Appendix A

Completed Permits and Inspections

AM/PM OH CV GB FR LY CL CAM

ISLAND COUNTY BUILDING DIVISION
INSPECTION REPORT

Address 200 Cornet Bay Rd

Contractor Glacier

Owner

Date 6/30/14

Day Contact Phone

Building Permit No.
Bulkhead
13-1079

☐ Erosion / Sedimentation	☐ Plmbg / Pressure Test	☐ Gas / Wood Appliance
☐ Setbacks and Footings	☐ Shear Wall / Hold Downs	☐ Propane Tank / Line
☐ Bulkhead / Retaining Wall	☐ Gas Pipe / Pressure Test	☐ Set-Up Block / Tie Down
☐ Foundation	☐ Mechanical	☐ **Engineering / Drainage**
☐ Ground Work / Plmbg Test	☐ Masonry / Fireplace	☐ **Health / As-built**
☐ Inter Ftg / Slab Insulation	☐ Framing	☐ Other
☐ Radiant / Hydronic	☐ Insulation	☐ Consultation
☐ Under Floor Framing	☐ Inter Shear / BWP Nail	☒ Final

_____ **ARRV'D** ☐ **CORRECTION REQUIRED** * ☒ **APPROVAL**

_____ **DPRT'D** ☐ **NOT ABLE TO PERFORM INSPECTION** ☐ **VIOLATION**

* HEALTH DEPARTMENT MUST APPROVE SEPTIC SYSTEM PRIOR TO FINAL INSPECTION. FOR HEALTH DEPARTMENT REQUIREMENTS, PLEASE CALL THEM AT 360-679-7350.
* If corrections required, re-inspection must be done prior to covering or concealing areas of construction. Additional fees may be assessed for multiple re-inspections.
* For re-inspection on Whidbey, call (360) 679-7307 — 24 hour notice is required
* On Camano, call (360) 387-3443 ext. 233 — 24 hour notice is required

Main Extension Whidbey (360) 679-7339 Camano (360) 387-3443

Inspector [signature] Date 6/30/14

Questions - Inspectors available between 8 and 9 AM

Building Permit

Island County Planning and Community Development
P. O. Box 5000, Coupeville, WA 98239

Inspection Request Line
(360) 679-7307 or (360) 321-5111 ext 7307
Or online at
https://www.islandcounty.net/publicportal/main.aspx
Inspections must be requested by 3:00 PM
the day *prior* to the date requested
Other Department inspections require minimum of 48 hours notice
This Permit Card and the approved set of Plans MUST be on-site.

Permit No. 13-1079
Parcel No. R13936-508-2420
Contractor GLACIER ENVIRONMENTAL SERVICES
Lender _____

Occupancy R **Type** VB
Seismic zone _____

# of Bedrooms _____

Main Floor _____

2nd Floor _____ **3rd Floor** _____

Bsmt Fin/Unfin _____

Garage _____

Deck/Porch Covered _____

Deck/Porch UnCov'd _____
Other 340' SHEET PILE BULKD

Setbacks for _____
Front( ) _____ **Rear ( )** _____
Side ( ) _____ **Side ( )** _____

CODE: IBC **HAC** (FLOOD) **NOISE**
Notes _____
FDP 13-1090

Permit *EXPIRES* on the date below
Final or Renew by 12/1 2015

Owner DECEPTION PASS MARINA (DOCKETT) OH
Address 200 CORNET BAY RD

Setback – Excavation – Footing - Foundation

To be confirmed *BEFORE* any concrete is poured		
	Erosion/Sediment	
	Setbacks and Footings	
	Blkhd / Retaining Wall	
	Foundation	
	Int. Ftg / Slab Insulation	
	Hydronic	

Under Floor (UF)

To be made *BEFORE* floor sheathing is applied		
	Grndwork/Plmbg Test	
	UF Framing	

Rough In

Electrical Permit Required from the Dept. of Labor and Industries. Wiring by other than owner requires a licensed electrician. Plumbing by other than owner requires licensed plumber.		
	ShearWall/HoldDown	
	Plumbing/PressTest	
	GasPipe/PressTest	
	Mechanical	
	Masonry/Fireplace	
	FEMA Elevation Cert.	
	Framing	
	Insulation	
	IntShear/BWP Nail	
	Propane Tank/Line	
	Other	

Other Department Sign-Offs As Per Conditions Of Approval Required Prior To A Final Inspection

Public Works	Health	Planning
StormH2O/Drainage, etc.	Septic Water	Landscaping Parking, etc.

Final

Structures must be upgraded to meet current smoke detector standards for *any* addition or repair work over $1,000.00		
	House Numbers	
	Gas/Wood Appliance	
	Building	

Manufactured/Mobile Home

All work done by someone other than owner, requires CTED certified installer sign-off		
	Set-Up Blocking/Tie Downs	
	Skirting/Final	

Note: Upon payment of fee, a Building Permit may be renewed once. A new permit will be required for any portion not completed within the extension period.

Island County
Planning and Community Development
P. O. Box 5000, Coupeville, WA 98239-5000

13-1080
SITE ADDRESS: 200 CORNET BAY RD

Flood Development Permit
ISSUED: 12/30/2013
EXPIRES: 12/30/2015

PARCEL: R13436-506-2420

PID 45249

APPLICANT: DECEPTION PASS MARINA INC
200 CORNET BAY RD
OAK HARBOR, WA 98277

OWNER: DECEPTION PASS MARINA INC
200 CORNET BAY RD
OAK HARBOR, WA 98277

FEES PAID:

Flood Development Permit	$50.00
Technology Fee - Building	$1.50
Total:	$51.50

REQUIRED INSPECTIONS

Final Building — no report see 13-1081

CONDITIONS

- Provide completed Flood Elevation Certificate to the building department prior to final inspection.
- Corps of Engineers permit NWS-2013-478.

Issued By: Cindy White

Contractor or Authorized Agent: _____ **Date:** 12/30/13

AM/PM

OH CV GB FR LY CL CAM

ISLAND COUNTY BUILDING DIVISION
INSPECTION REPORT

Address 200 Cornet Bay Rd

Contractor Glacier

Owner

Date 6/30/14

Building Permit No. 13-1081

Day Contact Phone

☐ Erosion / Sedimentation	☐ Plmbg / Pressure Test	☐ Gas / Wood Appliance
☐ Setbacks and Footings	☐ Shear Wall / Hold Downs	☐ Propane Tank / Line
☐ Bulkhead / Retaining Wall	☐ Gas Pipe / Pressure Test	☐ Set-Up Block / Tie Down
☐ Foundation	☐ Mechanical	☐ **Engineering / Drainage**
☐ Ground Work / Plmbg Test	☐ Masonry / Fireplace	☐ **Health / As-built**
☐ Inter Ftg / Slab Insulation	☐ Framing	☐ Other
☐ Radiant / Hydronic	☐ Insulation	☐ Consultation
☐ Under Floor Framing	☐ Inter Shear / BWP Nail	☒ Final

_____ **ARRV'D** ☐ **CORRECTION REQUIRED** * ☒ **APPROVAL**

_____ **DPRT'D** ☐ **NOT ABLE TO PERFORM INSPECTION** ☐ **VIOLATION**

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Main Extension Whidbey (360) 679-7339 Camano (360) 387-3443

Inspector [signature] Date 6/30/14

Questions - Inspectors available between 8 and 9 AM

Building Permit

Island County Planning and Community Development
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(360) 679-7307 or (360) 321-5111 ext 7307
Or online at
https://www.islandcounty.net/publicportal/main.aspx
Inspections must be requested by 3:00 PM
the day *prior* to the date requested

Other Department inspections require minimum of 48 hours notice

This Permit Card and the approved set of Plans MUST be on-site.

Permit No. 13-1081
Parcel No. R13426-586-2420
Contractor GLACIER ENVIRONMENTAL SERVICES
Lender _____

Occupancy M **Type** VB
Seismic zone _____

# of Bedrooms _____

Main Floor _____

2nd Floor _____ **3rd Floor** _____

Bsmt Fin/Unfin _____

Garage _____

Deck/Porch Covered _____

Deck/Porch UnCov'd _____

Other TEMP. RELOCATION OF BLDG - RETURN TO SITE ON AS FOUND.

Setbacks for
Front( ) _____ **Rear ( )** _____
Side ( ) _____ **Side ( )** _____

CODE: 18 **HAC** **FLOOD** **NOISE**

Notes _____

Permit *EXPIRES* on the date below
Final or Renew by 12/2015

Owner DECEPTION PASS MARINA (OWNER)
Address 200 CORNET BAY RD

Setback – Excavation – Footing - Foundation

To be confirmed *BEFORE* any concrete is poured	Erosion/Sediment	
	Setbacks and Footings	
	Blkhd / Retaining Wall	
	Foundation	
	Int. Ftg / Slab Insulation	
	Hydronic	

Under Floor (UF)

To be made *BEFORE* floor sheathing is applied	Grndwork/Plmbg Test	
	UF Framing	

Rough In

Electrical Permit Required from the Dept. of Labor and Industries. Wiring by other than owner requires a licensed electrician. Plumbing by other than owner requires licensed plumber.	ShearWall/HoldDown	
	Plumbing/PressTest	
	GasPipe/PressTest	
	Mechanical	
	Masonry/Fireplace	
	FEMA Elevation Cert.	
	Framing	
	Insulation	
	IntShear/BWP Nail	
	Propane Tank/Line	
	Other	

Other Department Sign-Offs As Per Conditions Of Approval Required Prior To A Final Inspection

Public Works	Health	Planning
StormH2O/Drainage, etc.	Septic Water	Landscaping Parking, etc.

Final

Structures must be upgraded to meet current smoke detector standards for *any* addition or repair work over $1,000.00	House Numbers	
	Gas/Wood Appliance	
	Building	

Manufactured/Mobile Home

All work done by someone other than owner, requires CTED certified installer sign-off	Set-Up Blocking/Tie Downs	
	Skirting/Final	

Note: Upon payment of fee, a Building Permit may be renewed once. A new permit will be required for any portion not completed within the extension period.

View Inspections

Permit

Permit Number	2321901E
Status	Inactive
Applied	1/2/2014
Total Corrections	18
Special Instructions	This permit has been finaled.
Fee Due	$0.00

Applicant

Permit Holder	S&M ELECTRIC LLC
Name	
Address	6824 150TH ST SW APT 23
City	LAKEWOOD

Inspection Site

Company Name	cornet bay company
Owner Name	
Address	200 cornet bay rd
City	OAK HARBOR

Return to Permit List

Requests

Created	Requested	Reason	Status	Action
7/1/2014	7/2/2014		Request Taken	Edit/Cancel Request
6/26/2014	6/27/2014		Request Taken	Edit/Cancel Request
6/18/2014	6/19/2014		Request Taken	Edit/Cancel Request
6/9/2014	6/10/2014		Request Taken	Edit/Cancel Request
6/5/2014	6/6/2014		Request Taken	Edit/Cancel Request
5/15/2014	5/16/2014		Request Taken	Edit/Cancel Request
5/6/2014	5/7/2014		Request Taken	Edit/Cancel Request
4/30/2014	5/1/2014		Request Taken	Edit/Cancel Request
4/17/2014	4/18/2014		Request Taken	Edit/Cancel Request
4/9/2014	4/10/2014		Request Taken	Edit/Cancel Request
4/4/2014	4/5/2014		Request Taken	Edit/Cancel Request

Inspections

Inspected	Inspector	Corrections Written	Corrections Completed	Comments
7/2/2014	JONES, MICHAEL P	0	9	
6/27/2014	JONES, MICHAEL P	0	1	
6/20/2014	JONES, MICHAEL P	10	4	
6/10/2014	JONES, MICHAEL P	3	3	
6/9/2014	JONES, MICHAEL P	1	1	
5/16/2014	JONES, MICHAEL P	0	0	
5/8/2014	JONES, MICHAEL P	3	0	
5/1/2014	JONES, MICHAEL P	1	0	
4/18/2014	JONES, MICHAEL P	0	0	
4/10/2014	JONES, MICHAEL P	0	0	

4/7/2014	JONES, MICHAEL P	0	0

Details

Inspected	Inspection	Result	Comment
7/2/2014	Finals,Commercial	AC - Approved Complete	NOTE: No propane or fuel dispensers
6/27/2014	Finals,Commercial	DP - Disapproved Partial	
6/20/2014	Service,Altered,Underground,240V,>600A	AC - Approved Complete	800 amp
6/20/2014	Finals,Commercial	DP - Disapproved Partial	
6/10/2014	Service,Altered,Underground,240V,>600A	DP - Disapproved Partial	800 amp
6/9/2014	Service,Altered,Underground,240V,401-600A	DC - Disapproved Complete	
5/16/2014	Service,New,Underground,240V,201-400A	AC - Approved Complete	at store
5/8/2014	Cover,Circuit,Wall	AP - Approved Partial	panels not ready
5/1/2014	Service,Altered,Underground,240V,>600A	DP - Disapproved Partial	
4/18/2014	Cover,Conduit Only,Underground	AP - Approved Partial	PVC to sin,location septic,propane service at store and dock service
4/10/2014	Miscellaneous,Other	AC - Approved Complete	fee due sent
4/10/2014	Feeder,Temporary,Exposed,240V,<=100A	AC - Approved Complete	temp dock power
4/7/2014	Grounding/Bonding,Service	AC - Approved Complete	ufer ground
4/7/2014	Cover,Conduit Only,Underground	AP - Approved Partial	along bulk head

4/18/2014	JONES, MICHAEL P	0	0	
4/10/2014	JONES, MICHAEL P	0	0	
4/7/2014	JONES, MICHAEL P	0	0	

Details

Inspected	Inspection	Result	Comment
7/2/2014	Finals,Commercial	AC - Approved Complete	NOTE: No propane or fuel dispensers
6/27/2014	Finals,Commercial	DP - Disapproved Partial	
6/20/2014	Service,Altered,Underground,240V,>600A	AC - Approved Complete	800 amp
6/20/2014	Finals,Commercial	DP - Disapproved Partial	
6/10/2014	Service,Altered,Underground,240V,>600A	DP - Disapproved Partial	800 amp
6/9/2014	Service,Altered,Underground,240V,401-600A	DC - Disapproved Complete	
5/16/2014	Service,New,Underground,240V,201-400A	AC - Approved Complete	at store
5/8/2014	Cover,Circuit,Wall	AP - Approved Partial	panels not ready
5/1/2014	Service,Altered,Underground,240V,>600A	DP - Disapproved Partial	
4/18/2014	Cover,Conduit Only,Underground	AP - Approved Partial	PVC to sin,location septic,propane service at store and dock service

4/10/2014	Miscellaneous,Other	AC - Approved Complete	fee due sent
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4/7/2014	Grounding/Bonding,Service	AC - Approved Complete	ufer ground
4/7/2014	Cover,Conduit Only,Underground	AP - Approved Partial	along bulk head

JOBSITE COPY
ELECTRICAL CONTRACTOR
ELECTRICAL WORK PERMIT #2356810E

Contractor Name
S&M ELECTRIC LLC

License Number
SMELEEL876D8

Installation Description:
connecting temporary power to trailer

Purchaser's mailing address
6824 150TH ST SW APT 23
LAKEWOOD WA 98439
Telephone number
3605368261

Services to inspect:

Description	Quantity	Amount
Temporary Service for constr or stage concert - 0 - 60 AMP	2	$104.20

Inspection Fee: $104.20

Premises owner's name
cornet bay company

Address of inspection
200 cornet bay rd

OAK HARBOR

Power company
Puget Sound Energy

The department will perform 1 inspection for permits where total fee paid on permit is less than $89.79. For more than 1 inspection, additional fees are required.
Additional Fees May Be Assessed Upon Field Inspection

This permit expires one (1) year after the date of purchase.

Applied:4/9/2014 Expiration:4/9/2015

	Date	Approved By		Date	Approved By
WALLS					
Insulation Only			**SERVICE**		
Cover			**FEEDER**		
CEILING					
Insulation Only			**THERMOSTAT**		
Cover			**DITCH**		

Inspection Date	Area, Building or Equipment Inspected	Action Taken	Electrical Inspector

Property Owner: Retain Permit Number for your records

Attention Applicant! The Department will not conduct this inspection if there are unrestrained animals on the premises. Failure to comply with this requirement may result in additional inspection service fees and delay in service.

JOBSITE COPY
ELECTRICAL CONTRACTOR
ELECTRICAL WORK PERMIT #2321901E

Contractor Name
S&M ELECTRIC LLC

License Number
SMELEEL876D8

Installation Description:
Disconnecting power for site clean up

Purchaser's mailing address
6824 150TH ST SW APT 23
LAKEWOOD WA 98439
Telephone number
3605368261

Services to inspect:
Description Quantity Amount
Altered Service or Feeder (no circuits) - 201 - 6 1 $228.40
Inspection Fee: $228.40
The department will perform 1 inspection for permits where total fee paid on permit is less than $89.79. For more than 1 inspection, additional fees are required.
Additional Fees May Be Assessed Upon Field Inspection

Premises owner's name
cornet bay company

Address of inspection
200 cornet bay rd

OAK HARBOR

Power company
Puget Sound Energy

This permit expires one (1) year after the date of purchase.

Applied:1/2/2014 Expiration:1/2/2015

	Date	Approved By		Date	Approved By
WALLS					
Insulation Only			**SERVICE**		
Cover			**FEEDER**		
CEILING					
Insulation Only			**THERMOSTAT**		
Cover			**DITCH**		

Inspection Date	Area, Building or Equipment Inspected	Action Taken	Electrical Inspector

Property Owner: Retain Permit Number for your records

Attention Applicant! The Department will not conduct this inspection if there are unrestrained animals on the premises. Failure to comply with this requirement may result in additional inspection service fees and delay in service.

AM/PM

OH CV GB FR LY CL CAM

200
6.18

ISLAND COUNTY BUILDING DIVISION
INSPECTION REPORT

Address 200 Cornet Bay Rd

Contractor Alan Hall @ Glacier

Owner

Date 6.19.14

Day Contact Phone 206-446-5280

Building Permit No.

13-1082

❑ Erosion / Sedimentation	❑ Plmbg / Pressure Test	❑ Gas / Wood Appliance
❑ Setbacks and Footings	❑ Shear Wall / Hold Downs	❑ Propane Tank / Line
❑ Bulkhead / Retaining Wall	❑ Gas Pipe / Pressure Test	❑ Set-Up Block / Tie Down
❑ Foundation	❑ Mechanical	❑ **Engineering / Drainage**
❑ Ground Work / Plmbg Test	❑ Masonry / Fireplace	❑ **Health / As-built**
❑ Inter Ftg / Slab Insulation	❑ Framing	☑ Other Fuel lines
❑ Radiant / Hydronic	❑ Insulation	❑ Consultation
❑ Under Floor Framing	❑ Inter Shear / BWP Nail	❑ Final

12:22 **ARRV'D** ❑ **CORRECTION REQUIRED** * ☑ **APPROVAL**

DPRT'D ❑ **NOT ABLE TO PERFORM INSPECTION** ❑ **VIOLATION**

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Main Extension — Whidbey (360) 679-7339 — Camano (360) 387-3443

Inspector [signature] Date 6/19/14

Questions - Inspectors available between 8 and 9 AM

Building Permit

Island County Planning and Community Development
P. O. Box 5000, Coupeville, WA 98239

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Permit No. 13-1082
Parcel No. R13436-506-2420
Contractor GLACIER ENVIRONMENTAL SERVICES
Lender ______

Occupancy M **Type** VB
Seismic zone ______

# of Bedrooms ______

Main Floor ______

2nd Floor ______ **3rd Floor** ______

Bsmt Fin/Unfin ______

Garage ______

Deck/Porch Covered ______

~~Deck/Porch UnCov'd~~ DEMO & REPLACE
Other FUEL LINES + VENT SYSTEM

Setbacks for ______
Front( ) ______ **Rear ( )** ______
Side ( ) ______ **Side ( )** ______

CODE: IBC **HAC FLOOD NOISE**
Notes ______

Permit *EXPIRES* on the date below
Final or Renew by 12/2015

Owner DECEPTION PASS MARINA (DUNDEE)

Address 200 CORNET BAY RD

Setback – Excavation – Footing - Foundation		
To be confirmed *BEFORE* any concrete is poured	Erosion/Sediment	
	Setbacks and Footings	
	Blkhd / Retaining Wall	
	Foundation	
	Int. Ftg / Slab Insulation	
	Hydronic	

Under Floor (UF)		
To be made *BEFORE* floor sheathing is applied	Grndwork/Plmbg Test	
	UF Framing	

Rough In		
Electrical Permit Required from the Dept. of Labor and Industries. Wiring by other than owner requires a licensed electrician. Plumbing by other than owner requires licensed plumber.	ShearWall/HoldDown	
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	GasPipe/PressTest	
	Mechanical	
	Masonry/Fireplace	
	FEMA Elevation Cert.	
	Framing	
	Insulation	
	IntShear/BWP Nail	
	Propane Tank/Line	
	Other	

Other Department Sign-Offs As Per Conditions Of Approval Required Prior To A Final Inspection

Public Works	Health	Planning
StormH2O/Drainage, etc.	Septic Water	Landscaping Parking, etc.

Final		
Structures must be upgraded to meet current smoke detector standards for *any* addition or repair work over $1,000.00	House Numbers	
	Gas/Wood Appliance	
	Building	

Manufactured/Mobile Home		
All work done by someone other than owner, requires CTED certified installer sign-off	Set-Up Blocking/Tie Downs	
	Skirting/Final	

Note: Upon payment of fee, a Building Permit may be renewed once. A new permit will be required for any portion not completed within the extension period.

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

Regulatory Branch

SEP 19 2013

Mr. Robert W. Warren
Toxics Cleanup Program
Washington Department of Ecology
3190 160th Avenue Southeast
Bellevue, Washington 98008

Reference: NWS-2013-478
WA State Dept of Ecology
(Cornet Bay Marina
Cleanup)

Dear Mr. Warren:

We have reviewed your application to install 340 linear feet of sheet pile bulkhead, temporarily move sections of existing docks to allow access for the new bulkhead, place a temporary access float between two existing mooring docks during construction, and demolish the existing timber bulkhead in Cornet Bay, Deception Pass near Oak Harbor, Island County, Washington. Based on the information you provided to us, Nationwide Permit (NWP) 38, *Cleanup of Hazardous and Toxic Waste* (Federal Register February 21, 2012, Vol. 77, No. 34), authorizes your proposal as depicted on the enclosed drawings dated April 12, 2013 provided you implement the mitigation plan dated July 1, 2013.

In order for this authorization to be valid, you must ensure the work is performed in accordance with the enclosed *NWP 38, Terms and Conditions* and the following special conditions:

a. You must implement and abide by the Endangered Species Act (ESA) requirements and/or agreements set forth in the *Cornet Bay Marina Model Toxics Control Act (MTCA) Cleanup Biological Evaluation*, dated April 2013, in its entirety. The U.S. Fish and Wildlife Service (USFWS) concurred with a finding of "may affect, not likely to adversely affect" based on this document on September 10, 2013 (USFWS Reference Number 01EWFW-2013-I-0425). The National Marine Fisheries Service (NMFS) concurred with a finding of "may affect, not likely to adversely affect" based on this document on July 30, 2013 (NMFS Reference Number NWR-2013-10322). Both agencies will be informed of this permit issuance. Failure to comply with the commitments made in this document constitutes non-compliance with the ESA and your

U.S. Army Corps of Engineers permit. The USFWS/NMFS is the appropriate authority to determine compliance with ESA.

b. In order to meet the requirements of the Endangered Species Act (ESA) and the projection of Puget Sound Chinook, steelhead, and Coastal/Puget Sound bull trout, the permittee may conduct the authorized activities from July 16 through February 15 in any year this permit is valid. The permittee shall not conduct work authorized by this permit from February 16 through July 15 in any year this permit is valid.

c. A professional archaeologist must be on-site to monitor for the presence of archaeological resources during all ground disturbing construction activities within the Cornet Bay Marina MTCA Cleanup Project. The permittee must implement the archaeological monitoring plan titled "*Archaeological monitoring Plan for Cornet Bay marina MTCA Cleanup Project*", dated August 7, 2013.

d. The permittee must notify the Swinomish Indian Tribe Community, Cultural Resources Protection Office, Larry Campbell, by phone at (360) 466-7352 and by email at lcampbell@swinomish.nsn.us, at least 24 hours prior to any ground disturbing construction activities that would require archaeological monitoring and the permittee must facilitate reasonable access for tribal monitoring if so requested.

e. A summary report of the findings of the archaeological monitoring must be prepared and submitted to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch within 90 days of the completion of all ground disturbing activities.

f. If human remains, historic resources, or archaeological resources are encountered during construction, all ground disturbing activities shall cease in the immediate area and you shall immediately (within one business day of discovery) notify the U.S. Army Corps of Engineers (Corps), Seattle District, Regulatory Branch, the Washington State Department of Archaeology & Historic Preservation, and the Swinomish Indian Tribe. You shall perform any work required by the Corps in accordance with Section 106 of the National Historic Preservation Act and Corps regulations.

We have reviewed your project pursuant to the requirements of the ESA, the Magnuson-Stevens Fishery Conservation and Management Act and the National Historic Preservation Act. We have determined this project complies with the requirements of these laws provided you comply with all of the permit general and special conditions.

Please be reminded that Special Condition "a" through "b" of your permit requires that you implement and abide by the ESA requirements and/or agreements set forth in the Biological

Evaluation (BE) for this project. Failure to comply with the commitments made in the BE constitutes non-compliance with the ESA and with this authorization.

Please note that Seattle District NWP Regional General Condition 6, Cultural Resources and Human Burials, found in the *Nationwide Permit Terms and Conditions* enclosure, details procedures should an inadvertent discovery occur. You must ensure that you comply with this condition during the construction of your project.

The authorized work complies with the Washington State Department of Ecology's (Ecology) Water Quality Certification and the Coastal Zone Management Act requirements for this NWP. No further coordination with Ecology is required.

Cornet Bay is a water of the U.S. If you believe this is inaccurate, you may request a preliminary or approved jurisdictional determination (JD). If one is requested, please be aware that we may require the submittal of additional information to complete the JD and work authorized in this letter may not occur until the JD has been completed.

