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July 6, 2006

Mr. Kipp Eckert ConocoPhillips P.O. Box 923 Bothell, Washington 98041

### SUBJ: Results of Exploratory Drilling ConocoPhillips Station 255353 600 Westlake Avenue North Seattle, Washington

Dear Mr. Eckert:

At the request of ConocoPhillips Company (ConocoPhillips or COP), Delta Environmental Consultants (Delta) performed exploratory drilling activities at the above-referenced site (Figure 1) in conjunction with the Westlake/Mercer Cleanup Project. Drilling activities were performed on the subject ConocoPhillips property and on the City of Seattle right-of-way (ROW) to obtain specific geotechnical data pertaining to subsurface soils at greater depths than previously explored beneath the site.

### SCOPE OF WORK

Geotechnical exploration activities included drilling and installing one deep well (DW-1) on the COP property near the northeast corner of the station building, drilling two soil borings along the southern boundary of the COP property (DB-01-06 and DB-02-06), and drilling three soil borings within Westlake Avenue North, west of the COP property (DB-03-06 through DB-05-06). Soil samples were collected from each of the borings for specific geotechnical analyses. The data collected from these exploratory drilling activities supplement existing geotechnical data for shallower soils beneath the site. The data were requested by URS Corporation for use in their evaluation of a design depth for proposed shoring to be installed around the perimeter of a remedial excavation. The boring locations are shown on Figure 2.

### **PRE-FIELD ACTIVITIES**

Prior to drilling the exploratory soil borings, Delta prepared a site-specific Health and Safety Plan in accordance with state and federal requirements for use during the field activities. Additionally, Delta obtained ROW Permit No. 28928 from Seattle Department of Transportation (SDOT) to gain access for drilling activities to be performed in the City of Seattle ROW. Delta personnel visited the site to mark the exploratory drilling locations and contacted Utilities Underground Location Center prior to drilling. Delta personnel also met on site with a private utility locator to clear each proposed boring location. Delta



subcontracted a traffic-control service to provide safe access during field activities in the ROW. Notifications regarding the field activities were made in advance to the City of Seattle as stipulated in the ROW permit.

### EXPLORATORY DRILLING AND WELL INSTALLATION

On December 21, 2005, Delta directed Cascade Drilling, Inc. (Cascade) of Woodinville, Washington, to drill one soil boring on the COP property near the northeast corner of the station building. Prior to drilling, the hole was cleared to an approximate depth of five feet below ground surface (bgs) using an air-knife and vactor truck. The boring was advanced to approximately 46 feet bgs using a drill rig equipped with hollow-stem augers. Soil samples were collected continuously from the five-foot depth to the total depth explored using a split-spoon sampler driven ahead of the drill bit into undisturbed formation materials. A Delta geologist examined and described each sample using the Unified Soil Classification System (USCS) and standard geologic techniques. A description of each sample was recorded on a boring log form.

During drilling at approximately 24 feet in depth, water appeared to be bubbling within the auger equipment. At that time, drilling was temporarily discontinued and an explosimeter/multiple gas meter was procured. Field personnel monitored the hole for lower explosive limit (LEL), hydrogen sulfide (H<sub>2</sub>S), and carbon monoxide (CO) levels. All readings were non-detectable, and it was determined that the likely cause of bubbling was due to residual pressure in the subsurface from previous operation of the deep air sparge system at the site (the system had been turned off more than 24 hours prior to drilling). As such, drilling activities recommenced and continued to the total explored depth of 46 feet bgs.

Following drilling, Well DW-1 was installed in the boring using 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen and blank riser pipe. The well was constructed using a five-foot length of 0.020-inch factory slotted PVC well screen placed between 46 and 41 feet bgs. A filter pack of washed silica sand was placed from the bottom of the well to two feet above the top of the screened interval concurrent with removal of the augers. A surface seal of bentonite chips was placed from the top of the filter pack to within approximately 1.5 feet of ground surface. A flush-mount security casing was then cemented in place over the well head. Well construction details were recorded on the boring log form.

On April 3 and 4, 2006, Delta directed Cascade to advance two soil borings along the southern boundary of the COP property (DB-01-06 and DB-02-06) and three soil borings within Westlake Avenue North between Mercer and Valley Streets (DB-03-06, DB-04-06, and DB-05-06). Prior to drilling, each hole was cleared to approximately five feet bgs using an air-knife. During hole clearance, one shallow soil sample was collected from each boring using a hand auger at a depth of approximately 2.5 feet bgs. The soil borings were advanced using hollow-stem auger drilling equipment to total depths ranging from 36 feet to 41.5 feet bgs. Due to close proximity to overhead power lines, Borings DB-01-06 and DB-02-06 were advanced using a limited access drill rig. Borings DB-03-06 through DB-05-06 were advanced using a full-size rig.

Soil samples were collected from the five borings at five-foot intervals from approximately 5 to 20 feet bgs, continuously from approximately 20 to 30 feet bgs, and again at five-foot intervals from approximately 30 to 40 feet bgs. Samples were collected using a split-spoon sampler driven ahead of the drill bit into undisturbed formation materials. Soil samples were logged in the field using the USCS, and all soil samples were field screened for the presence of volatile organic compounds (VOCs) by

headspace analysis using a photo-ionization detector (PID) calibrated to 100 parts per million by volume (ppmv) of isobutylene.

Upon completion, the soil borings were abandoned by backfilling with a bentonite seal to approximately two feet below grade, and finished to surface grade with concrete. Down-hole drilling and sampling equipment was steam cleaned prior to and between each boring to prevent cross-contamination. Boring logs, including well construction details for DW-1, are presented in Appendix A and include PID readings, lithology, and other field observations.

### WASTE DISPOSAL

Soil cuttings generated during drilling activities, and rinseate from cleaning of equipment, was placed in Department of Transportation (DOT)-approved 55-gallon drums. The drums were sealed and labeled in accordance with the appropriate protocols, and each drum was identified on a waste inventory manifest. The drums were temporarily stored on the ConocoPhillips station property, pending transport and disposal by a ConocoPhillips-approved waste management contractor. The drill cuttings and rinseate from drilling activities performed in December 2005 were transported to Waste Management's Columbia Ridge Landfill located in Arlington, Oregon. The drill cuttings and rinseate from drilling activities performed in April 2006 were transported to Waste Management's Graham Road Recycling and Disposal Facility located in Spokane, Washington. The non-hazardous waste manifests are included in Appendix B.

### GEOTECHNICAL SAMPLE COLLECTION AND ANALYSES

During drilling of DW-1 on December 21, 2005, core soil samples were collected continuously in six-inch stainless steel sample liners, using a split-spoon sampler driven ahead of the drill bit into undisturbed formation materials. A total of 56 core samples were collected from the boring. The liners were capped at each end and labeled with top and bottom depths. The samples were frozen prior to placement in chilled coolers with dry ice for shipment to a geotechnical laboratory.

The samples were submitted to PTS GeoLabs, Inc. located in Santa Fe Springs, California, on behalf of URS Corporation (URS) for core photography and for chemical and geotechnical analyses as determined by URS. Delta understands that analyses were requested to determine the following: vertical extent of hydrocarbons, physical soil characteristics, vertical and horizontal hydraulic conductivities in the saturated zone, air permeability in the unsaturated zone, general corrosion properties, organic carbon content, soil pH, and visual observations on characteristics of wood in the samples. These analyses were requested on behalf of URS Corporation for their evaluation and use. Appropriate chain-of-custody documentation was completed and accompanied the samples. All results were reported directly to URS Corporation by the geotechnical laboratory. Delta did not receive a copy of the results. Copies of chain-of-custody documentation for these samples are included in Appendix C.

During drilling of DB-01-06 through DB-05-06 in April 2006, soil samples were collected at designated intervals from each boring for specific geotechnical analyses, also determined by URS. A total of 11 soil samples were collected from the five borings (from approximate depths of 5, 10, 15, 20, 25, and/or 40 feet bgs) and were placed in laboratory-prepared 16-ounce glass or plastic containers. Additionally, four core soil samples were collected from three of the borings from depths between 32 and 36 feet bgs, of which two samples were collected in 18-inch Shelby tubes, and two samples were collected in 6-inch

stainless steel sample liners. Samples were collected using a split-spoon sampler driven ahead of the drill bit into undisturbed formation materials. The core samples were capped at each end and labeled with top and bottom depths. All samples were placed in chilled coolers for shipment to the geotechnical laboratory.

At the request of URS, the samples were submitted to Analytical Resources, Incorporated (ARI) located in Tukwila, Washington for specific geotechnical analyses. The analyses included moisture content (ASTM D2216), grain size (ASTM D422), specific gravity (ASTM D854), hydraulic conductivity (ASTM D5084), and unconsolidated, undrained triaxial compression testing (ASTM D2850). Appropriate chain-of-custody documentation was completed and accompanied the samples. Copies of chain-of-custody documentation for these samples are included in Appendix C.

