

Appendix H: Main Engines Lubricant Analysis Results

Company: WSF ISSAQUAH 2901 3RD AVE SUITE 500 SEATTLE WA 98121-3104	Comp. Descr.: #1 MAIN ENGINE Make: GE Model: 7FDM-12	Fuel Type: BIODIESEL-B5 Oil Brand: CHEVRON Oil Type: MREO DELO477CFO	Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)
Customer No: 20386655	Equip. Make:	Fluid Grade: 40	End User:
Unit No: ISSAQUAH	Equip. Model:	Ser.No: 100464466	End Loc:

Lab No	Date Taken	Time on Oil on_Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINIUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
84284	10/31/08	3263	5	0	0	0	0	2	0	0	0	0	5	25	5444	0	9	4	123	2
Normal	11/06/08	33292																		
75378	10/01/08	2667	6	0	0	0	0	3	0	0	0	0	5	27	6116	0	9	4	132	2
Normal	10/08/08	32696																		
64860	09/01/08	2089	6	0	0	0	0	3	0	0	0	0	5	26	5751	0	10	4	128	2
Normal	09/04/08	32118																		
57598	08/01/08	1488	5	0	0	0	0	2	0	0	0	0	5	23	5361	0	4	4	111	2
Normal	08/07/08	31517																		

Lab No	CONTAMINATION								PHYSICAL PROPERTIES					
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration
84284	2	2	5	0	0	NO	<1	0.1	15.52	143.62	12	9.7	2.6	19
75378	3	2	5	0	0	NO	<1	0.2	15.55	141.70	11	10.5	3.6	18
64860	3	3	5	0	0	NO	<1	0.3	15.49	142.24	11	10.0	3.3	18
57598	2	3	5	0	0	NO	<1	0.2	14.66	141.65	1	12.2	3.0	18

Lab No	ADDITIONAL			
	LMOA	OILADD	SAE	VI
84284	2.17%	134	40	112
75378	1.3%	145	40	113
64860	0.99%	135	40	111
57598	0.92%	68	40	102

Lab No	Brand	Product	Grade	Recommendation
84284	CHEVRON	MREO DELO477CFO	40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
75378	CHEVRON	MREO DELO477CFO	40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
64860	CHEVRON	MREO DELO477CFO	40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
57598	CHEVRON	MREO DELO477CFO	40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.

* Fuel results reported as "<" may have been determined by inference from viscosity measurements and may have been confirmed by instrument specific analysis as required.

Appendix H: Main Engines Lubricant Analysis Results

Company: WSF ISSAQUAH 2901 3RD AVE SUITE 500 SEATTLE WA 98121-3104	Comp. Descr.: #1 MAIN ENGINE Make: GE Model: 7FDM-12	Fuel Type: BIODIESEL-B5 Oil Brand: CHEVRON Oil Type: MREO DELO477CFO	Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)
Customer No: 20386655 Unit No: ISSAQUAH	Equip. Make: Equip. Model:	Fluid Grade: 40 Ser.No: 100464466	End User: End Loc:

Lab No	Date Taken	Time on Oil on Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINIUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
57598	08/01/08	1488	5	0	0	0	0	2	0	0	0	0	5	23	5361	0	4	4	111	2
Normal	08/07/08	31517																		
48901	07/01/08	897	4	0	0	0	0	2	0	0	0	0	6	21	5689	0	0	3	103	2
Normal	07/08/08	30347																		
40419	05/31/08		7	0	0	0	0	2	0	0	0	0	5	23	4845	0	0	3	124	2
Normal	06/05/08																			
32497	04/30/08		7	0	0	0	0	3	0	0	0	0	6	21	5919	0	0	5	114	1
Abnormal	05/05/08	29743																		

Lab No	CONTAMINATION								PHYSICAL PROPERTIES					
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration
57598	2	3	5	0	0	NO	<1	0.2	14.66	141.65	1	12.2	3.0	18
48901	2	3	6	0	0	NO	<1	0.1	15.59	139.06	8	12.4	1.2	15
40419	2	2	5	0	0	NO	<1	0.1	14.70	132.93	4	14.2	1.8	9
32497	3	3	6	0	0	NO	<1	0.	15.59	156.13	14	9.9	5.7	22

