including Turbidity

PURGE DATA								
start purge time	1027							
time		1040	1043	1046	1049	1052	1055	1058
~~volume purged~~	~~(gal)~~ (ft)	12.89	12.89	N.m.	12.89	N.m.	N.m.	12.87
purge rate	(L/min)	0.250	0.250	0.250	0.250	0.250	0.250	0.250
pH	(Units)	5.94	5.97	5.99	6.00	6.04	6.06	6.08
conductivity mS/m	~~(umhos/cm)~~	20.2	19.5	19.1	19.0	18.6	18.4	18.2
temperature	(deg C)	2.55	3.17	3.66	4.07	4.80	4.95	5.10
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ORP	(mv)	74	72	69	67	62	61	61
turbidity	(NTU)	2.6	2.5	3.0	2.0	2.0	2.0	2.0
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

>T'

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
1A-W-1-1106	1107	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	2	None
1P 1A-W-10-1106	1200	NWTPH-Dx	↓	↓	HCl
↓	↓	PAH's (Method 8270)	↓	↓	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	1A-W-2
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/30/06	weather	Cloudy, 25 °F

WELL INFORMATION		
Depth to water	10.10	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	0.09	(ft)
Screen interval:		
well condition:	ok	

COMMENTS
Extra sample collected for Lab QC
Tubing inlet set at ~11'

PURGE DATA								
start purge time	1013							
time								
volume purged	(gal)			No parameters -				
purge rate	(L/min)							
pH	(Units)			product in discharge				
conductivity	(umhos/cm)							
temperature	(deg C)			line				
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
1A-W-2-1106	1025	NWTPH-Dx	1L Gl. Amber	4	HCl
		PAH's (Method 8270)	1L Gl. Amber	4	None
		Total As & Pb	500 mL Poly	2	HNO3
		Diss. As & Pb	500 mL Poly	2	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	1A-W-3
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/28/06	weather	Cloudy, 25 °F

WELL INFORMATION		
Depth to water	7.60	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet at ~ 8.5'

PURGE DATA								
start purge time	1118							
time								
volume purged	(gal)		No parameters —					
purge rate	(L/min)							
pH	(Units)		product in discharge					
conductivity	(umhos/cm)							
temperature	(deg C)			line				
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
1A-W-3-1106	1130	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	1A-W-4
Project No.	BN050-16423-710	Sampled By	QM
Date	11/28/06	weather	snow flurries/ overcast ~20°F

WELL INFORMATION		
Depth to water	8.13	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	missing 4 bolts	

COMMENTS
Tubing Inlet @ ~9.13'
Used Horiba U-22 for Turbidity and all other purge data.

PURGE DATA								
start purge time	0931							
time		0943	0946	0949	0952	0955		
volume purged	(gal)							
purge rate	(L/min)	0.210	0.210	0.210	0.210	0.210		
pH	(Units)	5.96	6.07	6.16	6.15	6.20		
conductivity	(mS/m) ~~(umhos/cm)~~	19.0	17.6	16.8	16.3	16.0		
temperature	(deg C)	1.41	1.42	1.40	1.36	1.31		
D.O.	(mg/L)	6.85	6.65	6.50	6.51	6.71		
ORP	(mv)	210	210	209	209	213		
turbidity	(NTU)	3.9	7.7	10.4	11.5	10.0		
purge and sample equip.		Peristaltic Pump + Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
1A-W-4-1106	1000	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	1A-W-5
Project No.	BN050-16423-710	Sampled By	QM
Date	11/28/05	weather	overcast ~20°F - ~25°F

WELL INFORMATION		
Depth to water	9.42	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS
Tubing Inlet @ 10.4'