Our verification of this NWP authorization is valid until March 18, 2017, unless the NWP is modified, reissued, or revoked prior to that date. If the authorized work has not been completed by that date and you have commenced or are under contract to commence this activity before March 18, 2017, you will have until March 18, 2018, to complete the activity under the enclosed terms and conditions of this NWP. Failure to comply with all terms and conditions of this NWP verification invalidates this authorization and could result in a violation of Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act. You must also obtain all State and local permits that apply to this project.

You are cautioned that any change in project location or plans will require that you submit a copy of the revised plans to this office and obtain our approval before you begin work. Deviating from the approved plans could result in the assessment of criminal or civil penalties. Please note that we may need to reinitiate consultation with the NMFS and/or USFWS in order to authorize any work not already included in the enclosed plans.

Upon completing the authorized work, you must fill out and return the enclosed *Certificate of Compliance with Department of the Army Permit* form. Thank you for your cooperation during the permitting process. We are interested in your experience with our Regulatory Program and encourage you to complete a customer service survey form. This form and information about our program is available on our website at www.nws.usace.army.mil select "Regulatory Branch, Permit Information" and then "Contact Us".

If you have any questions, please contact me at olivia.h.romano@usace.army.mil or at (206) 764-6960.

Sincerely,

Olivia Romano, Project Manager
Regulatory Branch

Enclosures

US Army Corps of Engineers ®
Seattle District

NATIONWIDE PERMIT 38
Terms and Conditions

Effective Date: June 15, 2012

In addition to any special condition that may be required on a case-by-case basis by the District Engineer, the following terms and conditions must be met, as applicable, for a Nationwide Permit authorization to be valid in Washington State.

A. DESCRIPTION OF AUTHORIZED ACTIVITIES

38. Cleanup of Hazardous and Toxic Waste. Specific activities required to effect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Court ordered remedial action plans or related settlements are also authorized by this NWP. This NWP does not authorize the establishment of new disposal sites or the expansion of existing sites used for the disposal of hazardous or toxic waste.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 31.) (Sections 10 and 404)

Note: Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA as approved or required by EPA, are not required to obtain permits under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

B. CORPS NATIONAL GENERAL CONDITIONS FOR ALL NWPs

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR § 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will

notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.noaa.gov/fisheries.html respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed

activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332. (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment. (2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered. (3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). (4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided. (5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is

best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____

(Transferee)

_____

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include: (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions; (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and (c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either: (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information: (1) Name, address and telephone numbers of the prospective permittee; (2) Location of the proposed project; (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans); (4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate; (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan. (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level. (2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than

minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5. (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act. (4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan

before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

C. CORPS SEATTLE DISTRICT REGIONAL GENERAL CONDITIONS

1. Aquatic Resources Requiring Special Protection. Activities resulting in a loss of waters of the United States in a mature forested wetland, bog, bog-like wetland, aspen-dominated wetland, alkali wetland, wetlands in a dunal system along the Washington coast, vernal pools, camas prairie wetlands, estuarine wetlands, and wetlands in coastal lagoons cannot be authorized by a NWP, except by the following NWPs:

NWP 3 – Maintenance
NWP 20 – Oil Spill Cleanup
NWP 32 – Completed Enforcement Actions
NWP 38 – Cleanup of Hazardous and Toxic Waste

In order to use one of the above-referenced NWPs in any of the aquatic resources requiring special protection, you must submit a pre-construction notification to the District Engineer in accordance with Nationwide Permit General Condition 31 (Pre-Construction Notification) and obtain written approval before commencing work.

2. Commencement Bay. The following NWPs may not be used to authorize activities located in the Commencement Bay Study Area (see Figure 1 at www.nws.usace.army.mil, select Regulatory Permits then Permit Guidebook, then Nationwide Permits) requiring Department of the Army authorization:

NWP 12 – Utility Line Activities (substations)
NWP 13 – Bank Stabilization
NWP 14 – Linear Transportation Projects
NWP 23 – Approved Categorical Exclusions
NWP 29 – Residential Developments
NWP 39 – Commercial and Institutional Developments
NWP 40 – Agricultural Activities
NWP 41 – Reshaping Existing Drainage Ditches
NWP 42 – Recreational Facilities
NWP 43 – Stormwater Management Facilities

3. New Bank Stabilization Prohibition Areas in Tidal Waters of Puget Sound. Activities involving new bank stabilization in tidal waters in Water Resource Inventory Areas (WRIAs) 8, 9, 10, 11, and 12 (within the specific area identified on Figure 2 at www.nws.usace.army.mil, select Regulatory Permits then Permit Guidebook, then Nationwide Permits) cannot be authorized by a NWP.

4. Bank Stabilization. Any project including new or maintenance bank stabilization activities requires pre-construction notification to the District Engineer in accordance with Nationwide Permit General Condition 31 for Pre-Construction Notification. This requirement does not apply to maintenance work exempt by 33 CFR 323.4 (a)(2). Each notification must also include the following information:

a. Need for the work, including the cause of the erosion and the threat posed to structures, infrastructure, and/or public safety. The notification must also include a justification for the need to place fill or structures waterward of the line of the Corps' jurisdiction (typically, the ordinary high water mark or mean higher high water mark).

b. Current and expected post-project sediment movement and deposition patterns in and near the project area. In tidal waters, describe the location and size of the nearest bluff sediment sources (feeder bluffs) to the project area and current and expected post-project nearshore drift patterns in the project area.

c. Current and expected post-project habitat conditions, including the presence of fish, wildlife and plant species, submerged aquatic vegetation, spawning habitat, and special aquatic sites (e.g., vegetated shallows, riffle and pool complexes, or mudflats) in the project area.

d. In rivers and streams, an assessment of the likely impact of the proposed work on upstream, downstream and cross-stream properties (at a minimum the area assessed should extend from the nearest upstream bend to the nearest downstream bend of the watercourse). Discuss the methodology used for determining effects. The Corps reserves the right to request an increase in the reach assessment area to fully address the relevant ecological reach and associated habitat.

e. For new bank stabilization activities in rivers and streams, describe the type and length of existing bank stabilization within 300 feet up and downstream of the project area. In tidal areas, describe the type and length of existing bank stabilization within 300 feet along the shoreline on both sides of the project area.

f. Demonstrate the proposed project incorporates the least environmentally damaging practicable bank protection methods. These methods include, but are not limited to, the use of bioengineering, biotechnical design, root wads, large woody material, native plantings, and beach nourishment in certain circumstances. If rock must be used due to site erosion conditions, explain how the bank stabilization structure incorporates elements beneficial to fish. If the Corps determines you have not incorporated the least environmentally damaging practicable bank protection methods and/or have not fully compensated for impacts to aquatic resources, you must submit a compensatory mitigation plan to compensate for impacts to aquatic resources.

g. A planting plan using native riparian plant species unless the applicant demonstrates a planting plan is not appropriate or not practicable.

5. Crossings of Waters of the United States. Any project including installing, replacing, or modifying crossings of waters of the United States, such as culverts, requires pre-construction notification to the District Engineer in accordance with Nationwide Permit General Condition 31 for Pre-Construction Notification. This requirement does not apply to maintenance work exempt by 33 CFR 323.4 (a)(2). Each notification must also include the following information:

a. Need for the crossing.

b. Crossing design criteria and design methodology.

c. Rationale behind using the specific design method for the crossing.

6. Cultural Resources and Human Burials. Permittees must immediately stop work and notify the District Engineer within 24 hours if, during the course of conducting authorized work, human burials, cultural resources, or historic properties, as identified by the National Historic Preservation Act, are discovered. Failure to stop work in the area of discovery until the Corps can comply with the provisions of 33 CFR 325 Appendix C, the National Historic Preservation Act, and other pertinent laws and regulations could result in a violation of state and federal laws. Violators are subject to civil and criminal penalties.

7. Essential Fish Habitat. An activity which may adversely affect essential fish habitat, as identified under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), may not be authorized by NWP until essential fish habitat requirements have been met by the applicant and the Corps. Non-federal permittees shall notify the District Engineer if essential fish habitat may be affected by, or is in the vicinity of, a proposed activity and shall not begin work until notified by the District Engineer that the requirements of the essential fish habitat provisions of the MSA have been satisfied and the activity is authorized. The notification must identify the type(s) of essential fish habitat (e.g., Pacific salmon, groundfish, and/or coastal-pelagic species) managed by a Fishery Management Plan that may be affected. Information about essential fish habitat is available at www.nwr.noaa.gov/.

8. Vegetation Protection and Restoration. Permittees must clearly mark all construction area boundaries before beginning work. The removal of native vegetation in riparian areas and wetlands, and the removal of submerged aquatic vegetation in estuarine and tidal areas must be avoided and minimized to the maximum extent practicable. Areas subject to temporary vegetation removal shall be replanted with

appropriate native species by the end of the first planting season following the disturbance except as waived by the District Engineer. If an aquaculture area is permitted to impact submerged aquatic vegetation under NWP 48, the aquaculture area does not need to be replanted with submerged aquatic vegetation.

9. Access. You must allow representatives of this office to inspect the authorized activity at any time deemed necessary to ensure the work is being, or has been, accomplished in accordance with the terms and conditions of your permit.

10. Contractor Notification of Permit Requirements. The permittee must provide a copy of the nationwide permit verification letter, conditions, and permit drawings to all contractors involved with the authorized work, prior to the commencement of any work in waters of the U.S.

D. CORPS REGIONAL SPECIFIC CONDITIONS FOR THIS NWP: NONE

E. STATE 401 CERTIFICATION GENERAL CONDITIONS:

1. **For in-water construction activities**. Individual 401 review is required for projects or activities authorized under NWPs that will cause, or be likely to cause or contribute to an exceedence of a State water quality standard (WAC 173-201A) or sediment management standard (WAC 173-204).

   ***Note**: State water quality standards are posted on Ecology's website: http://www.ecy.wa.gov/programs/wq/swqs/. Click "Surface Water Criteria" for freshwater and marine water standards. Sediment management standards are posted on Ecology's website: http://www.ecy.wa.gov/biblio/wac173204.html. Information is also available by contacting Ecology's Federal Permit staff.*

2. **Projects or Activities Discharging to Impaired Waters**. Individual 401 review is required for projects or activities authorized under NWPs if the project or activity will occur in a 303(d) listed segment of a waterbody or upstream of a listed segment and may result in further exceedences of the specific listed parameter.

   ***Note**: To determine if your project or activity is in a 303(d) listed segment of a waterbody, visit Ecology's Water Quality Assessment webpage for maps and search tools, http://www.ecy.wa.gov/programs/wq/303d/2008/. Information is also available by contacting Ecology's Federal Permit staff.*

3. **Notification**. For projects or activities that will require Individual 401 review, applicants must provide Ecology with the same documentation provided to the Corps (as described in Corps Nationwide Permit General Condition 31, Pre-Construction Notification), including, when applicable:

   (a) A description of the project, including site plans, project purpose, direct and indirect adverse environmental effects the project would cause, and any other Department of the Army permits used or intended to be used to authorize any part of the proposed project or any related activity.

   (b) Delineation of special aquatic sites and other waters of the United States. Wetland delineations must be prepared in accordance with the current method required by the Corps and shall include Ecology's Wetland Rating form. Wetland rating forms are subject to review and verification by Ecology staff.

   ***Note**: Wetland rating forms are available on Ecology's Wetlands website:*

http://www.ecy.wa.gov/programs/sea/wetlands/ratingsystems or by contacting Ecology's Federal Permit staff.

(c) A statement describing how the mitigation requirement will be satisfied. A conceptual or detailed mitigation or restoration plan may be submitted.

Mitigation plans submitted for Ecology review and approval shall be based on the guidance provided in Wetland Mitigation in Washington State, Parts 1 and 2 (Ecology Publications #06-06-011a and #06-06-011b).

(d) Coastal Zone Management Program "Certification of Consistency" Form if the project is located within a coastal county (Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pacific, Pierce, San Juan, Skagit, Snohomish, Thurston, Wahkiakum, and Whatcom counties).

***Note**: CZM Certification of Consistency forms are available on Ecology's Federal Permit website: http://www.ecy.wa.gov/programs/sea/fed-permit/index.html or by contacting Ecology's Federal Permit staff.*

(e) Other applicable requirements of Corps Nationwide Permit General Condition 31, Corps Regional Conditions, or notification conditions of the applicable NWP.

***Note**: Ecology has 180 days from receipt of applicable documents noted above **and** a copy of the final authorization letter from the Corps providing coverage for a proposed project or activity under the NWP Program to issue a WQC and CZM consistency determination response. If more than 180 days pass after Ecology's receipt of these documents, your requirement to obtain an individual WQC and CZM consistency determination response becomes waived.*

4. **Aquatic resources requiring special protection**. Certain aquatic resources are unique, difficult-to-replace components of the aquatic environment in Washington State. Activities that would affect these resources must be avoided to the greatest extent possible. Compensating for adverse impacts to high value aquatic resources is typically difficult, prohibitively expensive, and may not be possible in some landscape settings.

Individual 401 review is required for activities in or affecting the following aquatic resources (and not prohibited by Regional Condition 1):

(a) Wetlands with special characteristics (as defined in the Washington State Wetland Rating Systems for western and eastern Washington, Ecology Publications #04-06-025 and #04-06-015):

- Estuarine wetlands
- Natural Heritage wetlands
- Bogs
- Old-growth and mature forested wetlands
- Wetlands in coastal lagoons
- Interdunal wetlands
- Vernal pools
- Alkali wetlands

(b) Fens, aspen-dominated wetlands, camas prairie wetlands, and marine water with eelgrass (*Zostera marina*) beds (except for NWP 48).

(c) Category 1 wetlands

(d) Category II wetlands with a habitat score ≥ 29 points. This State General Condition does not apply to the following Nationwide Permits:

NWP 20 – Response Operations for Oil and Hazardous Substances
NWP 32 – Completed Enforcement Actions

5. Mitigation. For projects requiring Individual 401 review, adequate compensatory mitigation must be provided for wetland and other water quality-related impacts of projects or activities authorized under the NWP Program.

(a) Mitigation plans submitted for Ecology review and approval shall be based on the guidance provided in Wetland Mitigation in Washington State, Parts 1 and 2 (Ecology Publications #06-06-011a and #06-06-011b) and shall, at a minimum, include the following:

i. A description of the measures taken to avoid and minimize impacts to wetlands and other waters of the U.S.

ii. The nature of the proposed impacts (i.e., acreage of wetlands and functions lost or degraded)

iii. The rationale for the mitigation site that was selected

iv. The goals and objectives of the compensatory mitigation project

v. How the mitigation project will be accomplished, including construction sequencing, best management practices to protect water quality, proposed performance standards for measuring success and the proposed buffer widths

vi. How it will be maintained and monitored to assess progress towards goals and objectives. Monitoring will generally be required for a minimum of five years. For forested and scrub-shrub wetlands, 10 years of monitoring will often be necessary.

vii. How the compensatory mitigation site will be legally protected for the long term.

Refer to Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Ecology Publication #06-06-011b) for guidance on developing mitigation plans.

Ecology encourages the use of alternative mitigation approaches, including advance mitigation and other programmatic approaches such as mitigation banks and programmatic mitigation areas at the local level. If you are interested in proposing use of an alternative mitigation approach, consult with the appropriate Ecology regional staff person. (see http://www.ecy.wa.gov/programs/sea/wetlands/contacts.htm)

Information on the state wetland mitigation banking program is available on Ecology's website: http://www.ecy.wa.gov/programs/sea/wetlands/mitigation/banking/index.html

6. Temporary Fills. Individual 401 review is required for any project or activity with temporary fill in wetlands or other waters of the State for more than 90 days, unless the applicant has received written approval from Ecology.

***Note**: This State General Condition does not apply to projects or activities authorized under NWP 33, Temporary Construction, Access, and Dewatering*

7. **Stormwater discharge pollution prevention**: All projects that involve land disturbance or impervious surfaces must implement prevention or control measures to avoid discharge of pollutants in stormwater runoff to waters of the state. For land disturbances during construction, the permittee must obtain and implement permits where required and follow Ecology's current stormwater manual.

   ***Note**: Stormwater permit information is available at Ecology's Water Quality website: http://www.ecy.wa.gov/programs/wq/stormwater/index.html. Ecology's Stormwater Management and Design Manuals are available at: http://www.ecy.wa.gov/programs/wq/stormwater/municipal/StrmwtrMan.html. Information is also available by contacting Ecology's Federal Permit staff.*

8. **State Certification for PCNs not receiving 45-day response.** In the event the U.S. Army Corps of Engineers does not respond to a complete pre-construction notification within 45 days, the applicant must contact Ecology for Individual 401 review.

F. STATE 401 CERTIFICATION SPECIF**IC CONDITIONS FOR THIS NWP:** Certified subject to conditions. Permittee must meet Ecology 401 General Conditions. Individual 401 review is required for projects or activities authorized under this NWP if:

1. The project or activity involves fill in tidal waters.
2. The project or activity affects ½ acre or more of wetlands.

G. EPA 401 CERTIFICATION GENERAL CONDITIONS:

A. Any activities in the following types of wetlands and waters of the United States will need to apply for an individual 401 certification: Mature forested wetlands, bogs, bog-like wetlands, wetlands in dunal systems along the Washington coast, coastal lagoons, vernal pools, aspen-dominated wetlands, alkali wetlands, camas prairie wetlands, estuarine wetlands, including salt marshes, and marine waters with eelgrass or kelp beds.

B. A 401 certification determination is based on the project or activity meeting established turbidity levels. The EPA will be using as guidance the state of Washington's water quality standards [WAC 173-201a] and sediment quality standards [WAC 173-204]. Projects or activities that are expected to exceed these levels or that do exceed these levels will require an individual 401 certification.

The water quality standards allow for short-term turbidity exceedances after all necessary Best Management Practices have been implemented (e.g., properly placed and maintained filter fences, hay bales and/or other erosion control devices, adequate detention of runoff to prevent turbid water from flowing off-site, providing a vegetated buffer between the activity and open water, etc.), and only up to the following limits:

Wetted Stream Width at Discharge Point	Approximate Downstream Point for Determining Compliance
Up to 30 feet	50 feet
>30 to 100 feet	100 feet
>100 feet to 200 feet	200 feet

>200 feet	300 feet
LAKE, POND, RESERVOIR	Lesser of 100 feet or maximum surface dimension

C. 401 certification of projects and activities under NWPs will use Washington State Department of Ecology's most recent stormwater manual or an EPA approved equivalent manual as guidance in meeting water quality standards.

D. For projects and activities requiring coverage under an NPDES permit, certification is based on compliance with the requirements of that permit. Projects and activities not in compliance with NPDES requirements will require individual 401certification.

E. Individual 401certification is required for projects or activities authorized under NWPs if the project will discharge to a waterbody on the list of impaired waterbodies (the 303(d) List) and the discharge may result in further exceedance of a specific parameter the waterbody is listed for. The EPA shall make this determination on a case-by-case basis.

For projects or activities that will discharge to a 303(d)-listed waterbody that does not have an approved Total Maximum Daily Load (TMDL) or an approved water quality management plan, the applicant must provide documentation for EPA approval showing that the discharge will not result in further exceedance of the listed contaminant or impairment.

For projects or activities that will discharge to a 303(d)-listed waterbody that does not have an approved TMDL, the applicant must provide documentation for EPA approval showing that the discharge is within the limits established in the TMDL. The current list of 303(d)-listed waterbodies in Washington State will be consulted in making this determination and is available on Ecology's web site at: www.ecy.wa.gov/programs/wq/303d/2012/index.html

The EPA may issue 401 certification for projects or activities that would result in further exceedance or impairment if mitigation is provided that would result in a net decrease in listed contaminants or less impairment in the waterbody. This determination would be made during individual 401 certification review.

F. For projects requiring individual 401 certification, applicants must provide the EPA with the same documentation provided to the Corps, (as described in Corps' National General Condition 31, Pre-Construction Notification), including, when applicable:

(a) A description of the project, including site plans, project purpose, direct and indirect adverse environmental effects the project would cause, any other U.S. Department of the Army permits used or intended to use to authorize any part of the proposed project or any related activity.

(b) Delineation of special aquatic sites and other waters of the United States. Wetland delineations must be prepared in accordance with the current method required by the Corps.

(c) A statement describing how the mitigation requirement will be satisfied. A conceptual or detailed mitigation or restoration plan may be submitted.

(d) Other applicable requirements of Corps National General Condition 31, Corps Regional Conditions, or notification conditions of the applicable NWP.

A request for individual 401 certification- review is not complete until the EPA receives the applicable documents noted above and the EPA has received a copy of the final authorization letter from the Corps providing coverage for a proposed project or activity under the NWP Program.

G. No activity, including structures and work in navigable waters of the United States or discharges of dredged or fill material, may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

H. An individual 401 certification is based on adequate compensatory mitigation being provided for aquatic resource and other water quality-related impacts of projects or activities authorized under the NWP Program.

A 401 certification is contingent upon written approval from the EPA of the compensatory mitigation plan for projects and activities resulting in any of the following:

- impacts to any aquatic resources requiring special protection (as defined in EPA General Condition A or Corps General Regional Condition 1)
- any impacts to tidal waters or non-tidal waters adjacent to tidal waters (applies to NWP 14)
- Or, any impacts to aquatic resources greater than ¼ acre.

Compensatory mitigation plans submitted to the EPA shall be based on the Joint Agency guidance provided in *Wetland Mitigation in Washington State, Parts 1 and 2* (Ecology Publication #06-06-011a and #06-06-011b) and shall, at a minimum, include the following:

(1) A description of the measures taken to avoid and minimize impacts to wetlands and other waters of the U.S.
(2) The nature of the proposed impacts (i.e., acreage of wetlands and functions lost or degraded)
(3) The rationale for the mitigation site that was selected
(4) The goals and objectives of the compensatory mitigation project
(5) How the mitigation project will be accomplished, including proposed performance standards for measuring success (including meeting planting success standard of 80 percent survival after five years), evidence for hydrology at the mitigation site, and the proposed buffer widths;
(6) How it will be maintained and monitored to assess progress towards goals and objectives.
(7) Completion and submittal of an "as-built conditions report" upon completion of grading, planting and hydrology establishment at the mitigation site;
(8) Completion and submittal of monitoring reports at years 3 and 5 showing the results of monitoring for hydrology, vegetation types, and aerial cover of vegetation.
(9) For forested and scrub-shrub wetlands, 10 years of monitoring will often be necessary.
(10) Documentation of legal site protection mechanism (covenant or deed restriction) to show how the compensatory mitigation site will be legally protected for the long-term.

I. An individual 401 certification is required for any activity where temporary fill will remain in wetlands or other waterbodies for more than 90 days. The 90 day period begins when filling activity starts in the wetland or other waterbody.

J. An individual 401 is required for any proposed project or activity in waterbodies on the most current list of the following Designated Critical Resource Waters (per Corps General Condition 22).

K. An individual 401 certification is required for any proposed project that would increase permanent, above-grade fill within the 100-year floodplain (including the floodway and the flood fringe).

> [***Note:*** The 100-year floodplain is defined as those areas identified as Zones A, A1-30, AE, AH, AO, A99, V, V1-30, and VE on the most current Federal Emergency Management Agency Flood Rate Insurance Maps, or areas identified as within the 100-year floodplain on applicable local Flood Management Program maps. The 100-year flood is also known as the flood with a 100-year recurrence interval, or as the flood with an exceedance probability of 0.01.]

H. EPA 401 CERTIFICATION SPECIFIC CONDITIONS FOR THIS NWP: Partially denied without prejudice. Permittee must meet EPA 401 General Conditions. Individual 401 review is required for projects authorized under this NWP if the project or activities are not part of an EPA ordered cleanup.

I. COASTAL ZONE MANAGEMENT CONSISTENCY RESPONSE FOR THIS NWP: Concur subject to the following condition: When individual 401 review by Ecology is triggered, a CZM Certification of Consistency form must be submitted for projects located within the 15 coastal counties (see State General 401 Condition 3 (Notification)).

US Army Corps of Engineers ®
Seattle District

CERTIFICATE OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

Permit Number: NWS-2013-478

Name of Permittee: WA State Dept of Ecology

Date of Issuance: September 19, 2013

Upon completion of the activity authorized by this permit, please check the applicable boxes below, date and sign this certification, and return it to the following address:

Department of the Army
U.S. Army Corps of Engineers
Seattle District, Regulatory Branch
Post Office Box 3755
Seattle, Washington 98124-3755

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of your authorization, your project is subject to suspension, modification, or revocation.

☐	The work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of this permit. Date work complete: _____
	☐ Photographs and as-built drawings of the authorized work are attached.

☐	If applicable, the mitigation required (not including monitoring (e.g., construction and plantings) in the above-referenced permit has been completed in accordance with the terms and conditions of this permit. Date work complete: _____
	☐ Photographs and as-built drawings of the mitigation are attached.

Printed Name: _____

Signature: _____

Date: _____

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

September 20, 2013

Robert Warren
Washington Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

RE: Coverage under the Construction Stormwater General Permit

Permit number:	**WAR301251**	
Site Name:	**Cornet Bay Marina**	
Location:	**200 Cornet Bay Road**	
	Oak Harbor, WA	**County: Island**
Disturbed Acres:	**1.1**	

Dear Mr. Warren:

The Washington State Department of Ecology (Ecology) received your Notice of Intent for coverage under Ecology's Construction Stormwater General Permit (permit). This is your permit coverage letter. Your permit coverage is effective on September 20, 2013. **Please retain this permit coverage letter with your permit (enclosed), stormwater pollution prevention plan (SWPPP), and site log book. These materials are the official record of permit coverage for your site.**

Please take time to read the entire permit and contact Ecology if you have any questions.

Appeal Process
You have a right to appeal coverage under the general permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this letter. This appeal is limited to the general permit's applicability or non-applicability to a specific discharger. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of this letter:

- File your appeal and a copy of the permit cover page with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and the permit cover page on Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

Address and Location Information:

Street Addresses:	**Mailing Addresses:**
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board (PCHB) 1111 Israel Road SW, Suite 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Electronic Discharge Monitoring Reports (WQWebDMR)
This permit requires that Permittees submit monthly discharge monitoring reports (DMRs) electronically using Ecology's secure online system, WQWebDMR. To sign up for WQWebDMR go to: www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html. If you have questions, contact Tonya Wolfe at (360) 407-7097 (Olympia area), or (800) 633-6193/option 3, or email WQWebPortal@ecy.wa.gov.