Lab No	LMOA				ADDITIONAL OILADD				SAE				VI	
	57598					68				40				102
48901					158				40				115	
40419					N/A				40				111	
32497					N/A				40				101	

Lab No	Brand	Product	Grade	Recommendation
57598	CHEVRON	MREO DELO477CFO	40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
48901	CHEVRON	MREO DELO477CFO	40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
40419	CHEVRON	MREO DELO477CFO	40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
32497	CHEVRON	MREO DELO477CFO	40	MODERATE LEVEL OF NITRATION PRODUCTS DETECTED. NO RECOMMENDED ACTION AT THIS TIME. RESAMPLE AT NORMAL INTERVALS.

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Appendix H: Main Engines Lubricant Analysis Results

Company: WSF ISSAQUAH 2901 3RD AVE SUITE 500 SEATTLE, WA 98121-3104 USA	Comp. Descr.: #2 MAIN ENGINE Make: GE Model: 7FDM-12	Fuel Type: BIODIESEL-B5 Oil Brand: CHEVRON Oil Type: MREO DELO477CFO	Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)
Customer No: 20386655	Equip. Make:	Fluid Grade: 20W40	End User:
Unit No: ISSAQUAH	Equip. Model:	Ser.No: 100015244 464467	End Loc:

Lab No	Date Taken	Time on Oil on Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINIUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
64861	09/01/08	1990	5	0	0	0	0	3	0	0	0	0	6	28	5987	0	1	5	140	3
Normal	09/04/08	32117																		
57599	08/01/08	1389	5	0	0	0	0	2	0	0	0	0	6	25	5469	0	1	5	106	2
Normal	08/07/08	31516																		
48902	07/01/08	796	4	0	0	0	0	2	0	0	0	0	6	22	5816	0	0	5	97	2
Normal	07/08/08	30344																		
40420	05/31/08		3	0	0	0	0	2	0	0	0	0	5	23	4773	0	0	4	112	2
Normal	06/05/08																			

Lab No	CONTAMINATION								PHYSICAL PROPERTIES					
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration
64861	3	3	6	0	0	NO	<1	0.3	15.99	149.02	12	10.1	3.4	18
57599	2	2	6	0	0	NO	<1	0.2	15.52	147.49	12	12.0	3.4	18
48902	2	2	6	0	0	NO	<1	0.2	15.25	144.80	10	12.0	1.3	17
40420	2	2	5	0	0	NO	<1	0.1	14.62	108.06	5	14.4	2.0	9

Lab No	LMOA				ADDITIONAL OILADD				SAE		VI	
	64861					201				40		
57599					105				40			109
48902					204				40			107
40420					N/A				40			140

Lab No	Brand	Product	Grade	Recommendation
64861	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
57599	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
48902	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
40420	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.

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Company: WSF ISSAQUAH 2901 3RD AVE SUITE 500 SEATTLE, WA 98121-3104 USA	Comp. Descr.: #2 MAIN ENGINE Make: GE Model: 7FDM-12	Fuel Type: BIODIESEL-B5 Oil Brand: CHEVRON Oil Type: MREO DELO477CFO	Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)
Customer No: 20386655	Equip. Make:	Fluid Grade: 20W40	End User:
Unit No: ISSAQUAH	Equip. Model:	Ser.No: 100015244 464467	End Loc:

Lab No	Date Taken	Time on Oil on_Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINIUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
84285	10/31/08	2662	5	0	0	0	0	2	0	0	0	0	5	25	5398	0	6	3	123	2
Normal	11/06/08	33291																		
75379	10/01/08	2066	5	0	0	0	0	3	0	0	0	0	5	27	5933	0	5	5	123	3
Normal	10/08/08	32695																		
64861	09/01/08	1990	5	0	0	0	0	3	0	0	0	0	6	28	5987	0	1	5	140	3
Normal	09/04/08	32117																		
57599	08/01/08	1389	5	0	0	0	0	2	0	0	0	0	6	25	5469	0	1	5	106	2
Normal	08/07/08	31516																		

