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Memo

To:	Ian Zelo, NOAA Oil Spill Coordinator Eric Knudson, Senior Scientist		
From:	Scott Prevatte and Patrick Blair, HDR Alaska, Inc.	Project:	Adak Oil Spill Field Reconnaissance
CC:	James Brady, HDR Alaska, Inc.		
Date:	25 February 2010	Job No:	

This memorandum describes the field events of 14-18 February, 2010 on Adak Island regarding environmental sampling in response to the diesel fuel spill at the Adak Petroleum Tank Farm. Attachments to this document include sample log tables and chain of custody forms, fish collection summary table, stream habitat summary table, and sample site maps.

The sampling effort was completed by two field teams. Lee McKinley and Paul Blanche of ADF&G were primarily responsible for water quality sampling and reconnaissance of potential habitat restoration sites. Scott Prevatte and Patrick Blair of HDR Alaska, and Justin Smith of ADF&G were primarily responsible for fish sample collection and stream habitat surveys.

Field Team Members

Scott Prevatte	HDR Alaska Inc.	(907) 644-2024
Patrick Blair	HDR Alaska Inc.	(907) 644-2164
Lee McKinley	ADF&G	(907) 260-4882
Paul Blanche	ADF&G	(907) 267-2812
Justin Smith	ADF&G	(907) 465-4345

Trip Summary

14 February

The field team arrived on Adak at 5:00 in the evening, acquired a USFWS vehicle, transported gear to the USFWS bunkhouse, and prepared sampling equipment for the next day's field events.

15 February

Both of the field teams arrived at Airport Creek in the morning. We found a 4-6" ice layer covering 95% of the stream throughout site EFR 001. The water quality sampling team was able to sample an open area just upstream of the electrofishing reach. After discussing the ramifications to the fish survey caused by breaking out and removing the ice, we decided to proceed and let the site rest prior to fish sampling. After clearing the 75 meter study area on Airport Creek, we left the site to EFC 002 on lower Helmet Creek and found similar conditions and proceeded to break open that study reach as well. EFC 002 had significant petroleum sheening covering approximately 50% of the water surface when the ice was removed. We returned to EFR 001 on Airport Creek several hours later and were able to electrofish that site, although the depletion method was hampered, possibly by heavy shelf ice that restricted our access to undercut banks during each pass (see attached fish capture data). We were able to conduct the habitat survey at EFR 001 after electrofishing was complete; however, heavy snow drifts in places prevented collecting more than one bankfull width measurement (see attached habitat survey data). A minnow trap was placed approximately 90m downstream of the EFR 001 study site at the same location as on the previous trip.

The water quality sampling team collected all required sampling from six sites on Helmut Creek and one site on Airport Creek on February 15. The samples were processed at the end of the day at the Bunkhouse.

16 February

The habitat reconnaissance field team spent the day evaluating several area streams for restoration potential (see Lee McKinley's report). The fish capture and habitat survey team finished breaking out and clearing ice from site EFC 002 on lower Helmet Creek in the morning and let this area rest during the afternoon while they placed minnow traps upstream on Helmet Creek at sites 005 and 006. Six traps were set in the upper drainage to collect fish samples from both the contaminated and uncontaminated reaches.

Due to heavy snow drifts, minnow traps within site 006 were slightly relocated from the previous trip. Two minnow traps were set just downstream of the original site (north fork), one trap was set just upstream of the mouth of the middle fork, and one trap was set just upstream of the mouth of the south fork. No electrofishing was attempted at sites 005 or 006 due the deep snow drifts that had filled in much of the stream channel.

It should be noted here that several unexploded ordnances were marked by orange cones at sites 005 and 006. The field team tried to avoid the areas around the cones as much as possible. Diesel odors were strong at all sites visited on Helmet Creek below the Tank Farm discharge point. After a period of about 30 minutes, all of the field team mentioned having a slight headache when removing broken ice from these locations.

17 February

High winds and heavy snow grounded both field teams all day. Despite the conditions, effort was made to access Helmet Creek however, the road was drifted in and work conditions were deemed unsafe.

18 February

The water quality team remained at the bunkhouse to prepare the necessary chain of custody paperwork, deliver samples to the airport, and clean up the residence according to our requirements.

With fair weather conditions the fish capture and habitat survey field team attempted to retrieve minnow traps set within sites 005 and 006 on Helmet Creek as soon as the road was plowed free of the deep snow drifts. All traps were recovered except the most upstream trap at site 006 (see fish capture data). ADF&G permitting officers were notified of the lost trap and a plan to have USFWS employees recover it in March was initiated.

The fish capture and habitat survey field team were able to conduct abbreviated studies on Helmet Creek at site EFC 004. Approximately 40 meters of stream was cleared of ice and two electrofishing passes were completed however, due to time limitations the reach was not rested between ice removal and electrofishing.

Habitat Data Summary

Habitat survey data was collected at three sites, including one site on Airport Creek and two sites on Helmet Creek

Airport Creek site EFR 001

An evaluation of approximately 62 m of stream showed that this site may be characterized as an E3 Rosgen stream type, having a much larger flood plain relative to its active channel width. It is a riffle dominated habitat with two longer riffles separated by two relatively shorter and poorly developed pools more resembling glides. However, both pools are classified as macropools according to Tier 3 habitat survey methods. The pool to riffle area ratio (0.56) is low, where values closer to 1.0 are commonly considered to represent more natural states. Average wetted stream width is 2.7 m, and bankfull width is 3.2 m. Pool substrate is mostly sand with some large gravel, while riffle habitat is mostly small cobble and large gravel. Sinuosity is lower than expected for this stream type, probably due to the likelihood that the stream was moved to accommodate the adjacent access road.

Helmut Creek site EFC 002

Approximately 66 m of stream were evaluated and it was determined that this site may be characterized as an G4 Rosgen stream type, having an entrenched active channel within a relatively high and narrow flood plain. The site shows a pool-riffle sequence dominated by slightly longer riffles, which are regularly separated by relatively shorter and well developed pools. All identified pools are classified as macropools according to Tier 3 habitat survey methods. The pool to riffle area ratio (0.64) is moderate. Average wetted stream width is 2.1

m, and bankfull width is 2.8 m. Pool substrate is mostly large and small gravels, while riffle habitat is mostly large gravel and large cobble. Slightly reduced sinuosity may be attributable locally to stream headcutting. Upper portions of Helmet Creek exhibit comparatively higher sinuosity.

Helmut Creek site EFC 004

An abbreviated habitat survey at this site, resulting from a weather day on 17 Feb, yielded incomplete results; however, we learned enough to estimate that the 39 m of stream surveyed was a E3b Rosgen stream type. The site has a much larger flood plain relative to its active channel width, and a slightly higher estimated gradient than site EFR 001 described above. The portion of Helmet Creek surveyed demonstrates a riffle dominated habitat with irregularly spaced pools. Pool formation derives chiefly from lateral scour; however, two small pools are formed by man-made debris in the stream. The necessary measurements for calculating minimum residual pool depth were not collected, and so no macropools were identified. The estimated pool to riffle area ratio (0.35) is very low. Average wetted stream width is 1.5 m, but bankfull width was not measured due to snow conditions. A single visual estimate suggests that the overall substrate is mostly angular cobble. Sinuosity is relatively high, owing to both the low stream gradient an open, low elevation floodplain.

Fish Capture Data Summary

Fish capture data from electrofishing and minnow trapping efforts are summarized in tabular format and may be found attached.

Captured fish for histology analysis were preserved in 10% buffered Formalin according to the project protocol and additional fish selected for residue analysis were sealed in foil and plastic and frozen. All fish samples were packaged according to protocol, and shipped via Goldstreak to the designated labs. Appropriate chains of custody forms were completed prior to shipping. Copies of the sample logs and forms have been distributed via the NOAA ftp site.

Water Quality Data Summary

Water quality samples were collected at all seven scheduled sampling sites, which included one site on Airport Creek and six sites on Helmet Creek. See ADF&G sampling report for details.

Water quality samples were collected and preserved according to project protocol. All samples were packaged according to protocol, and shipped via Goldstreak to the designated lab. Appropriate chains of custody forms and were completed prior to shipping. Copies of the sample logs and CoC's have been distributed via the NOAA ftp site.

