

APPENDIX D
SAND COVER ANALYTICAL RESULTS



AGGREGATE QUOTE

A CalPortland Company

TO: GREG ANDERES

FAX: 206 774-5958

PROJECT: OLYMPIA GRADATIONS

FROM: NICK MARKS

TOTAL PAGES: 5 (including cover page)

GLACIER NORTHWEST AGGREGATE LOCATIONS

PIONEER AGGREGATES

4301 Pioneer Avenue
DuPont, WA 98327

Contact: Nick Marks

Office: (253) 912-8500, ext. 18516
Fax: (253) 912-8510

SNOQUALMIE SAND & GRAVEL

5601 - 396th Drive SE
Snoqualmie, WA 98065

Contact: Spencer Kull

Office: (425) 888-9795
Fax: (425) 881-3471

WHITE RIVER QUARRY

31107 SE State Route 410
Enumclaw, WA 98022

Contact: Jeff Hamel

Office: (360) 825-6204
Fax: (360) 825-6266

SEATTLE AGGREGATE YARD

4002 W. Marginal Way SW
Seattle, WA 98124

Contact: Mike Middling

Office: (206) 938-6761
Fax: (206) 933-0379

KENMORE AGGREGATES

6423 NE 175th Street
Kenmore, WA 98028

Contact: Darrin Yogan

Cell: (425) 422-5134
Fax: (425) 259-5679

VASHION SAND & GRAVEL

P.O. Box P
Vashon, WA 98070

Contact: Todd Gateman

Office: (206) 463-9970