### SUBSURFACE CONDITIONS

### Field Observations

Subsurface soil in the vicinity of DW-1 consisted of intermittent layers of silty sand, sandy silt, sandy clay, clay, silt, and sand. Wood fragments and concrete debris were encountered between approximate depths of 10 and 12 feet bgs. Wood fragments and a log were also encountered between approximately 15 and 22 feet bgs, making drilling and sample recovery difficult between those depths. Native sands, silts, and clays were observed beneath the wood layer in the vicinity of DW-1. At approximately 39 feet bgs, well to poorly graded sand was present to the maximum explored depth of 46 feet bgs. Groundwater was encountered in the well at approximately 13 feet bgs during drilling.

Subsurface soil in the vicinity of DB-01-06 through DB-05-06 consisted primarily of silty clays, sandy silts, silty sands, poorly graded sands, and woody debris and peat to the maximum explored depth of 41.5 feet bgs. This is generally consistent with the soil types previously reported from prior subsurface investigations conducted that this site. Groundwater was encountered at 12 feet bgs during drilling of these borings. Geologic cross-sections in the vicinity of these borings are shown on Figure 2 and depicted in Figures 3 and 4.

### **Results of Geotechnical Analyses**

Results of geotechnical analyses for core samples from DW-1 were reported directly to URS Corporation by PTS GeoLabs. Delta did not receive a copy of the results. Results of geotechnical analyses for core and soil samples from DB-01-06 through DB-05-06 were reported to Delta. The following is a summary of those results.

Analytical results for grain size were obtained by sieve analysis and hydrometer analysis. The analyses reported the percent (%) retained in each size fraction for gravel, coarse sand, medium sand, fine sand, very coarse silt, coarse silt, medium silt, fine silt, very fine silt, and clay. Samples from DB-02-06 and DB-03-06 at 20 feet bgs (DB-02-06-d20 and DB-03-06-20) and DB-04-06 at 5 feet bgs and 10 feet bgs (DB-04-06-5 and DB-04-06-10, respectively) were analyzed by sieve analysis due to the absence of a significant amount of fines, all other samples were analyzed by hydrometer analysis. The results of sieve and hydrometer analyses were compared by evaluating the percent retained in particle size ranges based on measurement, not named size fractions (e.g., 425-75 microns versus fine sand).

From all of the samples analyzed, the percent gravel (greater than 4,750 microns) ranged from 0.0% in the sample collected from DB-03-06 at 34.5 to 36 feet (DB-03-06-34.5-36) to 58.0% in the sample from

DB-03-06 at 20 feet bgs (DB-03-06-20). Samples for percent retained in fine sand (425 to 75 microns) ranged from 1.0% in the sample from DB-03-06 at 34.5 to 36 feet (DB-03-06-34.5-36) to 55.2% in the sample from DB-01-06 at 10 feet bgs (DB-01-06-d10). Percent retained in fine silt (13 and 9 microns) ranged from 2.0% in the sample from DB-03-06 at 34.5 to 36 feet (DB-03-06-34.5-36) to 7.2% in the sample from DB-03-06 at 40 feet bgs (DB-03-06-40). Percent retained in clay (less than 3.2 microns) ranged from 4.0% in the sample from DB-03-06 at 40 feet bgs (DB-03-06 at 40 feet bgs (DB-03-06 at 40 feet bgs (DB-03-06 at 40 feet bgs (DB-03-06-40)) to 25.1% in the sample from DB-03-06 at 5 feet bgs (DB-03-06-5).

Moisture content results identified significantly higher moisture content in the soil samples from 20 feet bgs in borings DB-02-06 and DB-03-06. Samples DB-02-06-d20 and DB-03-06-20 had moisture contents of 145.2% and 214.5%, respectively. These soil samples consisted of woody debris and peat. The remaining samples analyzed for moisture content consisted of inorganic soils and the moisture contents ranged from 13.73% in DB-01-06 at 10 feet bgs (DB-01-06-d10) to 35.41% in DB-03-06 at 25 feet bgs (DB-03-06-25).

Specific gravity, flexible-wall hydraulic conductivity, and unconsolidated, undrained triaxial strength were analyzed in core samples from soil borings DB-01-06, DB-03-06, and DB-05-06 from depths ranging between 32.5 feet bgs and 36 feet bgs (DB-01-06-32.5-33, DB-01-06-33-33.5, DB-03-06-34.5-36, and DB-05-06-34-36). Results of specific gravity analyses indicated values ranging from 2.72 to 2.74. Hydraulic conductivity values ranged from 9.84x10<sup>-7</sup> centimeters per second (cm/s) in the sample from DB-01-06 at 33 to 33.5 feet bgs (DB-01-06-33-33.5 to 2.06x10<sup>-3</sup> cm/s in the sample from DB-03-06 at 34.5 to 36 feet bgs (DB-03-06-34.5-36). The average hydraulic conductivity in the analyzed samples was 5.16x10<sup>-4</sup> cm/s. Results for unconsolidated, undrained triaxial strength reported shear failure in samples from DB-01-06 (DB-01-06-d32.5-33 and DB-01-06-d33-33.5) and DB-03-06 (DB-03-06-34.5-36), and bulging failure in the sample from DB-05-06 (DB-05-06-34-36). Additional information regarding hydraulic conductivity testing and triaxial strength analyses is presented in the complete laboratory report from ARI, which is included in Appendix C.

### LIMITATIONS

The findings contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

Results of Exploratory Drilling ConocoPhillips Site No. 255353 Page 6 of 6

Delta appreciates the opportunity to provide environmental services for ConocoPhillips Company. Please call (425) 498-7718 if you have any questions regarding the contents of this report.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

ena Seeda

Tena Seeds Project Engineer

Eric Larsen, L.H.G. Senior Project Manager



- Enc: Figure 1 Site Location Map Figure 2 – Site Map Figure 3 – Geologic Cross-section A-A' Figure 4 – Geologic Cross-section B-B' Appendix A – Boring Logs and Well Construction Details Appendix B – Waste Disposal Documents Appendix C – Certified Geotechnical Laboratory Reports and Chain-of-Custody Documentation
- cc: Washington State Department of Ecology Northwest Regional Office, Bellevue, WA Paul McCullough, URS Corporation, 1501 4<sup>th</sup> Avenue, Suite 1400, Seattle, WA 98101









APPENDIX A

BORING LOGS AND WELL CONSTRUCTION DETAILS

### SOIL CLASSIFICATION GRAPHIC SYMBOLS

MAJOR DIVISIONS	SYM	IBOLS	TYPICAL SOIL DESCRIPTIONS
	GW		Well graded gravels or gravel-sand mixtures, little or no fines
GRAVELS	GP		Poorly graded gravels or gravel-sand mixtures, little or no fines
	GM		Silty gravels, gravel-sand-silt mixtures
	GC		Clayey gravels, gravel-sand-clay mixtures
	SW		Well graded sands or gravelly sands, little or no fines
	SP		Poorly graded sands or gravelly sands, little or no fines
SANDS	SM		Silty sands, sand-silt mixtures
	SC/SM		Clayey sands with a touch of gravel
	SC		Clayey sands, sand-clay mixtures
	ML		Inorganic silts and very fine sands, rock flour, silty or clayey sands or clayey silts with slight plasticity
SILTS & CLAYS	CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
LL<50	OL		Organic silts and organic silty clays of low plasticity
	MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils elastic silts
SILTS & CLAYS	СН		Inorganic clays of high plasticity, fat clays
LL>50	OH		Organic clays of medium to high plasticity, organic silty clays, organic silts
HIGHLY ORGANIC SOILS	PT		Peat and other highly organic soils
FILL MATERIAL	FILL		
ASPHALT/Concre	te		
BENTONITE			Water Level - First Encounter
SAND			
			Static Water Level