Project Photos

Key field photos and a video clip showing the sheen on Helmet Creek have been distributed via the NOAA ftp site and may be made available on CD upon request.

Project Mapping

The three attached maps show fish capture and habitat survey sites, and habitat reconnaissance sites, as well as water quality collection sites. The maps are broken up into:

- Helmet Creek Area
- Airport and NavFac Creek Area
- Clam Lagoon Area.

Adak Tank Farm Spill Fish Sampling Summary Trip 3

Site	Date	Lat Start	Long Start	Lat End	Long End	Reach Length (m)	Reach Width (m)	Species	10% Formalin	Frozen	Total
Airport Creek EFR-001	2/15/2010	51.891220	-176.634525	51.891650	-176.634800	62	1.6 to 3.0	Coho	19	1	20
								Dolly varden	25	1	26
								Sculpin	20	0	20
								Salmon Eggs	2	0	2
Helmet Creek EFC-002	2/16/2010	51.854820	-176.661500	51.855150	-176.662230	66	1.2 to 3.2	Coho	0	0	0
								Dolly varden	24	8	32
								Sculpin	11	0	11
								Stickleback	2	0	2
Helmet Creek EFC-004	2/18/2010	51.855350	176.667470	51.855350	-176.667470	39	1.5	Dolly varden	21	6	27
Helmet Creek MTR-005A	2/18/2010	51.852956	-176.671364			NA		Dolly varden	1	0	1
Helmet Creek MTR-005B	2/18/2010	51.852980	-176.671296			NA			0	0	0
Helmet Creek MTR-006A	2/18/2010	51.852834	-176.671698			NA		Dolly varden	4	0	0
Helmet Creek MTR-006B	2/18/2010	51.852851	-176.671890			NA			NA	NA	NA
Helmet Creek MTR-006C	2/18/2010	51.852578	-176.671598			NA			0	0	0
Helmet Creek MTR-006D	2/18/2010	51.852556	-176.671494			NA		Dolly varden	2	0	0

Adak Island Oil Spill
Habitat Survey Data

Stream Name	Site Name	Date	Field Team	US_Lat	US_Long	DS_Lat	DS_Long	Estimated Gradient (%)	Total Linear Length (m)	Mean Velocity (m/s)	Mean Floodprone Width (m)	Mean Bankfull Depth (m)	Pool/Glide Substrate (visual estimate %) Sand	SG	LG	SC	LC	BO	Riffle Substrate (visual estimate %) Sand	SG	LG	SC	LC	BO	Hab_Type	Length (m)	Wet Width1 (m)	Wet Width2 (m)	Wet Width2 (m)	BFW1 (m)	BFW2 (m)	BFW2 (m)	LWD	Max Depth (m)	Tailout Depth (m)
Airport Creek	**EFR 001**	15-Feb-10	P. Blair, S. Prevatte, J. Smith	51.89165	-176.63480	51.89122	-176.63425	1	65	0.33	13.3	0.75	55	0	30	15	0	0	10	0	40	50	0	0	Rfl	21.3	1.9	2.9	2.6				0	0.30	
																									Gld/PL	6.3	3.0	2.3	2.6	SINGLE			0	0.51	0.22
																									Gld/PL	13.5	2.8	3.8	3.0	MEASUREMENT			0	0.55	0.15
																									Rfl	21.2	2.4	2.9	2.3				0	0.35	

Calculated Values:

Entrenchment	Width/Depth Ratio	Sinuosity	Rosgen Channel Type	Minimum Residual Pool Depth (m)	Substrate d50	Avg WW (m)	Avg. BFW (m)	Pool Hab (m2)	Rfl Hab (m2)	Pool / Riffle Ratio	Total Survey Length (m)
4.16	4.27	0.96	E3	0.182	Small Cobble	2.7	3.2	59.7	106.2	0.56	62.3

Stream Name	Site Name	Date	Field Team	US_Lat	US_Long	DS_Lat	DS_Long	Estimated Gradient (%)	Total Linear Length (m)	Mean Velocity (m/s)	Mean Floodprone Width (m)	Mean Bankfull Depth (m)	Pool/Glide Substrate (visual estimate %) Sand	SG	LG	SC	LC	BO	Riffle Substrate (visual estimate %) Sand	SG	LG	SC	LC	BO	Hab_Type	Length (m)	Wet Width1 (m)	Wet Width2 (m)	Wet Width2 (m)	BFW1 (m)	BFW2 (m)	BFW2 (m)	LWD	Max Depth (m)	Tailout Depth (m)
Helmet Creek	**EFC 002**	16-Feb-10	P. Blair, S. Prevatte, J. Smith	51.85515	-176.66224	51.85482	-176.66150	2	61.5	0.27	4.7	0.9	0	40	55	0	0	5	0	0	60	15	25	0	Rfl	30	2.0	1.9	1.8	3.1	2.7	1.9	0	0.30	
																									PL	4.6	2.3	1.9	2.6	3.7	2.5	3.7	0	0.40	0.10
																									Rfl	4.1	1.2	1.4	1.5	2.3	2.5	2.5	0	0.25	
																									PL	5.3	1.8	2.0	1.3	2.5	2.2	1.6	0	0.35	0.10
																									Rfl	10.8	1.4	1.2	1.9	3.4	2.6	3.3	0	0.20	
																									PL	6.6	1.9	2.5	3.0	3.2	2.8	3.6	0	0.61	0.24
																									PL	4.9	2.9	3.2	2.7	2.9	2.6	2.4	0	0.97	0.08

Calculated Values:

Entrenchment	Width/Depth Ratio	Sinuosity	Rosgen Channel Type	Minimum Residual Pool Depth (m)	Substrate d50	Avg. Wet Width (m)	Avg. Bankfull Width (m)	Pool Hab (m2)	Rfl Hab (m2)	Pool / Riffle Ratio	Total Survey Length (m)
1.70	3.07	1.08	G4	0.178	Large Gravel	2.1	2.8	50.1	78.8	0.64	66.3