Fax: (206) 463-3966

EVERETT AGGREGATE YARD

2323 Ross Ave.
Everett, WA 98205

Contact: Darrin Yogan

Cell: (425) 422-5134
Fax: (425) 259-5679

www.CalPortland.com

Glacier Northwest - Aggregate Submittal



Date: December 15, 2008

Product Number: 8720

Product Description: Clean Sand

Specification Number: 2.01 Clean Sand

Source: Pioneer Aggregates

Location: DuPont, WA

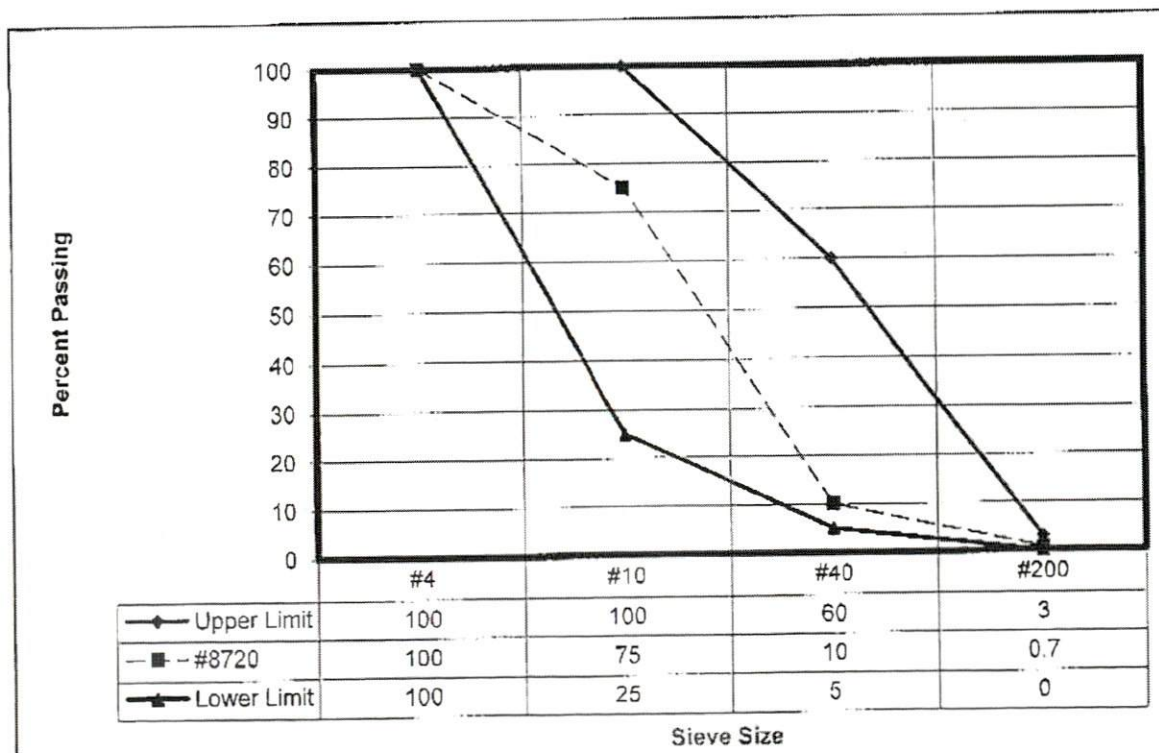
WSDOT Pit Number: B-335

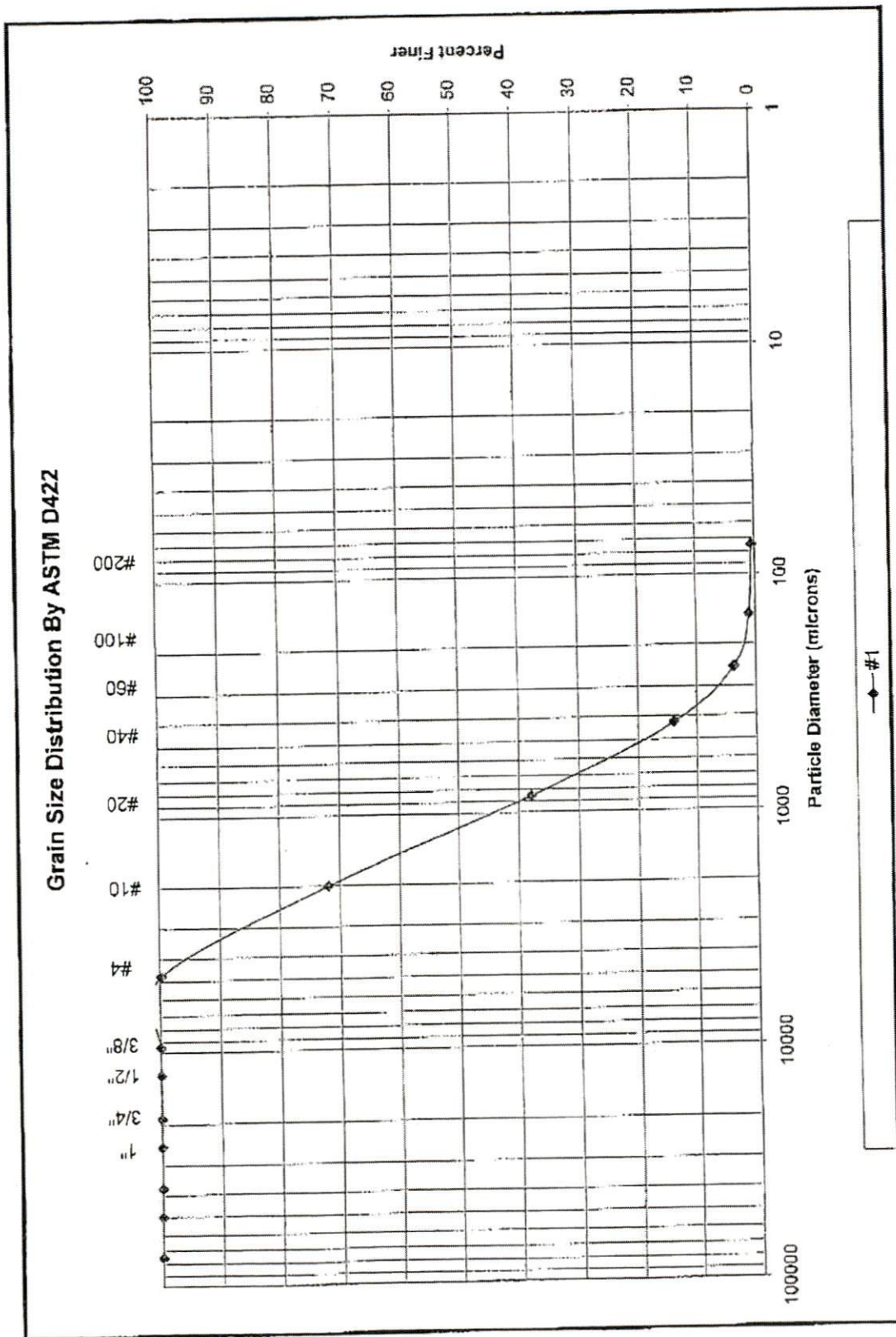
Specification:

US No. 4	100% passing
US No. 10	25-100
US No. 40	20-60
US No. 200	0-3

Specific Gravity:	NA
Absorption:	NA
L.A. Abrasion:	NA
Degradation:	NA

% Fracture:	NA
Sand Equivalent:	NA
Dust Ratio:	NA





Spectra Laboratories, Inc.
2009010400

Percent Retained in Each Size Fraction, By ASTM D422

Sieve Size (microns)	3-2"	2-1.5"	1.5-1"	1-3/4"	3/4-1/2"	1/2-3/8"	3/8-#4	4750-2000	2000-850	850-425	425-250	250-150	150-75	<75
#1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	27.8	34.1	24.0	10.2	2.6	0.6	0.5