PURGE DATA								
start purge time	1336							
time		1347	1350	1353				
W ~~volume purged~~	~~(gal)~~ (ft)	9.42	N.M.	9.42				
purge rate	(L/min)	0.290	0.290	0.290				
pH	(Units)	6.33	6.38	6.41				
conductivity	(mS/m) ~~(umhos/cm)~~	13.5	13.6	13.7				
temperature	(deg C)	0.63	0.62	0.64				
D.O.	(mg/L)	4.80	5.04	5.15				
ORP	(mv)	153	158	161				
turbidity	(NTU)	0.77	0.76	0.42				
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
1A-W-5-1106	1356	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	1B-W-1
Project No.	BN050-16423-710	Sampled By	DWR
Date	11/29/06	weather	Cloudy, 25 °F

WELL INFORMATION		
Depth to water	9.44	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:	ok	

COMMENTS
Tubing inlet at ~ 10.25'

PURGE DATA								
start purge time	1036							
time			No parameters — product in discharge line					
volume purged	(gal)							
purge rate	(L/min)							
pH	(Units)							
conductivity	(umhos/cm)							
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
1B-W-1-1106	1050	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	1B-W-2
Project No.	BN050-16423-710	Sampled By	RM
Date	11/30/06	weather	overcast / ~23 °F partially sunny

WELL INFORMATION		
Depth to water	12.48	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS

Tubing Inlet @ 13.5'

Used Horiba to measure turbidity

*Note: 0.0 NTU turbidity measured by Horiba may be inaccurate.

- Unable to use oakton Turb meter (gives error while calibrating)

PURGE DATA

start purge time	0904							
time		0927	0930	0933	0936			
~~volume purged~~	~~(gal)~~ DTW	(ft) 12.59	12.59	12.59	12.59			
purge rate	(L/min)	0.28	0.28	0.28	0.28			
pH	(Units)	6.03	6.04	6.02	6.01			
conductivity mS/m	~~(umhos/cm)~~	19.5	19.1	18.7	18.3			
temperature	(deg C)	4.86	5.05	5.24	5.28			
D.O.	(mg/L)	0.00	0.00	0.00	0.00			
ORP	(mv)	117	118	120	122			
turbidity	(NTU)	0.0	0.0	0.0	0.0			
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
1B-W-2-1106	0939	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	1B-W-3
Project No.	BN050-16423-710	Sampled By	DM
Date	11/29/06	weather	overcast 28 °F

WELL INFORMATION		
Depth to water	13.80	(ft)
Depth of well:	N.M	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	Missing 4 bolts	

COMMENTS
Tubing Inlet 14.8'

PURGE DATA								
start purge time	1406							
time		1423	1426	1429	1432	1435	1438	1441
~~volume purged~~	~~(gal)~~ (ft)	13.81	N.M.	N.M.	13.81	N.M.	N.M.	13.81
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
pH	(Units)	6.08	6.06	6.02	6.03	5.99	5.99	5.97
conductivity mS/m	~~(umhos/cm)~~	17.6	17.4	17.0	16.9	16.8	16.6	16.5
temperature	(deg C)	4.09	4.17	4.21	4.24	4.26	4.28	4.30
D.O.	(mg/L)	0.95	1.13	1.56	1.62	2.03	2.07	2.01
ORP	(mv)	189	194	199	202	207	210	214
turbidity	(NTU)	1.40	1.33	1.34	1.44	1.30	1.20	1.35
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
1B-W-3-1106	1444	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	1C-W-1
Project No.	BN050-16423-710	Sampled By	QM
Date	11/29/06	weather	overcast 22°F

WELL INFORMATION

Depth to water	12.17	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	~~N.M.~~	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	missing 1 bolt	

COMMENTS

tubing inlet @ 13.2'

PURGE DATA

start purge time	1152							
time		1209	1212	1215	1218	1221		
DTW ~~volume purged~~	(gal) (ft)	12.17	N.M.	12.17	N.M.	12.18		
purge rate	(L/min)	0.325	0.325	0.325	0.325	0.325		
pH	(Units)	5.64	5.65	5.66	5.66	5.65		
conductivity mS/m	~~(umhos/cm)~~	15.4	15.3	15.2	15.1	15.0		
temperature	(deg C)	3.27	3.58	3.75	3.89	3.99		
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00		
ORP	(mv)	150	151	152	151	151		
turbidity	(NTU)	1.22	1.02	1.25	1.44	1.45		
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
1C-W-1-1106	1225	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	IC-W-2
Project No.	BN050-16423-710	Sampled By	QM
Date	11/29/06	weather	overcast 25 °F