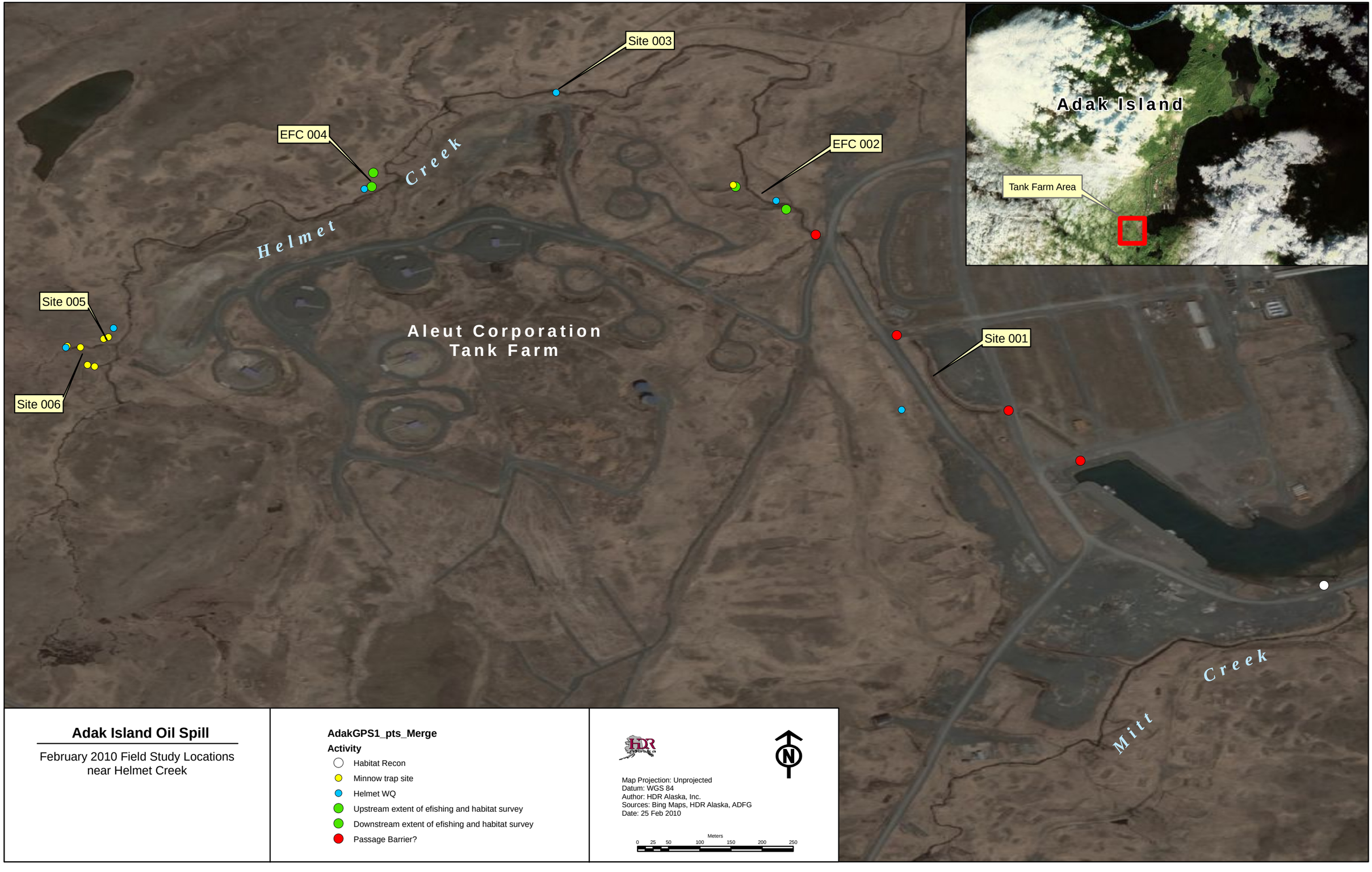
Stream Name	Site Name	Date	Field Team	US_Lat	US_Long	DS_Lat	DS_Long	Estimated Gradient (%)	Total Linear Length (m)	Mean Velocity (m/s)	Mean Floodprone Width (m)	Mean Bankfull Depth (m)	Pool/Glide Substrate (visual estimate %) Sand SG LG SC LC BO	Riffle Substrate (visual estimate %) Sand SG LG SC LC BO	Hab_Type	Length (m)	Wet Width1 (m)	Wet Width2 (m)	Wet Width2 (m)	BFW1 (m)	BFW2 (m)	BFW2 (m)	LWD	Max Depth (m)	Tailout Depth (m)
Helmet Creek	**EFC 004**	18-Feb-10	P. Blair, S. Prevatte, J. Smith	51.85515	-176.66749	51.85535	-176.66747	2-3	23	NOT MEASURED		0.6	SINGLE ESTIMATE		Rfl	ESTIMATED OR NOT MEASURED									
															PL										
															PL										
															Rfl										
															PL										
															Rfl										

Calculated Values:

Entrenchment	Width/Depth Ratio	Sinuosity	Rosgen Stream Type (visual photo est.)	Minimum Residual Pool Depth (m)	Substrate d50	Avg. Wet Width (m)	Avg. Bankfull Width (m)	Estimate Pool Hab (m2)	Estimate Rfl Hab (m2)	Pool / Riffle Ratio	Total Survey Length (m)
NOT MEASURED		1.70	E3b		Cobble	1.5	NOT MEASURED	15.0	43.5	0.34	39

Definitions:

Gradient	visual estimation only, no clinometer was used
Total Linear Length	straighline distance between US and DS endpoints of study reach
Velocity	timed orange float method
Floodprone Width	width of floodplain at 2x bankfull depth elevation
Bankful Depth	estimated depth of stream at bankfull stage
Hab_Type	Rfl = riffle, PL = pool, Gld = glide.
Max Depth	either thalweg depth or pool depth depending upon hab_type
Tailout Depth	pool tail crest depth
Entrenchment	(floodprone width) / (avg. BFW)
Width/Depth Ratio	(BFW) / (Bankfull depth)
Rosgen Stream Type	see Rosgen classification scheme
Min Res Pool Depth	(avg. BFW) x (0.01) + (0.15m)
Substrate d50	substrate distribution visually estimated to the 50th percentile
Wet Width	current stream width
BFW	width of active stream channel at bankfull stage
Pool Hab m2	area of pool habitat
Rfl Hab m2	area of riffle habitat



Adak Island Oil Spill

February 2010 Field Study Locations
near Helmet Creek

AdakGPS1_pts_Merge

Activity

- Habitat Recon
- Minnow trap site
- Helmet WQ
- Upstream extent of efishing and habitat survey
- Downstream extent of efishing and habitat survey
- Passage Barrier?

Map Projection: Unprojected
Datum: WGS 84
Author: HDR Alaska, Inc.
Sources: Bing Maps, HDR Alaska, ADFG
Date: 25 Feb 2010

Meters
0 25 50 100 150 200 250

NavFac Creek

Airport Creek

EFR 001

Adak Island Oil Spill

February 2010 Field Study Locations
Airport Creek and NavFac Creek

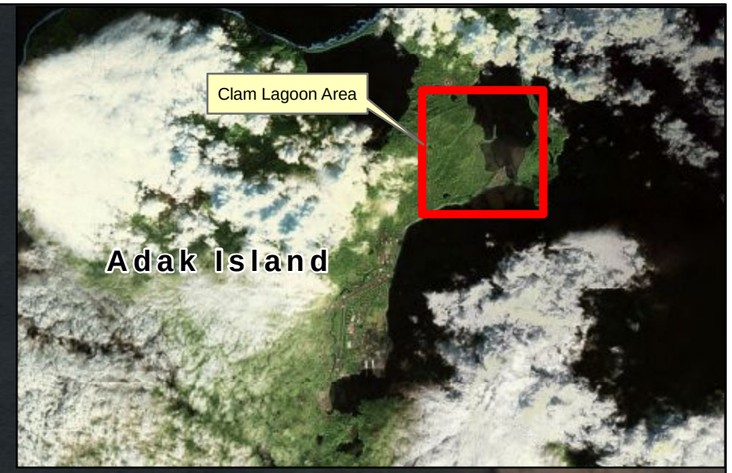
AdakGPS1_pts_Merge

Activity

- Habitat Recon
- Minnow trap site
- Upstream extent of efishing and habitat survey
- Downstream extent of efishing and habitat survey

Map Projection: Unprojected
Datum: WGS 84
Author: HDR Alaska, Inc.
Sources: Bing Maps, HDR Alaska, ADFG
Date: 25 Feb 2010

Meters
0 25 50 100 150 200 250 300 350 400



Clam Lagoon

Adak Island Oil Spill

February 2010 Field Study Locations
near Clam Lagoon

AdakGPS1_pts_Merge
Activity

○ Habitat Recon

Map Projection: Unprojected
Datum: WGS 84
Author: HDR Alaska, Inc.
Sources: Bing Maps, HDR Alaska, ADFG
Date: 25 Feb 2010

Meters
0 50 100 200 300 400 500 600 700

ProjCode: AJak | Station No: Reference | Date\Time: 2-15-10 | Partly cloudy windy

Sample Events Total Actual Reach Length Sampled(m):

Event ID	Airport R1	Method	* EFish	SubreachID		Event Loc.	U D		
Volts	310	Current (A)	0.1	Power(W)	23	Freq(Hz)	30		
EF Time (s)	862	Waveform	*	Duty Cycle(%)	12%	Efficiency	*		
		Macro		Meso		Micro			
Habitat Chan.	*	*		*					
Comments	Ice cleared from reach at 11:30.						Start time 1453 End time 1515		

Color = CH
Sculpin = SC
Dolly Varden = DV

Event ID	Airport R2	Method	* EFish	SubreachID		U/D Stream	U / D		
Volts	310	Current (A)	0.1	Power(W)	23	Freq(Hz)	30		
EF Time (s)	795	Waveform	*	Duty Cycle(%)	12%	Efficiency	*		
	Channel	Macro	Meso	Micro	Micro				
Habitat	*	*	*	*	*		Start time 1525 End time 1546		
Comments	< 50mm not cutting open on pass 1 or 2								

Fish Observations

* For all observed fish please populate the header row as follows (Species Code/Life Stage/Life History/Event ID)
All fork lengths are in millimeters. Additional counts are entered as (AC-200-E). "AC" denotes additional count and that it is not a measurement. 200 would be the exclusive additional fish count. The E is optional for "estimated count". Note any fish anomalies*.