Lab No	CONTAMINATION								PHYSICAL PROPERTIES					
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration
84285	2	2	5	0	0	NO	<1	0.2	15.14	150.08	13	9.7	2.7	19
75379	3	2	5	0	0	NO	<1	0.2	15.72	148.88	12	10.6	3.8	18
64861	3	3	6	0	0	NO	<1	0.3	15.99	149.02	12	10.1	3.4	18
57599	2	2	6	0	0	NO	<1	0.2	15.52	147.49	12	12.0	3.4	18

Lab No	LMOA				OILADD				SAE		VI	
	84285									40		
75379									40			110
64861									40			111
57599									40			109

Lab No	Brand	Product	Grade	Recommendation
84285	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
75379	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
64861	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
57599	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.

* Fuel results reported as "<" may have been determined by inference from viscosity measurements and may have been confirmed by instrument specific analysis as requir

Appendix K

M. V. Tillikum Main Engines Lubricant Analysis Results

Company: WSF TILLIKUM 2901 3RD AVE SUITE 500 SEATTLE WA 98121-3104	Comp. Descr.: #1 MAIN ENGINE Make: EMD Model: 12-645F7B	Fuel Type: Diesel Oil Brand: CHEVRON Oil Type: MREO DELO477CFO	Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)
Customer No: 20386661	Equip. Make:	Fluid Grade: 20W40	End User:

Lab No Condition	Date Taken Tested	Time on Oil on_Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
84289 Abnormal	11/01/08 11/06/08	3302 3299	12	0	10	31 A	0	3	0	0	0	0	5	33	6663	0	8	3	160	3
75370 Normal	10/01/08 10/08/08	2775 2772	11	0	8	24	0	2	0	0	0	0	5	29	6071	0	0	3	128	3
64867 Normal	09/01/08 09/04/08	2256	11	0	8	21	0	3	0	0	0	0	5	28	5700	0	2	3	120	3
57594 Normal	08/01/08 08/07/08	1698 1695	12	0	8	20	0	2	0	0	0	0	4	27	5875	0	0	3	124	2

Lab No	CONTAMINATION								PHYSICAL PROPERTIES					
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration
84289	3	4	5	0	0	NO	<1	0.1	15.10	141.95	8	10.6	2.8	16
75370	2	2	5	0	0	NO	<1	0.1	15.76	145.42	8	11.2	2.9	16
64867	3	3	5	0	0	NO	<1	0.2	18.14	141.91	8	10.3	3.0	16
57594	2	3	4	0	0	NO	<1	0.1	15.55	141.65	8	12.8	2.8	16

Lab No	ADDITIONAL			
	LMOA	OILADD	SAE	VI
84289	1.41%	1795	40	108
75370	0.66%	1543	40	112
64867	1.0%	245	50	143
57594	0.95%	337	40	113

Lab No	Brand	Product	Grade	Recommendation
84289	CHEVRON	MREO DELO477CFO	20W40	COPPER LEVEL HAS INCREASED SINCE LAST SAMPLE. RECOMMEND RESAMPLE TO MONITOR/ESTABLISH WEAR TREND.
75370	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
64867	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
57594	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.

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Appendix H: Main Engines Lubricant Analysis Results