WELL INFORMATION		
Depth to water	9.04	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	missing 4 bolts	

COMMENTS
Tubing Inlet @ 10.0'

PURGE DATA								
start purge time	1307							
time		1316	1319	1322	1325	1328	1331	1334
~~volume purged~~	~~(gal)~~ (ft)	9.05	9.05	N.M.	N.M.	9.05	N.M.	9.05
purge rate	(L/min)	0.37	0.37	0.37	0.37	0.37	0.37	0.37
pH	(Units)	6.43	6.42	6.41	6.41	6.40	6.41	6.39
conductivity	mS/m ~~(umhos/cm)~~	13.4	13.2	13.0	12.9	12.8	12.7	12.7
temperature	(deg C)	2.19	2.53	2.78	2.97	3.10	3.20	3.29
D.O.	(mg/L)	7.00	6.45	6.40	6.24	6.06	6.02	5.99
ORP	(mv)	183	189	194	198	201	204	208
turbidity	(NTU)	1.41	1.21	1.28	0.92	1.29	1.42	1.29
purge and sample equip.		Peristaltic Pump & Silicone/Polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
IC-W-2-1106	1338	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	IC-W-3
Project No.	BN050-16423-710	Sampled By	GM
Date	11/29/06	weather	overcast 20 °F

WELL INFORMATION

Depth to water	10.19	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS

Tubing Inlet @ 11.2'

purging intially @ 200 mL/min
Reduced purge rate to
155 mL/min @ 0903

PURGE DATA

start purge time	0853							
time		0905	0908	0911	0914	0917	0920	
TW ~~volume purged~~	~~(gal)~~ (ft)	10.75	10.78	10.81	10.81	10.81	10.82	
purge rate	(L/min)	0.155	0.155	0.155	0.145	0.135	0.135	
pH	(Units)	5.71	5.73	5.71	5.72	5.73	5.73	
conductivity ms/m	~~(umhos/cm)~~	16.1	15.6	15.7	15.5	15.4	15.3 ①	
temperature	(deg C)	0.55	0.74	0.79	0.91	0.99	1.03	
D.O.	(mg/L)	10.39	10.04	10.22	9.97	9.46	9.45	
ORP	(mv)	244	247	248	250	251	252	
turbidity	(NTU)	10.62	10.11	8.41	6.85	5.39	4.81	
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
IC-W-3-1106	0925	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	2	None

① 0920 conductivity = 15.3 ms/m

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	IC-W-4
Project No.	BN050-16423-710	Sampled By	GM
Date	11/29/06	weather	overcast 20 °F

WELL INFORMATION

Depth to water	9.55	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS

Tubing Inlet @ 10.6'

DO seems abnormally low

1055 check DO calibration.

Calibration is good.

PURGE DATA

start purge time	1014								
time		1032	1036	1039	1042	1045	1048	1051	1054
~~volume purged~~	~~(gal)~~ (ft)	9.60	N.M.	9.60	N.M.	9.60	N.M.	9.60	N.M.
purge rate	(L/min)	0.220	0.220	0.220	0.220	0.220	0.220	0.22	0.22
pH	(Units)	4.65	5.23	5.39	5.47	5.52	5.53	5.56	5.57
conductivity ms/m	~~(umhos/cm)~~	17.2	15.7	15.3	15.2	15.0	14.8	14.7	14.6
temperature	(deg C)	① 0.05	1.73	2.21	2.53	2.85	3.04	3.20	3.33
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ORP	(mv)	260	250	247	247	247	247	248	248
turbidity	(NTU)	5.00	2.14	1.74	2.00	2.06	1.78	1.52	1.48
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing							

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
IC-W-4-1106	1103	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	2	None
		Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3

F.F.