Pass 1 species life	Jar ID	Length (mm)	Pass 1 SPP	Jar ID	Length (mm)		
CH	EFR001-A	78	SC	EFR001-D	43	SC	EFR001-G 60
CH	EFR001-A	57	2 escp	↓		SC	↓ 48
CH	↓	51	Pass 2				
CH		53	CH	EFR001-E	48		
CH		52	CH		64		
CH		54	CH		78		
CH	↓	49	CH		49		
DV	EFR001-B	38	CH		44		
DV		46	CH		52		
DV		68	CH	↓	56		
DV		34	DV	EFR001-F	47		
DV		49	DV		46		
DV		44	DV		46		
DV	↓	57	DV		46		
CH	EFR001-C	150	DV		30		
DV	EFR001-B	33	DV		34		
SC	EFR001-D	105	DV		34		
SC	↓	74	DV	↓	46		
SC		46	SC	EFR001-G	55		
SC		46	SC		99		
SC		48	SC		53		
SC		49	SC		49		
SC		51	SC		49		
SC	↓	53	SC	↓	51		

ProjCode: ADAK | Station No: Reference | Date\Time: 2-15-10

Sample Events Total Actual Reach Length Sampled(m):

Event ID	Airport R3	Method	* E. Fish	SubreachID		Event Loc.	U D
Volts	310	Current (A)	0.1	Power(W)	23	Freq(Hz)	30
EF Time (s)	755	Waveform	* .	Duty Cycle(%)	12%	Efficiency	*

	Macro	Meso	Micro
Habitat Chan.	*	*	*
Comments			Start time 1630 End time 1647

Event ID	Airport R4	Method	* E. Fish	SubreachID		U/D Stream	U / D
Volts	310	Current (A)	0.1	Power(W)	23	Freq(Hz)	30
EF Time (s)	654	Waveform	*	Duty Cycle(%)	12%	Efficiency	*

	Channel	Macro	Meso	Micro	Micro
Habitat	*	*	*	*	*
Comments					Start time 1705 End time 1717

Color? CH
Dolly Varden? DV
Sculpin SC

Fish Observations

* For all observed fish please populate the header row as follows (Species Code/Life Stage/Life History/Event ID)
All fork lengths are in millimeters. Additional counts are entered as (AC-200-E). "AC" denotes additional count and that it is not a measurement. 200 would be the exclusive additional fish count. The E is optional for "estimated count". Note any fish anomalies*.

Pass 3 SPP	Jar ID	Length (mm)	Pass 4 SPP	Jar ID	Length (mm)		
CH	EFR001-H	75	CH	EFR001-H	53		
CH		66	CH	N/A	58		
CH		51	CH		63		
CH		50	CH		48		
CH		72	CH		63		
DV	EFR001-I	55	CH		45		
DV		36	DV	N/A	89		
DV		49	DV		42		
DV		43	DV		46		
DV		39	SC	EFR001-J	43		
DV		48	SC	N/A	50		
DV		36	SC		49		
DV*		39	SC		54		
DV	EFR001-K	118	DV	EFR001-K			
DV	EFR001-I	32					
SC	EFR001-J	49					
SC		48					

* looks like it was regurgitated in poor condition

DV = Dolly Varden
SC = Sculpin
ST = Stickleback

ProjCode: Helmet EF2 | Station No: Pass 1+2 | Date\Time: 2-16-10

Sample Events Total Actual Reach Length Sampled(m):

Event ID	Pass 1	Method	* E. Fish	SubreachID		Event Loc.	U D
Volts	253	Current (A)	0.1	Power(W)	20	Freq(Hz)	30
EF Time (s)	923	Waveform	*	Duty Cycle(%)	12%	Efficiency	*

	Macro	Meso	Micro
Habitat Chan.	*	*	*

Comments: Pass 1 Start time 14:10 End time 14:35 Visibility good Sheen cover ~50%

Event ID	Pass 2	Method	* E. Fish	SubreachID		U/D Stream	U / D
Volts	253	Current (A)	0.1	Power(W)	20	Freq(Hz)	30
EF Time (s)	940	Waveform	*	Duty Cycle(%)	12%	Efficiency	*

	Channel	Macro	Meso	Micro	Micro
Habitat	*	*	*	*	*

Comments: Pass 2 Start time 1525 End time 1546

Fish Observations

* For all observed fish please populate the header row as follows (Species Code/Life Stage/Life History/Event ID)
All fork lengths are in millimeters. Additional counts are entered as (AC-200-E). "AC" denotes additional count and that it is not a measurement. 200 would be the exclusive additional fish count. The E is optional for "estimated count". Note any fish anomalies*.

Pass 1 species + Length	Pass 1 Jar ID	Pass 1 species + Length (mm)	Pass 1 Jar ID	Pass 2 spp + Length (mm)	Pass 2 Jar ID		
DV 114	EFL-002-A	Sculpin-90	EFL-002-F	SC 104	EFL-002 I		
DV 127	↓	SC 91	↓	SC 95	↓		
DV 88	↓	SC 93	↓	SC 91	↓		
DV 50	↓	DV 167	EFL-002-G	SC 89	↓		
DV 79	EFL-002-B	DV 127	↓	DV 84	N/A		
DV 114	↓	DV 132	↓	DV 131	↓		
DV 87	↓	DV 142	↓	DV 67	↓		
DV 77	↓	DV 149	EFL-002-H	DV 64	↓		
DV 83	↓	DV 128	EFL-002-H	DV 126	↓		
DV 75	EFL-002-C	DV 142	↓	DV 73	↓		
DV 82	↓	DV 129	↓	DV 63	↓		
DV 74	↓	ST	-	ST	EFL-002 J		
DV 97	↓						
DV 77	↓						
DV 75	EFL-002-D						
DV 76	↓						
DV 74	↓						
DV 70	↓						
DV 70	↓						
DV 70	↓						
DV 52	~~EFL-002-F~~						
DV 70	EFL-002-E						
DV 36	↓						
DV 120							

DV = Dolly Varden
Sc = Sculpin
St = Stickleback

NA = released

ProjCode: Aelnet EF2 | Station No: Pass 3 | Date\Time: 7-16-10

Sample Events Total Actual Reach Length Sampled(m):

Event ID	Pass 3	Method	* E. Fish	SubreachID		Event Loc.	U D
Volts	253	Current (A)	0.1	Power(W)	20	Freq(Hz)	30
EF Time (s)	918	Waveform	*	Duty Cycle(%)	12%	Efficiency	*

	Macro	Meso	Micro
Habitat Chan.	*	*	*

Comments: Start time 15:55 End time 16:16 Settings not changed for all 3 passes

Event ID		Method	*	SubreachID		U/D Stream	U / D
Volts		Current (A)		Power(W)		Freq(Hz)	
EF Time (s)		Waveform	*	Duty Cycle(%)		Efficiency	*

	Channel	Macro	Meso	Micro	Micro
Habitat	*	*	*	*	*

Comments:

Fish Observations

* For all observed fish please populate the header row as follows (Species Code/Life Stage/Life History/Event ID)
All fork lengths are in millimeters. Additional counts are entered as (AC-200-E). "AC" denotes additional count and that it is not a measurement. 200 would be the exclusive additional fish count. The E is optional for "estimated count". Note any fish anomalies*.

Pass 3 Fish Spp. + Length	Jar ID						
DV 145	N/A						
DV 70	↓						
DV 68							
SC 82	EFC002-J						
DV 56	N/A						
ST 65	EFC002-J						

DV = Dolly Varden NA = released
SC = Sculpin
ST = Stickleback

EFC-004

~~See Notebook~~ PP/23Feb2010

ProjCode: AdaK Station No: Helmet-Site 4 Date\Time: 18 Feb 2010

Sample Events Total Actual Reach Length Sampled(m):

PASS 1

Event ID	Helmet Pass 1	Method	* EFish	SubreachID		Event Loc.	U D		
Volts	305	Current (A)	0.1	Power(W)	23	Freq(Hz)	30		
EF Time (s)	515	Waveform	*	Duty Cycle(%)	12	Efficiency	*		
	Macro		Meso		Micro		Begin 12:00		
Habitat Chan.	*		*		*		End 12:12		
Comments	Ice cleared from sample area @ 11:45 / Location just DS of EFC-004 Water Quality site.								