OK31

Spectra Laboratories, Inc.
 2009010400

Percent Finer Than Indicated Size, By ASTM D422

Sample ID	Depth (ft)	Moisture Content (%)	3"	2"	1.5"	1"	3/4"	1/2"	3/8"	#4	#10	#20	#40	#60	#100	#200
#1	A	4.78	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	71.9	37.8	13.8	3.7	1.1	0.5

OK31



SPECTRA Laboratories

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02/19/2009

Glacier NW-DuPont Concrete Plant
4301 Pioneer Avenue
Dupont, WA 98327
Attn: Nick Marks

Project: Port of Olympia Berth 2 & 3
Client ID: # 8720
Sample Matrix: Soil
Date Sampled: 01/27/2009
Date Received: 01/27/2009
Spectra Project: 2009010400
Spectra Number: 1

Analyte	Result	Units	Method	Analyte	Result	Units	Method
1,2,4-Trichlorobenzene	<3.3	ug/Kg	8270C SIM	Chrysene	<3.3	ug/Kg	8270C SIM
1,2-Dichlorobenzene	<3.3	ug/Kg	8270C SIM	Di-n-Butylphthalate	25 B	ug/Kg	8270C SIM
1,3-Dichlorobenzene	<3.3	ug/Kg	8270C SIM	Di-n-Octyl Phthalate	<83	ug/Kg	8270C SIM
1,4-Dichlorobenzene	<3.3	ug/Kg	8270C SIM	Dibenz(a,h)Anthracene	<3.3	ug/Kg	8270C SIM
2,4-Dimethylphenol	<3.3	ug/Kg	8270C SIM	Dibenzofuran	<3.3	ug/Kg	8270C SIM
1-Methylphenol	<3.3	mg/Kg	8270C SIM	Diethylphthalate	<3.3	ug/Kg	8270C SIM
4-Methylphenol	<3.3	ug/Kg	8270C SIM	Dimethyl Phthalate	<3.3	ug/Kg	8270C SIM
Acenaphthene	<3.3	ug/Kg	8270C SIM	Fluoranthene	<3.3	ug/Kg	8270C SIM
Acenaphthylene	<3.3	ug/Kg	8270C SIM	Fluorene	<3.3	ug/Kg	8270C SIM
Anthracene	<3.3	ug/Kg	8270C SIM	Hexachlorobenzene	<3.3	ug/Kg	8270C SIM
Benzo(a)Anthracene	<3.3	ug/Kg	8270C SIM	Hexachlorobutadiene	<3.3	ug/Kg	8270C SIM
Benzo(a)Pyrene	<3.3	ug/Kg	8270C SIM	Indeno(1,2,3-cd)Pyrene	<3.3	ug/Kg	8270C SIM
Benzo(b)Fluoranthene	<3.3	ug/Kg	8270C SIM	N-Nitrosodiphenylamine	<3.3	ug/Kg	8270C SIM
Benzo(ghi)Perylene	<3.3	ug/Kg	8270C SIM	Naphthalene	<3.3	ug/Kg	8270C SIM
Benzo(k)Fluoranthene	<3.3	ug/Kg	8270C SIM	Phenanthrene	<3.3	ug/Kg	8270C SIM
Benzoic Acid	<16.5	ug/Kg	8270C SIM	Phenol	<3.3	ug/Kg	8270C SIM
Benzyl Alcohol	<3.3	ug/Kg	8270C SIM	Pyrene	<3.3	ug/Kg	8270C SIM
Butylbenzylphthalate	<3.3	ug/Kg	8270C SIM	bis(2-Ethylhexyl)Phthalate	17.8 B	ug/Kg	8270C SIM
				Moisture Content	4.78*	%	ASTM D2216

B = Also found in method blank. Result is not blank-corrected. *Results were obtained via subcontract laboratory, ARI. See attached data for Results and further information. **Results were obtained via subcontract lab, CAS-Houston. See attached

Surrogate	Recovery	Method	Surrogate	Recovery	Method
Decachlorobiphenyl	87	SW846 8082	2-Fluorobiphenyl	62	SW846 8270C
Nitrobenzene-d5--SIM	67	8270C SIM	2,4,6-Tribromophenol	81	SW846 8270C
2-Fluorobiphenyl--SIM	54	8270C SIM	p-Terphenyl-d14	73	SW846 8270C
p-Terphenyl-d14--SIM	71	8270C SIM			
2-Fluorophenol	72	SW846 8270C			
Phenol-d6	70	SW846 8270C			
Nitrobenzene-d5	56	SW846 8270C			

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager
a14exsur/sgh



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02/19/2009

Glacier NW-DuPont Concrete Plant
4301 Pioneer Avenue
Dupont, WA 98327
Attn: Nick Marks