				PROJECT	NO:	WA255-3519-1			CLIEN	IT:	ConocoPhillips BORING/WELL NO: DW-1
				LOGGED	BY:	L. Brock			LOCA	TION:	600 Westlake Ave N, Seattle, WA PAGE 1 OF 3
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	Л		ta		METHOD:					DIAMET	ER: 8" ØW-1
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							4 —				(Experimentational and haddeline from the first of ALEA
											(Encountered old building foundation at 4'. Moved hole east by 8")
						2	5 —			SM	Silty SAND; light gray mottled with dark gray and brown,
				Moist		2				OW	medium-coarse sand with large gravel, ~10% silt, loose
						3	6—				
						2	7				(As above, changes to gravel at 8')
				Moist		2	· _				
						2	8				
				Moist		3 2				ML	Sandy SILT; gray, coarse-grained sand, brick fragments, loose
				WOISt		3	9				10036
						11					Sandy SILT; gray mottled with white, 10-15% sand,
				Moist		2	10				medium- to fine-grained, gravel fragments, loose, wood
ш						3	11			WDFill	chips at 11'
ONITE				14-1-1							(Encountered concrete; concrete fragments with
01				Moist		104	12				5% sand, medium-grained, gray, loose)
BENT			$\bigtriangledown$			1				CL	Sandy CLAY; gray, ~10% sand, medium- to fine-grained,
B				Wet		1	13				<5% gravel, dense
						1	14—				
						2				СН	CLAY; gray, high plasticity, dense, wood fragments at 15.5'
				Wet		2 5 3 3 2	15—				
						5				WDEill	Wood Fragments; dark brown, 10% gravel, ~5% sand
				Wet		3	16——				
						2	47				
							17—				(Drilled through log; wood fragments, dark brown,
				Wet			18				loose)
						100					
							19—				(No sample due to log)
								$\vdash$			
						16	20—				(No recovery)
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						8					
				Wet		13	22—				Wood Fragments; 10-15% silt
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						3	23			SP	SAND; light gray, medium- to coarse-grained sand,
						3	20				5-10% silt, dense
				Wet		9	24 —				(As above, 5% silt, 5-10% gravel, loose)
						12	_				
					LEL: 0	5	25			SM	Silty SAND; gray, medium- to fine-grained sand,
				Wet	H <sub>2</sub> S: 0	6					5-10% silt, loose
					CO: 0	6	26—				(Water bubbling in auger; monitored with LEL meter)
						2					Silty SAND; as above to 26.5'
				Wet		3	27 —			CL	Sandy CLAY; gray, 10-15% medium- to fine-grained sand,
						3	_			014	low plasticity, loose
				Wet		3 7	28 —			SM	Silty SAND; gray, medium-grained sand, 5-10% silt, loose
				wei		10	_				
						4	29 —			ML	SILT; gray, 5-10% fine-grained sand, dense, increasing
ш				Wet		4	-				clay in bottom 6", low plasticity
BENTONITE						4	30 —				
Ø						12					SILT; gray, 10-15% clay, low plasticity, dense
Z				Wet		12	31 —				
m						15	32—				
						15	52				SILT; gray, 15% clay, low plasticity, dense
				Wet		15	33 —				
						15					
						20	34 —			CL	Silty CLAY; gray, 20% silt, low plasticity, dense
				Wet		27					
						28	35 —			SM	Cilty CAND, grow modium grained aged 400/ cilt
				Wet		14 20	_			SIVI	Silty SAND; gray, medium-grained sand, 10% silt, low plasticity, loose
				VVEL		20 25	36 —				
		-				23					Silty SAND; gray, medium- to coarse-grained sand,
				Wet		38	37 —				10-15% silt, loose
						19	20				
						40	38 —				(As above; with silt layer at 38.5', transitions to
				Wet		50	39—				silty sand again at 39' with 10% silt)
						13				SW	SAND; gray, medium-grained sand, 5% silt, dense
						30	40 —				
		_		Wet		33	_				
	Щ					9	41 —				(As above)
SAND	Н	_		Met		10	-				
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Bac	ů U	Level	≥0	DIA	be be	De	Rec	Ň		
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Conc.						1 —				
ŭ	—									
	·					2		ML	Silty CLAY: poorly ar	aded, gray, low strength and
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						3—		1		•
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	·		Damp	0.8	9	5—		SM	Silty SAND: poorly ar	aded, gray, very fine to fine,
			Damp	0.0	12	_				phness, little silt ~20% silt
					13	6—			0	, ,
						7—				
						8 —		-		
						_				
			Moist	40.1	6	9			(As Above)	
					7	10				
					9	_				
111						11 —		-		
BENTONITE		$\sum$				_				
Õ						12—		1		
EN						13—				
8	_					_		-		
			Wet	0.0	17	14—		PT	Wood Debris: dark br	rown, organic soil, some PEAT
			1101	0.0	50/3"	-		1''		
						15—				
						16—				
								-		
	·					17 —		1		
						18—				
						19—		4		
	_					_		SP	SAND: poorly graded	gray yory find to modium low
			Wet	0.0	17	20 —		57	strength and toughne	l, gray, very fine to medium, low
	_			0.0	50/4"			SM		aded, gray, very fine to fine, low
						21 —			strength and plasticity, strength and plastici	55% sand, 45% silt, trace wood debris
				0.0	11	20		SM		aded, gray, very fine to medium, low
			Wet	0.0	7	22		CL	strength and toughne	ess, silt ~20% aded, gray, low strength and plasticity
					1				Tonty OFVI, boothy dia	auca, yray, iow suchyn and plasnolly

	Del			) BY: :: G METHOD: NG METHOD:			DATE HOLI HOLI	NT: ATION: E DRILLE E DIAME <sup>T</sup> E DEPTH L DIAME <sup>T</sup>	D: 4/3/2006 TER: 8" : 36'	BORING/WELL NO: DB-01-06 PAGE 2 OF 2 Location Map
	nvironm nsultan		SLOT SIZ GRAVEL					L DEPTH NG STIC		* WREATLY
				ELEVATION	N		•		EASTING	MERCER ST
	Casing Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Interval	Soil Type	LITH	OLOGY / DESCRIPTION
			wet	0.0	6 7 20 32	23 — 		SP	and toughness (As above, trac	I, gray, very fine to fine, low strength ce gravel, subrounded to tted, trace silt ~10%)
			wet	0.0	52 6 18	25 — -			<b>U</b>	ce wood debris)
			wet	0.0	30 17 50/6"	26 		ML SC SM	streaks, 55% clay, 45 Sandy SILT; poorly g	aded, gray, low strength and plasticity, 5% silt raded, gray, 60% silt, 40% sand raded, gray, very fine to fine, low
BENTONITE			wet	0.0	8 11	28 — 			strength and toughne	raded, gray, very fine to fine, for raded, gray, very fine to fine,
BENT			wet	0.0	11 4 50/5"	30 — 31 —				aded, gray, very fine to fine, low ess, dense, 60% sand, 40% silt
						32 — 33 —			(As Above)	
						34 — 			(Auger refusal)	
						36— 			BOTTOM OF HOLE	
						38 — 		-		
						40 — 41 —				
						42 — 42 —		-		
						43 — 				

			PROJECT		WA255-3		CLIEN		ConocoPhillips	BORING/WELL NO: DB-02-06
			LOGGED DRILLER:		Aric Froh	iman		TION: DRILLE	600 Westlake Ave N, Seat D: 4/3/2006	tle, WA PAGE 1 OF 2
	)el	ta		METHOD:						
╵┖		la		G METHOD:				DEPTH:	-	
— .		antal	CASING T					DIAMET		
	vironm		SLOT SIZ	E:			WELL	DEPTH	:	
0	nsultan	ls, mc.	GRAVEL	PACK:			CASI	NG STICI	KUP:	≥
			I	ELEVATION	N	N	ORTHING		EASTING	MERCER ST
				D	_	-				MERCER SI
Well C	ompletion	Static	int	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample	/pe		
kfill	ing	Water	Moisture Content	Rea	etra	th (i	very val	Soil Type	LITH	OLOGY / DESCRIPTION
Backfill	Casing	Level	ğΰ	Ū,	Pen (bld	Эер	Recovery Interval	So		
	0			ш		1	~ _		Asphalt (4")	
ပ်										
Conc.						1 ——				
						2				
			wet	0.0				SM		/, poorly graded, non-plastic, trace
						3—			light gray silt (wet)	
						_				
						4 ——				
			Damp	0.0	5	5—		SP	SAND: poorly graded	l, gray, very fine to fine, low strength
					6			-	and toughness, trace	
					7	6—			-	
						7—				
						· _				
						8 —				
						9 —				
						10				
			Moist	0.0	9	10—			SAND; poorly graded	l; gray, very fine to medium, low
					11	11—				~ 20%, subrounded to subangular
₩ E					10			PT	Wood Debris/PEAT;	dark brown, organic soil
BENTONITE		$\bigtriangledown$				12				
Ę										
Ш Ю						13 —				
						14—				
						15—				
			Wet	111	6			SM		raded, gray, very fine to fine, low
					8	16 —				ess, 55% sand, 40% silt, trace gravel
					9	_			and wood debris ~ 5%	%, subrounded to subangular, pitted
						17 —				
	_					10		1		
						18—		1		
						19				
	_						-			
			maint	0.0	А	20—		рт	DEAT: doub brown	rachie coil
	—		moist	0.0	4 5	-		PT	PEAT; dark brown, or	ryanic soli
					5 6	21 —				
	—		moist	0.0	8	22			(As above)	
					12	<i>∠∠</i> —				