Ecology Field Inspector Assistance
If you have questions regarding stormwater management at your construction site, please contact Tracie Walters of Ecology's Northwest Regional Office in Bellevue at tracie.walters@ecy.wa.gov, or (425) 649-4484.

Questions or Additional Information
Ecology is committed to providing assistance. Please review our web page at: www.ecy.wa.gov/programs/wq/stormwater/construction/. If you have questions about the construction stormwater general permit, please contact Clay Keown at clay.keown@ecy.wa.gov, or (360) 407-6048.

Sincerely,

Bill Moore, P.E., Manager
Program Development Services Section
Water Quality Program

Enclosure

Issuance Date: December 1, 2010
Effective Date: January 1, 2011
Expiration Date: December 31, 2015

CONSTRUCTION STORMWATER GENERAL PERMIT

National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Stormwater Discharges Associated with Construction Activity

State of Washington
Department of Ecology
Olympia, Washington 98504

In compliance with the provisions of
Chapter 90.48 Revised Code of Washington
(State of Washington Water Pollution Control Act)
and
Title 33 United States Code, Section 1251 et seq.
The Federal Water Pollution Control Act (The Clean Water Act)

Until this permit expires, is modified or revoked, Permittees that have properly obtained coverage under this general permit are authorized to discharge in accordance with the special and general conditions that follow.

Kelly Susewind, P.E., P.G.
Water Quality Program Manager
Washington State Department of Ecology

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LIST OF TABLES

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions within this permit for additional submittal requirements. Appendix A provides a list of definitions. Appendix B provides a list of acronyms.

Table 1. Summary of Permit Report Submittals

Permit Section	Submittal	Frequency	First Submittal Date
S5.A and S8	High Turbidity/Transparency Phone Reporting	As Necessary	Within 24 hours
S5.B	Discharge Monitoring Report	Monthly*	Within 15 days of applicable monitoring period
S5.F and S8	Noncompliance Notification	As necessary	Immediately
S5.F	Noncompliance Notification – Written Report	As necessary	Within 5 Days of non-compliance
G2.	Notice of Change in Authorization	As necessary	
G6.	Permit Application for Substantive Changes to the Discharge	As necessary	
G8.	Application for Permit Renewal	1/permit cycle	No later than 180 days before expiration
G9.	Notice of Permit Transfer	As necessary	
G20.	Notice of Planned Changes	As necessary	
G22.	Reporting Anticipated Non-compliance	As necessary	

SPECIAL NOTE: *Permittees must submit Discharge Monitoring Reports (DMRs) to the Washington State Department of Ecology monthly, regardless of site discharge, for the full duration of permit coverage. Refer to Section S5.B of this General Permit for more specific information regarding DMRs.

Table 2. Summary of Required On-site Documentation

Document Title	Permit Conditions
Permit Coverage Letter	See Conditions S2, S5
Construction Stormwater General Permit	See Conditions S2, S5
Site Log Book	See Conditions S4, S5
Stormwater Pollution Prevention Plan (SWPPP)	See Conditions S9, S5

SPECIAL CONDITIONS

S1. PERMIT COVERAGE

A. Permit Area

This Construction Stormwater General Permit (CSWGP) covers all areas of Washington State, except for federal and Tribal lands as specified in Special Condition S1.E.3.

B. Operators Required to Seek Coverage Under this General Permit:

1. Operators of the following construction activities are required to seek coverage under this CSWGP:

   a. Clearing, grading and/or excavation that results in the disturbance of one or more acres and discharges stormwater to surface waters of the State; and clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more and discharge stormwater to surface waters of the State.

      i. This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, and discharge to surface waters of the State (that is, forest practices that prepare a site for construction activities); and

   b. Any size construction activity discharging stormwater to waters of the State that the Department of Ecology ("Ecology"):

      i. Determines to be a significant contributor of pollutants to waters of the State of Washington.

      ii. Reasonably expects to cause a violation of any water quality standard.

2. Operators of the following activities are not required to seek coverage under this CSWGP (unless specifically required under Special Condition S1.B.1.b. above):

   a. Construction activities that discharge all stormwater and non-stormwater to ground water, sanitary sewer, or combined sewer, and have no point source discharge to either surface water or a storm sewer system that drains to surface waters of the State.

   b. Construction activities covered under an Erosivity Waiver (Special Condition S2.C).

   c. Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

C. Authorized Discharges:

1. Stormwater Associated with Construction Activity. Subject to compliance with the terms and conditions of this permit, Permittees are authorized to discharge stormwater associated with construction activity to surface waters of the State or to a storm sewer system that drains to surface waters of the State. (Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.)

2. Stormwater Associated with Construction Support Activity. This permit also authorizes stormwater discharge from support activities related to the permitted construction site (for example, an on-site portable rock crusher, off-site equipment staging yards, material storage areas, borrow areas, etc.) provided:

   a. The support activity relates directly to the permitted construction site that is required to have a NPDES permit; and

   b. The support activity is not a commercial operation serving multiple unrelated construction projects, and does not operate beyond the completion of the construction activity; and

   c. Appropriate controls and measures are identified in the Stormwater Pollution Prevention Plan (SWPPP) for the discharges from the support activity areas.

3. Non-Stormwater Discharges. The categories and sources of non-stormwater discharges identified below are authorized conditionally, provided the discharge is consistent with the terms and conditions of this permit:

   a. Discharges from fire-fighting activities.

   b. Fire hydrant system flushing.

   c. Potable water, including uncontaminated water line flushing.

   d. Pipeline hydrostatic test water.

   e. Uncontaminated air conditioning or compressor condensate.

   f. Uncontaminated ground water or spring water.

   g. Uncontaminated excavation dewatering water (in accordance with S9.D.10).

   h. Uncontaminated discharges from foundation or footing drains.

   i. Water used to control dust. Permittees must minimize the amount of dust control water used.

   j. Routine external building wash down that does not use detergents.

   k. Landscape irrigation water.

   The SWPPP must adequately address all authorized non-stormwater discharges, except for discharges from fire-fighting activities, and must comply with Special

Condition S3. At a minimum, discharges from potable water (including water line flushing), fire hydrant system flushing, and pipeline hydrostatic test water must undergo the following: dechlorination to a concentration of 0.1 parts per million (ppm) or less, and pH adjustment to within 6.5 – 8.5 standard units (su), if necessary.

D. Prohibited Discharges:

The following discharges to waters of the State, including ground water, are prohibited.

1. Concrete wastewater.
2. Wastewater from washout and clean-up of stucco, paint, form release oils, curing compounds and other construction materials.
3. Process wastewater as defined by 40 Code of Federal Regulations (CFR) 122.1 (see Appendix A of this permit).
4. Slurry materials and waste from shaft drilling.
5. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
6. Soaps or solvents used in vehicle and equipment washing.
7. Wheel wash wastewater, unless discharged according to Special Condition S9.D.9.d.
8. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed according to Special Condition S9.D.10.

E. Limits on Coverage

Ecology may require any discharger to apply for and obtain coverage under an individual permit or another more specific general permit. Such alternative coverage will be required when Ecology determines that this CSWGP does not provide adequate assurance that water quality will be protected, or there is a reasonable potential for the project to cause or contribute to a violation of water quality standards.

The following stormwater discharges are not covered by this permit:

1. Post-construction stormwater discharges that originate from the site after completion of construction activities and the site has undergone final stabilization.
2. Non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance, from which there is natural runoff as excluded in 40 CFR Subpart 122.
3. Stormwater from any federal project or project on federal land or land within an Indian Reservation except for the Puyallup Reservation. Within the Puyallup

Reservation, any project that discharges to surface water on land held in trust by the federal government may be covered by this permit.

4. Stormwater from any site covered under an existing NPDES individual permit in which stormwater management and/or treatment requirements are included for all stormwater discharges associated with construction activity.

5. Stormwater from a site where an applicable Total Maximum Daily Load (TMDL) requirement specifically precludes or prohibits discharges from construction activity.

S2. APPLICATION REQUIREMENTS

A. Permit Application Forms

1. Notice of Intent Form/Timeline

a. Operators of new or previously unpermitted construction activities must submit a complete and accurate permit application (Notice of Intent, or NOI) to Ecology.

b. The operator must submit the NOI at least 60 days before discharging stormwater from construction activities and must submit it on or before the date of the first public notice (see Special Condition S2.B below for details). The 30-day public comment period required by WAC 173-226-130(5) begins on the publication date of the second public notice. Unless Ecology responds to the complete application in writing, based on public comments, or any other relevant factors, coverage under the general permit will automatically commence on the thirty-first day following receipt by Ecology of a completed NOI, or the issuance date of this permit, whichever is later, unless Ecology specifies a later date in writing.

c. Applicants who propose to discharge to a storm or sewer system operated by Seattle, King County, Snohomish County, Tacoma, Pierce County, or Clark County must also submit a copy of the NOI to the appropriate jurisdiction.

d. If an applicant intends to use a Best Management Practice (BMP) selected on the basis of Special Condition S9.C.4 (“demonstrably equivalent” BMPs), the applicant must notify Ecology of its selection as part of the NOI. In the event the applicant selects BMPs after submission of the NOI, it must provide notice of the selection of an equivalent BMP to Ecology at least 60 days before intended use of the equivalent BMP.

e. Permittees must notify Ecology regarding any changes to the information provided on the NOI by submitting an updated NOI. Examples of such changes include, but are not limited to,

i. changes to the Permittee’s mailing address,

ii. changes to the on-site contact person information, and

iii. changes to the area/acreage affected by construction activity.

2. Transfer of Coverage Form

The Permittee can transfer current coverage under this permit to one or more new operators, including operators of sites within a Common Plan of Development, provided the Permittee submits a Transfer of Coverage Form in accordance with General Condition G9. Transfers do not require public notice.

B. Public Notice

For new or previously unpermitted construction activities, the applicant must publish a public notice at least one time each week for two consecutive weeks, at least 7 days apart, in a newspaper with general circulation in the county where the construction is to take place. The notice must contain:

1. A statement that "The applicant is seeking coverage under the Washington State Department of Ecology's Construction Stormwater NPDES and State Waste Discharge General Permit."

2. The name, address and location of the construction site.

3. The name and address of the applicant.

4. The type of construction activity that will result in a discharge (for example, residential construction, commercial construction, etc.), and the number of acres to be disturbed.

5. The name of the receiving water(s) (that is, the surface water(s) to which the site will discharge), or, if the discharge is through a storm sewer system, the name of the operator of the system.

6. The statement: "Any persons desiring to present their views to the Washington State Department of Ecology regarding this application, or interested in Ecology's action on this application, may notify Ecology in writing no later than 30 days of the last date of publication of this notice. Ecology reviews public comments and considers whether discharges from this project would cause a measurable change in receiving water quality, and, if so, whether the project is necessary and in the overriding public interest according to Tier II antidegradation requirements under WAC 173-201A-320. Comments can be submitted to: Department of Ecology, P.O. Box 47696, Olympia, WA 98504-7696 Attn: Water Quality Program, Construction Stormwater."

C. Erosivity Waiver

Construction site operators may qualify for an erosivity waiver from the CSWGP if the following conditions are met:

1. The site will result in the disturbance of fewer than 5 acres and the site is not a portion of a common plan of development or sale that will disturb 5 acres or greater.

2. Calculation of Erosivity "R" Factor and Regional Timeframe:

   a. The project's rainfall erosivity factor ("R" Factor) must be less than 5 during the period of construction activity, as calculated using either the Texas A&M University online rainfall erosivity calculator at: http://ei.tamu.edu/ or EPA's calculator at http://cfpub.epa.gov/npdes/stormwater/lew/lewcalculator.cfm. The period of construction activity starts when the land is first disturbed and ends with final stabilization. In addition:

   b. The entire period of construction activity must fall within the following timeframes:

      i. For sites west of the Cascades Crest: June 15 – September 15.

      ii. For sites east of the Cascades Crest, excluding the Central Basin: June 15 – October 15.

      iii. For sites east of the Cascades Crest, within the Central Basin: no additional timeframe restrictions apply. The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches. For a map of the Central Basin (Region 2), refer to http://www.ecy.wa.gov/pubs/ecy070202.pdf.

3. Construction site operators must submit a complete Erosivity Waiver certification form at least one week before disturbing the land. Certification must include statements that the operator will:

   a. Comply with applicable local stormwater requirements; and

   b. Implement appropriate erosion and sediment control BMPs to prevent violations of water quality standards.

4. This waiver is not available for facilities declared significant contributors of pollutants as defined in Special Condition S1.B.1.b.

5. This waiver does not apply to construction activities which include non-stormwater discharges listed in Special Condition S1.C.3.

6. If construction activity extends beyond the certified waiver period for any reason, the operator must either:

   a. Recalculate the rainfall erosivity "R" factor using the original start date and a new projected ending date and, if the "R" factor is still under 5 and the entire

project falls within the applicable regional timeframe in Special Condition S2.C.2.b, complete and submit an amended waiver certification form before the original waiver expires; or

b. Submit a complete permit application to Ecology in accordance with Special Condition S2.A and B before the end of the certified waiver period.

S3. COMPLIANCE WITH STANDARDS

A. Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges not in compliance with these standards are not authorized.

B. Prior to the discharge of stormwater and non-stormwater to waters of the State, the Permittee must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate Stormwater Pollution Prevention Plan (SWPPP), with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.

C. Ecology presumes that a Permittee complies with water quality standards unless discharge monitoring data or other site-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards, when the Permittee complies with the following conditions. The Permittee must fully:

1. Comply with all permit conditions, including planning, sampling, monitoring, reporting, and recordkeeping conditions.

2. Implement stormwater BMPs contained in stormwater management manuals published or approved by Ecology, or BMPs that are demonstrably equivalent to BMPs contained in stormwater technical manuals published or approved by Ecology, including the proper selection, implementation, and maintenance of all applicable and appropriate BMPs for on-site pollution control. (For purposes of this section, the stormwater manuals listed in Appendix 10 of the Phase I Municipal Stormwater Permit are approved by Ecology.)

D. Where construction sites also discharge to ground water, the ground water discharges must also meet the terms and conditions of this CSWGP. Permittees who discharge to ground water through an injection well must also comply with any applicable requirements of the Underground Injection Control (UIC) regulations, Chapter 173-218 WAC.

S4. MONITORING REQUIREMENTS, BENCHMARKS AND REPORTING TRIGGERS

Table 3. Summary of Primary Monitoring Requirements

Size of Soil Disturbance[1]	Weekly Site Inspections	Weekly Sampling w/ Turbidity Meter	Weekly Sampling w/ Transparency Tube	Weekly pH Sampling[2]	Requires CESCL Certification?
Sites that disturb less than 1 acre, but are part of a larger Common Plan of Development	Required	Not Required	Not Required	Not Required	No
Sites that disturb 1 acre or more, but fewer than 5 acres	Required	Sampling Required – either method[3]		Required	Yes
Sites that disturb 5 acres or more	Required	Required	Not Required[4]	Required	Yes

A. Site Log Book

The Permittee must maintain a site log book that contains a record of the implementation of the SWPPP and other permit requirements, including the installation and maintenance of BMPs, site inspections, and stormwater monitoring.

B. Site Inspections

The Permittee's (operator's) site inspections must include all areas disturbed by construction activities, all BMPs, and all stormwater discharge points. (See Special Conditions S4.B.3 and B.4 below for detailed requirements of the Permittee's Certified Erosion and Sediment Control Lead [CESCL]).

[1] Soil disturbance is calculated by adding together all areas affected by construction activity. Construction activity means clearing, grading, excavation, and any other activity that disturbs the surface of the land, including ingress/egress from the site.

[2] If construction activity results in the disturbance of 1 acre or more, and involves significant concrete work (1,000 cubic yards of poured or recycled concrete over the life of a project) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area drains to surface waters of the State or to a storm sewer stormwater collection system that drains to other surface waters of the State, the Permittee must conduct pH monitoring sampling in accordance with Special Condition S4.D.

[3] Sites with one or more acres, but fewer than 5 acres of soil disturbance, must conduct turbidity or transparency sampling in accordance with Special Condition S4.C.

[4] Sites equal to or greater than 5 acres of soil disturbance must conduct turbidity sampling using a turbidity meter in accordance with Special Condition S4.C.

Construction sites one acre or larger that discharge stormwater to surface waters of the State must have site inspections conducted by a certified CESCL. Sites less than one acre may have a person without CESCL certification conduct inspections; sampling is not required on sites that disturb less than an acre.

1. The Permittee must examine stormwater visually for the presence of suspended sediment, turbidity, discoloration, and oil sheen. The Permittee must evaluate the effectiveness of BMPs and determine if it is necessary to install, maintain, or repair BMPs to improve the quality of stormwater discharges.

   Based on the results of the inspection, the Permittee must correct the problems identified by:

   a. Reviewing the SWPPP for compliance with Special Condition S9 and making appropriate revisions within 7 days of the inspection.

   b. Immediately beginning the process of fully implementing and maintaining appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than within 10 days of the inspection. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.

   c. Documenting BMP implementation and maintenance in the site log book.

2. The Permittee must inspect all areas disturbed by construction activities, all BMPs, and all stormwater discharge points at least once every calendar week and within 24 hours of any discharge from the site. (For purposes of this condition, individual discharge events that last more than one day do not require daily inspections. For example, if a stormwater pond discharges continuously over the course of a week, only one inspection is required that week.) The Permittee may reduce the inspection frequency for temporarily stabilized, inactive sites to once every calendar month.

3. The Permittee must have staff knowledgeable in the principles and practices of erosion and sediment control. The CESCL (sites one acre or more) or inspector (sites less than one acre) must have the skills to assess the:

   a. Site conditions and construction activities that could impact the quality of stormwater, and

   b. Effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.

4. The SWPPP must identify the CESCL or inspector, who must be present on site or on-call at all times. The CESCL must obtain this certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160 in the manual referred to in Special Condition S9.C.1 and 2).

5. The Permittee must summarize the results of each inspection in an inspection report or checklist and enter the report/checklist into, or attach it to, the site log book. At a minimum, each inspection report or checklist must include:

    a. Inspection date and time.

    b. Weather information, the general conditions during inspection and the approximate amount of precipitation since the last inspection, and precipitation within the last 24 hours.

    c. A summary or list of all implemented BMPs, including observations of all erosion/sediment control structures or practices.

    d. A description of the locations:

        i. Of BMPs inspected.

        ii. Of BMPs that need maintenance and why.

        iii. Of BMPs that failed to operate as designed or intended, and

        iv. Where additional or different BMPs are needed, and why.

    e. A description of stormwater discharged from the site. The Permittee must note the presence of suspended sediment, turbidity, discoloration, and oil sheen, as applicable.

    f. Any water quality monitoring performed during inspection.

    g. General comments and notes, including a brief description of any BMP repairs, maintenance or installations made following the inspection.

    h. A summary report and a schedule of implementation of the remedial actions that the Permittee plans to take if the site inspection indicates that the site is out of compliance. The remedial actions taken must meet the requirements of the SWPPP and the permit.

    i. The name, title, and signature of the person conducting the site inspection, a phone number or other reliable method to reach this person, and the following statement: "I certify that this report is true, accurate, and complete to the best of my knowledge and belief."

C. Turbidity/Transparency Sampling Requirements

1. Sampling Methods

    a. If construction activity involves the disturbance of 5 acres or more, the Permittee must conduct turbidity sampling per Special Condition S4.C.

    b. If construction activity involves 1 acre or more but fewer than 5 acres of soil disturbance, the Permittee must conduct either transparency sampling **or** turbidity sampling per Special Condition S4.C.

2. Sampling Frequency

    a. The Permittee must sample all discharge locations at least once every calendar week when stormwater (or authorized non-stormwater) discharges from the site or enters any on-site surface waters of the state (for example, a creek running through a site).

    b. Samples must be representative of the flow and characteristics of the discharge.

    c. Sampling is not required when there is no discharge during a calendar week.

    d. Sampling is not required outside of normal working hours or during unsafe conditions.

    e. If the Permittee is unable to sample during a monitoring period, the Permittee must include a brief explanation in the monthly Discharge Monitoring Report (DMR).

    f. Sampling is not required before construction activity begins.

3. Sampling Locations

    a. Sampling is required at all points where stormwater associated with construction activity (or authorized non-stormwater) is discharged off site, including where it enters any on-site surface waters of the state (for example, a creek running through a site).

    b. The Permittee may discontinue sampling at discharge points that drain areas of the project that are fully stabilized to prevent erosion.

    c. The Permittee must identify all sampling point(s) on the SWPPP site map and clearly mark these points in the field with a flag, tape, stake or other visible marker.

    d. Sampling is not required for discharge that is sent directly to sanitary or combined sewer systems.

4. Sampling and Analysis Methods

    a. The Permittee performs turbidity analysis with a calibrated turbidity meter (turbidimeter) either on site or at an accredited lab. The Permittee must record the results in the site log book in nephelometric turbidity units (NTU).

    b. The Permittee performs transparency analysis on site with a 1¾-inch-diameter, 60-centimeter (cm)-long transparency tube. The Permittee will record the results in the site log book in centimeters (cm). Transparency tubes are available from: http://watermonitoringequip.com/pages/stream.html.

Table 4. Monitoring and Reporting Requirements

Parameter	Unit	Analytical Method	Sampling Frequency	Benchmark Value	Phone Reporting Trigger Value
Turbidity	NTU	SM2130 or EPA 180.1	Weekly, if discharging	25 NTU	250 NTU
Transparency	cm	Manufacturer instructions, or Ecology guidance	Weekly, if discharging	33 cm	6 cm

5. Turbidity/Transparency Benchmark Values and Reporting Triggers

The benchmark value for turbidity is 25 NTU or less. The benchmark value for transparency is 33 centimeters (cm). Note: Benchmark values do not apply to discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus; these discharges are subject to a numeric effluent limit for turbidity. Refer to Special Condition S8 for more information.

a. Turbidity 26 – 249 NTU, or Transparency 32 – 7 cm:

If the discharge turbidity is 26 to 249 NTU; or if discharge transparency is less than 33 cm, but equal to or greater than 6 cm, the Permittee must:

i. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.

ii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.

iii. Document BMP implementation and maintenance in the site log book.

b. Turbidity 250 NTU or greater, or Transparency 6 cm or less:

If a discharge point's turbidity is 250 NTU or greater, or if discharge transparency is less than or equal to 6 cm, the Permittee must complete the reporting and adaptive management process described below.

i. Telephone the applicable Ecology Region's Environmental Report Tracking System (ERTS) number within 24 hours, in accordance with Special Condition S5.F.

- Central Region (Okanogan, Chelan, Douglas, Kittitas, Yakima, Klickitat, Benton): (509) 575-2490

- Eastern Region (Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman): (509) 329-3400
- Northwest Region (Kitsap, Snohomish, Island, King, San Juan, Skagit, Whatcom): (425) 649-7000
- Southwest Region (Grays Harbor, Lewis, Mason, Thurston, Pierce, Clark, Cowlitz, Skamania, Wahkiakum, Clallam, Jefferson, Pacific): (360) 407-6300

These numbers are also listed at the following web site: http://www.ecy.wa.gov/programs/wq/stormwater/construction/permit.html

ii. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.

iii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.

iv. Document BMP implementation and maintenance in the site log book.

v. Continue to sample discharges daily until:

a) Turbidity is 25 NTU (or lower); or

b) Transparency is 33 cm (or greater); or

c) The Permittee has demonstrated compliance with the water quality limit for turbidity:

1) No more than 5 NTU over background turbidity, if background is less than 50 NTU, or

2) No more than 10% over background turbidity, if background is 50 NTU or greater; or

d) The discharge stops or is eliminated.

D. pH Sampling Requirements -- Significant Concrete Work or Engineered Soils

If construction activity results in the disturbance of 1 acre or more, **and** involves significant concrete work (significant concrete work means greater than 1000 cubic yards poured concrete or recycled concrete used over the life of a project) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area

drains to surface waters of the State or to a storm sewer system that drains to surface waters of the state, the Permittee must conduct pH monitoring as set forth below. Note: In addition, discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for high pH are subject to a numeric effluent limit for pH; refer to Special Condition S8.

1. For sites with significant concrete work, the Permittee must begin the pH monitoring period when the concrete is first poured and exposed to precipitation, and continue weekly throughout and after the concrete pour and curing period, until stormwater pH is in the range of 6.5 to 8.5 (su).

2. For sites with engineered soils, the Permittee must begin the pH monitoring period when the soil amendments are first exposed to precipitation and must continue until the area of engineered soils is fully stabilized.

3. During the applicable pH monitoring period defined above, the Permittee must obtain a representative sample of stormwater and conduct pH analysis at least once per week.

4. The Permittee must monitor pH in the sediment trap/pond(s) or other locations that receive stormwater runoff from the area of significant concrete work or engineered soils before the stormwater discharges to surface waters.

5. The benchmark value for pH is 8.5 standard units. Anytime sampling indicates that pH is 8.5 or greater, the Permittee must either:

    a. Prevent the high pH water (8.5 or above) from entering storm sewer systems or surface waters; or

    b. If necessary, adjust or neutralize the high pH water until it is in the range of pH 6.5 to 8.5 (su) using an appropriate treatment BMP such as carbon dioxide (CO_2) sparging or dry ice. The Permittee must obtain written approval from Ecology before using any form of chemical treatment other than CO_2 sparging or dry ice.

6. The Permittee must perform pH analysis on site with a calibrated pH meter, pH test kit, or wide range pH indicator paper. The Permittee must record pH monitoring results in the site log book.

S5. REPORTING AND RECORDKEEPING REQUIREMENTS

A. High Turbidity Phone Reporting

Anytime sampling performed in accordance with Special Condition S4.C indicates turbidity has reached the 250 NTU phone reporting level, the Permittee must call Ecology's Regional office by phone within 24 hours of analysis. The web site is http://www.ecy.wa.gov/programs/wq/stormwater/construction/permit.html. Also see phone numbers in Special Condition S4.C.5.b.i.

B. Discharge Monitoring Reports

Permittees required to conduct water quality sampling in accordance with Special Conditions S4.C (Turbidity/Transparency), S4.D (pH), S8 (303[d]/TMDL sampling), and/or G13 (Additional Sampling) must submit the results to Ecology.