PASS 2

Event ID	Helmet Pass 2	Method	* EFish	SubreachID		U/D Stream	U / D		
Volts	305	Current (A)	0.1	Power(W)	23	Freq(Hz)	30		
EF Time (s)	415	Waveform	*	Duty Cycle(%)	12	Efficiency	*		
	Channel	Macro	Meso	Micro	Micro		Begin 12:16		
Habitat	*	*	*	*	*		End 12:25		
Comments									

Fish Observations

* For all observed fish please populate the header row as follows (Species Code/Life Stage/Life History/Event ID)
All fork lengths are in millimeters. Additional counts are entered as (AC-200-E). "AC" denotes additional count and that it is not a measurement. 200 would be the exclusive additional fish count. The E is optional for "estimated count". Note any fish anomalies*.

PASS 1 Species	FL (mm)	Otolith Collected	Jar ID	Pass 2 Spp	FL (mm)	otolith collected	Jar ID
DV	163	Yes	EFC-004-A	DV	45	NO	EFC-004-D
DV	142	Yes		DV	42	NO	↓
DV	151	Yes		DV	38	NO	↓
P2 DV	135	Yes					
DV	121	NO					
DV	121	NO	↓				
DV	115	NO	EFC-004-B				
DV	116	NO	↓				
DV	92	NO					
DV	84	NO	↓				
DV	85	NO	EFC-004-C				
DV	75	NO	↓				
DV	67	NO					
DV	71	NO					
DV	80	NO					
DV	53	NO					
DV	49	NO					
DV	46	NO					
DV	40	NO	↓				
Pass 2 Start → DV	95	NO	EFC-004-D				
DV	68	NO	↓				
DV	65	NO					
DV	55	NO					
DV	48	NO	↓				

Trapping Data Form

Stream	Helmet 4	Weather Conditions	
Date	2-18-10	Flow	
Water Temp.		Remarks	
Air Temp.		Observers	S. prevatt J. smith P. Blair

Reach	Habitat Unit	Trap #	Set Time	Pull Time	Species	# Observed	Size Class (in)	Spawning Area (m2)	Comments
005	NA	MT5A			DV	1	118		
006	NA	MT6A			DV	1	111		
006	NA	MT6A			DV	1	115		
006	NA	MT6A			DV	1	109		
006	NA	MT6A			DV	1	83		
006	NA	MT6B			None?	Ø	—		Trap lost in snow drift
006	NA	MT6C			None	Ø	—		
006	NA	MT6D			DV	1	72		
006	NA	MT6D			DV	1	92		
002	NA	MT2A			None	Ø	—		

P. BLAIR

DURA-Rite
WATERPROOF

LINE RULE

Spiral Notebook

Adak - Feb 2010
< Habitat >

No. 693
32 Sheets
4 5/8" x 7"

Adak – Efishing /MT 15 Feb 2010

Forms Used @ each site

- E-Fishing
- ~~Tier 1 Habitat~~
- ~~Geographic Info~~
- ~~Rosgen Channel Type~~
- Minnow Trapping

written in this notebook

Gate Keepers: for tank farm

- Dan Galagher 577-2169
- Russel 752-0396

– Penco –

Habitat Parameters

⑤ - US GPS of Reach

⑥ - DS GPS of Reach

⑦ • Habitat Type from DS to US
1) Hab Type
2) Hab Length (m)
3) Thalweg / Max Depth (m)
4) Tailout Depth (m)
5) LWD <None>
6) Wetwidth (m) [1][2][3]
7) Bankfullwidth (m) [1][2][3]

① - Stream Name

② - Site / Reach Name

④ - Field Team

③ - Date

- Velocity Estimate
- Gradient %
- Substrate Distribution Estimate
  First % =
  Second % =
  Third % =
- Mean Bankfull Depth (m)
- Sinuosity *
- Width/Depth Ratio *
- Rosgen Channel Type *
- Minimum Residual Pool Depth *

- Linear Reach Length (m)
- Floodplain width (m)

* ③

16 Feb 2010

MT on upper Helmet Creek

Sites 5 & 6. MTs set 11:30-12:00

Two traps set w/in each site. Tried to avoid marked ordnances. Site 6 was drifted in w/ snow, channel full of slush to bottom, relocated traps MT6c & MT6d

---

Airport Geek MT1

pulled at 13:30 on 2-16-2010

set 15 Feb 2010 @ about (Time not recorded here)

Coho ~100 mm, ~60 mm, 50, 50, 45, 45, 45

Dolly ~ 75, 75, 90, 90

Sculpin ~ 50, 75

Stickleback ~ 60, 60

All fish released

Helmut Creek Habitat — Site EFC002

- DS GPS | 51.85482 / 176.66150
- 16 Feb 2010
- P. Blair
- S. Prevatle
- Justin Smith

Est. Gradient = 2%

Mean Bankfull Depth = 0.90m

Mean Floodplain Width = 4.7m

	Hab Type	Length (m)	Wet Width (m)	BFW (m)	LWD	Max Depth (m) Tail out
DS	Rfl	30.0	2.0, 1.9, 1.8	3.1, 2.7, 1.9	∅	0.3
	Pool Sc	4.6	2.3, 1.9, 2.6	3.7, 2.5, 3.7	∅	max/TO 0.4/0.1
	Rfl	4.1	1.2, 1.4, 1.5	2.3, 2.5, 2.5	∅	0.25
	Pool Sc	5.3	1.8, 2.0, 1.3	2.5, 2.2, 1.6	∅	max/TO 0.35/0.1
	~~Pool~~ Rfl	10.8	1.4, 1.2, 1.9	3.4, 2.6, 3.3	∅	0.2
∇	Pool Sc	6.6	1.9, 2.5, 3.0	3.2, 2.8, 3.6	∅	max/TO 0.61/0.24
US	Pool Sc	4.9	2.9, 3.2, 2.7	2.9, 2.6, 2.4	∅	max/TO 0.97/0.08

(Visual Est.)

	%	%	%
Pool Substrate =	LG 55	SG 40	BD 5
Rfl Substrate	LC 25	SC 15	LG 60

Total Linear length = 61.5(m)

Mean V = 14.1m/52 sec orange method

= 0.27 m/sec

- US GPS | 51.855152 / 176.662237

HELMUT - Site 2

E-Fish 18 Feb 2010

Pass 1

Begin 2:10

End 2:35

Duration 923 sec

Power: 20 watts

Volts: 253

Amps: 0.1

Pulse type: standard

voltage: 260

Freq: 30

Pulse width: 4 milisec

Duty cycle: 12%

Placed MT above E-fish Location

Helmut MT1

51.85518

176.66228

4:30 = set

Pulled 18 Feb 2010

@ 12:51

No Fish

Pass 2

start time 325

End time 436

Duration 940

Pass 3

Start time 3:55

End time 4:16

Duration 918

HELMUT SITE ~~3~~ 4 EFC-003 — closer to Site 4

E-Fish 18 Feb 2010

	Begn	End	Sec
Pass 1	12:00	12:12	515
Pass 2	12:16	1225	415

- 23 watt
- 305 V
- 0.1 A
- Std Pulse Type
- 400 Watt Limit
- 30 Hz
- 4 ms Pulse width
- 12% Duty Cycle

- Located ~50m downstream of water quality site
- Est grad % 2-3
- Linear length from GLS = 23m
- BF depth from Lotos = 0.60

EF Length 39m
(wet width) — Av WW 1.5m

d50 = cobble
(Angular Large Cobble
Small Cobble)

Riffle(3) 29m — Av Depth 0.15m
pool(3) 10m — Max Depth 0.5m
tail Depth 0.1m

(10)

Helmit MT Collection 18 Feb 2010

MT 5A — 9:28 — 1 DV
MT 5B — 9:32 — Ø (Trap drifted full of snow/slosh)
MT 6A — 9:50 — 4 DV
MT 6B — Not recovered
MT 6C — 10:32 — Ø
MT 6D — 10:25 — 2 DV

Traps placed on 16 Feb 2010, a 20-hr blizzard and high winds prevented pick up until 18 Feb. All traps drifted in up to 5' deep.