			PROJEC		WA255-3			CLIEN		ConocoPhillips	BORING/WELL NO: DB-02-06					
1_			LOGGED		Aric Froh	iman				600 Westlake Ave N, Seatt						
[		Ita		: G METHOD:	CDI HSA											
	して	ια		IG METHOD:					DIAMET		Dispenser					
					50				DIAMET		MESTLARE AVEN					
	Environ		SLOT SIZ						DEPTH:							
	onsulta	nts, Inc.	GRAVEL						IG STICI							
				ELEVATION	١		NORTH	HING		EASTING						
											MERCER ST					
	I Completion	Static	ы е	٦ و	tion 6")	eet)	Sam	-	be							
kfill	ing	Water	Moisture Content	PID Reading (ppm)	enetratior (blows/6")	h (f	very	Val	Soil Type	LITH	OLOGY / DESCRIPTION					
Backfill	Casing	Level	δΩ	– ar	Penetration (blows/6")	Depth (feet)	Recovery	Interval	Soi							
	<i>[</i> ]				10		<u> </u>		PT							
	Ø —	-	wet	0.0	21	23 —			• •	Wood Debris/PEAT; o	dark brown, organic soil					
		-			50/6"	24—										
						24			SP		, gray, very fine to fine, low strength					
	//	4	wet	0.0	11	25—			<u></u>	and toughness						
	- 1	4			12	_					raded, gray, low strength and plasticity					
	<b>—</b>	-			17	26 —			SP	SAND; gray, poorly graves and the strength and toughness	raded, very fine to medium, low					
		-	wet	0.0	14	-				strength and toughne	ss, trace siit ~10%					
	<b></b>	-	1101	0.0	16	27 —				(As above, ver	y fine to fine, ~20% silt)					
		1			10	-				(, , , , , , , , , , , , , , , , , , ,	,					
			wet	0.0	11	28 —				(As Above)						
	<u> </u>				14	29—										
	- 1	-			15					0 I 0						
	<b></b>	-	wat	0.0	4.4	30 —			SM		raded, gray, very fine to fine, low					
		-	wet	0.0	11 12	-			SP	strength and plasticity	, gray, very fine to medium, low					
ш	<b></b>	-			14	31 —			01	strength and toughne						
BENTONITE		1				-										
Ľ						32 —										
E E E E E E E E E E E E E E E E E E E	<b></b>	_				33—										
		-				_										
	<b></b>	-				34 —										
		-				-										
		1	wet	0.0	50/6"	35 —				SAND; poorly graded	, gray, very fine to medium, low					
		1				26				strength and toughne						
						36 —										
	<u> </u>	4				37 —	$\downarrow \downarrow$									
	- 1	-				-										
	<b>//</b>	4				38 —	+									
		-				-	+									
		1				39 —	┽┥									
		1				40										
		]	wet	0.0	50/6"	40—			SM		aded, gray, very fine to fine, low					
	<u> </u>	4				41 —				strength and toughne	ess, 60% sand, 40% silt					
		4				-										
		-				42 —	+			BOTTOM OF HOLE	@ 41 E'					
	_	-				-	+			BOTTOM OF HOLE	世 41.3					
1		1				43 —	┽┤									
		1				4.4										
		1				44 —										

			PROJECT	ΓNO:	WA255-3	3523		CLIEN	IT:	ConocoPhillips		BORING/WELL NO: DB-03-06
			LOGGED	BY:	Jamey P	eterson		LOCA	TION:	600 Westlake Ave N, Seatt	le, WA	PAGE 1 OF 2
		10	DRILLER		CDI			DATE	DRILLE	D: 4/3/2006	Location Map	
	)el	ГA	DRILLING	METHOD:	HSA			HOLE	DIAMET	ER: 8"		COP265363 Station Building
				G METHOD:	SS			HOLE	DEPTH:	40'	AVE N	
E	nvironm	ental	CASING						DIAMET		AKE	
Co	onsultan	ts, Inc.	SLOT SIZ						DEPTH:		♦ WESTLAKE AVE N	Dispenser Islands
			GRAVEL		N	N	VORTI		NG STICH	EASTING		·÷
					•					Enormo		MERCER ST
Well (	Completion			bu	<u>с</u> –	it)	Sor	مام	0			
Backfill	Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery 8	Interval aldu	Soil Type			DESCRIPTION
						_				Asphalt/Concrete (~24	4")	
Conc.						1 —			,			( A))
ŏ	_					_				(Encountered ra	ailroad tie a	t 1')
				0.2		2 —			014		سمام ماغاني	
	—		wet	0.2		_			SM	Silty SAND; coarse sa <10% clay, <20% grav		
						3 —				(Encountered v		
	-					_					voou piirig e	
						4 —						
			wet	12	5	5 —			ML	Sandy SILT; dark gray	y, <20% dar	k clay, medium
					6	6				plasticity, dense		
	_				7	- U						
						7 —						
	_					_						
						8 —			,			
						_						
	—					9 —			,			
	-		wet	95	50/6"					(As above, incr	easing sand	d and gravel)
						10 —			,	(		<b>..</b>
						11			Wood	Wood Debris; with tra-	ce sand and	d fines
쏊						11 —						
BENTONITE		$\bigtriangledown$				12 —						
Ê						_						
ű.						13 —						
	—					_						
						14 —				(No recovery)		
	-					-						
						15 —						
						16 —				-		
						10						
						17 —			i			
	_											
						18 —						
						_						
						19 —						
			wet		12	20 —						
					15				Wood	Wood Debris; with tra-	ce sand and	d fines
					17	21 —						
			wet		12	22 —			,	(As above)		
	1				18							

			PROJEC	T NO:	WA255-3	3523	Cl	IENT:		ConocoPhillips	BORING/WELL NO: DB-03-06
			LOGGED	BY:	Jamey P	eterson	LC	CATION	:	600 Westlake Ave N, Seatt	le, WA PAGE 2 OF 2
Г		+0	DRILLER		CDI		DA	TE DRIL	LED	4/3/2006	Location Map
	)el	ld		METHOD:				DLE DIAN			
				IG METHOD:	SS			DLE DEP		40'	
Е	nvironm	nental	CASING <sup>-</sup> SLOT SIZ							ER:	
Со	nsultan	ts, Inc.	GRAVEL					ELL DEP <sup>-</sup> SING ST		Ί IP·	
				ELEVATION	J	Ν	IORTHI			EASTING	[ [**]
					-		-				MERCER ST
Well C	ompletion	-	0		LO 💭	et)	Samp	le o			
≣	g	Static Water	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)		ā	5		
Backfill	Casing	Level	Aois Con	PI Rea	enet	pth	Recovery	Soil Ty		LIIN	OLOGY / DESCRIPTION
ä	Ö	2010	20	Щ		De	Re				
					17	23 —		Woo	bd	(As above)	
	_		wet	0.0	4			01		<u> </u>	
					6 7	24 —		SN			n, trace dark brown clay, <15% clay,
	_		wet	0.0	4	_				medium plasticity, <30	5% well softed sand, rounded
			wei	0.0	7	25 —		-	-	(As above)	
	_				9	_				(//0/00/0)	
					15	26 —					
			wet	0.0	20	27 —		Cl	-		e sands, high strength and plasticity,
	_				22					dense, <15% sand, re	ounded
					6	28 —				<u> </u>	
	—		wet	0.0	6 7	_		SN			gray, dense, medium to high o medium sand, rounded
					7 14	29 —		-	-	plasticity, <30% line to	5 medium sand, rounded
	_		wet	0.0	14	_			-	(As above)	
ш				0.0	1	30 —				() to an or of	
BENTONITE					7	31 —					
P					8	51					
X						32 —		_			
89	_					_					
						33 —		_	-		
	—					_					
						34 —					
			wet	0.0		35 —					
										(Collected She	lby tube sample for analysis)
						36 —					
	—								-		
						37 —		_	-		
	_					_					
						38 —					
			wet	0.0	12	39 —		SN	Л	SILT with Sand; dark	gray, dense, medium to high
					15	39				plasticity, <30% fine to	o medium sand, rounded
					17	40 —					
	_					_	$\square$		ŀ	DOTTOM OF USU 5	a 40'
						41 —	$\vdash$	_	ŀ	BOTTOM OF HOLE	ଞ <b>4</b> 0
						-	$\vdash$	_	ŀ		
						42 —			ŀ		
						42			ľ		
						43 —					
						44 —					