Permittees must submit monitoring data using Ecology's WebDMR program. To find out more information and to sign up for WebDMR go to: http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html.

Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper copy DMR at:

Mailing Address:
Department of Ecology
Water Quality Program
Attn: Stormwater Compliance Specialist
PO Box 47696
Olympia, WA 98504-7696

Permittees who obtain a waiver not to use WebDMR must use the forms provided to them by Ecology; submittals must be mailed to the address above. Permittees shall submit DMR forms to be received by Ecology within 15 days following the end of each month.

If there was no discharge during a given monitoring period, all Permittees must submit a DMR as required with "no discharge" entered in place of the monitoring results. For more information, contact Ecology staff using information provided at the following web site: http://www.ecy.wa.gov/programs/spills/response/assistancesoil%20map.pdf

C. Records Retention

The Permittee must retain records of all monitoring information (site log book, sampling results, inspection reports/checklists, etc.), Stormwater Pollution Prevention Plan, and any other documentation of compliance with permit requirements for the entire life of the construction project and for a minimum of three years following the termination of permit coverage. Such information must include all calibration and maintenance records, and records of all data used to complete the application for this

permit. This period of retention must be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

D. Recording Results

For each measurement or sample taken, the Permittee must record the following information:

1. Date, place, method, and time of sampling or measurement.
2. The first and last name of the individual who performed the sampling or measurement.
3. The date(s) the analyses were performed.
4. The first and last name of the individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

E. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Special Condition S4 of this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Permittee's DMR.

F. Noncompliance Notification

In the event the Permittee is unable to comply with any part of the terms and conditions of this permit, and the resulting noncompliance may cause a threat to human health or the environment, the Permittee must:

1. Immediately notify Ecology of the failure to comply by calling the applicable Regional office ERTS phone number (find at http://www.ecy.wa.gov/programs/spills/response/assistancesoil%20map.pdf) or refer to Special Condition S4.C.5.b.i.
2. Immediately take action to prevent the discharge/pollution, or otherwise stop or correct the noncompliance, and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to Ecology within five (5) days of becoming aware of the violation.
3. Submit a detailed written report to Ecology within five (5) days, unless requested earlier by Ecology. The report must contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Permittee must report any unanticipated bypass and/or upset that exceeds any effluent limit in the permit in accordance with the 24-hour reporting requirement contained in 40 C.F.R. 122.41(l)(6)).

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply. Refer to Section G14 of this permit for specific information regarding non-compliance.

G. Access to Plans and Records

1. The Permittee must retain the following permit documentation (plans and records) on site, or within reasonable access to the site, for use by the operator or for on-site review by Ecology or the local jurisdiction:

   a. General Permit.

   b. Permit Coverage Letter.

   c. Stormwater Pollution Prevention Plan (SWPPP).

   d. Site Log Book.

2. The Permittee must address written requests for plans and records listed above (Special Condition S5.G.1) as follows:

   a. The Permittee must provide a copy of plans and records to Ecology within 14 days of receipt of a written request from Ecology.

   b. The Permittee must provide a copy of plans and records to the public when requested in writing. Upon receiving a written request from the public for the Permittee's plans and records, the Permittee must either:

      i. Provide a copy of the plans and records to the requester within 14 days of a receipt of the written request; or

      ii. Notify the requester within 10 days of receipt of the written request of the location and times within normal business hours when the plans and records may be viewed; and provide access to the plans and records within 14 days of receipt of the written request; or

      Within 14 days of receipt of the written request, the Permittee may submit a copy of the plans and records to Ecology for viewing and/or copying by the requester at an Ecology office, or a mutually agreed location. If plans and records are viewed and/or copied at a location other than at an Ecology office, the Permittee will provide reasonable access to copying services for which a reasonable fee may be charged. The Permittee must notify the requester within 10 days of receipt of the request where the plans and records may be viewed and/or copied.

S6. PERMIT FEES

The Permittee must pay permit fees assessed by Ecology. Fees for stormwater discharges covered under this permit are established by Chapter 173-224 WAC. Ecology continues to assess permit fees until the permit is terminated in accordance with Special Condition S10 or revoked in accordance with General Condition G5.

S7. SOLID AND LIQUID WASTE DISPOSAL

The Permittee must handle and dispose of solid and liquid wastes generated by construction activity, such as demolition debris, construction materials, contaminated materials, and waste materials from maintenance activities, including liquids and solids from cleaning catch basins and other stormwater facilities, in accordance with:

A. Special Condition S3, Compliance with Standards.

B. WAC 173-216-110.

C. Other applicable regulations.

S8. DISCHARGES TO 303(D) OR TMDL WATER BODIES

A. Sampling and Numeric Effluent Limits For Certain Discharges to 303(d)-listed Water Bodies

1. Permittees who discharge to segments of water bodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, or phosphorus, must conduct water quality sampling according to the requirements of this section, and Special Conditions S4.C.2.b-f and S4.C.3.b-d, and must comply with the applicable numeric effluent limitations in S8.C and S8.D.

2. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current listing by Ecology of impaired waters (Category 5) that exists on January 1, 2011, or the date when the operator's complete permit application is received by Ecology, whichever is later.

B. Limits on Coverage for New Discharges to TMDL or 303(d)-listed Waters

Operators of construction sites that discharge to a 303(d)-listed water body are not eligible for coverage under this permit *unless* the operator:

1. Prevents exposing stormwater to pollutants for which the water body is impaired, and retains documentation in the SWPPP that details procedures taken to prevent exposure on site; or

2. Documents that the pollutants for which the water body is impaired are not present at the site, and retains documentation of this finding within the SWPPP; or

3. Provides Ecology with data indicating the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retains such data on site with the SWPPP. The operator must provide data and other technical information to Ecology that sufficiently demonstrate:

    a. For discharges to waters without an EPA-approved or -established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the water body; or

    b. For discharges to waters with an EPA-approved or -established TMDL, that there is sufficient remaining wasteload allocation in the TMDL to allow construction stormwater discharge and that existing dischargers to the water body are subject to compliance schedules designed to bring the water body into attainment with water quality standards.

    Operators of construction sites are eligible for coverage under this permit if Ecology issues permit coverage based upon an affirmative determination that the discharge will not cause or contribute to the existing impairment.

C. Sampling and Numeric Effluent Limits for Discharges to Water Bodies on the 303(d) List for Turbidity, Fine Sediment, or Phosphorus

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus must conduct turbidity sampling in accordance with Special Condition S4.C.2 and comply with either of the numeric effluent limits noted in Table 5 below.

2. As an alternative to the 25 NTU effluent limit noted in Table 5 below (applied at the point where stormwater [or authorized non-stormwater] is discharged off-site), permittees may choose to comply with the surface water quality standard for turbidity. The standard is: no more than 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or no more than a 10% increase in turbidity when the background turbidity is more than 50 NTU. In order to use the water quality standard requirement, the sampling must take place at the following locations:

    a. Background turbidity in the 303(d)-listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge.

    b. Turbidity at the point of discharge into the 303(d)-listed receiving water, inside the area of influence of the discharge**.**

3. Discharges that exceed the numeric effluent limit for turbidity constitute a violation of this permit.

4. Permittees whose discharges exceed the numeric effluent limit shall sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

Table 5. Turbidity, Fine Sediment & Phosphorus Sampling and Limits for 303(d)-Listed Waters

Parameter identified in 303(d) listing	Parameter Sampled	Unit	Analytical Method	Sampling Frequency	Numeric Effluent Limit[1]
• Turbidity • Fine Sediment • Phosphorus	Turbidity	NTU	SM2130 or EPA180.1	Weekly, if discharging	25 NTU, at the point where stormwater is discharged from the site; OR In compliance with the surface water quality standard for turbidity (S8.C.1.a)

[1]Permittees subject to a numeric effluent limit for turbidity may, at their discretion, choose either numeric effluent limitation based on site-specific considerations including, but not limited to, safety, access and convenience.

D. Discharges to Water Bodies on the 303(d) List for High pH

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for high pH must conduct pH sampling in accordance with the table below, and comply with the numeric effluent limit of pH 6.5 to 8.5 su (Table 6).

Table 6. pH Sampling and Limits for 303(d)-Listed Waters

Parameter identified in 303(d) listing	Parameter Sampled/Units	Analytical Method	Sampling Frequency	Numeric Effluent Limit
High pH	pH /Standard Units	pH meter	Weekly, if discharging	In the range of 6.5 – 8.5

2. At the Permittee's discretion, compliance with the limit shall be assessed at one of the following locations:

   a. Directly in the 303(d)-listed water body segment, inside the immediate area of influence of the discharge; or

   b. Alternatively, the permittee may measure pH at the point where the discharge leaves the construction site, rather than in the receiving water.

3. Discharges that exceed the numeric effluent limit for pH (outside the range of 6.5 – 8.5 su) constitute a violation of this permit.

4. Permittees whose discharges exceed the numeric effluent limit shall sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

E. Sampling and Limits for Sites Discharging to Waters Covered by a TMDL or Another Pollution Control Plan

1. Discharges to a water body that is subject to a Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus must be consistent with the TMDL. Refer to http://www.ecy.wa.gov/programs/wq/tmdl/index.html for more information on TMDLs.

    a. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges must be consistent with any specific waste load allocations or requirements established by the applicable TMDL.

        i. The Permittee must sample discharges weekly or as otherwise specified by the TMDL to evaluate compliance with the specific waste load allocations or requirements.

        ii. Analytical methods used to meet the monitoring requirements must conform to the latest revision of the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136. Turbidity and pH methods need not be accredited or registered unless conducted at a laboratory which must otherwise be accredited or registered.

    b. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but has not identified specific requirements, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.

    c. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.

    d. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.

2. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus that is completed and approved by EPA before January 1, 2011, or before the date the operator's complete permit application is received by Ecology, whichever is later. TMDLs completed after the operator's complete permit application is received by Ecology become applicable to the Permittee only if they are imposed through an administrative order by Ecology, or through a modification of permit coverage.

S9. STORMWATER POLLUTION PREVENTION PLAN

The Permittee must prepare and properly implement an adequate Stormwater Pollution Prevention Plan (SWPPP) for construction activity in accordance with the requirements of this permit beginning with initial soil disturbance and until final stabilization.

A. The Permittee's SWPPP must meet the following objectives:

1. To implement best management practices (BMPs) to prevent erosion and sedimentation, and to identify, reduce, eliminate or prevent stormwater contamination and water pollution from construction activity.

2. To prevent violations of surface water quality, ground water quality, or sediment management standards.

3. To control peak volumetric flow rates and velocities of stormwater discharges.

B. General Requirements

1. The SWPPP must include a narrative and drawings. All BMPs must be clearly referenced in the narrative and marked on the drawings. The SWPPP narrative must include documentation to explain and justify the pollution prevention decisions made for the project. Documentation must include:

   a. Information about existing site conditions (topography, drainage, soils, vegetation, etc.).

   b. Potential erosion problem areas.

   c. The 12 elements of a SWPPP in Special Condition S9.D.1-12, including BMPs used to address each element.

   d. Construction phasing/sequence and general BMP implementation schedule.

   e. The actions to be taken if BMP performance goals are not achieved—for example, a contingency plan for additional treatment and/or storage of stormwater that would violate the water quality standards if discharged.

   f. Engineering calculations for ponds and any other designed structures.

2. The Permittee must modify the SWPPP if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The Permittee must then:

   a. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the inspection or investigation.

   b. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than 10 days from the inspection or investigation. If

installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period,

c. Document BMP implementation and maintenance in the site log book.

The Permittee must modify the SWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

C. Stormwater Best Management Practices (BMPs)

BMPs must be consistent with:

1. Stormwater Management Manual for Western Washington (most recent edition), for sites west of the crest of the Cascade Mountains; or

2. Stormwater Management Manual for Eastern Washington (most recent edition), for sites east of the crest of the Cascade Mountains; or

3. Revisions to the manuals listed in Special Condition S9.C.1. & 2., or other stormwater management guidance documents or manuals which provide an equivalent level of pollution prevention, that are approved by Ecology and incorporated into this permit in accordance with the permit modification requirements of WAC 173-226-230; or

4. Documentation in the SWPPP that the BMPs selected provide an equivalent level of pollution prevention, compared to the applicable Stormwater Management Manuals, including:

   a. The technical basis for the selection of all stormwater BMPs (scientific, technical studies, and/or modeling) that support the performance claims for the BMPs being selected.

   b. An assessment of how the selected BMP will satisfy AKART requirements and the applicable federal technology-based treatment requirements under 40 CFR part 125.3.

D. SWPPP – Narrative Contents and Requirements

The Permittee must include each of the 12 elements below in Special Condition S9.D.1-12 in the narrative of the SWPPP and implement them unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the SWPPP.

1. Preserve Vegetation/Mark Clearing Limits

   a. Before beginning land-disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.

b. Retain the duff layer, native top soil, and natural vegetation in an undisturbed state to the maximum degree practicable.

2. Establish Construction Access

   a. Limit construction vehicle access and exit to one route, if possible.

   b. Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMPs, to minimize tracking sediment onto roads.

   c. Locate wheel wash or tire baths on site, if the stabilized construction entrance is not effective in preventing tracking sediment onto roads.

   d. If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or pickup and transport of the sediment to a controlled sediment disposal area.

   e. Conduct street washing only after sediment removal in accordance with Special Condition S9.D.2.d. Control street wash wastewater by pumping back on site or otherwise preventing it from discharging into systems tributary to waters of the State.

3. Control Flow Rates

   a. Protect properties and waterways downstream of development sites from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site, as required by local plan approval authority.

   b. Where necessary to comply with Special Condition S9.D.3.a, construct stormwater retention or detention facilities as one of the first steps in grading. Assure that detention facilities function properly before constructing site improvements (for example, impervious surfaces).

   c. If permanent infiltration ponds are used for flow control during construction, protect these facilities from siltation during the construction phase.

4. Install Sediment Controls

   The Permittee must design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, the Permittee must design, install and maintain such controls to:

   a. Construct sediment control BMPs (sediment ponds, traps, filters, etc.) as one of the first steps in grading. These BMPs must be functional before other land disturbing activities take place.

   b. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of

resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.

c. Direct stormwater runoff from disturbed areas through a sediment pond or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must meet the flow control performance standard of Special Condition S9.D.3.a.

d. Locate BMPs intended to trap sediment on site in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.

e. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.

f. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.

5. Stabilize Soils

a. The Permittee must stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base on areas to be paved, and dust control.

b. The Permittee must control stormwater volume and velocity within the site to minimize soil erosion.

c. The Permittee must control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.

d. Depending on the geographic location of the project, the Permittee must not allow soils to remain exposed and unworked for more than the time periods set forth below to prevent erosion:

West of the Cascade Mountains Crest
During the dry season (May 1 - Sept. 30): 7 days
During the wet season (October 1 - April 30): 2 days

East of the Cascade Mountains Crest, except for Central Basin*
During the dry season (July 1 - September 30): 10 days
During the wet season (October 1 - June 30): 5 days

The Central Basin*, East of the Cascade Mountains Crest

During the dry Season (July 1 - September 30): 30 days
During the wet season (October 1 - June 30): 15 days

*Note: The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches.

e. The Permittee must stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.

f. The Permittee must stabilize soil stockpiles from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.

g. The Permittee must minimize the amount of soil exposed during construction activity.

h. The Permittee must minimize the disturbance of steep slopes.

i. The Permittee must minimize soil compaction and, unless infeasible, preserve topsoil.

6. Protect Slopes

a. The Permittee must design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).

b. The Permittee must divert off-site stormwater (run-on) or ground water away from slopes and disturbed areas with interceptor dikes, pipes, and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.

c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion.

i. West of the Cascade Mountains Crest: Temporary pipe slope drains must handle the peak 10-minute velocity of flow from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as "landscaped area."

ii. East of the Cascade Mountains Crest: Temporary pipe slope drains must handle the expected peak flow velocity from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.

d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.

e. Place check dams at regular intervals within constructed channels that are cut down a slope.

7. Protect Drain Inlets

a. Protect all storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.

b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).

8. Stabilize Channels and Outlets

a. Design, construct and stabilize all on-site conveyance channels to prevent erosion from the following expected peak flows:

i. West of the Cascade Mountains Crest: Channels must handle the peak 10-minute velocity of flow from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the WWHM to predict flows, bare soil areas should be modeled as "landscaped area."

ii. East of the Cascade Mountains Crest: Channels must handle the expected peak flow velocity from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.

b. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches at the outlets of all conveyance systems.

9. Control Pollutants

Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. The Permittee must:

a. Handle and dispose of all pollutants, including waste materials and demolition debris that occur on site in a manner that does not cause contamination of stormwater.

b. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.

c. Conduct maintenance, fueling, and repair of heavy equipment and vehicles using spill prevention and control measures. Clean contaminated surfaces immediately following any spill incident.

d. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, such as closed-loop recirculation or upland land application, or to the sanitary sewer with local sewer district approval.

e. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers' label requirements for application rates and procedures.

f. Use BMPs to prevent contamination of stormwater runoff by pH-modifying sources. The sources for this contamination include, but are not limited to: bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters. (Also refer to the definition for "concrete wastewater" in Appendix A--Definitions.)

g. Adjust the pH of stormwater if necessary to prevent violations of water quality standards.

h. Assure that washout of concrete trucks is performed offsite or in designated concrete washout areas only. Do not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets, or streams. Do not dump excess concrete on site, except in designated concrete washout areas. Concrete spillage or concrete discharge to surface waters of the State is prohibited.

i. Obtain written approval from Ecology before using chemical treatment other than CO_2 or dry ice to adjust pH.

10. Control Dewatering

a. Permittees must discharge foundation, vault, and trench dewatering water, which have characteristics similar to stormwater runoff at the site, into a

controlled conveyance system before discharge to a sediment trap or sediment pond.

b. Permittees may discharge clean, non-turbid dewatering water, such as well-point ground water, to systems tributary to, or directly into surface waters of the State, as specified in Special Condition S9.D.8, provided the dewatering flow does not cause erosion or flooding of receiving waters. Do not route clean dewatering water through stormwater sediment ponds. Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.

c. Other treatment or disposal options may include:

   i. Infiltration.

   ii. Transport off site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters.

   iii. Ecology-approved on-site chemical treatment or other suitable treatment technologies.

   iv. Sanitary or combined sewer discharge with local sewer district approval, if there is no other option.

   v. Use of a sedimentation bag with discharge to a ditch or swale for small volumes of localized dewatering.

d. Permittees must handle highly turbid or contaminated dewatering water separately from stormwater.

11. Maintain BMPs

    a. Permittees must maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications.

    b. Permittees must remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

12. Manage the Project

    a. Phase development projects to the maximum degree practicable and take into account seasonal work limitations.

    b. Inspection and monitoring -- Inspect, maintain and repair all BMPs as needed to assure continued performance of their intended function. Conduct site inspections and monitoring in accordance with Special Condition S4.

    c. Maintaining an updated construction SWPPP -- Maintain, update, and implement the SWPPP in accordance with Special Conditions S3, S4 and S9.

E. SWPPP – Map Contents and Requirements

The Permittee's SWPPP must also include a vicinity map or general location map (for example, a USGS quadrangle map, a portion of a county or city map, or other appropriate map) with enough detail to identify the location of the construction site and receiving waters within one mile of the site.

The SWPPP must also include a legible site map (or maps) showing the entire construction site. The following features must be identified, unless not applicable due to site conditions:

1. The direction of north, property lines, and existing structures and roads.
2. Cut and fill slopes indicating the top and bottom of slope catch lines.
3. Approximate slopes, contours, and direction of stormwater flow before and after major grading activities.
4. Areas of soil disturbance and areas that will not be disturbed.
5. Locations of structural and nonstructural controls (BMPs) identified in the SWPPP.
6. Locations of off-site material, stockpiles, waste storage, borrow areas, and vehicle/equipment storage areas.
7. Locations of all surface water bodies, including wetlands.
8. Locations where stormwater or non-stormwater discharges off-site and/or to a surface water body, including wetlands.
9. Location of water quality sampling station(s), if sampling is required by state or local permitting authority.
10. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.

S10. NOTICE OF TERMINATION

A. The site is eligible for termination of coverage when it has met any of the following conditions:

1. The site has undergone final stabilization, the Permittee has removed all temporary BMPs (except biodegradable BMPs clearly manufactured with the intention for the material to be left in place and not interfere with maintenance or land use), and all stormwater discharges associated with construction activity have been eliminated; or
2. All portions of the site that have not undergone final stabilization per Special Condition S10.A.1 have been sold and/or transferred (per General Condition G9), and the Permittee no longer has operational control of the construction activity; or

3. For residential construction only, the Permittee has completed temporary stabilization and the homeowners have taken possession of the residences.

B. When the site is eligible for termination, the Permittee must submit a complete and accurate Notice of Termination (NOT) form, signed in accordance with General Condition G2, to:

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, Washington 98504-7696

The termination is effective on the date Ecology receives the NOT form, unless Ecology notifies the Permittee within 30 days that termination request is denied because the Permittee has not met the eligibility requirements in Special Condition S10.A.

Permittees transferring the property to a new property owner or operator/permittee are required to complete and submit the Notice of Transfer form to Ecology, but are not required to submit a Notice of Termination form for this type of transaction.

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this general permit must be consistent with the terms and conditions of this general permit. Any discharge of any pollutant more frequent than or at a level in excess of that identified and authorized by the general permit must constitute a violation of the terms and conditions of this permit.

G2. SIGNATORY REQUIREMENTS

A. All permit applications must bear a certification of correctness to be signed:

1. In the case of corporations, by a responsible corporate officer of at least the level of vice president of a corporation;

2. In the case of a partnership, by a general partner of a partnership;

3. In the case of sole proprietorship, by the proprietor; or

4. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

B. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Ecology.

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

C. Changes to authorization. If an authorization under paragraph G2.B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G2.B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a document under this section must make the following certification:

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering

information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G3. RIGHT OF INSPECTION AND ENTRY

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

A. To enter upon the premises where a discharge is located or where any records are kept under the terms and conditions of this permit.

B. To have access to and copy – at reasonable times and at reasonable cost -- any records required to be kept under the terms and conditions of this permit.

C. To inspect -- at reasonable times – any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.

D. To sample or monitor – at reasonable times – any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G4. GENERAL PERMIT MODIFICATION AND REVOCATION

This permit may be modified, revoked and reissued, or terminated in accordance with the provisions of Chapter 173-226 WAC. Grounds for modification, revocation and reissuance, or termination include, but are not limited to, the following:

A. When a change occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this permit.

B. When effluent limitation guidelines or standards are promulgated pursuant to the CWA or Chapter 90.48 RCW, for the category of dischargers covered under this permit.

C. When a water quality management plan containing requirements applicable to the category of dischargers covered under this permit is approved, or

D. When information is obtained that indicates cumulative effects on the environment from dischargers covered under this permit are unacceptable.

G5. REVOCATION OF COVERAGE UNDER THE PERMIT

Pursuant to Chapter 43.21B RCW and Chapter 173-226 WAC, the Director may terminate coverage for any discharger under this permit for cause. Cases where coverage may be terminated include, but are not limited to, the following:

A. Violation of any term or condition of this permit.

B. Obtaining coverage under this permit by misrepresentation or failure to disclose fully all relevant facts.

C. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

D. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

E. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.

F. Nonpayment of permit fees or penalties assessed pursuant to RCW 90.48.465 and Chapter 173-224 WAC.

G. Failure of the Permittee to satisfy the public notice requirements of WAC 173-226-130(5), when applicable.

The Director may require any discharger under this permit to apply for and obtain coverage under an individual permit or another more specific general permit. Permittees who have their coverage revoked for cause according to WAC 173-226-240 may request temporary coverage under this permit during the time an individual permit is being developed, provided the request is made within ninety (90) days from the time of revocation and is submitted along with a complete individual permit application form.

G6. REPORTING A CAUSE FOR MODIFICATION

The Permittee must submit a new application, or a supplement to the previous application, whenever a material change to the construction activity or in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application must be submitted at least sixty (60) days prior to any proposed changes. Filing a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G7. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit will be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G8. DUTY TO REAPPLY

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit.

G9. TRANSFER OF GENERAL PERMIT COVERAGE

Coverage under this general permit is automatically transferred to a new discharger, including operators of lots/parcels within a common plan of development or sale, **if**:

A. A written agreement (Transfer of Coverage Form) between the current discharger (Permittee) and new discharger, signed by both parties and containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to the Director; and

B. The Director does not notify the current discharger and new discharger of the Director's intent to revoke coverage under the general permit. If this notice is not given, the transfer is effective on the date specified in the written agreement.

When a current discharger (Permittee) transfers a portion of a permitted site, the current discharger must also submit an updated application form (NOI) to the Director indicating the remaining permitted acreage after the transfer.

G10. REMOVED SUBSTANCES

The Permittee must not re-suspend or reintroduce collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of stormwater to the final effluent stream for discharge to state waters.

G11. DUTY TO PROVIDE INFORMATION

The Permittee must submit to Ecology, within a reasonable time, all information that Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology, upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G13. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G14. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars ($10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars ($10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G15. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in Special Condition S5.F, and; 4) the Permittee complied with any remedial measures required under this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G16. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G17. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G18. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G19. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than $20,000 per day of violation, or imprisonment of not more than four (4) years, or both.

G20. REPORTING PLANNED CHANGES

The Permittee must, as soon as possible, give notice to Ecology of planned physical alterations, modifications or additions to the permitted construction activity. The Permittee should be aware that, depending on the nature and size of the changes to the original permit, a new public notice and other permit process requirements may be required. Changes in activities that require reporting to Ecology include those that will result in:

A. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).

B. A significant change in the nature or an increase in quantity of pollutants discharged, including but not limited to: for sites 5 acres or larger, a 20% or greater increase in acreage disturbed by construction activity.

C. A change in or addition of surface water(s) receiving stormwater or non-stormwater from the construction activity.

D. A change in the construction plans and/or activity that affects the Permittee's monitoring requirements in Special Condition S4.

Following such notice, permit coverage may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G21. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to Ecology, it must promptly submit such facts or information.

G22. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee must give advance notice to Ecology by submission of a new application or supplement thereto at least forty-five (45) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, must be scheduled during non-critical water quality periods and carried out in a manner approved by Ecology.