Project: Port of Olympia Berth 2 & 3
Client ID: # 8720
Sample Matrix: Soil
Date Sampled: 01/27/2009
Date Received: 01/27/2009
Spectra Project: 2009010400
Spectra Number: 1

Analyte	Result	Units	Method	Analyte	Result	Units	Method
Grain Size	*		ASTM D422	2-Nitroaniline	<83	ug/Kg	SW846 8270C
Total Organic Carbon	250	mg/Kg	PSEP	2-Nitrophenol	<83	ug/Kg	SW846 8270C
Total Arsenic	1.9	mg/Kg	SW846 6020	3,3-Dichlorobenzidine	<660	ug/Kg	SW846 8270C
Total Cadmium	< 0.1	mg/Kg	SW846 6020	3-Nitroaniline	<83	ug/Kg	SW846 8270C
Total Chromium	6.7	mg/Kg	SW846 6020	4,6-Dinitro-2-Methylphenol	<330	ug/Kg	SW846 8270C
Total Copper	6.9	mg/Kg	SW846 6020	4-Bromophenyl-phenylether	<83	ug/Kg	SW846 8270C
Total Lead	1.0	mg/Kg	SW846 6020	4-Chloro-3-Methylphenol	<83	ug/Kg	SW846 8270C
Total Silver	0.2	mg/Kg	SW846 6020	4-Chloroaniline	<83	ug/Kg	SW846 8270C
Total Zinc	13	mg/Kg	SW846 6020	4-Chlorophenyl-phenylether	<83	ug/Kg	SW846 8270C
Total Mercury	< 0.05	mg/Kg	SW846 7471B	4-Nitroaniline	<83	ug/Kg	SW846 8270C
PCB	<0.01	mg/Kg	SW846 8082	4-Nitrophenol	<83	ug/Kg	SW846 8270C
2,4,5-Trichlorophenol	<83	ug/Kg	SW846 8270C	Aniline	<330	ug/Kg	SW846 8270C
2,4,6-Trichlorophenol	<83	ug/Kg	SW846 8270C	Azobenzene	<83	ug/Kg	SW846 8270C
2,4-Dichlorophenol	<83	ug/Kg	SW846 8270C	Benzidine	<660	ug/Kg	SW846 8270C
2,4-Dinitrophenol	<330	ug/Kg	SW846 8270C	Biphenyl	<83	ug/Kg	SW846 8270C
2,4-Dinitrotoluene	<83	ug/Kg	SW846 8270C	Bis(2-Chloroethyl)Ether	<83	ug/Kg	SW846 8270C
2,6-Dinitrotoluene	<83	ug/Kg	SW846 8270C	Carbazole	<83	ug/Kg	SW846 8270C
2-Chloronaphthalene	<83	ug/Kg	SW846 8270C	Dibenzothiophene	<83	ug/Kg	SW846 8270C
2-Chlorophenol	<83	ug/Kg	SW846 8270C	Hexachlorocyclopentadiene	<83	ug/Kg	SW846 8270C

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Decachlorobiphenyl	87	SW846 8082	2-Fluorobiphenyl	62	SW846 8270C
Nitrobenzene-d5--SIM	67	8270C SIM	2,4,6-Tribromophenol	81	SW846 8270C
2-Fluorobiphenyl--SIM	54	8270C SIM	p-Terphenyl-d14	73	SW846 8270C
p-Terphenyl-d14--SIM	71	8270C SIM			
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Phenol-d6	70	SW846 8270C			
Nitrobenzene-d5	56	SW846 8270C			

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Steve Hibbs, Laboratory Manager
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4301 Pioneer Avenue
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Attn: Nick Marks


Project: Port of Olympia Berth 2 & 3
Client ID: # 8720
Sample Matrix: Soil
Date Sampled: 01/27/2009
Date Received: 01/27/2009
Spectra Project: 2009010400
Spectra Number: 1

Analyte	Result	Units	Method	Analyte	Result	Units	Method
Hexachloroethane	<83	ug/Kg	SW846 8270C				
Isophorone	<83	ug/Kg	SW846 8270C				
N-Nitroso-Di-n-Propylamine	<83	ug/Kg	SW846 8270C				
N-nitrosodimethylamine	<83	ug/Kg	SW846 8270C				
Nitrobenzene	<83	ug/Kg	SW846 8270C				
2,4-Dichlorophenol	<83	ug/Kg	SW846 8270C				
2,6-Dichlorophenol	<330	ug/Kg	SW846 8270C				
Tetrachlorophenol	<83	ug/Kg	SW846 8270C				
bis(2-Chloroethoxy)Methane	<83	ug/Kg	SW846 8270C				
bis(2-chloroisopropyl)Ether	<83	ug/Kg	SW846 8270C				
Dioxins & Furans	**		SW846 8290				

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