Environmental Consultants, Inc.       SLOT SIZE: GRAVEL PACK:       WELL DEPTH: CASING STICKUP:       Image: Consultants of the state of the s	6
Delta       Delluing Method: HSA SAMPLING Method: SS Casing Type: SLOT SIZE: GRAVEL PACK:       Hole DIAMETER: Well DIAMETER: GRAVEL DEPTH:       Hole DIAMETER: 41' Well DIAMETER:       Image: Completion of the comp	
Environmental Consultants, Inc.       CASING TYPE: SLOT SIZE: ISON STREE: SLOT SIZE: SLOT SI	
Environmental Consultants, Inc.       CASING TYPE: SLOT SIZE: ISON STREE: SLOT SIZE: SLOT SI	
Consultants, Inc.       Static GR/VEL PACK:       Well Deprint CASING STICKUP:         Well Completion IFY OF OR OF OF OF OF OF OF OF OF OF OF OF OF OF	
Consultants, Inc.       Static GR/VEL PACK:       Well Deprint CASING STICKUP:         Well Completion IFY OF OR OF OF OF OF OF OF OF OF OF OF OF OF OF	COP 255353 Station Building
CRAINE STICKOP:         CONSIDE STICKOP:         ELEVATION       NORTHING       EASTING         Well Completion       Static       *         Use of grad       OF grad       CASING STICKOP:         Well Completion       Static       *         Use of grad       OF grad       Colspan="2">Casine Static         Use of grad       OF grad       Casine Static         Use of grad       Casine Static       LITHOLOGY / DESCRIPTION         Use of grad       OF grad       LITHOLOGY / DESCRIPTION         Use of grad       Casine Grad       Asphalt/Concrete (-24")         Use of grad       Casine Grad       Asphalt/Concrete (-24")         Use of grad       Casine Grad       Asphalt/Concrete (-24")	
Well Completion       Static       ensitie       Dip real (a) (b) (b) (b) (b) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	
i       wet       0.0       1       i       Asphalt/Concrete (-24")         (Encountered railroad tie at 1')       2       SM       Silty SAND; dark gray, trace dark gray clay, <15% grave rounded	Dispenser Islands
i       wet       0.0       1       i       Asphalt/Concrete (-24")         (Encountered railroad tie at 1')       2       SM       Silty SAND; dark gray, trace dark gray clay, <15% grave rounded         wet       0.0       4       5       6       6         wet       1.4       2       10       6       7         wet       1.4       2       10       10       10	
i       wet       0.0       1       i       Asphalt/Concrete (-24")         (Encountered railroad tie at 1')       2       SM       Silty SAND; dark gray, trace dark gray clay, <15% grave rounded         wet       0.0       4       5       6       6         wet       1.4       2       10       6       7         wet       1.4       2       10       10       10	
i       wet       0.0       1       i       Asphalt/Concrete (-24")         (Encountered railroad tie at 1')       2       SM       Silty SAND; dark gray, trace dark gray clay, <15% grave rounded         wet       0.0       4       5       6       6         wet       1.4       2       10       6       7         wet       1.4       2       10       10       10	
i       wet       0.0       1       i       Asphalt/Concrete (-24")         (Encountered railroad tie at 1')       2       SM       Silty SAND; dark gray, trace dark gray clay, <15% grave rounded         wet       0.0       4       5       6       6         wet       1.4       2       10       6       7         wet       1.4       2       10       10       10	
wet       0.0       2       SM       Silty SAND; dark gray, trace dark gray clay, <15% grave	
wet       0.0       2       SM       Silty SAND; dark gray, trace dark gray clay, <15% grave	
wet       0.0       4       3       3       3       3       10         wet       0.0       4       4       4       4       10<	
wet     0.0     4     3     interference     interference <td></td>	
$wet = 0.0 \begin{vmatrix} 4 \\ 4 \\ 4 \\ 4 \\ 7 \\ 8 \\ 9 \\ 9 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\$	el,
wet = 0.0 $uwet = 0.0$	
wet = 0.0 $uwet = 0.0$	
wet     0.0     4     6     (As above, change in color to dark brown)	
wet     0.0     4     6     (As above, change in color to dark brown)	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
wet     1.4     2     10	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
wet 1.4 2 10	
wet 1.4 2 10	
3 11 (As above, gravel increasing)	
wet 1.2 3 ML Sandy SILT; dark gray, trace gray clay, medium strength	:h
and plasticity, <10% gravel	
17 (Auger encountered wood debris)	
2 20 Wood Wood Debrie: brown with trace cand and fines	
wet 3 20 Wood Wood Debris; brown, with trace sand and fines	

			PROJEC	T NO:	WA255-3	3523		CLIEN	NT:	ConocoPhillips		BORING/WELL NO: DB-04-06
			LOGGED	BY:	Jamey P	eterson		LOCA	TION:	600 Westlake Ave N, Sea	ttl <u>e, WA</u>	PAGE 2 OF 2
Г	<b>ゝ</b> ~!	+~	DRILLER		CDI			DATE	DRILLEI		Location Map	
	Del	ld		METHOD:					DIAMET			◆ U U U U U U U U U U U U U U U U U U U
	- • •		-	IG METHOD:	SS				DEPTH:			
E	Invironm	ental	CASING						DIAMET		TΝ	COP255353 Station Building
Co	onsultant	ts, Inc.	SLOT SIZ GRAVEL						_ DEPTH: NG STICI			s [ [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
				ELEVATION	١		NORT			EASTING		
												Biogeneer Islands
	Completion	Static	e t	bc (	Penetration (blows/6")	Depth (feet)		mple	be			
kfill	ing	Water	Moisture Content	PID Reading (ppm)	etra ws/	h (fi	very	val	Soil Type	LITH	HOLOGY /	DESCRIPTION
Backfill	Casing	Level	δΩ	Re –	blo	Dept	Recovery	Interval	Soi			
	8				3	_			Wood			
			wet	0.0	5	23 —				(As above)		
					5	24 —				(		
					6	24 —						
			wet	0.0	2	25 —			PT	PEAT; with increasin	g sand and	fines, gray
	—				4	_						
			wet	0	2 4	26 —			SM	Silty SAND; poorly g	radad dark	aray low strongth
			WEL	0	4 5					medium to coarse sa		yray, iow รถธาญแา,
					5	27 —						
			wet	0.0	2	28						
					3	20			ML	SILT with Sand; incre	easing clay,	dark gray, low strength
					3	29 —						
	—		wet	0.0	5					(As above)		
					3 4	30 —						
111	—		wet	0.0	4 5	-			CL	CLAY; dark gray, hig	ih strenath a	nd plasticity
BENTONITE			wor	0.0	6	31 —			0L	OE/(I, dank gray, hig	nongina	
Ø					4	32 —						
Z			wet	0.0	4	32 -			ML			ray, dense, medium to
20					4	33 —				high plasticity, fine to	o medium, ro	unded
	—				5	-						
						34 —						
	—											
			wet	0.0	7	35 —			CL	Silty CLAY; dark gray	y, high stren	gth and plasticity,
					8	36 —				sand ~15%, fine to m		
	_				9							
						37 —	_					
	—					-						
	—					38 —						
	—											
						39 —						
			wet	0.0	10	40 —			ML	Silty CLAY; dark gray		
					14	-				sand <40%, fine to m	nedium, rour	nded
	<b>a</b>				9	41 —						
	—					-				BOTTOM OF HOLE	@ 41'	
						42 —				BOTTOM OF HOLE	<b>۲۲</b>	
	—					40						
						43 —			ĺ			
						44			ļ			

<b>F</b>			PROJECT	NO:	WA255-3	3523	CLIE	NT:	ConocoPhillips	BORING/WELL NO: DB-05-06
			LOGGED		Jamey P	eterson		ATION:	600 Westlake Ave N, Seattle, WA	PAGE 1 OF 2
Delta			DRILLER:		CDI			E DRILLE	D: 4/4/2006 Location Map	•
			DRILLING	METHOD:				E DIAMET	ER: 8"	
		<sup>1</sup>	SAMPLIN	G METHOD:	SS		HOL	E DEPTH:	40'	
E	nvironm	ental	CASING T	TYPE:			WEL	L DIAMET	TER:	Z I
Co	nsultant	ts, Inc.	SLOT SIZ							AKE A
			GRAVEL	PACK: ELEVATIOI	N.			ING STIC	EASTING	Representation of the second sec
					•			,	LAGHING	≥ <u> </u>
Woll C	Completion			ð		÷		Γ		
		Static	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample	Soil Type		
kfill	sing	Water	oist	Ppr	ows	oth (	kecovery Interval	i –	LITHOLOGY	/ DESCRIPTION
Backfill	Casing	Level	Σü		(bl	Dep	Recovery Interval	Š		
				_					Asphalt/Concrete (~30")	
Conc.						1				
8								]		
						2—				
	_		moist	0.0				CL	Silty CLAY; dark gray, low stren	
						3—		4	and density, trace sand ~5%, ve	ery fine to fine
	—					-	+ $-$	-		
						4 —		4		
	—									
			moist	0.0	5	5 —		SM	Silty SAND; well graded, dark g	ray, low strength,
	_				5	6—		1	clay ~20%, gravel ~5%, subrou	
					4	0				
						7—		4		
	_						+ $+$			
						8 —	+ $+$	4		
	—					-	+ $-$	-		
						9 —		4		
			moist	0.0	2	-				
					2	10 —		1		
		$\bigtriangledown$			3	11 —		SW	(Poor recovery, large cot	ble within sampler,
Щ	_								subrounded, pitted)	
Z						12 —		4		
BENTONITE								4		
1						13 —	+ $-$	$\frac{1}{2}$		
	-					-	+ $+$	-		
			wet	0.0	2	14 —		SP	SAND; poorly graded, dark gray	/, fine to medium,
	—				2	15			low strength and toughness, tra	
					2	15 —				
						16—				
	_						+ $+$			
	┨					17 —	+ $+$	┥		
	1 —					-	+ $+$	-		
						18 —	+ $+$	┫		
	-					-	+ $+$	1		
			wet	0.0	5	19 —		CL	CLAY; poorly graded, dark gray	r, trace gravel ~5%
					3	20 —		SW	SAND; well graded, dark gray, t	trace silt ~5%
					3	20		PT	Wood Debris/PEAT; trace sand	
			wet	0.0	1	21 —		SP	SAND; poorly graded, dark gray	
					1	_		PT	PEAT; with wood fibers, dark br	own
	]		wet	0.0	2 2	22		4	(As above)	
	1		WEL	0.0	2					