G23. REQUESTS TO BE EXCLUDED FROM COVERAGE UNDER THE PERMIT

Any discharger authorized by this permit may request to be excluded from coverage under the general permit by applying for an individual permit. The discharger must submit to the Director an application as described in WAC 173-220-040 or WAC 173-216-070, whichever is applicable, with reasons supporting the request. These reasons will fully document how an individual permit will apply to the applicant in a way that the general permit cannot. Ecology may make specific requests for information to support the request. The Director will either issue an individual permit or deny the request with a statement explaining the reason for the denial. When an individual permit is issued to a discharger otherwise subject to the construction stormwater general permit, the applicability of the construction stormwater general permit to that Permittee is automatically terminated on the effective date of the individual permit.

G24. APPEALS

A. The terms and conditions of this general permit, as they apply to the appropriate class of dischargers, are subject to appeal by any person within 30 days of issuance of this general permit, in accordance with Chapter 43.21B RCW, and Chapter 173-226 WAC.

B. The terms and conditions of this general permit, as they apply to an individual discharger, are appealable in accordance with Chapter 43.21B RCW within 30 days of the effective date of coverage of that discharger. Consideration of an appeal of general permit coverage of an individual discharger is limited to the general permit's applicability or nonapplicability to that individual discharger.

C. The appeal of general permit coverage of an individual discharger does not affect any other dischargers covered under this general permit. If the terms and conditions of this general permit are found to be inapplicable to any individual discharger(s), the matter

shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

G25. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

G26. BYPASS PROHIBITED

A. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited for stormwater events below the design criteria for stormwater management. Ecology may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, 3 or 4) is applicable.

1. Bypass of stormwater is consistent with the design criteria and part of an approved management practice in the applicable stormwater management manual.

2. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

   Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health.

3. Bypass of stormwater is unavoidable, unanticipated, and results in noncompliance of this permit.

   This bypass is permitted only if:

   a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

   b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.

c. Ecology is properly notified of the bypass as required in Special Condition S5.F of this permit.

4. A planned action that would cause bypass of stormwater and has the potential to result in noncompliance of this permit during a storm event.

   The Permittee must notify Ecology at least thirty (30) days before the planned date of bypass. The notice must contain:

   a. a description of the bypass and its cause

   b. an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.

   c. a cost-effectiveness analysis of alternatives including comparative resource damage assessment.

   d. the minimum and maximum duration of bypass under each alternative.

   e. a recommendation as to the preferred alternative for conducting the bypass.

   f. the projected date of bypass initiation.

   g. a statement of compliance with SEPA.

   h. a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated.

   i. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

5. For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above must be considered during preparation of the Stormwater Pollution Prevention Plan (SWPPP) and must be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

   Ecology will consider the following before issuing an administrative order for this type bypass:

   a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.

   b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

   c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve, conditionally approve, or deny the request. The public must be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under RCW 90.48.120.

B. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

APPENDIX A – DEFINITIONS

AKART is an acronym for "all known, available, and reasonable methods of prevention, control, and treatment." AKART represents the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants and controlling pollution associated with a discharge.

Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which was completed and approved by EPA before January 1, 2011, or before the date the operator's complete permit application is received by Ecology, whichever is later.

Applicant means an operator seeking coverage under this permit.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: stormwater associated with construction activity, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Buffer means an area designated by a local jurisdiction that is contiguous to and intended to protect a sensitive area.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

Calendar Day A period of 24 consecutive hours starting at 12:00 midnight and ending the following 12:00 midnight.

Calendar Week (same as Week) means a period of seven consecutive days starting at 12:01 a.m. (0:01 hours) on Sunday.

Certified Erosion and Sediment Control Lead (CESCL) means a person who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160 in the SWMM).

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; USC 1251 et seq.

Combined Sewer means a sewer which has been designed to serve as a sanitary sewer and a storm sewer, and into which inflow is allowed by local ordinance.

Common Plan of Development or Sale means a site where multiple separate and distinct construction activities may be taking place at different times on different schedules and/or by different contractors, but still under a single plan. Examples include: 1) phased projects and projects with multiple filings or lots, even if the separate phases or filings/lots will be constructed under separate contract or by separate owners (e.g., a development where lots are sold to separate builders); 2) a development plan that may be phased over multiple years, but is still under a

consistent plan for long-term development; 3) projects in a contiguous area that may be unrelated but still under the same contract, such as construction of a building extension and a new parking lot at the same facility; and 4) linear projects such as roads, pipelines, or utilities. If the project is part of a common plan of development or sale, the disturbed area of the entire plan must be used in determining permit requirements.

Composite Sample means a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots.

Concrete wastewater means any water used in the production, pouring and/or clean-up of concrete or concrete products, and any water used to cut, grind, wash, or otherwise modify concrete or concrete products. Examples include water used for or resulting from concrete truck/mixer/pumper/tool/chute rinsing or washing, concrete saw cutting and surfacing (sawing, coring, grinding, roughening, hydro-demolition, bridge and road surfacing). When stormwater comingles with concrete wastewater, the resulting water is considered concrete wastewater and must be managed to prevent discharge to waters of the state, including ground water.

Construction Activity means land disturbing operations including clearing, grading or excavation which disturbs the surface of the land. Such activities may include road construction, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Contaminant means any hazardous substance that does not occur naturally or occurs at greater than natural background levels. See definition of “hazardous substance” and WAC 173-340-200.

Demonstrably Equivalent means that the technical basis for the selection of all stormwater BMPs is documented within a SWPPP, including:

1. The method and reasons for choosing the stormwater BMPs selected.
2. The pollutant removal performance expected from the BMPs selected.
3. The technical basis supporting the performance claims for the BMPs selected, including any available data concerning field performance of the BMPs selected.
4. An assessment of how the selected BMPs will comply with state water quality standards.
5. An assessment of how the selected BMPs will satisfy both applicable federal technology-based treatment requirements and state requirements to use all known, available, and reasonable methods of prevention, control, and treatment (AKART).

Department means the Washington State Department of Ecology.

Detention means the temporary storage of stormwater to improve quality and/or to reduce the mass flow rate of discharge.

Dewatering means the act of pumping ground water or stormwater away from an active construction site.

Director means the Director of the Washington Department of Ecology or his/her authorized representative.

Discharger means an owner or operator of any facility or activity subject to regulation under Chapter 90.48 RCW or the Federal Clean Water Act.

Domestic Wastewater means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such ground water infiltration or surface waters as may be present.

Ecology means the Washington State Department of Ecology.

Engineered Soils means the use of soil amendments including, but not limited, to Portland cement treated base (CTB), cement kiln dust (CKD), or fly ash to achieve certain desirable soil characteristics.

Equivalent BMPs means operational, source control, treatment, or innovative BMPs which result in equal or better quality of stormwater discharge to surface water or to ground water than BMPs selected from the SWMM.

Erosion means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep.

Erosion and Sediment Control BMPs means BMPs intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, sediment traps, and ponds. Erosion and sediment control BMPs are synonymous with stabilization and structural BMPs.

Final Stabilization (same as fully stabilized or full stabilization) means the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (such as riprap, gabions or geotextiles) which prevents erosion.

Ground Water means water in a saturated zone or stratum beneath the land surface or a surface water body.

Hazardous Substance means any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) and (6), or any dangerous or extremely dangerous waste as designated by rule under chapter 70.105 RCW; any hazardous sub-stance as defined in RCW 70.105.010(14) or any hazardous substance as defined by rule under chapter 70.105 RCW; any substance that, on the effective date of this section, is a hazardous substance under section 101(14) of the federal cleanup law, 42 U.S.C., Sec. 9601(14); petroleum or petroleum products; and any substance or category of substances, including solid waste decomposition products, determined by the director

by rule to present a threat to human health or the environment if released into the environment. The term hazardous substance does not include any of the following when contained in an underground storage tank from which there is not a release: crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal, state, and local law.

Injection Well means a well that is used for the subsurface emplacement of fluids. (See Well.)

Jurisdiction means a political unit such as a city, town or county; incorporated for local self-government.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the State from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology.

Notice of Intent (NOI) means the application for, or a request for coverage under this general permit pursuant to WAC 173-226-200.

Notice of Termination (NOT) means a request for termination of coverage under this general permit as specified by Special Condition S10 of this permit.

Operator means any party associated with a construction project that meets either of the following two criteria:

- The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
- The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

Permittee means individual or entity that receives notice of coverage under this general permit.

pH means a liquid's measure of acidity or alkalinity. A pH of 7 is defined as neutral. Large variations above or below this value are considered harmful to most aquatic life.

pH monitoring period means the time period in which the pH of stormwater runoff from a site must be tested a minimum of once every seven days to determine if stormwater pH is between 6.5 and 8.5.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which pollutants are or may be discharged to surface waters of the State. This term does not include return flows from irrigated agriculture. (See Fact Sheet for further explanation.)

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste. This term does not include sewage from vessels within the meaning of section 312 of the CWA, nor does it include dredged or fill material discharged in accordance with a permit issued under section 404 of the CWA.

Pollution means contamination or other alteration of the physical, chemical, or biological properties of waters of the State; including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the State as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product (40 CFR 122.1).

Receiving water means the water body at the point of discharge. If the discharge is to a storm sewer system, either surface or subsurface, the receiving water is the water body to which the storm system discharges. Systems designed primarily for other purposes such as for ground water drainage, redirecting stream natural flows, or for conveyance of irrigation water/return flows that coincidentally convey stormwater are considered the receiving water.

Representative means a stormwater or wastewater sample which represents the flow and characteristics of the discharge. Representative samples may be a grab sample, a time-proportionate composite sample, or a flow proportionate sample. Ecology's Construction Stormwater Monitoring Manual provides guidance on representative sampling.

Sanitary sewer means a sewer which is designed to convey domestic wastewater.

Sediment means the fragmented material that originates from the weathering and erosion of rocks or unconsolidated deposits, and is transported by, suspended in, or deposited by water.

Sedimentation means the depositing or formation of sediment.

Sensitive area means a water body, wetland, stream, aquifer recharge area, or channel migration zone.

SEPA (State Environmental Policy Act) means the Washington State Law, RCW 43.21C.020, intended to prevent or eliminate damage to the environment.

Significant Amount means an amount of a pollutant in a discharge that is amenable to available and reasonable methods of prevention or treatment; or an amount of a pollutant that has a

reasonable potential to cause a violation of surface or ground water quality or sediment management standards.

Significant concrete work means greater than 1000 cubic yards poured concrete or recycled concrete over the life of a project.

Significant Contributor of Pollutants means a facility determined by Ecology to be a contributor of a significant amount(s) of a pollutant(s) to waters of the State of Washington.

Site means the land or water area where any "facility or activity" is physically located or conducted.

Source control BMPs means physical, structural or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. A few examples of source control BMPs are erosion control practices, maintenance of stormwater facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the sanitary sewer or a dead end sump.

Stabilization means the application of appropriate BMPs to prevent the erosion of soils, such as, temporary and permanent seeding, vegetative covers, mulching and matting, plastic covering and sodding. See also the definition of Erosion and Sediment Control BMPs.

Storm drain means any drain which drains directly into a storm sewer system, usually found along roadways or in parking lots.

Storm sewer system means a means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains designed or used for collecting or conveying stormwater. This does not include systems which are part of a combined sewer or Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Stormwater means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Stormwater Management Manual (SWMM) or Manual means the technical Manual published by Ecology for use by local governments that contain descriptions of and design criteria for BMPs to prevent, control, or treat pollutants in stormwater.

Stormwater Pollution Prevention Plan (SWPPP) means a documented plan to implement measures to identify, prevent, and control the contamination of point source discharges of stormwater.

Surface Waters of the State includes lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Temporary Stabilization means the exposed ground surface has been covered with appropriate materials to provide temporary stabilization of the surface from water or wind erosion. Materials include, but are not limited to, mulch, riprap, erosion control mats or blankets and temporary cover crops. Seeding alone is not considered stabilization. Temporary stabilization is not a substitute for the more permanent "final stabilization."

Total Maximum Daily Load (TMDL) means a calculation of the maximum amount of a pollutant that a water body can receive and still meet state water quality standards. Percentages of the total maximum daily load are allocated to the various pollutant sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDL calculations must include a "margin of safety" to ensure that the water body can be protected in case there are unforeseen events or unknown sources of the pollutant. The calculation must also account for seasonable variation in water quality.

Treatment BMPs means BMPs that are intended to remove pollutants from stormwater. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

Transparency means a measurement of water clarity in centimeters (cm), using a 60 cm transparency tube. The transparency tube is used to estimate the relative clarity or transparency of water by noting the depth at which a black and white Secchi disc becomes visible when water is released from a value in the bottom of the tube. A transparency tube is sometimes referred to as a "turbidity tube."

Turbidity means the clarity of water expressed as nephelometric turbidity units (NTU) and measured with a calibrated turbidimeter.

Uncontaminated means free from any contaminant, as defined in MTCA cleanup regulations. See definition of "contaminant" and WAC 173-340-200.

Waste Load Allocation (WLA) means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality based effluent limitation (40 CFR 130.2[h]).

Water quality means the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

Waters of the State includes those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the State" as defined in Chapter 90.48 RCW, which include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Well means a bored, drilled or driven shaft, or dug hole whose depth is greater than the largest surface dimension. (See Injection well.)

Wheel wash wastewater means any water used in, or resulting from the operation of, a tire bath or wheel wash (BMP C106: Wheel Wash), or other structure or practice that uses water to physically remove mud and debris from vehicles leaving a construction site and prevent track-out onto roads. When stormwater comingles with wheel wash wastewater, the resulting water is considered wheel wash wastewater and must be managed according to Special Condition S9.D.9.

APPENDIX B – ACRONYMS

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BMP	Best Management Practice
CESCL	Certified Erosion and Sediment Control Lead
CFR	Code of Federal Regulations
CKD	Cement Kiln Dust
cm	Centimeters
CTB	Cement-Treated Base
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
ESC	Erosion and Sediment Control
FR	Federal Register
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SWMM	Stormwater Management Manual
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control
USC	United States Code
USEPA	United States Environmental Protection Agency
WAC	Washington Administrative Code
WQ	Water Quality
WWHM	Western Washington Hydrology Model

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

August 6, 2014

Lauren Miles Golembiewski
Glacier Environmental Services, Inc.
PO Box 1097
Mukilteo, WA 98275

RE: **Notice of Termination of Coverage under the Stormwater General Permit for Construction Activity**

Permit Number:	**WAR301251**
Site Name:	Cornet Bay Marina
Location:	200 Cornet Bay Rd Oak Harbor, WA (Island County)
Disturbed Acres:	1.1

Dear Lauren Miles Golembiewski:

The Washington State Department of Ecology (Ecology) has reviewed your Notice of Termination (NOT) of coverage under the Construction Stormwater General Permit for the construction site shown above. Based upon the NOT, Ecology is terminating your coverage under the permit as of July 22, 2014, the date Ecology received the NOT, for the following reason:

> *The site has undergone final stabilization, all temporary BPMs have been removed, and all stormwater discharges associated with construction activity has been eliminated. (Section S10-A1).*

Please ensure that you retain the Stormwater Pollution Prevention Plan (SWPPP) and copies of all of the application, inspection reports, and all other reports required by this permit for at least three years after the date of final stabilization of the construction site. These documents need to be available to Ecology and to the local government agencies with jurisdiction, upon request.

As required by State law (RCW 90.48.465), Ecology charges a fee for its discharge permits. Although your permit coverage is terminated, you will receive a bill for the period the permit was effective.

If you would like more information on the fee process, please contact Bev Poston at (360) 407-6425 or send email to bev.poston@ecy.wa.gov.

If you have any questions regarding the termination process, please contact Clay Keown at (360) 407-6048 or send email to ckeo461@ecy.wa.gov.

Sincerely,

Bill Moore, P.E.
Program Development Services Section Manager
Water Quality Program

cc: Bev Poston, Ecology/Water Quality Program/Fees
Clay Keown, Ecology/Water Quality Program

Appendix B

Water Monitoring

February 11, 2014

Mr. Alan Hall
Glacier Environmental Services, Inc.
PO Box 1097,
Mukilteo, WA 98275

Dear Mr. Hall,

On February 7th, 2 samples were received by our laboratory and assigned our laboratory project number EV14020031. The project was identified as your 13-028. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/11/2014
		ALS JOB#:	EV14020031
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	2/7/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	2/7/2014 1:30:00 PM
CLIENT SAMPLE ID	EFF-2714	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/10/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	02/10/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/10/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/10/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/10/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/10/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/10/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**91.6**	02/10/2014	DLC
TFT	EPA-8021	**88.8**	02/10/2014	DLC
C25	NWTPH-DX	**90.2**	02/10/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/11/2014
		ALS JOB#:	EV14020031
		ALS SAMPLE#:	-02
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	2/7/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	2/7/2014 1:30:00 PM
CLIENT SAMPLE ID	After Primary-2714	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/10/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	02/10/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/10/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/10/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/10/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/10/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/10/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**90.9**	02/10/2014	DLC
TFT	EPA-8021	**92.6**	02/10/2014	DLC
C25	NWTPH-DX	**95.4**	02/10/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/11/2014
		ALS SDG#:	EV14020031
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY BLANK RESULTS

MB-020514W2 - Batch 7610 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/05/2014	DLC

MB-020514W2 - Batch 7610 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	02/05/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/05/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/05/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/05/2014	DLC

MB-020714W - Batch 7614 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/07/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/07/2014	EBS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/11/2014
		ALS SDG#:	EV14020031
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 7610 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**68.7**			02/05/2014	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**73.4**	**7**		02/05/2014	DLC

ALS Test Batch ID: 7610 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**95.0**			02/05/2014	DLC
Benzene - BSD	EPA-8021	**102**	**7**		02/05/2014	DLC
Toluene - BS	EPA-8021	**99.5**			02/05/2014	DLC
Toluene - BSD	EPA-8021	**107**	**7**		02/05/2014	DLC
Ethylbenzene - BS	EPA-8021	**96.7**			02/05/2014	DLC
Ethylbenzene - BSD	EPA-8021	**104**	**7**		02/05/2014	DLC
Xylenes - BS	EPA-8021	**97.2**			02/05/2014	DLC
Xylenes - BSD	EPA-8021	**104**	**7**		02/05/2014	DLC

ALS Test Batch ID: 7614 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**93.3**			02/07/2014	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**94.7**	**1**		02/07/2014	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1402003 1

Date 2/7/14 Page 1 Of 1

PROJECT ID: 13-028
REPORT TO COMPANY: GLACIER ENVIRONMENTAL
PROJECT MANAGER: ALAN
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275
PHONE: (425) 355-2826 FAX: (425) 290-9186
P.O. #: E-MAIL: EHAY@GLACIERENVIRO.COM
INVOICE TO COMPANY: GLACIER ENVIRONMENTAL
ATTENTION: LAUREN MILES
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. EFF-2714	2/7/14	13:30	W	1
2. AFTER PRIMARY-2714	2/7/14	13:30	W	2
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

ANALYSIS REQUESTED

NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐
	X	X	X											
	X	X	X											

OTHER (Specify)

NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
3	
3	

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: GES 2/7/14 1630
   Received By: ALS 2/7/14 1630
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: X 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

Clear Creek Systems, Inc. Data Log Sheet: CBR

Glacier Environmental Services - Cornet Bay Marina Remediation Project

Oak Harbor, WA

	Name: Eric Hay				Day/Date: 2/7/14					System GPM: 100			
Time	14:30	15:30											
Raw Water Treatment	D												
pH - Raw	8.36	8.11											
NTU - Raw	269	243											
Flow Rate (gpm)	35 GPM	N/A											
Flow Totalizer	N/A	N/A											
Pretreatment Dose (ppm)	1.1875	1.2 gpm											
Speed & Stroke	20/15	20/18											
CESF System	0.3125												
Sand Filter Dose (ppm)	~~25 GPM~~	.3 GPM											
Speed & Stroke	20/15	20/15											
Influent pH	6.47	6.48											
Effluent pH	6.85	6.98											
Influent Turbidity (NTU)	23.0	21.0											
Effluent Turbidtity (NTU)	5.01	4.85											
Influent psig	25	28											
Discharge psig	21	21											
Flow Rate (gpm)	111 GPM	98 gpm											
Residual Chitodan Test	Negative	NEG											
Flow Totalizer start 0	5439	11 319	End 13,742										
SAND EFFLUENT -	<5.0 NTU	4.90						Background NTU----->			pH/°C---->		

Total Discharge 13,742 gal

February 11, 2014

Mr. Alan Hall
Glacier Environmental Services, Inc.
PO Box 1097,
Mukilteo, WA 98275

Dear Mr. Hall,

On February 10th, 2 samples were received by our laboratory and assigned our laboratory project number EV14020036. The project was identified as your 13-028. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/11/2014
		ALS JOB#:	EV14020036
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	2/10/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	2/10/2014 10:00:00 AM
CLIENT SAMPLE ID	EFF-21014	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/11/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	02/11/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/11/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/11/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/11/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/11/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/11/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**91.6**	02/11/2014	DLC
TFT	EPA-8021	**90.1**	02/11/2014	DLC
C25	NWTPH-DX	**92.0**	02/11/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/11/2014
		ALS JOB#:	EV14020036
		ALS SAMPLE#:	-02
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	2/10/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	2/10/2014 10:00:00 AM
CLIENT SAMPLE ID	After Primary-21014	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/11/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	02/11/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/11/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/11/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/11/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/11/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/11/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**86.6**	02/11/2014	DLC
TFT	EPA-8021	**88.0**	02/11/2014	DLC
C25	NWTPH-DX	**91.4**	02/11/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/11/2014
		ALS SDG#:	EV14020036
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY BLANK RESULTS

MB-020514W2 - Batch 7610 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/05/2014	DLC

MB-020514W2 - Batch 7610 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	02/05/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/05/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/05/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/05/2014	DLC

MB-020714W - Batch 7614 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/07/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/07/2014	EBS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/11/2014
		ALS SDG#:	EV14020036
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 7610 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**68.7**			02/05/2014	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**73.4**	**7**		02/05/2014	DLC

ALS Test Batch ID: 7610 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**95.0**			02/05/2014	DLC
Benzene - BSD	EPA-8021	**102**	**7**		02/05/2014	DLC
Toluene - BS	EPA-8021	**99.5**			02/05/2014	DLC
Toluene - BSD	EPA-8021	**107**	**7**		02/05/2014	DLC
Ethylbenzene - BS	EPA-8021	**96.7**			02/05/2014	DLC
Ethylbenzene - BSD	EPA-8021	**104**	**7**		02/05/2014	DLC
Xylenes - BS	EPA-8021	**97.2**			02/05/2014	DLC
Xylenes - BSD	EPA-8021	**104**	**7**		02/05/2014	DLC

ALS Test Batch ID: 7614 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**93.3**			02/07/2014	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**94.7**	**1**		02/07/2014	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

EV1402O036

Date 2/10/14 Page 1 Of 1

PROJECT ID: 13-028
REPORT TO COMPANY: GLACIER ENVIRONMENTAL
PROJECT MANAGER: ALAN HALL
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275
PHONE: (425) 355-2826 FAX: (425) 290-9186
P.O. #: E-MAIL: EHAM@GLACIERENVIRO.COM

INVOICE TO COMPANY: GLACIER ENVIRONMENTAL
ATTENTION: LAUREN MILES
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EFF-21014	2/10/14	13:00	W	1		X	X	X												3	
2. AFTER PRIMARY-21014	2/10/14	10:00	W	2		X	X	X												3	
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: GES 2/10/14 4:25
Received By: Shawn Robinson AW 2/10/14 4:25
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: ~~5~~ Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

* Turnaround request less than standard may incur Rush Charges

284 NORTHWEST INSTRUMENTS

Clear Creek Systems, Inc. Data Log Sheet: CBR

Glacier Environmental Services - Cornet Bay Marina Remediation Project

Oak Harbor, WA

Name: Eric Hay **Day/Date:** 2/10/14 **System GPM:** 100

Time	0900	1015										
Raw Water Treatment		843										
pH - Raw	8.27	[illegible]										
NTU - Raw	>1000	393										
Flow Rate (gpm)	N/A	N/A										
Flow Totalizer	N/A	N/A										
Pretreatment Dose (ppm)	0.5 GPH	0										
Speed & Stroke	25/15	0 N/A										
CESF System												
Sand Filter Dose (ppm)	1.5 GPH	N/A										
Speed & Stroke	20/15	20/15										
Influent pH 7.85	[illegible]	7.88										
Effluent pH	7.13	7.20										
Influent Turbidity (NTU)	10.77	12.61										
Effluent Turbidtity (NTU)	1.04	0.40										
Influent psig	38	37										
Discharge psig	35	37										
Flow Rate (gpm)	—	81 GPM										
Residual Chitodan Test	NEG	NEGATIVE										
Flow Totalizer Start 13,742	19,542	26469.20 End - 30244.36										
SAND EFFLUENT	4.90	1.61							Background NTU----->		pH/°C----->	

Total Discharge — 16,502 gal

February 18, 2014

Mr. Alan Hall
Glacier Environmental Services, Inc.
PO Box 1097,
Mukilteo, WA 98275

Dear Mr. Hall,

On February 14th, 2 samples were received by our laboratory and assigned our laboratory project number EV14020061. The project was identified as your 13-028. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE: ALS JOB#: ALS SAMPLE#:	2/18/2014 EV14020061 EV14020061-01
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	02/14/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	2/14/2014 9:00:00 AM
CLIENT SAMPLE ID	EFF-21414	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/17/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	02/17/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/17/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/17/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/17/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/17/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/17/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**107**	02/17/2014	DLC
TFT	EPA-8021	**99.9**	02/17/2014	DLC
C25	NWTPH-DX	**86.1**	02/17/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/18/2014
		ALS JOB#:	EV14020061
		ALS SAMPLE#:	EV14020061-02
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	02/14/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	2/14/2014 9:00:00 AM
CLIENT SAMPLE ID	After Primary -21414	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/17/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	02/17/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/17/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/17/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/17/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/17/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/17/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**108**	02/17/2014	DLC
TFT	EPA-8021	**99.3**	02/17/2014	DLC
C25	NWTPH-DX	**85.4**	02/17/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/18/2014
		ALS SDG#:	EV14020061
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY BLANK RESULTS

MB-021414W - Batch 7613 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	100	2	UG/L	02/14/2014	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-021414W - Batch 7613 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	2.0	2	UG/L	02/14/2014	DLC
Toluene	EPA-8021	U	2.0	2	UG/L	02/14/2014	DLC
Ethylbenzene	EPA-8021	U	2.0	2	UG/L	02/14/2014	DLC
Xylenes	EPA-8021	U	6.0	2	UG/L	02/14/2014	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-021214W - Batch 7621 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/12/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/12/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	2/18/2014
		ALS SDG#:	EV14020061
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 7613 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range 2X Dilution - BS	NWTPH-GX	**79.3**			02/14/2014	DLC
TPH-Volatile Range 2X Dilution - BSD	NWTPH-GX	**77.5**	**2**		02/14/2014	DLC

ALS Test Batch ID: 7613 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene 2X Dilution - BS	EPA-8021	**91.3**			02/14/2014	DLC
Benzene 2X Dilution - BSD	EPA-8021	**93.8**	**3**		02/14/2014	DLC
Toluene 2X Dilution - BS	EPA-8021	**96.2**			02/14/2014	DLC
Toluene 2X Dilution - BSD	EPA-8021	**98.7**	**3**		02/14/2014	DLC
Ethylbenzene 2X Dilution - BS	EPA-8021	**93.9**			02/14/2014	DLC
Ethylbenzene 2X Dilution - BSD	EPA-8021	**96.2**	**2**		02/14/2014	DLC
Xylenes 2X Dilution - BS	EPA-8021	**94.2**			02/14/2014	DLC
Xylenes 2X Dilution - BSD	EPA-8021	**96.3**	**2**		02/14/2014	DLC

ALS Test Batch ID: 7621 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**79.0**			02/12/2014	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**80.2**	**2**		02/12/2014	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

EV1402006 1

Date 2/14/14 Page 1 Of 1

PROJECT ID: 13-028
REPORT TO COMPANY: GLACIER ENVIRONMENTAL SERVICES, INC.
PROJECT MANAGER: ALAN HALL
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275
PHONE: 425-355-2826 FAX:
P.O. #: E-MAIL: ERAY@GLACIERENVIRO.COM
INVOICE TO COMPANY: GLACIER ENVIRONMENTAL
ATTENTION: LAUREN
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EFF-21414	2/14/14	0900	W	1		X	X	X												3	
2. AFTER PRIMARY-21414	2/14/14	0900	W	2		X	X	X												3	
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

LABORATORY COPY

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: ERIC HAY GES. 2/14/14 1620
Received By: ALS 2/14/14 1620
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: X Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

* Turnaround request less than standard may incur Rush Charges

Clear Creek Systems, Inc. Data Log Sheet: AMD

Arbor Mist Development - Lennar Northwest, Inc.