① ice on temp. probe. Clear ice off probe to collect representative readings.

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	2A-W-1
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/20/06	weather	Cloudy, 25 °F

WELL INFORMATION		
Depth to water	8.70	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:		

COMMENTS
Inlet at ~ 9.5'

PURGE DATA								
start purge time	0925							
time			No	parameters				
volume purged	(gal)							
purge rate	(L/min)							
pH	(Units)			product	in	discharge		
conductivity	(umhos/cm)							
temperature	(deg C)			line				
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
2A-W-1-1106	0940	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	ZA-W-2
Project No.	BN050-16423-710	Sampled By	QM
Date	11/28/06	weather	overcast ~25 °F

WELL INFORMATION

Depth to water	9.72	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	missing 4 bolts	

COMMENTS

Duplicate sample collected

Tubing inlet @ 10.7'

PURGE DATA

start purge time	1436							
time		1447	1450	1453	1456			
TW ~~volume purged~~	~~(gal)~~ (ft)	9.76	9.76	N.M.	9.76			
purge rate	(L/min)	0.395	0.395	0.395	0.395			
pH	(Units)	5.59	5.61	5.62	5.62			
conductivity	(umhos/cm)	14.3	14.1	14.0	13.9			
temperature	(deg C)	4.99	5.02	5.28	5.49			
D.O.	(mg/L)	0.00	0.00	0.00	0.00			
ORP	(mv)	137	137	136	135			
turbidity	(NTU)	2.15	1.54	1.13	1.09			
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
ZA-W-2-1106	1500	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	2	None
ZA-W-20-1106	1600	NWTPH-Dx	↓	↓	HCl
↓	↓	PAH's (Method 8270)			None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	ZA-W-3
Project No.	BN050-16423-710	Sampled By	DWK
Date	11/28/06	weather	Snowing, 25 °F

WELL INFORMATION		
Depth to water	11.49	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet at ~ 12.5'

PURGE DATA								
start purge time	1031							
time								
volume purged	(gal)		No parameters –					
purge rate	(L/min)							
pH	(Units)		product in discharge					
conductivity	(umhos/cm)							
temperature	(deg C)		line					
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
ZA-W-3-1106	1045	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	ZA-W-4
Project No.	BN050-16423-710	Sampled By	LWK
Date	11/28/06	weather	Snowing, 25 °F

WELL INFORMATION		
Depth to water	9.20	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet at ~ 10'

PURGE DATA								
start purge time	0947							
time								
volume purged	(gal)		No parameters —					
purge rate	(L/min)							
pH	(Units)		product in					
conductivity	(umhos/cm)							
temperature	(deg C)		discharge line					
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
ZA-W-4-1106	1000	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None
		Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	ZA-W-5
Project No.	BN050-16423-710	Sampled By	GM
Date	11/30/06	weather	overcast 30 °F

WELL INFORMATION		
Depth to water	11.98	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS
Tubing inlet @ 13.0'

PURGE DATA								
start purge time	1213							
time		1221	1224	1227	1230	1233	1236	1239
~~volume purged~~	~~(gal)~~ DTW(ft)	N.M.	12.03	N.M.	12.03	N.M.	12.04	N.M.
purge rate	(L/min)	0.285	0.285	0.285	0.285	0.285	0.285	0.285
pH	(Units)	5.86	5.87	5.80	5.87	5.87	5.87	5.87
conductivity mS/m	~~(umhos/cm)~~	25.8	25.8	25.6	25.7	26.1	26.4	26.7
temperature	(deg C)	2.77	3.31	3.53	3.80	4.03	4.16	4.33
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ORP	(mv)	90	90	89	91	92	92	94
turbidity	(NTU)	7.5	① Turbidity giving erratic readings →					
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
ZA-W-5-1106	1242	NWTPH-Dx	1L Gl. Amber	2	HCl

① Turbidity gives erratic readings (ranges from 100-5 NTU within seconds)

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	2A-W-6
Project No.	BN050-16423-710	Sampled By	QM
Date	11/28/06	weather	overcast ~20 °F

WELL INFORMATION

Depth to water	10.37'	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:		(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	missing 2 bolts	

COMMENTS

Extra Sample collected for Lab QC

Tubing Inlet at ~ 11.4

Use Horiba U-22 for all purge data except Turbidity

Oakton T-100 used for Turbidity

1218 discuss low DO readings w/ Dean.