			PROJEC	T NO:	WA255-3	3523	CLIE	NT:	ConocoPhillips	BORING/WELL NO: DB-05-06			
			LOGGED	BY:	Jamey P	eterson	LOC	ATION:	600 Westlake Ave N, Seattle, WA	PAGE 2 OF 2			
		+0	DRILLER		CDI		DAT	E DRILLE		Мар			
	)el	ld		G METHOD:				E DIAMET		· · · · · · · · · · · · · · · · · · ·			
				IG METHOD:	SS			E DEPTH	I N	2			
E	nvironm	nental						L DIAMET		AVE			
Co	onsultan	ts, Inc.	SLOT SIZ GRAVEL					L DEPTH: ING STIC		A State			
				ELEVATION	١	١			EASTING	COP 25533 Saton Building Hands			
Well C	Completion	Static	re T	b	ion 5")	eet)	Sample	эе					
fill	bu	Water	Moisture Content	pm)	etrat vs/(	h (fe	/ery val	Soil Type	LITHOLOG	<b>GY / DESCRIPTION</b>			
Backfill	Casing	Level	C Mo	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Interval	Soil					
					1		~ -	PT	PEAT; with wood fibers, dark	, brown			
					1	23 —		SP	SAND; poorly graded; dark g				
	—		wet	0.0	4	_			to fine, trace silt ~10% and o				
					2	24 —							
					3	25 —			(As above)				
			wet	0.0	4	25							
					2	26 —		SM	Silty SAND; poorly graded, d	lark gray, low strength			
	_				2	_			and toughness				
			wet	0.0	4 5	27 —		CL	CLAY; dark gray, low strengt	h and plasticity, trace			
	—				7				sand ~5%	in and plasticity, trace			
			wet	0.0	4	28 —							
					6				(As above)				
				9	9	29 —		SM					
			<i>wet</i> 0.0	0.0	4	30 —			and toughness, 60% sand, 40% silt				
BENTONITE	_				5								
Z					6	31 —		4					
H	—												
Ш Ю						32 —		-					
	—												
						33 —							
						34 —							
	_		wet	0.0		_		-					
						35 —		4	(Collected Shelby tube	e sample for analysis)			
	_												
						36 —		1					
						37 —		]					
						38 —							
	1 —		wet	0.0	10	39 —		CL	Silty CLAY; poorly graded, da	ark gray, low strength			
	1 -				10 10	_			and plasticity				
	3				10	40 —			{				
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### APPENDIX B

WASTE DISPOSAL DOCUMENTS

Mar. 30.	2006	12:57PM	ENVIROTECH

1	·No,	5050	P,	2

	NON-HAZARDOUS Waste Manifest		19 EPAID No. 0 0 0 1 5 2	Manifell Doo.	1 · .			
	S. Generator's Name and Malling Address DUNOCOPHILLIPO DD. POHOX 233 4. Generator Photo 255 425 400-9271	RITERCORDER	COP SERVER SOO WESTLAKE A	VENUENORTH				
	4 GHARTTPRIN 125 1402-9271		SEATTLE, WAS					
	5. Transporter 1 Company Name ENVIROTECH SYSTEMS, INC.		<b></b>	A iD Numbor 日・日・イ 之 み 后 L		mebol(el,a		2001 888-9000
	7. Transporter & Campany Nama			A ID Number	B. Tr		Phone	
	8. Designated Fadilly Name and Site Address		10. 以名真門	A ID Number	O, Pat	ality's Phar	(a	
	Graham Road Redycling L Dispo 1820 9 Sraham Rd. Menical Lake, Madona	ieal fácil)	1					800-244-0161
	11. Waste Attipping Name and Description		منحيت المشاعد تمعاد		_	12. Car	ialnats	19. Telat Guantity
lŀ	MATERIAL NOT REGULATED	BY DOT	·····			No,	Tyze	Quantity
	(DWBOIL)					20	1 Nr	0.7.0.00
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71	B. Eposial Handling Instructions and Additional Inform EMERGENCY INFORMATION CO "Shippers Certification par 40CFR 1" described, packaged, transled, and is regulations of the Department of Translation of the sourcement by the astronac"	(2.204 - ) ())도 13 2)고린으러, 275 도가	to cercy that the	above-named and n focusateorizate	Nonshi	lnin og Hka	burnet of the	and the
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### APPENDIX C

### CERTIFIED GEOTECHNICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION



RECEIVED APR 2 5 2006 BY:

April 20, 2006

Eric Larson Delta Environmental Consultants, Inc. 4006 148<sup>th</sup> Avenue NE Redmond, WA 98052

### RE: Project: 1396DEL023 / COP 255353 Westlake ARI Job Nos: JF53 & JF58

Dear Mr. Larson:

Please find enclosed the original chain of custody documentation and the final data report for samples from the project referenced above.

Problems associated with these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALY/TICAL RESOURCES, INC.

Susan Dunnihoo Client Service Manager sue@arilabs.com 206/695-6207

Enclosures

cc: eFile JF53

SD/sdrd



Client: Delta Environmental Consultants

Project No.: JF53, JF58

Client Project: COP 255353 Westlake

### Case Narrative

- 1. The samples were submitted for moisture content, grain size, specific gravity, hydraulic conductivity, and unconsolidated, undrained triaxial compression testing.
- 2. The hydraulic conductivity was measured according to ASTM D5084.
- 3. The unconsolidated, undrained triaxial compression tests were run according to ASTM D2850. For samples DB-01-06-d32.5-33 and DB-01-06-d33-33.5, the strength test was run on the same specimen as was used for hydraulic conductivity. These two samples were very wet and soft when set up for conductivity, and were much firmer following consolidation and draining during the conductivity test. The conductivity test probably consolidated the specimens to field conditions.
- 4. The grain size tests were run according to ASTM D422. The samples with a lot of fines were set up for full sieve and hydrometer testing and those with few fines were run for sieve only. All samples were washed prior to sieving.
- 5. The specific gravity was measured according to ASTM D854.
- 6. The moisture contents were measured according to ASTM D2216.
- 7. The data is provided in summary tables and plots.

Title:

8. There were no other noted anomalies in the samples or methods on this project.

Approved by: **Division Manader** ótechnicàl

Date:

Sample Delivery Group 1

### Hydrometer Analysis

### ASTM D422



### Delta Environmental Consultants COP 255353 Westlake

# Percent Finer (Passing) Than the Indicated Size

1.3	76	15.8	0.0	0.0	1.0	- - -	14 1	6	6.6
3.2	94	25.1	11 7	12.3	204	40	201	11.3	13.9
7	10.8	36.5	15.9	15.4	0 4	50	27.5	14.0	19.8
თ	13.0	41.4	17.8	17.9	10.0	2.5	32.2	17.2	23.1
13	15.7	45.3	20.1	21.6	19.4	7.5	35.5	19.9	26.4
22	19.3	50.2	23.4	32.1	40.3	11.0	42.2	24.8	31.0
32	26.0	52.9	25.8	41.3	60.4	16.5	44.2	30.2	37.0
#200 (75)	33.3	55.3	29.1	63.1	0.66	50.0	48.6	46.1	50.3
#100 (150)	48.0	61.1	38.6	76.7	6.66	86.5	56.6	70.6	69.4
#60 (250)	66.5	69.1	46.7	86.2	6.66	95.1	6.69	84.9	85.3
#40 (425)	88.4	80.0	58.8	92.7	<u> 6</u> .66	97.7	88.1	94.1	95.3
#20 (850)	96.5	86.2	67.6	97.1	100.0	98.2	95.6	97.4	98.3
#10 (2000)	97.9	90.1	74.3	99.1	100.0	98.7	97.4	98.4	99.4
#4 (4750)	98.9	94.5	81.8	99.9	100.0	99.1	98.5	99.2	6.66
3/8"	99.3	100.0	90.0	100.0	100.0	100.0	0.66	100.0	100.0
1/2"	100.0	100.0	93.4	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	100.0	100.0	96.9	100.0	100.0	100.0	100.0	100.0	100.0
÷	100.0	100.0	96.9	100.0	100.0	100.0	100.0	100.0	100.0
2"	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
Sieve Size (microns)	DB-01-06-d10	DB-03-06-5	DB-03-06-10	DB-03-06-25	DB-03-06-34.5-36	DB-03-06-40	DB-04-06-15	DB-01-06-d32.5-33 100.0	DB-01-06-d33-33.5 100.0