Lynwood, WA

Name: ERIC HAY | **Day/Date:** 2/14/14 | **System GPM:** 100

Time	0800	0900	1000	12:00	1:00	2:00						
Raw Water Treatment												
pH - Raw	7.83	7.84	7.09	7.65								
NTU - Raw	1305	285	247	7007	176	770						
Flow Rate (gpm)	N/A	N/A	N/A	N/A	N/A	N/A						
Flow Totalizer	N/A	N/A	N/A	N/A	N/A	N/A						
Pretreatment Dose (ppm)	1.2 GPH	1.2 GPH	1.2 GPH	1.2 GPH	1.2	1.2						
Speed & Stroke	20/18	20/18	20/18	20/18	20/18	20/18						
CESF System	DIS @ 0835	DIS	DIS	DIS @ 11:50	DIS	DIS						
Sand Filter Dose (ppm)	0.3 GPH	0.3 GPH	0.3 GPH	0.3 GPH	.36 P/H	.3 GPH						
Speed & Stroke	20/15	20/15	20/15	20/15	20/15	20/15						
Influent pH	7.79	7.79	7.79	7.75	7.76	7.81						
Effluent pH	7.74	7.28	7.41	7.63	7.73	7.75						
Influent Turbidity (NTU)	2.38	6.00	10.50	57.00	80.60	38.12						
Effluent Turbidtity (NTU)	0.70	0.97	0.50	0.57	1.24	2.4						
Influent psig	20	39	39	39	39	39						
Discharge psig	15	39	39	39	39	39						
Flow Rate (gpm)	65.99	86.00	89.00	94.00	92.0	9300						
Residual Chitodan Test	ND	—	—	—	—	—						
Flow Totalizer	30244.76	34710.00	37441	41820.00	45792	52262	End - 54,136.01					
SAND Effluent	0.0	0.0	0.0	3.00	1.35	13			Background NTU----->		pH/°C----->	

Start @ 30,244.76 GAL

OFF @ 11:00 FOR MAINT

Total Discharge - 23,891 gal

March 4, 2014

Mr. Alan Hall
Glacier Environmental Services, Inc.
PO Box 1097,
Mukilteo, WA 98275

Dear Mr. Hall,

On February 25th, 2 samples were received by our laboratory and assigned our laboratory project number EV14020130. The project was identified as your 13-028. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	3/4/2014
		ALS JOB#:	EV14020130
		ALS SAMPLE#:	EV14020130-01
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	02/25/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	2/25/2014 9:00:00 AM
CLIENT SAMPLE ID	EFF - 22514	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/25/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	02/25/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/25/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/25/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/25/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/27/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/27/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**81.8**	02/25/2014	DLC
TFT	EPA-8021	**78.2**	02/25/2014	DLC
C25	NWTPH-DX	**78.7**	02/27/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE: ALS JOB#: ALS SAMPLE#:	3/4/2014 EV14020130 EV14020130-02
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	02/25/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	2/25/2014 9:00:00 AM
CLIENT SAMPLE ID	After Primary - 22514	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/25/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	02/25/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/25/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/25/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/25/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/27/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/27/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**94.3**	02/25/2014	DLC
TFT	EPA-8021	**93.6**	02/25/2014	DLC
C25	NWTPH-DX	**82.5**	02/27/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	3/4/2014
		ALS SDG#:	EV14020130
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY BLANK RESULTS

MB-021914W2 - Batch 7651 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/19/2014	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-021914W2 - Batch 7651 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	02/19/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/19/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/19/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/19/2014	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-022514W - Batch 7670 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/27/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/27/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	3/4/2014
		ALS SDG#:	EV14020130
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 7651 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**66.8**			02/19/2014	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**70.7**	**6**		02/19/2014	DLC

ALS Test Batch ID: 7651 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**102**			02/19/2014	DLC
Benzene - BSD	EPA-8021	**104**	**2**		02/19/2014	DLC
Toluene - BS	EPA-8021	**101**			02/19/2014	DLC
Toluene - BSD	EPA-8021	**103**	**2**		02/19/2014	DLC
Ethylbenzene - BS	EPA-8021	**101**			02/19/2014	DLC
Ethylbenzene - BSD	EPA-8021	**103**	**2**		02/19/2014	DLC
Xylenes - BS	EPA-8021	**101**			02/19/2014	DLC
Xylenes - BSD	EPA-8021	**103**	**2**		02/19/2014	DLC

ALS Test Batch ID: 7670 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**87.0**			02/27/2014	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**84.4**	**3**		03/03/2014	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1402013O

Date 2/25/14 Page 1 Of 1

PROJECT ID: 13-028
REPORT TO COMPANY: GLACIER ENVIRONMENTAL SERVICES
PROJECT MANAGER: ANN HALL
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275
PHONE: (425) 355-2826 FAX:
P.O. #: E-MAIL: EHAY@GLACIERENVIRO.COM
INVOICE TO COMPANY: GLACIER ENVIRONMENTAL SERVICES
ATTENTION: LAUREN
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EFF-225I4	02/25/14	0900	W	1		X	X	X												3	
2. AFTER PRIMARY-225I4	02/25/14	0900	W	2		X	X	X												3	
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

LABORATORY COPY

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: 2/25/14 14:30
Received By: Dale Grant, ALS, 2/25/14, 14:30
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*
Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY
Fuels & Hydrocarbon Analysis: X Standard | 3 | 1 | SAME DAY
OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

Clear Creek Systems, Inc. Data Log Sheet: AMD

Arbor Mist Development - Lennar Northwest, Inc.

Lynwood, WA

Name:					Day/Date: 2/25/14					System GPM:		
Time	0715	0815	0915	1040	1130							
Raw Water Treatment												
pH - Raw	7.11	7.05	6.93	7.3	7.0							
NTU - Raw	>1000	>1000	>1000	>1000	>1000							
Flow Rate (gpm)	NA											
Flow Totalizer	NA											
Pretreatment Dose (ppm)	25/18											
Speed & Stroke	0.88											
CESF System												
Sand Filter Dose (ppm)	0.37 GPM											
Speed & Stroke	20/15											
Influent pH	7.88	7.83	7.82	7.82	7.88							
Effluent pH 7.77	~~0.39~~	7.82	7.82	7.86	7.84							
Influent Turbidity (NTU)	7.35	3.58	4.39	4.49	40.29							
Effluent Turbidtity (NTU)	0.39	.39	.38	.38	.5							
Influent psig	40	40										
Discharge psig	38	38										
Flow Rate (gpm)	90.0	88.88	90.65	86	81							
Residual Chitodan Test	ND											
Flow Totalizer ~~Start 54,136~~	55304	58504	62442	67422	70897	End -	@ 11:30					
SAND EFF	0.39							Background NTU----->		pH/°C---->		

Start 54,136
1.25
57
.88

1.25 0.37

Total Discharge ~~[redacted]~~
16,761 gal

March 6, 2014

Mr. Alan Hall
Glacier Environmental Services, Inc.
PO Box 1097,
Mukilteo, WA 98275

Dear Mr. Hall,

On March 3rd, 2 samples were received by our laboratory and assigned our laboratory project number EV14030011. The project was identified as your 13-028. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	3/6/2014
		ALS JOB#:	EV14030011
		ALS SAMPLE#:	EV14030011-01
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	03/03/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	3/3/2014 10:00:00 AM
CLIENT SAMPLE ID	EFF-30314	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY	
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/04/2014	DLC	
Benzene	EPA-8021	U	1.0	1	UG/L	03/04/2014	DLC	
Toluene	EPA-8021	U	1.0	1	UG/L	03/04/2014	DLC	
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/04/2014	DLC	
Xylenes	EPA-8021	U	3.0	1	UG/L	03/04/2014	DLC	
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	03/04/2014	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	03/04/2014	EBS	

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY	
TFT	NWTPH-GX	**105**	03/04/2014	DLC	
TFT	EPA-8021	**94.0**	03/04/2014	DLC	
C25	NWTPH-DX	**81.1**	03/04/2014	EBS	

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE: ALS JOB#: ALS SAMPLE#:	3/6/2014 EV14030011 EV14030011-02
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	03/03/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	3/3/2014 10:00:00 AM
CLIENT SAMPLE ID	After Primary-30314	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/04/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	03/04/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	03/04/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/04/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	03/04/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	03/04/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	03/04/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**104**	03/04/2014	DLC
TFT	EPA-8021	**91.2**	03/04/2014	DLC
C25	NWTPH-DX	**75.8**	03/04/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	3/6/2014
		ALS SDG#:	EV14030011
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY BLANK RESULTS

MB-022714W2 - Batch 7665 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	02/27/2014	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-022714W2 - Batch 7665 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	02/27/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	02/27/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	02/27/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	02/27/2014	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-022814W - Batch 7671 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	02/28/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	02/28/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	3/6/2014
		ALS SDG#:	EV14030011
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 7665 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**70.7**			02/27/2014	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**74.3**	**5**		02/27/2014	DLC

ALS Test Batch ID: 7665 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**99.8**			02/27/2014	DLC
Benzene - BSD	EPA-8021	**104**	**4**		02/27/2014	DLC
Toluene - BS	EPA-8021	**98.6**			02/27/2014	DLC
Toluene - BSD	EPA-8021	**102**	**4**		02/27/2014	DLC
Ethylbenzene - BS	EPA-8021	**97.4**			02/27/2014	DLC
Ethylbenzene - BSD	EPA-8021	**101**	**4**		02/27/2014	DLC
Xylenes - BS	EPA-8021	**97.7**			02/27/2014	DLC
Xylenes - BSD	EPA-8021	**101**	**4**		02/27/2014	DLC

ALS Test Batch ID: 7671 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**85.8**			03/03/2014	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**87.2**	**2**		03/03/2014	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

EV1403011

Date 03/3/14 Page 1 Of 1

PROJECT ID: 13-028
REPORT TO COMPANY: Glacier Environmental Services, Inc.
PROJECT MANAGER: Alan Hall
ADDRESS: P.O. Box 1097
Mukilteo, WA, 98275
PHONE: (425) 355-2826 FAX:
P.O. #: E-MAIL: EHall@Glacierenv.com
INVOICE TO COMPANY: Glacier Environmental Services, Inc.
ATTENTION: Lauren
ADDRESS: P.O. Box 1097
Mukilteo, WA 98275

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EFF-30314	03/03/14	10:00	W	1		X	X	X													3	
2. AFTER PRIMARY-30314	03/03/14	10:00	W	2		X	X	X													3	
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

LABORATORY COPY

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Jim Riley 3/3/14 15:55
   Received By: Shawn Peterson ALS 3/3/14 3:55
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: ☒ Standard | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

Clear Creek Systems, Inc. Data Log Sheet: AMD

Arbor Mist Development - Lennar Northwest, Inc.

Lynwood, WA

Name: ERIC HAY				Day/Date: 3/3/14						System GPM: 100		
Time	0845	0945	1045	1145	1245							
Raw Water Treatment												
pH - Raw	7.5	7.5	7.52	7.40	7.46	N/A						
NTU - Raw	87.00	119	198	102	162	N/A						
Flow Rate (gpm)	N/A	N/A	N/A	N/A	N/A	N/A						
Flow Totalizer	N/A	N/A	N/A	N/A	N/A	N/A						
Pretreatment Dose (ppm)	1 GPH	1 GPH	1 GPH	1 GPM	1 GPM	N/A						
Speed & Stroke	20/18	20/18	20/18	20/18	20/18	N/A						
CESF System	DISCHARGE	D	D	D	D	D						
Sand Filter Dose (ppm)	0.375 GPM	0.375 GPM	0.375 GPM	0.375 GPM	0.375 GPM	0.375 GPM						
Speed & Stroke	20/15	20/15	20/15	20/15	20/15	20/15						
Influent pH	7.65	7.64	7.61	7.61	7.61	7.58						
Effluent pH	7.71	7.72	7.73	7.74	7.73	7.72						
Influent Turbidity (NTU)	14.5	21.0	27	23.58	29.49	25.19						
Effluent Turbidtity (NTU)	0.05	0.8	1.08	1.18	1.01	1.08						
Influent psig	40	40	41	40	39	40						
Discharge psig	39	39	35	38	38	39						
Flow Rate (gpm)	86.0	84	81	78	66	88						
Residual Chitodan Test	N.D	—	—	—	—	—						
Flow Totalizer	73,074	77,435	84,014	86,968	91,727	95,981.03	END					
SAND EFFLUENT	0.0	0.0	0.0	0.0	1.08	0.0		Background NTU----->		pH/°C---->		

Start 70,897 TOTAL Discharged today 25,084

March 14, 2014

Mr. Alan Hall
Glacier Environmental Services, Inc.
PO Box 1097,
Mukilteo, WA 98275

Dear Mr. Hall,

On March 12th, 2 samples were received by our laboratory and assigned our laboratory project number EV14030090. The project was identified as your 13-028. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	3/14/2014
		ALS JOB#:	EV14030090
		ALS SAMPLE#:	EV14030090-01
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	03/12/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	3/11/2014 9:20:00 AM
CLIENT SAMPLE ID	EFF-31114	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/13/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	03/13/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	03/13/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/13/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	03/13/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	03/13/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	03/13/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**98.0**	03/13/2014	DLC
TFT	EPA-8021	**92.6**	03/13/2014	DLC
C25	NWTPH-DX	**85.2**	03/13/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE: ALS JOB#: ALS SAMPLE#:	3/14/2014 EV14030090 EV14030090-02
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	03/12/2014
CLIENT PROJECT:	13-028	COLLECTION DATE:	3/11/2014 9:20:00 AM
CLIENT SAMPLE ID	After Primary-31114	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/13/2014	DLC
Benzene	EPA-8021	U	1.0	1	UG/L	03/13/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	03/13/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/13/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	03/13/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	03/13/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	03/13/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**93.7**	03/13/2014	DLC
TFT	EPA-8021	**93.6**	03/13/2014	DLC
C25	NWTPH-DX	**88.3**	03/13/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	3/14/2014
		ALS SDG#:	EV14030090
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY BLANK RESULTS

MB-030614W - Batch 7698 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	03/06/2014	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-030614W - Batch 7698 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	03/06/2014	DLC
Toluene	EPA-8021	U	1.0	1	UG/L	03/06/2014	DLC
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/06/2014	DLC
Xylenes	EPA-8021	U	3.0	1	UG/L	03/06/2014	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-031014W - Batch 7697 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	03/10/2014	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	03/10/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE:	3/14/2014
		ALS SDG#:	EV14030090
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	13-028		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 7698 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**74.7**			03/06/2014	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**75.6**	**1**		03/06/2014	DLC

ALS Test Batch ID: 7698 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**102**			03/06/2014	DLC
Benzene - BSD	EPA-8021	**103**	**1**		03/06/2014	DLC
Toluene - BS	EPA-8021	**101**			03/06/2014	DLC
Toluene - BSD	EPA-8021	**102**	**1**		03/06/2014	DLC
Ethylbenzene - BS	EPA-8021	**100**			03/06/2014	DLC
Ethylbenzene - BSD	EPA-8021	**101**	**1**		03/06/2014	DLC
Xylenes - BS	EPA-8021	**100**			03/06/2014	DLC
Xylenes - BSD	EPA-8021	**102**	**1**		03/06/2014	DLC

ALS Test Batch ID: 7697 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**82.6**			03/11/2014	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**76.0**	**8**		03/10/2014	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1403090

Date 3/11/14 Page 1 Of 1

PROJECT ID: 13-028
REPORT TO COMPANY: GLACIER ENVIRONMENTAL SERVICES, INC.
PROJECT MANAGER: ALAN HALL
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275
PHONE: (425) 355-2826 FAX:
P.O. #: E-MAIL: ERIC_HAY@HOTMAIL.COM
INVOICE TO COMPANY: GLACIER ENVIRONMENTAL SERVICES, INC.
ATTENTION: LAUREN
ADDRESS: P.O. BOX 1097
MUKILTEO, WA 98275

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EFF-31114	3/11/14	0920	W	1		X	X	X													3	
2. AFTER PRIMARY-31114	3/11/14	0920	W	2		X	X	X													3	
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: ERIC HAY, GLACIER ENVIRONMENTAL, 3/12/14 17:00
Received By: ALS 3/12/14 1700
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: X Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

* Turnaround request less than standard may incur Rush Charges

Clear Creek Systems, Inc. Data Log Sheet: AMD

Arbor Mist Development - Lennar Northwest, Inc.

Lynwood, WA

	Name: ERIC HAM				**Day/Date:** 3/11/14					**System GPM:** 100			
Time	8:20	09 20	10 20	1130	1230								
Raw Water Treatment													
pH - Raw	7.63	8.03	8.11	8.06	↑								
NTU - Raw	31.35	>1000	>1000	>1000	NO								
Flow Rate (gpm)	N/A	N/A	N/A	N/A	FNF.								
Flow Totalizer	N/A	N/A	N/A	N/A	↓								
Pretreatment Dose (ppm)	1.0 GPM	1.0	1.0	1.0	OFF @								
Speed & Stroke	20/18	20/18	20/18	20/18	12:17								
CESF System	Discharge	D	D	D	D								
Sand Filter Dose (ppm)	0.375 GPM	0.375	0.375	0.375	0.375								
Speed & Stroke	20/15	20/15	20/15	20/15	20/15								
Influent pH	7.46	7.51	7.54	7.52	7.51								
Effluent pH	7.60	7.58	7.59	7.61	7.62								
Influent Turbidity (NTU)	0.66	1.93	2.09	1.82	5.58								
Effluent Turbidtity (NTU)	0.29	0.29	0.28	0.49	1.50								
Influent psig	45	45	46	46	46								
Discharge psig	36	36	40	37	37								
Flow Rate (gpm)	70.55	69	72	66	61								
Residual Chitodan Test	N/D	N/D	N/D	N/D	N/D								
Flow Totalizer	95981.00	102,404	105,218	109,161	113,521	117709							
Sand Effluent	0.00	0.00	0.02	0.00	0.00				Background NTU----->		pH/°C---->		

SYSTEM OFF @ 1330

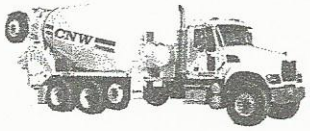
1.375

TOTAL Discharged TODAY

21,728

Appendix C

Import Soil Analytical and Single Source Letter and Disposal Letter



CNW
CONCRETE NOR'WEST
P.O. BOX 280 • MOUNT VERNON, WASHINGTON 98273-0280
(360) 757-3121 • FAX (360) 757-3816

January 24, 2014
Mr. Eric Hay QAQC Officer
Glacier Environmental Services, Inc.
PO Box 1097
Mukilteo, WA 98275

RE: Cornet Bay Project
Certification of Origin Letter

Mr. Eric Hay,

We have submitted the following products for supply to the project designated as "Coronet Bay" located on north Whidbey Island.

CSTC (crushed surfacing top course)
CSBC (crushed surfacing base course)
Ready Mix Rock (backfill for drains)
Gravel Borrow
Pea Gravel
Sand

These products are mined directly from the Boulder Pit, 229 E Henni Road, Oak Harbor WA. Only materials mined from the Boulder Pit will be delivered to the Coronet Bay project by Concrete Nor'West. These products will meet the environmental standards as we have previously so stated.

Submitted by,

Dave Enders

Dave Enders
Asst. General Manager
Concrete Nor'West

January 20, 2014

Mr. Alan Hall
Glacier Environmental Services, Inc.
PO Box 1097,
Mukilteo, WA 98275

Dear Mr. Hall,

On January 17th, 1 sample was received by our laboratory and assigned our laboratory project number EV14010090. The project was identified as your Cornet Bay. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE: ALS JOB#: ALS SAMPLE#:	1/20/2014 EV14010090 -01
CLIENT CONTACT:	Alan Hall	DATE RECEIVED:	1/17/2014
CLIENT PROJECT:	Cornet Bay	COLLECTION DATE:	1/17/2014 2:45:00 PM
CLIENT SAMPLE ID	Boulder Hill Pit	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	01/20/2014	DLC
Benzene	EPA-8021	U	0.030	1	MG/KG	01/20/2014	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	01/20/2014	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	01/20/2014	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	01/20/2014	DLC
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	01/20/2014	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	01/20/2014	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**117**	01/20/2014	DLC
TFT	EPA-8021	**116**	01/20/2014	DLC
C25	NWTPH-DX	**92.9**	01/20/2014	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc. PO Box 1097, Mukilteo, WA 98275	DATE: ALS SDG#: WDOE ACCREDITATION:	1/20/2014 EV14010090 C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	Cornet Bay		

LABORATORY BLANK RESULTS

MBG-011514S - Batch 7537 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	01/16/2014	DLC

MB-011514S - Batch 7537 - Soil by EPA-8021

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	0.030	1	MG/KG	01/16/2014	DLC
Toluene	EPA-8021	U	0.050	1	MG/KG	01/16/2014	DLC
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	01/16/2014	DLC
Xylenes	EPA-8021	U	0.20	1	MG/KG	01/16/2014	DLC

MB-011714S - Batch 7548 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	01/20/2014	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	01/20/2014	EBS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Glacier Environmental Services, Inc.	DATE:	1/20/2014
	PO Box 1097,	ALS SDG#:	EV14010090
	Mukilteo, WA 98275	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Alan Hall		
CLIENT PROJECT:	Cornet Bay		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 7537 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	67.0			01/16/2014	DLC
TPH-Volatile Range - BSD	NWTPH-GX	64.1	4		01/16/2014	DLC

ALS Test Batch ID: 7537 - Soil by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	95.2			01/16/2014	DLC
Benzene - BSD	EPA-8021	96.4	1		01/16/2014	DLC
Toluene - BS	EPA-8021	99.2			01/16/2014	DLC
Toluene - BSD	EPA-8021	99.5	0		01/16/2014	DLC
Ethylbenzene - BS	EPA-8021	99.2			01/16/2014	DLC
Ethylbenzene - BSD	EPA-8021	96.9	2		01/16/2014	DLC
Xylenes - BS	EPA-8021	100			01/16/2014	DLC
Xylenes - BSD	EPA-8021	99.0	1		01/16/2014	DLC

ALS Test Batch ID: 7548 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	98.6			01/17/2014	EBS
TPH-Diesel Range - BSD	NWTPH-DX	102	3		01/17/2014	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1401090

Date _____ Page _____ Of _____

PROJECT ID:	Cornet Bay
REPORT TO COMPANY:	Glacier Environmental
PROJECT MANAGER:	Alan Hall
ADDRESS:	PO Box 1097
	Mukilteo WA 98275
PHONE:	425-355-2826 FAX:
P.O. #:	13-028 E-MAIL: alan@glacierenviro.com
INVOICE TO COMPANY:	
ATTENTION:	Alan
ADDRESS:	

ANALYSIS REQUESTED / OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. Baldorhill Pit	1/17/14	2:45	soil	1	X	X	X	X												2	
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: C. Alan Hall 1/17/14 4:15
   Received By: ALS 1/17/14 4:15
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) | 3 | X | SAME DAY

OTHER: Specify: _____

* Turnaround request less than standard may incur Rush Charges

GeoTest

741 Marine Drive
Bellingham, WA 98225

20611-67th Avenue NE
Arlington, WA 98223

PHONE
360 733_7318

TOLL FREE
888 251_5276

FAX
360 733_7418

October 30, 2013
Job No. 13-0599

Strider Construction, Co. Inc.
4721 Northwest Drive
Bellingham, WA 98226

Attn.: Jerry Curtis, Project Manager

Re: Chemical Analysis Summary Report
Wyman's - Habitat Mitigation Site (Project Pier 1) – Import Fill Qualification
Concrete Nor'West Pits (Belleville – M-268 & Boulder Hill – IS-93)

Dear Mr. Curtis,

GeoTest Services, Inc. is pleased to present this summary report for our chemical analysis sampling conducted at the Belleville Pit located at 8198 Old Hwy. 99 N Rd. in Burlington, WA and the Boulder Hill Pit located at 229 E Henni Rd. in Oak Harbor, WA. Our understanding is that the subject mines will be utilized to import material for the Wyman's - Habitat Mitigation Site (Project Pier 1) located at the Port of Anacortes, Washington. Attached to this letter you will find four sample results (two from each mine) of the chemical analysis testing performed by ALS, dated October 29th, 2013 (service request number K1311350).