PURGE DATA

start purge time	1155									
time		1209	1212	1215	1218	1221	1224	1227	1230	1233
DTW ~~volume purged~~	~~(gal)~~ (ft)	10.37	N.M.	10.37	N.M.	N.M.	10.38	N.M.	N.M.	10.38
purge rate	(L/min)	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360	0.360
pH	(Units)	5.14	5.19	5.29	5.31	5.34	5.36	5.40	5.40	5.42
conductivity	(umhos/cm)	17.7	17.6	17.0	17.0	16.8	17.0	16.6	16.7	16.4
temperature	(deg C)	1.06	1.41	2.15	2.26	2.37	2.50	2.69	2.72	2.77
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ORP	(mv)	131	128	122	120	120	119	117	116	115
turbidity	(NTU)	7.96	3.79	3.42	2.90	2.76	2.77	3.06	2.90	2.62
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing								

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
2A-W-6-1106	1237	NWTPH-Dx	1L Gl. Amber	4	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	4	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	ZA-W-7
Project No.	BN050-16423-710	Sampled By	Amy
Date	11/28/06	weather	Cloudy 25 °F

WELL INFORMATION		
Depth to water	10:62	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS
Duplicate sample collected

PURGE DATA								
start purge time	09:27							
time		0937	0940	0943	0946	0949		
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25		
pH	(Units)	5.73	5.79	5.83	5.86	5.88		
conductivity	(umhos/cm)	79.1	68.3	63.2	60.3	58.7		
temperature	(deg C)	7.69	7.68	7.74	7.55	7.53		
D.O.	(mg/L)	2.43	2.43	2.43	2.43	2.45		
ORP	(mv)	254	254	254	254	254		
turbidity	(NTU)	1.23	0.75	0.73	0.50	0.20		
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
ZA-W-7-1106	0955	NWTPH-Dx	1L Gl. Amber	2	HCl
ZA-W-70-1106	0930	NWTPH-Dx	"	"	"

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	ZA-W-8
Project No.	BN050-16423-710	Sampled By	QM
Date	11/29/06	weather	light snow/ overcast 23°F

WELL INFORMATION		
Depth to water	14.01	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK ; stick up	

COMMENTS
Tubing Inlet @ 15.0'

PURGE DATA								
start purge time	1536							
time		1550	1554	1557	1600			
DIW ~~volume purged~~	~~(gal)~~ (ft)	N.M.	14.08	N.M.	14.09			
purge rate	(L/min)	0.195	0.195	0.195	0.195			
pH	(Units)	5.69	5.65	5.66	5.65			
conductivity mS/m	~~(umhos/cm)~~	15.3	15.3	15.3	15.4			
temperature	(deg C)	1.57	1.68	1.61	1.64			
D.O.	(mg/L)	4.29	3.55	3.50	3.46			
ORP	(mv)	260	270	272	274			
turbidity	(NTU)	1.76	2.18	1.81	1.66			
purge and sample equip.		Peristaltic pump + Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
ZA-W-8-1106	1603	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	ZA-W-9
Project No.	BN050-16423-710	Sampled By	Km
Date	11/30/06	weather	overcast 30 °F

WELL INFORMATION		
Depth to water	8.73	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS
Tubing Inlet @ ~9.8'
* Note: 0.0 Turbidity
Masured by Horiba
may be inaccurate
Unable to use oakton
turb meter (gives errors
while trying to calibrate).