(11)

Airport Creek Habitat — Site EFR 001

- DS GPS | 51.891215 176.634246 — 15 Feb 2010
- US GPS | 51.891654 176.634804 — P. Blair, S. Prevatte, J. Smith
- Est. Gradient = 1%
- Mean Bankfull Depth = 0.75m
- Mean Floodplain Width = 13.3m

	Hab Type	Length(m)	Wetwidth(m)	avg. BFW(m)	LWD	max depth Tail out (m)
DS	Rf1	21.3	1.9 2.9 2.6	3.2	∅	0.30
	Gld/PLsc	6.3	2.95 2.30 2.60	3.2	∅	max 0.51 / TO 0.22
	Gld/PLsc	13.5	2.8 3.8 3.0	3.2	∅	max 0.55 / TO 0.15
US	Rf1	21.2	2.4 2.9 2.3	3.2	∅	0.35

~~BFW estimated from (3) measurements throughout study reach (1.9m, 2.9m, 2.6m)~~

PB 15 Feb 2010

BFW extrapolated from a single measurement, due to extensive ice/snow cover over rest of study area.

	Glide (visual Est)
Pool Substrate	Sand 55% LG 30% SC 15%
Riffle Substrate	SC 50% LG 40% Sand 10%

Total Linear Length

Mean V = 20.0m / 61 sec

= 0.33m/sec

END

FEBRUARY ADAK

FIELD TRIP

027 ADK 7006 0233

027-7006 0233

Shipper's Name and Address HDR ALASKA INC 2525 C ST 305 ANCHORAGE, AK 99503 USA Tel: 9076442000	**Shipper's Account Number** 27442233484 **Customer's ID Number** 9302
Not Negotiable **Air Waybill** Issued By Alaska Air Cargo ALASKA AIRLINES & HORIZON AIR P.O. BOX 68900 SEATTLE, WA 98168 800-225-2752 ALASKACARGO.COM	
Consignee's Name and Address Columbia Analytical Servic 1317 South 13th Avenue KELSO, WA 98626 USA Tel: 3605777222	**Consignee's Account Number** 27442059657
Also notify Tel:	
Issuing Carrier's Agent and City	**Accounting Information** 9302 HDR ALASKA INC 2525 C ST 305 ANCHORAGE, AK 99503 USA GoldStreak
Agent's IATA Code / **Account No.**	
Airport of Departure (Addr. of First Carrier) and Requested Routing Adak	

To	By First Carrier	To / By		To / By		Currency		WT/VAL		Other		Declared Value For Carriage	Declared Value For Customs
ANC	Alaska Airlines	SEA	AS			USD	PZ	X		X		NVD	NCV

Airport of Destination	Flight/Date	Flight/Date	Amount of Insurance
Seattle	AS 161/18	AS 114/19	XXX

Handling Information

SCI

No of Pieces	Gross Weight	kg lb		Commodity Item No.	Chargeable Weight	Rate / Charge	Total	Nature and Quantity of Goods (Incl. Dimensions or Volume)
7	287.0	L	Q		287.0	2.12	608.44	WATER SAMPLES GSX
7	287.0						608.44	Volume: 0.000

Prepaid	Weight Charge	Collect	Other Charges
	608.44		MYC 28.70 SCC 5.74
Valuation Charge			
Tax	22.57		
Total Other Charges Due Agent			
Total Other Charges Due Carrier	34.44		
Total Prepaid	665.45	Total Collect	

Shipper certifies that the particulars on the face hereof are correct and that **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: HDR ALASKA INC — Signature of Shipper or his Agent

☐ THIS SHIPMENT DOES NOT CONTAIN DANGEROUS GOODS ☐ THIS SHIPMENT DOES CONTAIN DANGEROUS GOODS

Executed On (Date)	at (Place)	Signature of Issuing Carrier or its Agent
18 Feb 2010 15:45	Adak	Alaska Airlines

027-7006 0233

027 ADK 7006 0244

027-7006 0244

Shipper's Name and Address	Shipper's Account Number	Not Negotiable
HDR ALASKA INC 2525 C ST 305 ANCHORAGE, AK 99503 USA Tel: 9076442000	27442233484 Customer's ID Number 9302	**Air Waybill** Issued By Alaska Air Cargo ALASKA AIRLINES & HORIZON AIR P.O. BOX 68900 SEATTLE, WA 98168 800-225-2752 ALASKACARGO.COM
Consignee's Name and Address	**Consignee's Account Number**	**Also notify**
Ian zelo NOAA 7600 Sandpoint way NE Seattle, WA 98115 USA Tel: 206-375-3459		Tel:
Issuing Carrier's Agent and City		**Accounting Information** 9302 HDR ALASKA INC 2525 C ST 305 ANCHORAGE, AK 99503 USA
Agent's IATA Code	**Account No.**	
Airport of Departure (Addr. of First Carrier) and Requested Routing		GoldStreak

To	By First Carrier	To / By		To / By		Currency		WT/VAL		Other		Declared Value For Carriage	Declared Value For Customs
ANC	Alaska Airlines	SEA	AS			USD	PZ	X		X		NVD	NCV

Airport of Destination	Flight/Date	Flight/Date	Amount of Insurance
Seattle	AS 161/18	AS 114/19	XXX

Handling Information

SCI

No of Pieces	Gross Weight	kg lb		Commodity Item No.	Chargeable Weight	Rate / Charge	Total	Nature and Quantity of Goods (Incl. Dimensions or Volume)
1	29.0	L	N		30.0	2.75	82.50	WATER SAMPLES
								GSX
1	29.0						82.50	Volume: 0.000

Prepaid	Weight Charge	Collect	Other Charges
	82.50		MYC 2.90 SCC 2.00
Valuation Charge			
Tax	3.07		
Total Other Charges Due Agent			
Total Other Charges Due Carrier	4.90		

Shipper certifies that the particulars on the face hereof are correct and that **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: HDR ALASKA INC — Signature of Shipper or his Agent

☐ THIS SHIPMENT DOES NOT CONTAIN DANGEROUS GOODS ☐ THIS SHIPMENT DOES CONTAIN DANGEROUS GOODS

Total Prepaid	Total Collect
90.47	

18 Feb 2010 15:55 — Executed On (Date)

Adak — at (Place)

Alaska Airlines — Signature of Issuing Carrier or its Agent

027-7006 0244

Columbia Analytical Services INC.
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CHAIN OF CUSTODY

Sediment and Tissue Chemistry

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • FAX (360) 636-1068

SR#: _____

PAGE 1 OF 23 COC #: _____

PROJECT NAME: Adak Tank Farm Spill

PROJECT NUMBER:

PROJECT MANAGER: Ian Zelo (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-395-3454 FAX #:

SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M) ☐ PSEP ☐ Water Soluble	☐ AVS ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m) ☐ Plumb ☐ Pore water	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
EFR-001-A	2-15-10	17:30																								7 Coho
EFR-001-B	2-15-10	17:30																								8 Dolly
EFR-001-D	2-15-10	17:30																								9 Sculpin
EFR-001-E	2-15-10	17:30																								7 Coho
EFR-001-F	2-15-10	17:30																								8 Dolly
EFR-001-G	2-15-10	17:30																								8 Sculpin
EFR-001-H	2-15-10	17:30																								5 Coho
EFR-001-I	2-15-10	17:30																								9 Dolly
EFR-001-J	2-15-10	17:30																								2 Sculpin
EFC-002-A	2-16-10	14:50																								4 Coho

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn

CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn

SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: Contact Ian Zelo NOAA for analysis required

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature:	Signature:	Signature:
Date/Time: 2-17-10 16:00	Date/Time:	Date/Time:	Date/Time:
Printed Name: Scott Prevatte	Printed Name:	Printed Name:	Printed Name:
Firm: NOR Alaska	Firm:	Firm:	Firm:

COCSTC 7-04

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SR#: _____

PAGE 2 OF 3 COC #: _____

PROJECT NAME: Adak Tank Farm Spill

PROJECT NUMBER:

PROJECT MANAGER: Ian Zelo (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-375-3454 FAX #:

SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M) ☐ PSEP ☐ Water Soluble	☐ AVS ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m) ☐ Plumb ☐ Pore water	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
EFL-002-B	2-16-10	14:50																								5 Dolly
EFL-002-U	2-16-10	14:50																								5 Dolly
EFL-002-D	2-16-10	14:50																								7 Dolly
EFL-002-E	2-16-10	14:50																								3 Dolly
EFL-002-F	2-16-10	14:50																								3 Scallpm
EFL-002-I	2-16-10	14:50																								4 Scallpm
EFL-002-J	2-16-10	14:50																								1 Scallpm 2 Shrimp