Scope of Services

The scope of our services consisted of sampling the subject pits (Belleville and Boulder Hill) and shipping the four samples (two from each pit) to ALS Environmental Laboratory in Kelso, WA. Specifically the scope of our services included the following:

- Sampling of the 1½" dredged screened stockpile at the Belleville Pit in Burlington, WA and the west bank at the Boulder Hill Pit in Oak Harbor, WA.
- Submittal of the obtained samples to an independent analytical laboratory for analysis.
- Generation of this summary report.

Soil Sampling Methodology

Belleville Pit:
GeoTest obtained two samples from the Belleville Pit on October 18th, 2013. The samples were obtained from the 1½" dredged screened stockpile at the end of a conveyor belt. Sample labeled as Belleville Pit-S1 was obtained on the north side of the stockpile. Sample labeled as Belleville Pit-S2 was obtained on the south side of the stockpile. The material was being dredged and screened and several stockpiles were observed including a stockpile with large cobbles. During the time of our sampling, we observed no indications of potential contamination sources within the subject sand and

gravel mine. Soil sample labeled Belleville Pit-S1 was transferred into one eight oz. jar and two four oz. jars at the pit. Soil sample labeled Belleville Pit-S2 was transferred into one eight oz. jar and two four oz. jars labeled Belleville Pit-S2. All of the sample containers provided by the analytical laboratory were pre-cleaned with no preservatives necessary. Each container was placed immediately in a cooler and shipped overnight via FedEx on October 18th, 2013 to ALS Laboratory Group, located in Kelso, Washington. Sample collecting, handling, chain of custody records and protocol were maintained throughout the project.

Boulder Hill Pit:

GeoTest obtained two samples from the Boulder Hill Pit on October 18th, 2013. The samples were obtained from the west bank approximately six feet above existing ground surface. It is our understanding that the west bank is where material will be mined from for the Wyman's project. Sample labeled as Boulder Hill-Sample 1 was obtained from the north side of the west bank. Sample labeled as Boulder Hill-Sample 2 was obtained on the south side of the west bank. During the time of our sampling, we observed no indications of potential contamination sources within the subject sand and gravel mine. Soil sample labeled Boulder Hill-Sample 1 was transferred into two eight oz. jars at the pit. Soil sample labeled Boulder Hill-Sample 2 was transferred into two eight oz. jars at the pit. All of the sample containers provided by the analytical laboratory were pre-cleaned with no preservatives necessary. Each container was placed immediately in a cooler and shipped overnight via FedEx on October 18th, 2013 to ALS Laboratory Group, located in Kelso, Washington. Sample collecting, handling, chain of custody records and protocol were maintained throughout the project.

Sampling Summary

In accordance with the client's request and the project requirements, the samples were analyzed in accordance with WAC 173-204 for 8 specific metals by methods 6010C and 7471B, polychlorinated biphenyls (PCBs) by method EPA 8082A and semivolatile organic compounds (SVOC) by method EPA 8270D.

Results of the analysis were received on October 29, 2013 and verified that the subject material proposed for use was free of any identified contamination, based on the analysis performed, with all results well below the referenced WAC 173-204-320, Table 1, Marine Sediment Quality Standards. The individual laboratory data sheets and the chain of custody form are attached to this report for reference.

Limitations

We assume the sampled and/or subsurface conditions are representative of the subject site. However, subsurface conditions may vary with time and between locations evaluated. We have prepared this report exclusively for the use of Strider Construction Co., Inc. and their representatives. This report is not intended for use by others and the information contained herein is not applicable to other materials or sites.

The analyses and conclusions provided in this report are based on sampling performed by GeoTest Services Inc., state and federal regulatory guidelines and our experience and judgment. Our work has been performed in a manner consistent with the level of

care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in this area. No warranty, expressed or implied, is made.

As a condition of our services, it is understood that, to the fullest extent permitted by law, our clients agree to defend, indemnify and hold harmless GeoTest Services, Inc., its owners, employees, subcontractors and agents, from any (past, present, or future) pollution-related claims or damages at the site, including potential claims from third parties that may name GeoTest Services, Inc., as a claimant.

We appreciate the opportunity to be of service to you on this project. If any questions should arise regarding this report, please contact the undersigned.

Respectfully submitted,
GeoTest Services, Inc.

Kevin Richardson
Project Manager

Dan Sorenson L.E.G.
Engineering Geologist
Environmental Professional

Attachments: Chemical Analysis Lab Results/Chain of Custody (41 pages)

October 29, 2013 Analytical Report for Service Request No: K1311350

Kevin Richardson
Geo Test Services
741 Marine Drive
Bellingham, WA 98225

Dear Kevin:

Enclosed are the results of the samples submitted to our laboratory on October 19, 2013. For your reference, these analyses have been assigned our service request number K1311350.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3275. You may also contact me via Email at Chris.Leaf@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Chris Leaf
Project Manager

CL/mj

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626 USA | PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp. Part of the ALS Group An ALS Limited Company
Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
Indiana DOH	http://www.in.gov/isdh/24859.htm	C-WA-01
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-368
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.caslab.com or at the accreditation bodies web site

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Geo Test Services	**Service Request No.:**	K1311350
Project:	NA	**Date Received:**	10/19/2013
Sample Matrix:	Sediment		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Four sediment samples were received for analysis at ALS Environmental on 10/19/2013. The samples were received in good condition and consistent with the accompanying chain of custody form except as noted on the cooler receipt and preservation form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Total Metals

No anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

Second Source Exceptions:
The analysis of PCB Aroclors by EPA 8082A requires the use of dual column confirmation. The Initial Calibration Verification (ICV) evaluation criteria were not met on the confirmation column for Aroclor 1232 in CAL12822. The ICV criteria were met on the alternate column. The data quality was not affected. No further corrective action was necessary.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS26\1028F003.D: Benzo(b)fluoranthene. In accordance with the EPA Method, 80% or more of the CCV analytes must have passed within 20% of the true value. The remaining analytes are allowed a 40% difference as per the ALS SOP. The CCV met these criteria. No further corrective action was required.

No other anomalies associated with the analysis of these samples were observed.

Approved by 

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): K1311350

Date 10-18-13 Page 1 Of 1

PROJECT ID:	
REPORT TO COMPANY:	GeoTest Services Inc
PROJECT MANAGER:	Kevin Richardson
ADDRESS:	741 Marine View Dr. Bellingham WA
PHONE:	360-920-1146 FAX:
P.O. #:	E-MAIL: Kevinr@geotest-inc.com
INVOICE TO COMPANY:	GeoTest Services Inc.
ATTENTION:	~~Todd~~ Zoe Hart
ADDRESS:	

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1.																						
2.																						
3.																						
4.																						
5.																						
6.																						
7.	SS	Run tests per WAC. Same as last Samples. Call with questions																				
8.																						
9.																						
10.																						

LABORATORY COPY

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Kevin Rm, GeoTst, 10-18-13, 4:13pm
   Received By: K Smith 10/19/13 0920
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | (5) | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

CL

PC ##

Cooler Receipt and Preservation Form

Client / Project: GeoTest Service Request *K13* 11350

Received: 10/19/13 Opened: 10/19/13 By: KD Unloaded: 10/19/13 By: KD

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where?_____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
8.3	8.4	—	—	+.1	337		8034 4859 3885	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* hard pack ice
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y (N)*
9. Were appropriate bottles/containers and volumes received for the tests indicated? (NA) Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

RUSH

Notes, Discrepancies, & Resolutions: *Boulder Hill - Sample 1 10/18/13 1313

Boulder Hill - Sample 2 10/18/13 1313

Belleville Pit - S1 10/18/13 1458

Belleville Pit - S2 10/18/13 1458

*Page*____ *of*____

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Geo Test Services
Project:
Sample Matrix: Sediment

Service Request: K1311350

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: Wet

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
Boulder Hill-Sample 1	K1311350-001	10/18/2013	10/19/2013	10/24/2013	92.7	
Boulder Hill-Sample 2	K1311350-002	10/18/2013	10/19/2013	10/24/2013	95.3	
Belleville Pit-S1	K1311350-003	10/18/2013	10/19/2013	10/24/2013	95.3	
Belleville Pit-S2	K1311350-004	10/18/2013	10/19/2013	10/24/2013	92.2	

ALS Group USA, Corp.
dba ALS Environmental

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Geo Test Services
Project Name:
Project No.:

Service Request: K1311350

Sample Name:	Lab Code:
Batch QC1D	K1310745-001D
Batch QC1S	K1310745-001S
Batch QC2D	K1311196-001D
Batch QC2S	K1311196-001S
Boulder Hill-Sample 1	K1311350-001
Boulder Hill-Sample 2	K1311350-002
Belleville Pit-S1	K1311350-003
Belleville Pit-S2	K1311350-004
Method Blank	K1311350-MB

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Geo Test Services
Project No.: NA
Project Name: NA
Matrix: SEDIMENT

Service Request: K1311350
Date Collected: 10/18/13
Date Received: 10/19/13
Units: mg/Kg
Basis: DRY

Sample Name: Boulder Hill-Sample 1
Lab Code: K1311350-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6010C	4.1	2.0	10/21/13	10/22/13	4.1	U	
Cadmium	6010C	0.2	2.0	10/21/13	10/22/13	0.2	U	
Chromium	6010C	0.8	2.0	10/21/13	10/22/13	21.5		
Copper	6010C	0.8	2.0	10/21/13	10/22/13	33.0		
Lead	6010C	2.1	2.0	10/21/13	10/22/13	2.2		
Mercury	7471B	0.02	1.0	10/22/13	10/23/13	0.02		
Silver	6010C	0.8	2.0	10/21/13	10/22/13	0.8	U	
Zinc	6010C	1.0	2.0	10/21/13	10/22/13	36.6		

% Solids: 92.7

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Geo Test Services
Project No.: NA
Project Name: NA
Matrix: SEDIMENT

Service Request: K1311350
Date Collected: 10/18/13
Date Received: 10/19/13
Units: mg/Kg
Basis: DRY

Sample Name: Boulder Hill-Sample 2 **Lab Code:** K1311350-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6010C	3.7	2.0	10/21/13	10/22/13	3.7	U	
Cadmium	6010C	0.2	2.0	10/21/13	10/22/13	0.2	U	
Chromium	6010C	0.7	2.0	10/21/13	10/22/13	17.5		
Copper	6010C	0.7	2.0	10/21/13	10/22/13	20.0		
Lead	6010C	1.9	2.0	10/21/13	10/22/13	2.5		
Mercury	7471B	0.02	1.0	10/22/13	10/23/13	0.03		
Silver	6010C	0.7	2.0	10/21/13	10/22/13	0.7	U	
Zinc	6010C	0.93	2.0	10/21/13	10/22/13	28.5		

% Solids: 95.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Geo Test Services
Project No.: NA
Project Name: NA
Matrix: SEDIMENT

Service Request: K1311350
Date Collected: 10/18/13
Date Received: 10/19/13
Units: mg/Kg
Basis: DRY

Sample Name: Belleville Pit-S1
Lab Code: K1311350-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6010C	3.8	2.0	10/21/13	10/22/13	3.8	U	
Cadmium	6010C	0.2	2.0	10/21/13	10/22/13	0.2	U	
Chromium	6010C	0.8	2.0	10/21/13	10/22/13	18.7		
Copper	6010C	0.8	2.0	10/21/13	10/22/13	17.1		
Lead	6010C	1.9	2.0	10/21/13	10/22/13	2.2		
Mercury	7471B	0.02	1.0	10/22/13	10/23/13	0.02	U	
Silver	6010C	0.8	2.0	10/21/13	10/22/13	0.8	U	
Zinc	6010C	0.94	2.0	10/21/13	10/22/13	29.7		

% Solids: 95.3

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Geo Test Services
Project No.: NA
Project Name: NA
Matrix: SEDIMENT

Service Request: K1311350
Date Collected: 10/18/13
Date Received: 10/19/13
Units: mg/Kg
Basis: DRY

Sample Name: Belleville Pit-S2
Lab Code: K1311350-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6010C	3.8	2.0	10/21/13	10/22/13	3.8	U	
Cadmium	6010C	0.2	2.0	10/21/13	10/22/13	0.2	U	
Chromium	6010C	0.8	2.0	10/21/13	10/22/13	24.7		
Copper	6010C	0.8	2.0	10/21/13	10/22/13	25.7		
Lead	6010C	1.9	2.0	10/21/13	10/22/13	2.5		
Mercury	7471B	0.02	1.0	10/22/13	10/23/13	0.02	U	
Silver	6010C	0.8	2.0	10/21/13	10/22/13	0.8	U	
Zinc	6010C	0.94	2.0	10/21/13	10/22/13	37.5		

% Solids: 92.2

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Geo Test Services
Service Request: K1311350
Project No.: NA
Date Collected:
Project Name: NA
Date Received:
Matrix: SEDIMENT
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K1311350-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6010C	4.0	2.0	10/21/13	10/22/13	4.0	U	
Cadmium	6010C	0.2	2.0	10/21/13	10/22/13	0.2	U	
Chromium	6010C	0.8	2.0	10/21/13	10/22/13	0.8	U	
Copper	6010C	0.8	2.0	10/21/13	10/22/13	0.8	U	
Lead	6010C	2.0	2.0	10/21/13	10/22/13	2.0	U	
Mercury	7471B	0.02	1.0	10/22/13	10/23/13	0.02	U	
Silver	6010C	0.8	2.0	10/21/13	10/22/13	0.8	U	
Zinc	6010C	1.0	2.0	10/21/13	10/22/13	1.0	U	

% Solids: 100.0

Comments:

Metals

-5A-

SPIKE SAMPLE RECOVERY

Client:	Geo Test Services	**Service Request:**	K1311350
Project No.:	NA	**Units:**	MG/KG
Project Name:	NA	**Basis:**	DRY
Matrix:	SOIL	**% Solids:**	99.9

Sample Name: Batch QC1S **Lab Code:** K1310745-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	75 - 125	84.1		3.9	U	98.10	85.7		6010C
Cadmium	75 - 125	8.7		0.2		9.81	86.6		6010C
Chromium	75 - 125	38.1		2.5		39.20	90.8		6010C
Copper	75 - 125	48.8		5.7		49.10	87.8		6010C
Lead	75 - 125	91.0		7.2		98.10	85.4		6010C
Silver	75 - 125	8.7		0.8	U	9.81	88.7		6010C
Zinc	75 - 125	90.0		4.6		98.10	87.1		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Geo Test Services **Service Request:** K1311350

Project No.: NA **Units:** MG/KG

Project Name: NA **Basis:** As Rec

Matrix: SOIL

Sample Name: Batch QC2S **Lab Code:** K1311196-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	80 - 120	0.49		0.08		0.41	100.0		7471B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 6 -

DUPLICATES

Client:	Geo Test Services	**Service Request:**	K1311350
Project No.:	NA	**Units:**	MG/KG
Project Name:	NA	**Basis:**	DRY
Matrix:	SOIL	**% Solids:**	99.9

Sample Name: Batch QC1D **Lab Code:** K1310745-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		3.9	U	3.9	U			6010C
Cadmium		0.2		0.2	U	200.0		6010C
Chromium		2.5		2.5		0.0		6010C
Copper	20	5.7		5.8		1.7		6010C
Lead		7.2		6.6		8.7		6010C
Silver		0.8	U	0.8	U			6010C
Zinc		4.6		4.6		0.0		6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 6 -

DUPLICATES

Client: Geo Test Services **Service Request:** K1311350

Project No.: NA **Units:** MG/KG

Project Name: NA **Basis:** As Rec

Matrix: SOIL

Sample Name: Batch QC2D **Lab Code:** K1311196-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.08		0.08		0.0		7471B

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Geo Test Services **Service Request:** K1311350

Project No.: NA

Project Name: NA

Aqueous LCS Source: **Solid LCS Source:** ERA D076-540

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic				94.5	98.3	82	117	104.0
Cadmium				60.5	57.3	83	117	94.7
Chromium				70.4	66.9	82	118	95.0
Copper				79.6	85.1	84	116	106.9
Lead				91.8	88.2	82	118	96.1
Mercury				3.73	3.67	72	128	98.4
Silver				34.4	35.1	66	134	102.0
Zinc				140	135	82	118	96.4

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Polychlorinated Biphenyls (PCBs)

Sample Name:	Boulder Hill-Sample 1	**Units:**	mg/Kg
Lab Code:	K1311350-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1221	ND	U	0.11	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1232	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1242	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1248	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1254	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1260	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	87	43-148	10/25/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Polychlorinated Biphenyls (PCBs)

Sample Name:	Boulder Hill-Sample 2	**Units:**	mg/Kg
Lab Code:	K1311350-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1221	ND	U	0.11	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1232	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1242	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1248	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1254	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1260	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	87	43-148	10/25/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Polychlorinated Biphenyls (PCBs)

Sample Name:	Belleville Pit-S1	**Units:**	mg/Kg
Lab Code:	K1311350-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1221	ND	U	0.11	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1232	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1242	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1248	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1254	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1260	ND	U	0.052	1	10/22/13	10/25/13	KWG1311883	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	83	43-148	10/25/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Polychlorinated Biphenyls (PCBs)

Sample Name:	Belleville Pit-S2	**Units:**	mg/Kg
Lab Code:	K1311350-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1221	ND	U	0.11	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1232	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1242	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1248	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1254	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	
Aroclor 1260	ND	U	0.054	1	10/22/13	10/25/13	KWG1311883	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	78	43-148	10/25/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1311883-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.050	1	10/22/13	10/24/13	KWG1311883	
Aroclor 1221	ND	U	0.099	1	10/22/13	10/24/13	KWG1311883	
Aroclor 1232	ND	U	0.050	1	10/22/13	10/24/13	KWG1311883	
Aroclor 1242	ND	U	0.050	1	10/22/13	10/24/13	KWG1311883	
Aroclor 1248	ND	U	0.050	1	10/22/13	10/24/13	KWG1311883	
Aroclor 1254	ND	U	0.050	1	10/22/13	10/24/13	KWG1311883	
Aroclor 1260	ND	U	0.050	1	10/22/13	10/24/13	KWG1311883	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	81	43-148	10/24/13	Acceptable

Comments:

Client: Geo Test Services **Service Request:** K1311350
Project:
Sample Matrix: Sediment

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
Batch QC	K1311278-001	100
Boulder Hill-Sample 1	K1311350-001	87
Boulder Hill-Sample 2	K1311350-002	87
Belleville Pit-S1	K1311350-003	83
Belleville Pit-S2	K1311350-004	78
Method Blank	KWG1311883-4	81
Batch QCMS	KWG1311883-1	70
Batch QCDMS	KWG1311883-2	103
Lab Control Sample	KWG1311883-3	102

Surrogate Recovery Control Limits (%)

Sur1	= Decachlorobiphenyl	43-148

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Extracted:**	10/22/2013
Sample Matrix:	Sediment	**Date Analyzed:**	10/24/2013 - 10/25/2013

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Batch QC	**Units:**	mg/Kg
Lab Code:	K1311278-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1311883

		Batch QCMS KWG1311883-1 Matrix Spike			Batch QCDMS KWG1311883-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	0.444	0.705	63	0.637	0.701	91	23-145	36	40
Aroclor 1260	ND	0.462	0.705	65	0.656	0.701	94	24-148	35	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Extracted:**	10/22/2013
Sample Matrix:	Sediment	**Date Analyzed:**	10/24/2013

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8082A	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1311883

	Lab Control Sample KWG1311883-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Aroclor 1016	0.851	1.00	85	42-122
Aroclor 1260	0.917	1.00	92	50-124

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Boulder Hill-Sample 1	**Units:**	ug/Kg
Lab Code:	K1311350-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	28	1	10/22/13	10/28/13	KWG1311653	
1,4-Dichlorobenzene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
1,2-Dichlorobenzene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benzyl Alcohol	ND	U	19	1	10/22/13	10/28/13	KWG1311653	
2-Methylphenol	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
4-Methylphenol†	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
2,4-Dimethylphenol	ND	U	46	1	10/22/13	10/28/13	KWG1311653	
Benzoic Acid	ND	U	400	1	10/22/13	10/28/13	KWG1311653	
1,2,4-Trichlorobenzene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Naphthalene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobutadiene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
2-Methylnaphthalene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Acenaphthylene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Dimethyl Phthalate	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Acenaphthene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Dibenzofuran	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Fluorene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Diethyl Phthalate	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
N-Nitrosodiphenylamine	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobenzene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Pentachlorophenol	ND	U	92	1	10/22/13	10/28/13	KWG1311653	
Phenanthrene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Anthracene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Di-n-butyl Phthalate	ND	U	19	1	10/22/13	10/28/13	KWG1311653	
Fluoranthene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Pyrene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Butyl Benzyl Phthalate	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benz(a)anthracene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Chrysene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Bis(2-ethylhexyl) Phthalate	ND	U	92	1	10/22/13	10/28/13	KWG1311653	
Di-n-octyl Phthalate	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benzo(b)fluoranthene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benzo(k)fluoranthene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	

Comments:

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Boulder Hill-Sample 1	**Units:**	ug/Kg
Lab Code:	K1311350-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(a)pyrene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Indeno(1,2,3-cd)pyrene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Dibenz(a,h)anthracene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benzo(g,h,i)perylene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	46	20-86	10/28/13	Acceptable
Nitrobenzene-d5	48	27-91	10/28/13	Acceptable
2-Fluorobiphenyl	53	25-97	10/28/13	Acceptable
2,4,6-Tribromophenol	38	10-119	10/28/13	Acceptable
Terphenyl-d14	64	33-129	10/28/13	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Boulder Hill-Sample 2	**Units:**	ug/Kg
Lab Code:	K1311350-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	27	1	10/22/13	10/28/13	KWG1311653	
1,4-Dichlorobenzene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
1,2-Dichlorobenzene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Benzyl Alcohol	ND	U	18	1	10/22/13	10/28/13	KWG1311653	
2-Methylphenol	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
4-Methylphenol†	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
2,4-Dimethylphenol	ND	U	45	1	10/22/13	10/28/13	KWG1311653	
Benzoic Acid	ND	U	400	1	10/22/13	10/28/13	KWG1311653	
1,2,4-Trichlorobenzene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Naphthalene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobutadiene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
2-Methylnaphthalene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Acenaphthylene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Dimethyl Phthalate	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Acenaphthene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Dibenzofuran	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Fluorene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Diethyl Phthalate	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
N-Nitrosodiphenylamine	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobenzene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Pentachlorophenol	ND	U	89	1	10/22/13	10/28/13	KWG1311653	
Phenanthrene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Anthracene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Di-n-butyl Phthalate	ND	U	18	1	10/22/13	10/28/13	KWG1311653	
Fluoranthene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Pyrene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Butyl Benzyl Phthalate	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Benz(a)anthracene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Chrysene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Bis(2-ethylhexyl) Phthalate	ND	U	89	1	10/22/13	10/28/13	KWG1311653	
Di-n-octyl Phthalate	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Benzo(b)fluoranthene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Benzo(k)fluoranthene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	

Comments:

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Boulder Hill-Sample 2	**Units:**	ug/Kg
Lab Code:	K1311350-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(a)pyrene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Indeno(1,2,3-cd)pyrene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Dibenz(a,h)anthracene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	
Benzo(g,h,i)perylene	ND	U	8.9	1	10/22/13	10/28/13	KWG1311653	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	49	20-86	10/28/13	Acceptable
Nitrobenzene-d5	50	27-91	10/28/13	Acceptable
2-Fluorobiphenyl	57	25-97	10/28/13	Acceptable
2,4,6-Tribromophenol	42	10-119	10/28/13	Acceptable
Terphenyl-d14	69	33-129	10/28/13	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Belleville Pit-S1	**Units:**	ug/Kg
Lab Code:	K1311350-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	27	1	10/22/13	10/28/13	KWG1311653	
1,4-Dichlorobenzene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
1,2-Dichlorobenzene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Benzyl Alcohol	ND	U	18	1	10/22/13	10/28/13	KWG1311653	
2-Methylphenol	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
4-Methylphenol†	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
2,4-Dimethylphenol	ND	U	45	1	10/22/13	10/28/13	KWG1311653	
Benzoic Acid	ND	U	400	1	10/22/13	10/28/13	KWG1311653	
1,2,4-Trichlorobenzene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Naphthalene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobutadiene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
2-Methylnaphthalene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Acenaphthylene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Dimethyl Phthalate	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Acenaphthene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Dibenzofuran	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Fluorene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Diethyl Phthalate	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
N-Nitrosodiphenylamine	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobenzene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Pentachlorophenol	ND	U	90	1	10/22/13	10/28/13	KWG1311653	
Phenanthrene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Anthracene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Di-n-butyl Phthalate	ND	U	18	1	10/22/13	10/28/13	KWG1311653	
Fluoranthene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Pyrene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Butyl Benzyl Phthalate	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Benz(a)anthracene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Chrysene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Bis(2-ethylhexyl) Phthalate	ND	U	90	1	10/22/13	10/28/13	KWG1311653	
Di-n-octyl Phthalate	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Benzo(b)fluoranthene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Benzo(k)fluoranthene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	

Comments:

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Belleville Pit-S1	**Units:**	ug/Kg
Lab Code:	K1311350-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(a)pyrene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Indeno(1,2,3-cd)pyrene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Dibenz(a,h)anthracene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	
Benzo(g,h,i)perylene	ND	U	9.0	1	10/22/13	10/28/13	KWG1311653	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	40	20-86	10/28/13	Acceptable
Nitrobenzene-d5	42	27-91	10/28/13	Acceptable
2-Fluorobiphenyl	47	25-97	10/28/13	Acceptable
2,4,6-Tribromophenol	36	10-119	10/28/13	Acceptable
Terphenyl-d14	65	33-129	10/28/13	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	10/18/2013
Sample Matrix:	Sediment	**Date Received:**	10/19/2013