PURGE DATA

start purge time	1316							
time		1325	1328	1331	1334	1337	1340	
~~volume purged~~	~~(gal)~~							
purge rate	(L/min)	0.240	0.240	0.240	0.240	0.240	0.240	
pH	(Units)	5.66	5.62	5.59	5.60	5.57	5.58	
conductivity mS/m	~~(umhos/cm)~~	14.3	12.8	11.9	11.6	11.1	10.9	
temperature	(deg C)	2.86	2.42	2.05	1.91	1.87	1.89	
D.O.	(mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	
ORP	(mv)	149	152	152	150	152	151	
turbidity	(NTU)	0.0	0.0	0.0	0.0	0.0	0.0	
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
ZA-W-9-1106	1343	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	ZA-W-10
Project No.	BN050-16423-710	Sampled By	AHS
Date	11/30/06	weather	Cloudy 30 °F

WELL INFORMATION		
Depth to water	8.93	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:		(ft)
Screen interval:		
well condition:	GOOD	

COMMENTS

PURGE DATA								
start purge time	1340							
time		1350	1353	1356	1359	14:02		
volume purged	(gal)							
purge rate	(L/min)	0.25	0.25	0.25	0.25	0.25		
pH	(Units)	5.46	5.45	5.43	5.47	5.48		
conductivity mS/m	~~(umhos/cm)~~	35.7	53.9	99.9	99.9	99.9		
temperature	(deg C)	5.40	5.50	5.04	5.17	5.36		
D.O.	(mg/L)	2.66	1.95	1.99	2.09	2.03		
ORP	(mv)	193	191	189	187	187		
turbidity	(NTU)	3.52	4.20	2.85	2.66	2.45		
purge and sample equip.		Peristaltic Pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
ZA-W-10-1106	1410	NWTPH-Dx	1L Gl. Amber	2	HCl

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	ZA-W-11
Project No.	BN050-16423-710	Sampled By	AMJ
Date	11/30/06	weather	Cloudy 25 °F

WELL INFORMATION		
Depth to water	5.79	(ft)
Depth of well:		(ft)
Well diameter:	2"	(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:	Good	

COMMENTS
Product
no purge water
taken.

PURGE DATA								
start purge time	12:22							
time								
volume purged	(gal)							
purge rate	(L/min)							
pH	(Units)							
conductivity	(umhos/cm)							
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
ZA-W-11-1106	12:46	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	2B-W-4
Project No.	BN050-16423-710	Sampled By	QM
Date	11/30/06	weather	Snow ~28 °F

WELL INFORMATION		
Depth to water	1.99	(ft)
Depth of well:	N.M.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	OK	

COMMENTS
Tubing Inlet @ 3.0'
Use Horiba Turbidity
Note: 0.0 NTU Turbidity measured by Horiba may be inaccurate - unable to use other turb meter (gives error while calibrating)

PURGE DATA								
start purge time	1023							
time		1042	1045	1048				
MW ~~volume purged~~	~~(gal)~~ (ft)	1.99	2.00	2.00				
purge rate	(L/min)	0.375	0.375	0.375				
pH units	~~(Units)~~	5.73	5.72	5.75				
conductivity mS/m	~~(umhos/cm)~~	11.1	11.3	11.2				
temperature	(deg C)	3.94	4.02	4.07				
D.O.	(mg/L)	0.00	0.00	0.00				
ORP	(mv)	245	249	251				
turbidity	(NTU)	0.0	0.0	0.0				
purge and sample equip.		Peristaltic Pump + Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
2B-W-4-1106	1100	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	S-W-1
Project No.	BN050-16423-710	Sampled By	AWL
Date	11/28/06	weather	Cloudy °F

WELL INFORMATION		
Depth to water	6.19	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:		

COMMENTS
Duplicate collected for metals only
Tubing plot at ~7'

PURGE DATA								
start purge time	1159							
time								
volume purged	(gal)		No parameters					
purge rate	(L/min)							
pH	(Units)		product in discharge					
conductivity	(umhos/cm)							
temperature	(deg C)			line				
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.	Peristaltic pump & silicone/polyethylene tubing							

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
S-W-1-1106	1210	NWTPH-Dx	1L Gl. Amber	2	HCl
		Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3
S-W-10-1106	1220	Total As & Pb	↓	↓	↓
		Diss. As. & Pb	↓	↓	↓