Company: WSF TILLIKUM 2901 3RD AVE SUITE 500 SEATTLE WA 98121-3104			Comp. Descr.: #1 MAIN ENGINE			Fuel Type: Diesel			Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562											
Customer No: 20386661			Make: EMD			Oil Brand: CHEVRON			Oil Type: MREO DELO477CFO											
Unit No: TILLIKUM			Model: 12-645F7B			Fluid Grade: 20W40			End User:											
			Equip. Make:			Ser.No: 100015154			End Loc:											
			Equip. Model:																	
Lab No Condition	Date Taken Tested	Time on Oil on Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINIUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
57594	08/01/08	1698	12	0	8	20	0	2	0	0	0	0	4	27	5875	0	0	3	124	2
Normal	08/07/08	1695																		
48897	07/01/08	1159	10	0	7	17	2	2	0	0	0	0	5	24	5814	0	0	4	105	2
Normal	07/08/08	1162																		
40424	06/01/08	639	12	0	8	14	0	2	0	0	0	0	5	27	4905	0	0	8	117	3
Normal	06/05/08	639																		
27012	04/01/08	47	8	0	8	16	0	2	0	0	0	0	6	25	5511	0	0	6	107	2
Normal	04/16/08	47																		
Lab No	CONTAMINATION									PHYSICAL PROPERTIES										
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot		Visc100	Visc40	Oxidation	TBN	TAN	Nitration					
57594	2	3	4	0	0	NO	<1	0.1		15.55	141.65	8	12.8	2.8	16					
48897	2	4	5	0	0	NO	<1	0.1		15.49	141.94	8	12.0	3.2	16					
40424	2	6	5	0	0	NO	<1	0.1		14.33	137.10	7	13.4	2.7	13					
27012	2	4	6	0	0	NO	<1	0.1		14.82	135.90	4	13.5	1.5	8					
Lab No	LMOA				ADDITIONAL OILADD				SAE			VI								
57594	0.95%				337				40			113								
48897	1.15%				603				40			111								
40424	0.58%				328				40			103								
27012	0.21%				0				40			111								
Lab No	Brand	Product	Grade	Recommendation																
57594	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																
48897	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																
40424	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																
27012	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																

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Appendix H: Main Engines Lubricant Analysis Results

Company: WSF TILLIKUM 2901 3RD AVE SUITE 500 SEATTLE WA 98121-3104	Comp. Descr.: #2 MAIN ENGINE Make: EMD Model: 12-645F7B	Fuel Type: Diesel Oil Brand: CHEVRON Oil Type: MREO DELO477CFO	Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)
Customer No: 20386661	Equip. Make:	Fluid Grade: 20W40	End User:

Lab No Condition	Date Taken Tested	Time on Oil on_Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINIUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
84290 Abnormal	11/01/08 11/06/08	3303 3300	13	0	11	33 A	2	3	0	0	0	0	5	30	6122	0	2	3	137	3
75371 Normal	10/01/08 10/08/08	2775 2772	13	0	10	27	0	2	0	0	0	0	5	29	5641	0	1	3	121	3
64868 Normal	09/01/08 09/04/08	2256	14	0	9	26	0	2	0	0	0	0	4	28	5891	0	0	3	120	3
57595 Normal	08/01/08 08/07/08	1698 1695	14	0	9	23	0	2	0	0	0	0	5	27	5997	0	0	3	116	2

Lab No	CONTAMINATION								PHYSICAL PROPERTIES					
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration
84290	3	4	5	0	0	NO	<1	0.1	14.88	141.68	8	10.9	2.7	15
75371	2	2	5	0	0	NO	<1	0.1	15.40	144.65	8	11.3	2.6	15
64868	2	4	4	0	0	NO	<1	0.2	15.47	143.19	8	11.1	2.7	15
57595	2	4	5	0	0	NO	<1	0.1	15.54	144.81	8	12.8	3.2	15

Lab No	ADDITIONAL			
	LMOA	OILADD	SAE	VI
84290	1.22%	1613	40	105
75371	0.60%	1363	40	109
64868	0.84%	298	40	110
57595	0.90%	305	40	111

Lab No	Brand	Product	Grade	Recommendation
84290	CHEVRON	MREO DELO477CFO	20W40	COPPER LEVEL HAS INCREASED SINCE LAST SAMPLE. RECOMMEND RESAMPLE TO MONITOR/ESTABLISH WEAR TREND.
75371	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
64868	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
57595	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.