Testing performed according to ASTM D421/D422

JF53



## Delta Environmental Consultants COP 255353 Westlake

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## Percent Retained in Each Size Fraction

r	·····	- <u>-</u> -	1	<b>—</b>	1	<del></del>	T	T	<del>.</del>	<b>—</b>
% Clay	<3.2	9.4	25.1	11.7	12.3	5.0	4.0	20.1	11.3	13.9
% Very Fine Silt	7-3.2	1.3	11.4	4.2	3.1	2.9	1.0	7.4	2.7	5.9
% Fine Silt	6-7	2.2	4.9	1.9	2.5	4.3	0.5	4.7	3.2	3.3
% Fine Silt	13-9	2.7	3.8	2.3	3.7	7.2	2.0	3.4	2.7	3.3
% Medium Silt	22-13	3.6	4.9	3.3	10.5	20.9	3.5	6.7	4.8	4.6
% Coarse Silt	32-22	6.7	2.7	2.3	9.2	20.1	5.5	2.0	5.4	5.9
% Very Coarse Silt	75-32	7.3	2.4	3.3	21.8	38.5	33.5	4.4	16.0	13.3
% Fine Sand	425-75	55.2	24.7	29.7	29.5	1.0	47.7	39.5	48.0	45.1
% Medium Sand	2000-425	9.5	10.1	15.5	6.4	0.1	1.0	9.3	4.3	4.1
% Coarse Sand	4750-2000	0.9	4.3	7.5	0.8	0.0	0.4	1.1	0.8	0.4
% Gravel	> 4750	1.1	5.5	18.2	0.1	0.0	0.9	1.5	0.8	0.1
Description	Particle Size (microns)	DB-01-06-d10	DB-03-06-5	DB-03-06-10	DB-03-06-25	DB-03-06-34.5-36	DB-03-06-40	DB-04-06-15	DB-01-06-d32.5-33	DB-01-06-d33-33.5

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#### Sieve Analysis



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## Percent Finer Than Indicated Size, By ASTM D422

#200	18.8	2.9	17.5	24.8
#100	27.6	7.0	23.3	32.0
09#	32.4	12.4	28.3	38.8
#40	37.3	17.3	35.0	47.9
#20	45.1	21.8	41.2	56.5
#10	61.9	29.2	48.3	65.2
#4	93.4	41.9	57.4	73.1
3/8"	100.0	44.1	66.1	80.7
1/2"	100.0	46.5	70.7	83.1
3/4"	100.0	58.6	76.1	86.2
1"	100.0	73.6	76.1	92.3
1.5"	100	100	100	100
Depth (ft)	ΑN	NA	AN	AN
Sample ID	DB-02-06-d20	DB-03-06-20	DB-04-06-5	DB-04-06-10



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### Delta Environmental Consultants COP 255353 Westlake

# Percent Retained in Each Size Fraction, By ASTM D422

<75	18.8	2.2	90	17 5	2	24.8
150-75	8.8	2.5	4	5.8		7.2
250-150	48	2	5.4	20	0.0	6.9
425-250	5.0		6.4	67		9.1
850-425	7.8		4.5	6.2	1	8.5
2000-850	16.8		7.3	7.2		8.7
4750- 2000	31.5		12.8	0.6		7.9
3/8 <del>-#</del> 4	6.6		2.2	8.8		7.7
1/2-3/8"	0.0		2.4	4.6		2.3
3/4-1/2"	0.0		12.1	5.3		3.2
1-3/4"	0.0		14.9	0.0		6.1
1.5-1"	0.0		26.4	23.9		7.7
2-1.5"	0.0		0.0	0.0		0.0
3-2"	0.0		0.0	0.0		0.0
Sieve Size (microns)	DB-02-06-d20		UB-03-06-20	DB-04-06-5		UB-04-06-10

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4.

#### Flex Wall Hydraulic Conductivity

ANALYTICAL RESOURCES INCORPORATED

## Delta Environmental Consultants COP 255353 Westlake

Test Results for Flexible Wall Hydraulic Conductivity Testing

		As R	eceived Sal	As Received Sample Parameters	eters	After T	est Sample	After Test Sample Parameters			
Sample Identification	Depth (ft)	Wet Density (Ibs/ft <sup>3</sup> )	Total Porosity	Saturation	Moisture Content (%)	Wet Density (lbs/ft <sup>3</sup> )	Total Porosity	Saturation	Moisture Content (%)	Gradient (h/l)	Hydraulic Conductivity (cm/s)
DB-01-06-d32.5-33	AN	126.5	0.378	0.871	19.4	133.9	0.342	1.022	19.4	2.08	2.89E-06
DB-01-06-d33-33.5	ΨZ	136.5	0.369	1.281	27.6	141.1	0.298	1.183	18.5	2.38	9.84E-07
DB-03-06-34.5-36	AN	125.7	0.405	0.979	24.5	127.3	0.391	0.984	23.3	0.65	2.06E-03

Notes:

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The samples were tested in accordance with ASTM D-5084.
The tests were performed using tap water for the permeant.
The porosity and the saturation were calculated using measured specific gravity values.

Sample Description and Dimensions

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Sample ID	Depth (ft)	Visual Description	Confining Pressure (psi)	Initial Average Length (cm)	Initial Average Diameter (cm)	Final Average Length (cm)	Final Average Diameter (cm)
DB-01-06-d32.5-33	AN	Gray, clayey silt with fine sand.	5.0	13.56	6.05	12.00	6.24
DB-01-06-d33-33.5	NA	Gray sandy silt with 2"clay lense near middle of sample, .5"75" rock	5.0	12.02	6.05	10.71	6.08
DB-03-06-34.5-36	AA	Gray silty fine sand with stems and roots.	5.0	8.86	7.13	8.74	7.10

#### Unconsolidated, Undrained Triaxial Strength

#### Delta Environmental Consultants COP 255353 Westlake



Sample ID	Depth (ft)	Confining Pressure (psi)	Wet Density (pcf)	Moisture Content (%)	Dry Density (pcf)
DB-01-06-d32.5-33	NA	5.0	133.9	19.4	112.1

Notes to the testing:

- 1. The testing was performed according to ASTM D-2850.
- 2. The sample had a shear failure.



#### Delta Environmental Consultants COP 255353 Westlake





Sample ID	Depth (ft)	Confining Pressure (psi)	Wet Density (pcf)	Moisture Content . (%)	Dry Density (pcf)
DB-03-06-34.5-36	NA	5.0	124.2	25.7	98.9

Notes to the testing:

- 1. The testing was performed according to ASTM D-2850.
- 2. The sample had a shear failure.

#### ANALYTICAL RESOURCES INCORPORATED

#### Delta Environmental Consultants COP 255353 Westlake



Sample ID	Depth (ft)	Confining Pressure (psi)	vver Densitv	Moisture Content (%)	Dry Density (pcf)
DB-01-06-d33-33.5	NA	5.0	141.1	18.5	119.0

Notes to the testing:

- 1. The testing was performed according to ASTM D-2850.
- 2. The sample had a shear failure.

Specific Gravity



Data Release Authorized: Reported: 04/20/06 Date Received: 04/04/06 Page 1 of 1 QC Report No: JF53-Delta Environmental Consultants Project: COP 255353 Westlake 1396DEL023

Client/ ARI ID	Date Sampled	Matrix	Analysis Date	Result
DB-03-06-34.5-36 JF53G 06-5754	04/03/06	Soil	04/20/06 12:00	2.72
DB-01-06-d32.5-33 JF53L 06-5759	04/03/06	Soil	04/20/06 12:00	2.73
DB-01-06-d33-33.5 JF53M 06-5760	04/03/06	Soil	04/20/06 12:00	2.72

Reported in Std Units

#### Moisture Content



Data Release Authorized: Reported: 04/20/06 Date Received: 04/04/06 Page 1 of 1 QC Report No: JF53-Delta Environmental Consultants Project: COP 255353 Westlake 1396DEL023

Client/ ARI ID	Date Sampled	Matrix	Analysis Date	Result
DB-01-06-d10 JF53A 06-5748	04/03/06	Soil	04/20/06 12:00	13.73
DB-02-06-d20 JF53B 06-5749	04/03/06	Soil	04/20/06 12:00	145.2
DB-03-06-5 JF53C 06-5750	04/03/06	Soil	04/20/06 12:00	27.61
DB-03-06-10 JF53D 06-5751	04/03/06	Soil	04/20/06 12:00	14.87
DB-03-06-20 JF53E 06-5752	04/03/06	Soil	04/20/06 12:00	214.5
DB-03-06-25 JF53F 06-5753	04/03/06	Soil	04/20/06 12:00	35.41
DB-03-06-34.5-36 JF53G 06-5754	04/03/06	Soil	04/20/06 12:00	25.67
DB-03-06-40 JF53H 06-5755	04/03/06	Soil	04/20/06 12:00	24.07
DB-04-06-5 JF53I 06-5756	04/03/06	Soil	04/20/06 12:00	17.20
DB-04-06-10 JF53J 06-5757	04/03/06	Soil	04/20/06 12:00	15.16
DB-04-06-15 JF53K 06-5758	04/03/06	Soil	04/20/06 12:00	24.87
DB-01-06-d32.5-33 JF53L 06-5759	04/03/06	Soil	04/20/06 12:00	19.44
DB-01-06-d33-33.5 JF53M 06-5760	04/03/06	Soil	04/20/06 12:00	18.51

Reported in Percent

Sample Delivery Group 2

#### Hydrometer Analysis



## Delta Environmental Consultants COP 255353 WESTLAKE

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## Percent Finer (Passing) Than the Indicated Size