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	5-W-2
Project No.	BN050-16423-710	Sampled By	DWic
Date	11/29/06	weather	Cloudy, 20 °F

WELL INFORMATION		
Depth to water	6.28	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing Inlet at ~7.25'

PURGE DATA								
start purge time	0903							
time								
volume purged	(gal)		No parameters -					
purge rate	(L/min)							
pH	(Units)		product in discharge					
conductivity	(umhos/cm)							
temperature	(deg C)			line				
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION

sample number	time	analysis	container	# bottles	preservative
5-W-2-1106	0915	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None
		Total As & Pb	500 mL Poly	1	HNO3
		Diss. As & Pb	500 mL Poly	1	HNO3

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	5-W-3
Project No.	BN050-16423-710	Sampled By	DJK
Date	11/28/06	weather	Cloudy, 25 °F

WELL INFORMATION		
Depth to water	6.18	(ft)
Depth of well:		(ft)
Well diameter:		(in)
Feet of water:		(ft)
Product thickness:	trace	(ft)
Screen interval:		
well condition:		

COMMENTS
Tubing inlet at ~7'

PURGE DATA								
start purge time	1335							
time								
volume purged	(gal)		No	parameters	—			
purge rate	(L/min)							
pH	(Units)		product	in	discharge			
conductivity	(umhos/cm)							
temperature	(deg C)		line					
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
5-W-3-1106	1345	NWTPH-Dx	1L Gl. Amber	2	HCl
		PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	S-W-4
Project No.	BN050-16423-710	Sampled By	QM
Date	11/28/06	weather	Overcast 20 °F

WELL INFORMATION		
Depth to water	5.08	(ft)
Depth of well:	N.m.	(ft)
Well diameter:	2	(in)
Feet of water:	—	(ft)
Product thickness:	None	(ft)
Screen interval:	NA	
well condition:	Missing 4 bolts	

COMMENTS
Tubing Inlet @ 6.0'

PURGE DATA								
start purge time	1534							
time		1546	1549	1542				
>TW ~~volume purged~~ ~~(gal)~~ (ft)		5.10	N.m.	5.10				
purge rate	(L/min)	0.295	0.295	0.295				
pH	(Units)	5.68	5.68	5.68				
conductivity	(umhos/cm)	10.0	10.1	10.2				
temperature	(deg C)	2.55	2.56	2.58				
D.O.	(mg/L)	0.00	0.00	0.00				
ORP	(mv)	209	213	216				
turbidity	(NTU)	1.68	1.31	1.11				
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
S-W-4-1106	1545	NWTPH-Dx	1L Gl. Amber	2	HCl
↓	↓	PAH's (Method 8270)	1L Gl. Amber	2	None

GROUNDWATER SAMPLING LOG

Project name	BNSF-Skykomish	Well No.	Equip. Blank
Project No.	BN050-16423-710	Sampled By	AMS
Date	11/30/06	weather	Cloudy 32 °F

WELL INFORMATION	
Depth to water	(ft)
Depth of well:	(ft)
Well diameter:	(in)
Feet of water:	(ft)
Product thickness:	(ft)
Screen interval:	
well condition:	

COMMENTS

PURGE DATA								
start purge time								
time								
volume purged	(gal)							
purge rate	(L/min)							
pH	(Units)							
conductivity	(umhos/cm)							
temperature	(deg C)							
D.O.	(mg/L)							
ORP	(mv)							
turbidity	(NTU)							
purge and sample equip.		Peristaltic pump & Silicone/polyethylene tubing						

SAMPLE INFORMATION					
sample number	time	analysis	container	# bottles	preservative
MW-530-1106	1630	NWTPH-Dx	1L Gl. Amber	2	HCl
"	"	PAH's (Method 8270)	1L Gl. Amber	2	None
"	"	Total As & Pb	500 mL Poly	1	HNO3
"	"	Diss. As & Pb	500 mL Poly	1	HNO3