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn

CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn

SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: Contact Ian Zelo NOAA for analysis Required

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature:	Signature:	Signature:
Date/Time: 2-17-10 16:00	Date/Time:	Date/Time:	Date/Time:
Printed Name: Scott Brownlee	Printed Name:	Printed Name:	Printed Name:
Firm: HDR Alaska	Firm:	Firm:	Firm:

COCSTC 7-04

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SR#: _____

PAGE 3 OF 3 COC # _____

PROJECT NAME: ANF Tank Farm Spill
PROJECT NUMBER:
PROJECT MANAGER: Ian Zelo (NOAA)
COMPANY/ADDRESS:
EMAIL:
PHONE # 206-375-3454
FAX #
SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M)	☐ AVS ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m)	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
EFC-004-B	2-18-10	13:30																							4 Dolly
EFC-004-C	2-18-10	13:30																							9 Dolly
EFC-004-D	2-18-10	13:30																							8 Dolly

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
___ V. EDD

INVOICE INFORMATION

P.O. # _____
Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.
_____ 5 Day
_____ Standard (15 working days)
_____ Provide FAX Results

_____
Requested Report Date

Circle which metals are to be analyzed:

SMS Metals:	As	Cd	Cr	Cu	Pb	Hg	Ag	Zn		
CA Metals:	Ag	As	Cd	Cr	Cu	Hg	Ni	Pb	Se	Zn
SEM Metals:	Cd	Cu	Pb	Hg	Ni	Zn				

SPECIAL INSTRUCTIONS/COMMENTS: Contact Ian Zelo NOAA for analysis required Edwards

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature:	Signature:	Signature:
Date/Time: 2-18-10 13:30	Date/Time:	Date/Time:	Date/Time:
Printed Name: Scott Pruitt	Printed Name:	Printed Name:	Printed Name:
Firm: NOAA Alaska	Firm:	Firm:	Firm:

COCSTC 7-04

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SR#: _____

PAGE 1 OF 1 COC #_____

PROJECT NAME: Ajak Tank Farm Spill

PROJECT NUMBER:

PROJECT MANAGER: Ian Zelo (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-375-3454 FAX #

SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M) ☐ PSEP ☐ Water Soluble	☐ AVS ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m) ☐ Plumb ☐ Pore water	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
EFR-001-L	2-15-10	17:30			1																					1 coho frozen
EFR-001-K	2-15-10	17:30			1																					1 Bully frozen
EFC-002-G	2-16-10	14:50			1																					4 Bully frozen
EFC-002-H	2-16-10	14:50			1																					4 Bully frozen
EFC 004 A	2-18-10	13:30																								1 DV, Frozen
EFC 004 A	2-18-10	13:30																								1 DV, Frozen
EFC 004 A	2-18-10	13:30																								1 DV, Frozen
EFC 004 A	2-18-10	13:30																								1 DV, Frozen
EFC 004 A	2-18-10	13:30																								1 DV, Frozen
EFC 004 A	2-18-10	13:00																								1 DV, Frozen

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn

CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn

SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: Contact Ian Zelo at NOAA for analysis required

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature:	Signature:	Signature:
Date/Time: 2-17-10 16:00	Date/Time:	Date/Time:	Date/Time:
Printed Name: Swift Projects	Printed Name:	Printed Name:	Printed Name:
Firm: HDR Alaska	Firm:	Firm:	Firm:

COCSTC 7-04

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

Sediment and Tissue Chemistry

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • FAX (360) 636-1068

SR#: _____

PAGE 1 OF 1 COC # _____

PROJECT NAME: ADAK TANK FARM Spill

PROJECT NUMBER:

PROJECT MANAGER: IAN ZELO (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-375-3456 FAX #

SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M) ☐ PSEP ☐ Water Soluble	☐ AVS ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m) ☐ Plumb ☐ Pore water	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
Rool-1-A	2-15-10	9:57																								
Rool-1-B	2-15-10	9:57																								
Rool-1-C	2-15-10	9:57																								
Rool-2-A	2-15-10	9:57																								
Rool-2-B	2-15-10	9:57																								
Rool-2-C	2-15-10	9:57																								
Rool-3-A	2-15-10	9:57																								
Rool-3-B	2-15-10	9:57																								
Rool-3-C	2-15-10	9:57																								

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn

CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn

SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: Contact IAN ZELO NOAA For ANALYSIS REQUIRED.

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Paul Blanche	Signature:	Signature:	Signature:
Date/Time: 2-17-10/16:00	Date/Time:	Date/Time:	Date/Time:
Printed Name: PAUL BLANCHE	Printed Name:	Printed Name:	Printed Name:
Firm: ADF+G	Firm:	Firm:	Firm:

COCSTC 7-04

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CHAIN OF CUSTODY

Sediment and Tissue Chemistry

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SR#:_____

PAGE 1 OF 7 COC #_____

PROJECT NAME: ADAK TANK Farm Spill

PROJECT NUMBER:

PROJECT MANAGER: IAN ZELO (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-375-3454 FAX #

SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M)	☐ AVS	☐ PSEP ☐ Water Soluble ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m)	☐ Plumb ☐ Pore water Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)	REMARKS
Cool-1-A	2-15-10	11:04																					
Cool-1-B	2-15-10	11:04																					
Cool-1_C	2-15-10	11:04																					
Cool-2-A	2-15-10	11:04																					
Cool-2-B	2-15-10	11:04																					
Cool-2-C	2-15-10	11:04																					
Cool-3-A	2-15-10	11:04																					
Cool-3-B	2-15-10	11:04																					
Cool-3-C	2-15-10	11:04																					

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

_____

_____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____

Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn

CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn

SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: Contact IAN ZELO NOAA for Analysis Required

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Paul Blanche 2-17-10/16:00			
Signature / Date/Time	Signature / Date/Time	Signature / Date/Time	Signature / Date/Time
PAUL BLANCHE ADF+G			
Printed Name / Firm	Printed Name / Firm	Printed Name / Firm	Printed Name / Firm

COCSTC 7-04

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CHAIN OF CUSTODY

Sediment and Tissue Chemistry

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SR#:_____

PAGE 2 OF 7 COC #_____

PROJECT NAME: AOAK TANK FARM SPILL

PROJECT NUMBER:

PROJECT MANAGER: IAN ZELO (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-375-3454 FAX #:

SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M)	☐ AVS ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m)	☐ PSEP ☐ Water Soluble	Metals (list below)	☐ Plumb ☐ Pore water	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water	Volatiles (8260) ☐ TBT only	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
C002-1-A	2-15-10	11:35																									
C002-1-B	2-15-10	11:35																									
C002-1-C	2-15-10	11:35																									
C002-2-A	2-15-10	11:35																									
C002-2-B	2-15-10	11:35																									
C002-2-C	2-15-10	11:35																									
C002-3-A	2-15-10	11:35																									
C002-3-B	2-15-10	11:35																									
C002-3-C	2-15-10	11:35																									

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn

CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn

SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: Contact IAN ZELO NOAA For ANALYSIS REQUIRED

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Paul Blanche 2-17-10 16:00			
Signature / Date/Time	Signature / Date/Time	Signature / Date/Time	Signature / Date/Time
PAUL BLANCHE / ADF&G			
Printed Name / Firm	Printed Name / Firm	Printed Name / Firm	Printed Name / Firm

COCSTC 7-04

Columbia Analytical Services INC.
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CHAIN OF CUSTODY

Sediment and Tissue Chemistry

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • FAX (360) 636-1068

SR#:_____

PAGE 3 OF 3 COC #_____

PROJECT NAME: ADAK TANK FARM Spill

PROJECT NUMBER:

PROJECT MANAGER: IAN ZELO (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-375-3454 FAX #:

SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M)	☐ AVS	☐ SEM (metals list below)	Ammonia ☐ Total (350.1m)	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
C003-1-A	2-15-10	14:37																									
C003-1-B	2-15-10	14:37																									
C003-1-C	2-15-10	14:37																									
C003-2-A	2-15-10	14:37																									
C003-2-B	2-15-10	14:37																									
C003-2-C	2-15-10	14:37																									
C003-3-A	2-15-10	14:37																									
C003-3-B	2-15-10	14:37																									
C003-3-C	2-15-10	14:37																									