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Belleville Pit-S2	**Units:**	ug/Kg
Lab Code:	K1311350-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	28	1	10/22/13	10/28/13	KWG1311653	
1,4-Dichlorobenzene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
1,2-Dichlorobenzene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benzyl Alcohol	ND	U	19	1	10/22/13	10/28/13	KWG1311653	
2-Methylphenol	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
4-Methylphenol†	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
2,4-Dimethylphenol	ND	U	46	1	10/22/13	10/28/13	KWG1311653	
Benzoic Acid	ND	U	400	1	10/22/13	10/28/13	KWG1311653	
1,2,4-Trichlorobenzene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Naphthalene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobutadiene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
2-Methylnaphthalene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Acenaphthylene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Dimethyl Phthalate	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Acenaphthene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Dibenzofuran	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Fluorene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Diethyl Phthalate	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
N-Nitrosodiphenylamine	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobenzene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Pentachlorophenol	ND	U	92	1	10/22/13	10/28/13	KWG1311653	
Phenanthrene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Anthracene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Di-n-butyl Phthalate	ND	U	19	1	10/22/13	10/28/13	KWG1311653	
Fluoranthene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Pyrene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Butyl Benzyl Phthalate	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benz(a)anthracene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Chrysene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Bis(2-ethylhexyl) Phthalate	ND	U	92	1	10/22/13	10/28/13	KWG1311653	
Di-n-octyl Phthalate	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benzo(b)fluoranthene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benzo(k)fluoranthene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	

Comments:

Client: Geo Test Services
Project:
Sample Matrix: Sediment

Service Request: K1311350
Date Collected: 10/18/2013
Date Received: 10/19/2013

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Belleville Pit-S2
Lab Code: K1311350-004

Extraction Method: EPA 3541
Analysis Method: 8270D

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(a)pyrene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Indeno(1,2,3-cd)pyrene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Dibenz(a,h)anthracene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	
Benzo(g,h,i)perylene	ND	U	9.2	1	10/22/13	10/28/13	KWG1311653	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	48	20-86	10/28/13	Acceptable
Nitrobenzene-d5	48	27-91	10/28/13	Acceptable
2-Fluorobiphenyl	56	25-97	10/28/13	Acceptable
2,4,6-Tribromophenol	47	10-119	10/28/13	Acceptable
Terphenyl-d14	67	33-129	10/28/13	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1311653-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	20	1	10/22/13	10/28/13	KWG1311653	
1,4-Dichlorobenzene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
1,2-Dichlorobenzene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Benzyl Alcohol	ND	U	14	1	10/22/13	10/28/13	KWG1311653	
2-Methylphenol	ND	U	7.5	1	10/22/13	10/28/13	KWG1311653	
4-Methylphenol†	ND	U	7.5	1	10/22/13	10/28/13	KWG1311653	
2,4-Dimethylphenol	ND	U	33	1	10/22/13	10/28/13	KWG1311653	
Benzoic Acid	ND	U	400	1	10/22/13	10/28/13	KWG1311653	
1,2,4-Trichlorobenzene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Naphthalene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobutadiene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
2-Methylnaphthalene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Acenaphthylene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Dimethyl Phthalate	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Acenaphthene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Dibenzofuran	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Fluorene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Diethyl Phthalate	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
N-Nitrosodiphenylamine	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Hexachlorobenzene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Pentachlorophenol	ND	U	66	1	10/22/13	10/28/13	KWG1311653	
Phenanthrene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Anthracene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Di-n-butyl Phthalate	ND	U	14	1	10/22/13	10/28/13	KWG1311653	
Fluoranthene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Pyrene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Butyl Benzyl Phthalate	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Benz(a)anthracene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Chrysene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Bis(2-ethylhexyl) Phthalate	ND	U	66	1	10/22/13	10/28/13	KWG1311653	
Di-n-octyl Phthalate	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Benzo(b)fluoranthene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Benzo(k)fluoranthene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	

Comments:

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1311653-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(a)pyrene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Indeno(1,2,3-cd)pyrene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Dibenz(a,h)anthracene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	
Benzo(g,h,i)perylene	ND	U	6.6	1	10/22/13	10/28/13	KWG1311653	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	50	20-86	10/28/13	Acceptable
Nitrobenzene-d5	52	27-91	10/28/13	Acceptable
2-Fluorobiphenyl	57	25-97	10/28/13	Acceptable
2,4,6-Tribromophenol	42	10-119	10/28/13	Acceptable
Terphenyl-d14	78	33-129	10/28/13	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Geo Test Services **Service Request:** K1311350
Project:
Sample Matrix: Sediment

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8270D **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5
Boulder Hill-Sample 1	K1311350-001	46	48	53	38	64
Boulder Hill-Sample 2	K1311350-002	49	50	57	42	69
Belleville Pit-S1	K1311350-003	40	42	47	36	65
Belleville Pit-S2	K1311350-004	48	48	56	47	67
Method Blank	KWG1311653-5	50	52	57	42	78
Boulder Hill-Sample 1MS	KWG1311653-1	48	49	55	53	59
Boulder Hill-Sample 1DMS	KWG1311653-2	44	44	48	48	59
Lab Control Sample	KWG1311653-3	43	43	49	50	59
Duplicate Lab Control Sample	KWG1311653-4	33	32	36	35	46

Surrogate Recovery Control Limits (%)

Sur1 = Phenol-d6	20-86	Sur5 = Terphenyl-d14	33-129
Sur2 = Nitrobenzene-d5	27-91		
Sur3 = 2-Fluorobiphenyl	25-97		
Sur4 = 2,4,6-Tribromophenol	10-119		

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Extracted:**	10/22/2013
Sample Matrix:	Sediment	**Date Analyzed:**	10/28/2013

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Boulder Hill-Sample 1	**Units:**	ug/Kg
Lab Code:	K1311350-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1311653

		Boulder Hill-Sample 1MS			Boulder Hill-Sample 1DMS					
		KWG1311653-1			KWG1311653-2					
		Matrix Spike			**Duplicate Matrix Spike**					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	ND	132	228	58	117	228	51	15-98	12	40
1,4-Dichlorobenzene	ND	128	228	56	117	228	51	19-93	9	40
1,2,4-Trichlorobenzene	ND	134	228	59	122	228	53	23-99	9	40
Acenaphthene	ND	145	228	64	128	228	56	10-132	12	40
Diethyl Phthalate	ND	140	228	62	111	228	49	10-135	23	40
Pentachlorophenol	ND	119	228	52	101	228	44	10-123	16	40
Pyrene	ND	170	228	75	169	228	74	17-129	0	40
Benzo(a)pyrene	ND	169	228	74	168	228	73	13-126	1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Geo Test Services	**Service Request:**	K1311350
Project:		**Date Extracted:**	10/22/2013
Sample Matrix:	Sediment	**Date Analyzed:**	10/28/2013

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270D	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1311653

	Lab Control Sample KWG1311653-3 Lab Control Spike			Duplicate Lab Control Sample KWG1311653-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	135	250	54	98.8	250	40	27-97	31	40
1,4-Dichlorobenzene	131	250	52	95.9	250	38	28-89	31	40
1,2-Dichlorobenzene	131	250	52	96.5	250	39	27-91	30	40
Benzyl Alcohol	108	250	43	74.7	250	30	25-103	36	40
2-Methylphenol	131	250	52	94.3	250	38	18-95	32	40
4-Methylphenol	143	250	57	101	250	40	17-99	35	40
2,4-Dimethylphenol	409	750	55	298	750	40	10-93	31	40
Benzoic Acid	114	750	15	107	750	14	10-96	6	40
1,2,4-Trichlorobenzene	137	250	55	99.0	250	40	27-94	32	40
Naphthalene	137	250	55	98.4	250	39	27-93	32	40
Hexachlorobutadiene	135	250	54	97.9	250	39	25-96	32	40
2-Methylnaphthalene	147	250	59	104	250	41	27-96	34	40
Acenaphthylene	158	250	63	107	250	43	33-99	39	40
Dimethyl Phthalate	168	250	67	114	250	45	39-100	39	40
Acenaphthene	148	250	59	101	250	41	32-91	37	40
Dibenzofuran	152	250	61	103	250	41	34-92	38	40
Fluorene	153	250	61	103	250	41	32-96	39	40
Diethyl Phthalate	166	250	66	119	250	47	41-100	33	40
N-Nitrosodiphenylamine	143	250	57	99.4	250	40	36-96	36	40
Hexachlorobenzene	161	250	64	113	250	45	40-99	35	40
Pentachlorophenol	137	250	55	108	250	43	21-97	24	40
Phenanthrene	165	250	66	118	250	47	39-98	34	40
Anthracene	163	250	65	115	250	46	40-98	35	40
Di-n-butyl Phthalate	181	250	72	139	250	56	42-109	26	40
Fluoranthene	170	250	68	129	250	51	42-104	28	40
Pyrene	190	250	76	141	250	56	45-106	30	40
Butyl Benzyl Phthalate	178	250	71	136	250	54	45-111	27	40
Benz(a)anthracene	177	250	71	133	250	53	44-108	28	40
Chrysene	169	250	68	128	250	51	46-108	28	40
Bis(2-ethylhexyl) Phthalate	183	250	73	208	250	83	47-110	13	40
Di-n-octyl Phthalate	180	250	72	141	250	56	45-109	24	40
Benzo(b)fluoranthene	186	250	74	138	250	55	46-106	30	40
Benzo(k)fluoranthene	157	250	63	117	250	47	47-107	29	40
Benzo(a)pyrene	187	250	75	138	250	55	42-110	30	40
Indeno(1,2,3-cd)pyrene	205	250	82	157	250	63	47-109	27	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Geo Test Services
Project:
Sample Matrix: Sediment

Service Request: K1311350
Date Extracted: 10/22/2013
Date Analyzed: 10/28/2013

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270D

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG1311653

	Lab Control Sample KWG1311653-3 Lab Control Spike			Duplicate Lab Control Sample KWG1311653-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dibenz(a,h)anthracene	169	250	68	124	250	49	47-106	31	40
Benzo(g,h,i)perylene	157	250	63	117	250	47	44-108	29	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

November 6, 2013 Analytical Report for Service Request No: K1311829

Kevin Richardson
Geo Test Services
741 Marine Drive
Bellingham, WA 98225

Dear Kevin:

Enclosed are the results of the samples submitted to our laboratory on October 17, 2013. For your reference, these analyses have been assigned our service request number K1311829.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3275. You may also contact me via Email at Chris.Leaf@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Chris Leaf
Project Manager

CL/aj

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ALS Group USA, Corp. Part of the ALS Group An ALS Limited Company

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
Indiana DOH	http://www.in.gov/isdh/24859.htm	C-WA-01
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-368
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.caslab.com or at the accreditation bodies web site

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): K1311278

Date 10/15/13 Page 1 Of 1

PROJECT ID:	
REPORT TO COMPANY:	GeoTest Service Inc
PROJECT MANAGER:	Kevin Richardson
ADDRESS:	741 Marine View Dr.
	Bellingham WA 98225
PHONE: 360-920-1141	FAX:
P.O. #:	E-MAIL: kevinr@geotestinc.com
INVOICE TO COMPANY:	GeoTest
ATTENTION:	Janice Patience
ADDRESS:	741 Marine View Dr.
	Bellingham, WA 98225

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

ANALYSIS REQUESTED

NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐

OTHER (Specify)

								NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?

LABORATORY COPY

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Kevin Richardson, GeoTest, 10/15/13, 5:15pm
   Received By: SDavis/ALS-KCDC 10/17/13 0940
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: See Attached

* Turnaround request less than standard may incur Rush Charges

PC CL

Cooler Receipt and Preservation Form

Client / Project GeoTest Service Request *K13* 11278

Received: October 17, 13 Opened: 10/17 By: SD Unloaded: 10/17 By: SD

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where?_____
   If present, were custody seals intact? Y (N) If present, were they signed and dated? Y (N)

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
NDm							8037 3511 9569	

4.. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* N/A

5. Were custody papers properly filled out (ink, signed, etc.)?	NA	(Y) see	N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.*	NA	(Y)	(N)*
7. Were all sample labels complete (i.e analysis, preservation, etc.)?	NA	(Y)	N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.*	NA	(Y)	N
9. Were appropriate bottles/containers and volumes received for the tests indicated?	NA	(Y)	N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below*	(NA)	Y	N
11. Were VOA vials received without headspace? *Indicate in the table below.*	(NA)	Y	N
12. Was C12/Res negative?	(NA)	Y	N

1st 5th 7/13 Sample ID on Bottle	Sample ID on COC	Identified by:
X Sample 1	none	

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
Sample 1	1, 8oz			✓						

Notes, Discrepancies, & Resolutions: Cooler had no cooling agent OR pkg. material. I will attached broken sample label to 2nd page.
See pg 2 of 2 for additional discrepancies

ALS Environmental

44124

CHAIN OF CUSTODY

44124

1317 South 13th Ave. Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

SR# 113148

COC Set____ of____

COC#_____

Project Name: 13-0599	Project Number: 13-0599
Project Manager: Kevin Richardson	
Company: GeoTest Services Inc.	
Address: 741 Marine View Dr., Bellingham, WA	
Phone #: 360-920-1146	email: kevinr@geotestinc.com
Sampler Signature:	Sampler Printed Name: Daniel Craig

CLIENT SAMPLE ID	LABID	SAMPLING Date	SAMPLING Time	Matrix	NUMBER OF CONTAINERS	7D TS-MET / Total Solids	14D 8082A / PCB	14D 8270D / SVOLL	28D 7471B / Hg	180D 6010C / Metals T	1	2	3	4	5	Remarks
1. Lakeside - Anacortes (S1)		10/22/13	8:45		3	X	X	X	X	X						
2. Lakeside - Anacortes (S2)		10/22/13	8:20		3	X	X	X	X	X						
3.																
4.																
5.																
6.																
7.																
8.																
9																
10.																

TAKE SAMPLES TO EXTRALTIONS LAB IMMEDIATELY FOR RUSH ANALYSIS.

Report Requirements

- __ I. Routine Report: Method Blank, Surrogate as required
- X II. Report Dup., MS, MSD as required
- __ III. CLP Like Summary (no raw data)
- __ IV. Data Validation Report
- __ V. EDD

Invoice Information

P.O.# 13-0599

Bill To: GeoTest

Turnaround Requirements

__ 24 hr __ 48 hr.
X 5 Day
__ Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al (As) Sb Ba Be B Ca (Cd) Co (Cr) (Cu) Fe (Pb) Mg Mn Mo Ni K (Ag) Na Se Sr Ti Sn V (Zn) (Hg)

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

I've been working with Chris Leaf. We have sent previous samples and these need to be run in same criteria (WAC 173-204-320). Need results on this on 10/30/13. RUSH TAT! Thank you for your efforts -Kevin Richardson

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other_____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Daniel Craig	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: GeoTest Services	Firm: 12/23/13 1030	Firm	Firm	Firm	Firm
Date/Time: 10/23/2013	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

PC CL

Cooler Receipt and Preservation Form

Client / Project: Geotest Service Request K13 11480

Received: 10/23/13 Opened: 10/23/13 By: [illegible] Unloaded: 10/23/13 By: [illegible]

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where?_____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
0.1	0.1	-	-	0	382		8043 7769 6747	

4.. Packing material: *Inserts* *Baggies* *Bubble Wrap* (*Gel Packs*) *Wet Ice* *Dry Ice* *Sleeves* paper

5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

PUSH

*Notes, Discrepancies, & Resolutions:*_____

*Page*____ *of*____

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): K1311350

Date 10-15-13 Page 1 Of 1

PROJECT ID:
REPORT TO COMPANY: GeoTest Services Inc
PROJECT MANAGER: Kevin Richardson
ADDRESS: 741 Marine View Dr.
Bellingham WA
PHONE: 360-920-1146 FAX:
P.O. #: E-MAIL: Kevinr@geotest-inc.com
INVOICE TO COMPANY: GeoTest Services Inc.
ATTENTION: ~~Todd~~ Zoe Hart
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1.																					
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

7 Run tests per WAC. Same as last Samples. Call with questions

LABORATORY COPY

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Kevin Rn, GeoTst, 10-18-13, 4:13pm
   Received By: H Smith 10/19/13 0980
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | (5) | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

* Turnaround request less than standard may incur Rush Charges

CL

PC ##

Cooler Receipt and Preservation Form

Client / Project: GeoTest Service Request *K13* 11350

Received: 10/19/13 Opened: 10/19/13 By: KD Unloaded: 10/19/13 By: KD

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where?_____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
5.3	5.4	—	—	+.1	337		8034 4889 3885	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* hard pack ice
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y (N)*
9. Were appropriate bottles/containers and volumes received for the tests indicated? (NA) Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

RUSH

Notes, Discrepancies, & Resolutions: *Boulder Hill - Sample 1 10/18/13 1313

Boulder Hill - Sample 2 10/18/13 1313

Belleville Pit - S1 10/18/13 1458

Belleville Pit - S2 10/18/13 1458

*Page*____ *of*____

COLUMBIA ANALYTICAL SERVICES, INC.
LOG-IN and RE-ISSUE INFORMATION SHEET

Date: 10/31/13

K 1311278, K1311350, K1311480

Sample ID's K1311278-001 | K1311480-001

-002 | -002

K1311350-001

-002

-003

-004

Received information for this request from:

____ Project Chemist ____ Bottle Order _X_ Client ____ Bottles

____ Others (Specify) ____

Re-issue Instructions: Run 9060 TOC ASAP

Re-issue Due Date: Nov 4, 2013 48 hr / 2 Bda

Special Instructions:

RUSH

Analytical Report

Client:	Geo Test Services	**Service Request:**	K1311829
Project:		**Date Collected:**	10/15/13 - 10/22/13
Sample Matrix:	Sediment	**Date Received:**	10/17/13 - 10/23/13
Analysis Method:	9060	**Units:**	Percent
Prep Method:	Method	**Basis:**	Dry, per Method

Carbon, Total Organic (TOC)

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Sample 1	K1311829-001	**1.72**	0.10	1	11/05/13 15:04	11/5/13	
Sample 1 Dup	K1311829-002	**1.99**	0.10	1	11/05/13 16:21	11/5/13	
Boulder Hill-Sample 1	K1311829-003	ND U	0.10	1	11/05/13 16:36	11/5/13	
Boulder Hill-Sample 2	K1311829-004	ND U	0.10	1	11/05/13 16:49	11/5/13	
Belleville Pit-S1	K1311829-005	ND U	0.10	1	11/05/13 17:03	11/5/13	
Belleville Pit-S2	K1311829-006	ND U	0.10	1	11/05/13 17:53	11/5/13	
Lakeside-Anacortes (S1)	K1311829-007	ND U	0.10	1	11/05/13 18:07	11/5/13	
Lakeside-Anacortes (S2)	K1311829-008	ND U	0.10	1	11/05/13 18:21	11/5/13	
Method Blank	K1311829-MB	ND U	0.10	1	11/05/13 14:50	11/5/13	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Geo Test Services	**Service Request:**	K1311829
Project		**Date Collected:**	10/15/13
Sample Matrix:	Sediment	**Date Received:**	10/17/13
		Date Analyzed:	11/05/13

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Sample 1	**Units:**	Percent
Lab Code:	K1311829-001	**Basis:**	Dry, per Method

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1311829-001DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic (TOC)	9060	0.10	1.72	1.76	1.74	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Geo Test Services	**Service Request:**	K1311829
Project:		**Date Collected:**	10/15/13
Sample Matrix:	Sediment	**Date Received:**	10/17/13
		Date Analyzed:	11/5/13
		Date Extracted:	11/5/13

Duplicate Matrix Spike Summary
Carbon, Total Organic (TOC)

Sample Name:	Sample 1	**Units:**	Percent
Lab Code:	K1311829-001	**Basis:**	Dry, per Method
Analysis Method:	9060		
Prep Method:	Method		

		Matrix Spike K1311829-001MS			Duplicate Matrix Spike K1311829-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Carbon, Total Organic (TOC)	1.72	7.02	4.62	115	6.78	4.64	109	70-122	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Geo Test Services	**Service Request:**	K1311829
Project:		**Date Analyzed:**	11/05/13
Sample Matrix:	Sediment	**Date Extracted:**	11/05/13

Lab Control Sample Summary
Carbon, Total Organic (TOC)

Analysis Method:	9060	**Units:**	Percent
Prep Method:	Method	**Basis:**	Dry, per Method
		Analysis Lot:	366876

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1311829-LCS	0.285	0.28	104	72-122

CNW

CONCRETE NOR'WEST

DIVISION OF MILES SAND & GRAVEL CO., INC.

INDEMNIFICATION AGREEMENT
DELIVERY OF MATERIALS TO CONCRETE NOR'WEST SITES

1. The undersigned wishes to deliver soil, gravel, sand or similar Material ("the Material") to Concrete Nor'West's facility at HOFFMAN PIT. For in consideration of Concrete Nor'West's agreement to accept the Material, the undersigned agrees it is responsible for and indemnifies and holds harmless Concrete Nor'West from all costs and liabilities associated with any part of the Material that is now or hereafter defined by federal or State law as radioactive, dangerous, hazardous, toxic or extremely hazardous ("Contaminated Waste").

2. The Material being delivered to Concrete Nor'West's facility is as follows:
   Project Name Ecology Cornet Bay Marina
   Project Address & Location 200 Cornet Bay Road, Oak Harbor WA
   Property Owner Deception Pass Marina
   Description of the Material Soil excavated from site
   Approximate Quantity of the Material up to 3,000 yd^3

3. The undersigned warrants that the Material has been tested and found to be free of all Contaminated Waste. The test results are attached.

4. In the event any part of the Material is found to be Contaminated Waste, Concrete Nor'West will, to the extent practicable, segregate the Contaminated Waste and advise the undersigned of the improper delivery. Upon notice from Concrete Nor'West, the undersigned will immediately accept and collect the Contaminated Waste and dispose of it. The cost of testing, removal, transport, cleanup and disposal of Contaminated Waste delivered by Concrete Nor'West will be at the undersigned 's sole expense.

5. In the event the undersigned fails to accept and collect the Contaminated Waste within 24 hours after notification, Concrete Nor'West may dispose of the Contaminated Waste itself. Any costs incurred by Concrete Nor'West relating to the testing, cleanup, removal and disposal of Contaminated Waste will be reimbursed by the undersigned.

6. If Concrete Nor'West, or the undersigned brings any suit, action or other proceedings to Interpret, enforce or implement any of the terms, covenants, or conditions of this Agreement, the party prevailing in such action or proceeding, including any appeal, will be paid all costs (including expert fees and the cost of testing) and reasonable attorney fees by the other party.

This Indemnification Agreement is dated this 10 day of Feb 2014.

Sign Name

Jing Lin

Print name

On behalf of

Ecology

Name of Company

GENERAL MATERIAL RECEIVING REQUIREMENTS

The CEMEX criteria for acceptance is based on Chapter 173-340 WAC *"The Model Toxics Control Act,"* and the Washington State Department of Ecology's publication entitled *"Guidance for Remediation of Releases From Underground Storage Tanks."*

Number of samples to be provided to CEMEX prior to acceptance of contaminated soil.

Cubic Yards of Soil	Minimum Number of Samples
0 - 100	3
101 - 500	5
501 - 1,000	7
1,001 - 2,000	10
> 2,000	10 + 1 for each additional 500 cubic yards

Analytical Data Requirements

Contaminate	Analytical Method
Heavy fuel hydrocarbons	NWTPH-D-EXTENDED
Diesel/Heating Oil	NWTPH-D-EXTENDED
Gasoline	NWTPH-G
Gasoline	BTEX 8020

*** Total RCRA Metals analysis is required from all sites other than residential properties***

Note: Soils contaminated with used oil, hydraulic oil, mineral oil, or other waste oil shall be tested for Volatile Organic Aromatics (8020), and Volatile Organic Halogenated (8010), Volatile Organics (8240/8260), Total Metals (6010 or 7000 series) may be required if any of the total metals are above regulatory thresholds.

LIMITS OF ACCEPTANCE FOR PETROLEUM CONTAMINATED SOIL

CEMEX Class 3 Acceptance Limits For Petroleum Contaminated Soil To Be Thermally Treated

TPH	
Heavy fuels	20,000 ppm
Diesel	20,000 ppm
Gasoline	15,000 ppm
RCRA METALS:	
Lead	250 ppm
Arsenic	20 ppm
Cadmium	2 ppm
Chromium VI	19 ppm
Chromium III	2000 ppm
Mercury	2 ppm

CEMEX Class 2 Acceptance Limits For Petroleum Contaminated Soil to Be Land-Filled*

TPH	
Heavy fuels	450 ppm
Diesel	450 ppm
Gasoline	100 ppm
BTEX:	
Benzene	.5 ppm
Ethyl benzene	20 ppm
Toluene	40 ppm
Xylenes	20 ppm

*Material that meets the class 2 criteria can be disposed of at CEMEX'S permitted class 2 landfill. Incoming material will by stockpiled and tested for conformation at CEMEX'S Thermal Treatment Facility.

If the conformation analytical results do not meet the limits of class 2 as defined above it will be the customer's responsibility to either dispose of the material using CEMEX's Thermal Treatment Facility or provide loading and transport of the material to an alternate disposal facility.

In addition, CEMEX has several requirements relating to the receipt of material at our facility.

- No material will be received without a completed contaminated soil application form, an approval of credit application on file, and pre-approval from CEMEX.
- Trucks will be permitted to weigh in Monday through Friday 6:30 AM to 4:30 PM unless prior arrangements have been made.
- Material will be sampled at delivery. Comparisons will be made between the submitted profile and on site analysis. CEMEX reserves the right to refuse any material whose profile does not compare to delivered material.
- Soil must not contain any free liquids, or foreign material (i.e. rebar, fittings, cans, wood, etc.)
- Loads found with excessive foreign material will be reloaded and returned to customer OR screened, sorted and disposed of by CEMEX @ $6.00 per ton original load weight plus charges for off site transportation and disposal.

It is our sincere desire to provide you with complete service and technical support for your soil remediation needs.