1.3	15.5	8.4
3.2	23.3	12.6
7	32.4	19.6
თ	35.9	27.3
13	40.9	36.4
22	50.7	53.2
32	59.9	67.2
#200 (75)	68.0	82.3
#100 (150)	73.3	87.8
#60 (250.)	78.8	90.8
#40 (425)	86.9	93.9
#20 (850)	92.5	96.3
#10 (2000)	95.3	98.1
#4 #1 (4750) (200	97.1	99.2
3/8"	100.0 97.1	100.0 99.2
Sieve Size (microns)	DB-05-06-d10	DB-05-06-34-36

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Testing performed according to ASTM D421/D422

JF58

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## Delta Environmental Consultants COP 255353 WESTLAKE

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## Percent Retained in Each Size Fraction

Description	% Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Fine Silt	% Very Fine Silt	% Clay
Particle Size (microns)	> 4750	4750-2000 2000-425	2000-425	425-75	75-32	32-22	22-13	13-9	2-6	7-3.2	<3.2
DB-05-06-d10	2.9	1.8	8.4	18.9	8.1	9.2	9.9	4.9	3.5	9.2	23.3
DB-05-06-34-36	0.8	1.1	4.2	11.6	15.2	14.0	16.8	9.1	7.7	7.0	12.6

JF58

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#### Flex Wall Hydraulic Conductivity



## Delta Environmental Consultants COP 255353 Westlake

		ent Hydraulic Conductivity (cm/s)	0 8.75E-07		
		Gradient (h/l)	1.80		
	ers	Moisture Content (%)	20.1		
п	After Test Sample Parameters	Saturation	1.175		
stivity Testing	r Test Sam	Total Porosity	0.319		
draulic Conduc	After	Moisture Wet Density - Content (Ibs/ft <sup>3</sup> ) Pc	139.7		
Test Results for Flexible Wall Hydraulic Conductivity Testing	leters	Moisture Content (%)	22.4		
	mple Param	Saturation	0.940		
	As Received Sample Parameters	t Total Moisture We ity Porosity Porosity (%)	0.395		
	As R	Wet Density (lbs/ft <sup>3</sup> )	126.6		
		Depth (ft) D			
		Sample Identification	DB-05-06-34-36		

Notes:

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The samples were tested in accordance with ASTM D-5084.
The tests were performed using tap water for the permeant.
The porrosity and the saturation were calculated using measured specific gravity values.

Sample Description and Dimensions

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Sample ID	Depth (ft)	Visual Description	Confining Pressure (psi)	Initial Average Length	Initial Average Diameter (cm)	Final Average Length	Final Average Diameter (cm)
DB-05-06-34-36	NA	Light gray clay with silty fine sand layers in top 2" of sample.	5.0	8.34	7.20	7.93	6.96

#### Unconsolidated, Undrained Triaxial Strength



#### Delta Environmental Consultants COP 255353 WESTLAKE



Sample ID	Depth (ft)	Confining Pressure (psi)	Wet Density (pcf)	Moisture Content (%)	Dry Density (pcf)
DB-05-06-34-36	NA	5.0	129.8	20.8	107.4

Notes to the testing:

- 1. The testing was performed according to ASTM D-2850.
- 2. The sample had a bulging failure.

#### Specific Gravity



Data Release Authorized: Reported: 04/20/06 Date Received: 04/05/06 Page 1 of 1 QC Report No: JF58-Delta Environmental Consultants Project: COP 255353 WESTLAKE 1396DEL023

Client/ ARI ID	Date Sampled	Matrix	Analysis Date		Result
DB-05-06-34-36 JF58B 06-5789	04/04/06	Soil	04/20/06	12:00	2.74

Reported in Std Units

Moisture Content



Data Release Authorized: Reported: 04/20/06 Date Received: 04/05/06 Page 1 of 1 QC Report No: JF58-Delta Environmental Consultants Project: COP 255353 WESTLAKE 1396DEL023

Client/ ARI ID	Date Sampled	Matrix	Analysis Date	Result
DB-05-06-d10 JF58A 06-5788	04/04/06	Soil	04/20/06 12:00	26.65
DB-05-06-34-36 JF58B 06-5789	04/04/06	Soil	04/20/06 12:00	20.85

Reported in Percent

Chain of Custody Record & Laboratory Analysis Request

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Analytical Resources, Incorporated Analytical Chemists and Consultants		R	of		Page			lequested:	Turn-around Requested:	iber:	ARI Assigned Number:

meets standards for the industry. The total liability of AFI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by AFI release AFI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or cosigned agreement between ARI and the Client. Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program

retention schedules have been established by work-order or contract. Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate

Chain of Custody Record & Laboratory Analysis Request

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard			1 -		Comments/Special Instructions				DB-01-06-23-33.5	DB-01-06-2325-33	50 - 10 - 12 - BC	03-04-06-10	08-04-06-\$5 4	Sample ID		Client Project Name: へのや ようごうくろ \	Client Contact:	ARI Client Company:	••
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Operating Procedures and the ARI Quality Assurance Program. This program																Notes/Comments	206-695-6200 206-695-6201 (fax)	4611 South 134th Place, Suite 100 Tukwila, WA 98168	Analytical Resources, Incorporated Analytical Chemists and Consultants

meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or cosigned agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Cooler Red	coint Form	AN	
	.eipt roim	RE	
	COO 2553		1
	Project Name: <u>COP 2553</u>		
	Delivered By:		
Tracking NO.:			
	LIMS NO.:		
Preliminary Examination Phase:			
1. Were intact, properly signed and dated custody		VEC	
To the outside of the cooler?	·		NO
2. Were custody papers included with the cooler		~	NO
3. Were custody papers properly filled out (ink, sig		$\smile$	NO
4. Complete custody forms and attach all shipping	documents	UK	NA
Cooler Accepted BY:	$$ ate: <u>1</u> <u>1</u> <u><math>\nabla \mathcal{O}</math></u>	Time:	<u>1279</u>
Log-IN Phase:			
5. Was a temperature blank include in the cooler?		YES	NO
6. Record Cooler Temperature		Ant	<u>3_</u> ℃
7. What kind of packing material was used?			
8. Was sufficient ice used (if appropriate)?		YES	(NO)
9. Were all bottles sealed in separate plastic bags?		YES	NO
10. Did all bottles arrive in good condition (unbroke	n)?	(YES)	NO
11. Were all bottle labels complete and legible?		(YES)	NO
12. Did all bottle labels and tags agree with custody	papers?	YES	NO
13. Were all bottles used correct for the requested a	nalyses?	YES	NO
14. Do any of the analyses (bottles) require preserva	ative?	$\bigcirc$	
(If so, Preservation checklist must be attached) .		YES	NO
15. Were all VOA vials free of air bubbles?		YEŞ	
16. Was sufficient amount of sample sent in each bo	ottle?	YES	NO
17. Notify Project Manager of any discrepancies or o	concerns	OR)	NA
14		<u> </u>	
Cooler Opened By:	Date: <u>4.4.06</u> T	ime_ <u>1</u> 2	-15
Explain any discrepancies or negative responses:			

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0016F

**Cooler Receipt Form** 

Revision7(1/10/01)

Chain of Custody Record & Laboratory Analysis Request

uality Assurance Program This program	edures and the ARI Or	perating Proc	ondard Or	ina ARI St	oav followi	nethodolc	noronriate r	lance with a	es in accord	ested servic	m all requ	Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program
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signed agreement between ARI and the Client. meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-

retention schedules have been established by work-order or contract. Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate

	Cooler R	eceipt Form	
ARI Client:	Dolta	Project Name:	INCORPORATED
Tracking NO		Date: AS	06
ARI Joh No	JF58	Lims NO .	-¥¥-
	Examination Phase:		·
	/ere intact, properly signed and dated cus	tody seals attached	
	o the outside of the cooler?		YES NO
	ere custody papers included with the cool		8
	ere custody papers properly filled out (ink		
	end custody forms and attach all ship	-	
	introd PV:	Data A, S+ Ø	
Cooler Acce	Plea BT.	Date: <u>4:5*Ø</u>	<u>2</u> 11me. <u>12 2</u> 0
Log-IN Pha			
5. Wa	as a temperature blank include in the cool	er?	YES (NO)
6. Re	cord Cooler Temperature		Aup .c
7. Wh	at kind of packing material was used?		None
8. Wa	s sufficient ice used (if appropriate)?		YES NO
9. We	re all bottles sealed in separate plastic ba	gs?	YES NO
10. Dic	all bottles arrive in good condition (unbr	oken)?	YES NO
11. We	re all bottle labels complete and legible?		WES NO
12. Dic	all bottle labels and tags agree with cust	ody papers?	YES NO
13. We	re all bottles used correct for the requeste	ed analyses?	YES NO
14. Do	any of the analyses (bottles) require pres	ervative?	(
(If	so, Preservation checklist must be attache	ed)	YES NO
15. W	ere all VOA vials free of air bubbles?		YES NO 110
16. Wa	s sufficient amount of sample sent in eacl	h bottle?	(YES NO
17. No	otify Project Manager of any discrepancies	or concerns	OK NA
• (C. C.)	<u>PA</u>		$\sim$
Cooler Opene Explain any di	d By: screpancies or negative responses:	Date: <u> </u>	
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