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn

CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn

SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: CONTACT IAN ZELO NOAA FOR ANALYSIS REQUIRED

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Paul Blanche	Signature:	Signature:	Signature:
Date/Time: 2-17-10 / 16:00	Date/Time:	Date/Time:	Date/Time:
Printed Name: PAUL BLANCHE	Printed Name:	Printed Name:	Printed Name:
Firm: TDF+G	Firm:	Firm:	Firm:

COCSTC 7-04

Columbia Analytical Services INC.
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CHAIN OF CUSTODY

Sediment and Tissue Chemistry

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SR#: _____

PAGE 4 OF 7 COC #_____

PROJECT NAME: ADAK TANK farm Spill

PROJECT NUMBER:

PROJECT MANAGER: IAN ZELO (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-375-3454 FAX #

SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M)	☐ AVS ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m)	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
C003-4-A	2-15-10	14:37																								
C003-4-B	2-15-10	14:37																								
C003-4-C	2-15-10	14:37																								
C003-5-A	2-15-10	14:37																								
C003-5-B	2-15-10	14:37																								
C003-5-C	2-15-10	14:37																								
C003-6-A	2-15-10	14:37																								
C003-6-B	2-15-10	14:37																								
C003-6-C	2-15-10	14:37																								

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals:	As	Cd	Cr	Cu	Pb	Hg	Ag	Zn	
CA Metals:	Ag	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Zn
SEM Metals:	Cd	Cu	Pb	Hg	Ni	Zn				

SPECIAL INSTRUCTIONS/COMMENTS: Contact IAN ZELO NOAA For ANALYSIS REQUIRED.

* Those ARE BLANK AIR SAMPLES

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Paul Blanche 2-17-10/16:00			
Signature / Date/Time	Signature / Date/Time	Signature / Date/Time	Signature / Date/Time
PAUL BLANCHE / ADF&G			
Printed Name / Firm	Printed Name / Firm	Printed Name / Firm	Printed Name / Firm

COCSTC 7-04

Columbia Analytical Services INC.
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CHAIN OF CUSTODY

Sediment and Tissue Chemistry

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SR#: _____

PAGE 5 OF 7 COC # _____

PROJECT NAME: ADAK TANK FARM SPILL

PROJECT NUMBER:

PROJECT MANAGER: IAN ZELO (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-375-3454 FAX #:

SAMPLER'S SIGNATURE:

NUMBER OF CONTAINERS

☐ Total Volatile Solids ☐ Total Solids

TOC ☐ (ASTM D4129M) ☐ PSEP

Grain size ☐ PSEP ☐ ASTM D422

Sulfide ☐ Total (9030M) ☐ PSEP ☐ Water Soluble

☐ AVS ☐ SEM (metals list below)

Ammonia ☐ Total (350.1m) ☐ Plumb ☐ Pore water

Metals (list below)

Pesticides (8081-L)

PCBs (8082-L) ☐ Aroclors ☐ Congeners

Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L

Organotins ☐ Bulk ☐ Pore Water ☐ TBT only

Volatiles (8260)

Dioxins ☐ 1613 ☐ 8290

☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO

☐ Lipids

Tissue Sample Preparation (Instructions below)

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX		REMARKS
C004-1-A	2-15-10	15:38				
C004-1-B	2-15-10	15:38				
C004-1-C	2-15-10	15:38				
C004-2-A	2-15-10	15:38				
C004-2-B	2-15-10	15:38				
C004-2-C	2-15-10	15:38				
C004-3-A	2-15-10	15:38				
C004-3-B	2-15-10	15:38				
C004-3-C	2-15-10	15:38				

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn

CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn

SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: CONTACT IAN ZELO NOAA FOR ANALYSIS REQUIRED

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Paul Blanche	Signature:	Signature:	Signature:
Date/Time: 2-17-10 / 16:00	Date/Time:	Date/Time:	Date/Time:
Printed Name: PAUL BLANCHE	Printed Name:	Printed Name:	Printed Name:
Firm: ADF&G	Firm:	Firm:	Firm:

COCSTC 7-04

Columbia Analytical Services INC.
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CHAIN OF CUSTODY

Sediment and Tissue Chemistry

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SR#: _____

PAGE 6 OF 7 COC # _____

PROJECT NAME: APAK TANK Farm Spill

PROJECT NUMBER:

PROJECT MANAGER: IAN ZELO (NOAA)

COMPANY/ADDRESS:

EMAIL:

PHONE # 206-375-3454 FAX #

SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M) ☐ PSEP ☐ Water Soluble	☐ AVS ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m) ☐ Plumb ☐ Pore water	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
C005-1-A	2-15-10	16:17																								
C005-1-B	2-15-10	16:17																								
C005-1-C	2-15-10	16:17																								
C005-2-A	2-15-10	16:17																								
C005-2-B	2-15-10	16:17																								
C005-2-C	2-15-10	16:17																								
C005-3-A	2-15-10	16:17																								
C005-3-B	2-15-10	16:17																								
C005-3-C	2-15-10	16:17																								

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.

____ 5 Day

____ Standard (15 working days)

____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn

CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn

SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: Contact IAN ZELO NOAA For ANALYSIS REQUIRED

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Paul Blanche 2-17-10 16:00			
Signature / Date/Time	Signature / Date/Time	Signature / Date/Time	Signature / Date/Time
PAUL BLANCHE ADF+G			
Printed Name / Firm	Printed Name / Firm	Printed Name / Firm	Printed Name / Firm

COCSTC 7-04

Columbia Analytical Services INC.
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Sediment and Tissue Chemistry

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • FAX (360) 636-1068

SR#: _____

PAGE 7 OF 7 COC # _____

PROJECT NAME: ADAK TANK FARM Spill
PROJECT NUMBER:
PROJECT MANAGER: IAN ZELO (NOAA)
COMPANY/ADDRESS:
EMAIL:
PHONE # 206-375-3454 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	☐ Total Volatile Solids ☐ Total Solids	TOC ☐ (ASTM D4129M) ☐ PSEP	Grain size ☐ PSEP ☐ ASTM D422	Sulfide ☐ Total (9030M) ☐ PSEP ☐ Water Soluble	☐ AVS ☐ SEM (metals list below)	Ammonia ☐ Total (350.1m) ☐ Plumb ☐ Pore water	Metals (list below)	Pesticides (8081-L)	PCBs (8082-L) ☐ Aroclors ☐ Congeners	Semivolatiles ☐ PAH GC/MS SIM ☐ 8270-L	Organotins ☐ Bulk ☐ Pore Water ☐ TBT only	Volatiles (8260)	Dioxins ☐ 1613 ☐ 8290	☐ NWTPH ☐ 8015 ☐ GRO ☐ DRO ☐ RRO	☐ Lipids	Tissue Sample Preparation (Instructions below)				REMARKS
C006-1-A	2-15-10	16:31																							
C006-1-B	2-15-10	16:31																							
C006-1-C	2-15-10	16:31																							
C006-2-A	2-15-10	16:31																							
C006-2-B	2-15-10	16:31																							
C006-2-C	2-15-10	16:31																							
C006-3-A	2-15-10	16:31																							
C006-3-B	2-15-10	16:31																							
C006-3-C	2-15-10	16:31																							

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

___ V. EDD

INVOICE INFORMATION

P.O. # _____

Bill To: _____

TURNAROUND REQUIREMENTS

_____ 24 hr. _____ 48 hr.

_____ 5 Day

_____ Standard (15 working days)

_____ Provide FAX Results

_____ Requested Report Date

Circle which metals are to be analyzed:

SMS Metals: As Cd Cr Cu Pb Hg Ag Zn
CA Metals: Ag As Cd Cr Cu Hg Ni Pb Se Zn
SEM Metals: Cd Cu Pb Hg Ni Zn

SPECIAL INSTRUCTIONS/COMMENTS: Contact IAN ZELO NOAA for ANALYSIS REQUIRED

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature:	Signature:	Signature:
Date/Time: 2-17-10 / 16:00	Date/Time:	Date/Time:	Date/Time:
Printed Name: PAUL BLANKHE	Printed Name:	Printed Name:	Printed Name:
Firm: ADF+G	Firm:	Firm:	Firm:

COCSTC 7-04