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Company: WSF TILLIKUM 2901 3RD AVE SUITE 500 SEATTLE WA 98121-3104	Comp. Descr.: #2 MAIN ENGINE Make: EMD Model: 12-645F7B	Fuel Type: Diesel Oil Brand: CHEVRON Oil Type: MREO DELO477CFO	Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)
Customer No: 20386661	Equip. Make:	Fluid Grade: 20W40	End User:

Lab No Condition	Date Taken Tested	Time on Oil on_Unit	WEAR METALS (ppm)									ADDITIVES										
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON		
57595	08/01/08	1698	14	0	9	23	0	2	0	0	0	0	0	5	27	5997	0	0	3	116	2	
Normal	08/07/08	1695																				
48898	07/01/08	1159	14	0	8	22	0	2	0	0	0	0	5	25	6475	0	0	5	115	2		
Normal	07/08/08	1162																				
40425	06/01/08	640	13	0	9	15	0	2	0	0	0	0	4	25	4730	0	0	4	112	2		
Normal	06/05/08	640																				
27013	04/01/08	47	9	0	8	15	0	2	0	0	0	0	7	25	5618	0	0	6	115	2		
Normal	04/16/08	47																				

Lab No	CONTAMINATION								PHYSICAL PROPERTIES					
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration
57595	2	4	5	0	0	NO	<1	0.1	15.54	144.81	8	12.8	3.2	15
48898	2	4	5	0	0	NO	<1	0.1	15.27	140.67	9	12.3	3.0	17
40425	2	3	4	0	0	NO	<1	0.1	15.20	139.40	7	13.3	2.7	13
27013	2	5	7	0	0	NO	<1	0.1	15.38	134.97	4	13.9	1.4	7

Lab No	ADDITIONAL			
	LMOA	OILADD	SAE	VI
57595	0.90%	305	40	111
48898	0.91%	502	40	110
40425	0.49%	250	40	111
27013	0.39%	0	40	117

Lab No	Brand	Product	Grade	Recommendation
57595	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
48898	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
40425	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
27013	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.

* Fuel results reported as "<" may have been determined by inference from viscosity measurements and may have been confirmed by instrument specific analysis as required.

Appendix H: Main Engines Lubricant Analysis Results

Company: WSF KLAHOWYA 2901 3RD AVE SUITE 500 SEATTLE WA 98121-3104	Comp. Descr.: #1 MAIN ENGINE Make: EMD Model: 12-645F7B	Fuel Type: Diesel Oil Brand: CHEVRON Oil Type: MREO DELO477CFO	Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)
Customer No: 20386660 Unit No: KLAHOWYA	Equip. Make: Equip. Model:	Fluid Grade: 20W40 Ser.No: 100221312	End User: End Loc:

Lab No Condition	Date Taken Tested	Time on Oil on_Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
85698 Normal	10/31/08 11/10/08	3506 3506	16	3	14	27	4	2	0	0	0	0	6	26	5790	0	0	7	115	7
75374 Normal	10/01/08 10/08/08	2957 2957	18	3	13	25	4	2	0	0	0	0	5	28	5652	0	0	6	114	7
64858 Normal	09/01/08 09/04/08	2346 2346	15	2	9	21	0	2	0	0	0	0	5	26	5430	0	2	5	121	6
57592 Normal	08/01/08 08/07/08	1771 1771	14	2	8	19	0	2	0	0	0	0	6	25	5780	0	0	5	115	5

Lab No	CONTAMINATION								PHYSICAL PROPERTIES					
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration
85698	2	1	6	0	0	NO	<1	0.1	14.34	136.40	11	10.2	3.6	18
75374	2	2	5	0	0	NO	<1	0.1	14.69	138.84	9	9.7	5.2	17
64858	2	3	5	0	0	NO	<1	0.1	15.02	199.82	9	9.7	3.3	16
57592	2	2	6	0	0	NO	<1	0.1	14.50	127.86	8	11.8	4.0	16

Lab No	ADDITIONAL			
	LMOA	OILADD	SAE	VI
85698	0.92%	584	40	104
75374	0.66%	511	40	105
64858	0.61%	442	40	67
57592	0.82%	356	40	114

Lab No	Brand	Product	Grade	Recommendation
85698	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
75374	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
64858	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
57592	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.

as required

Appendix H: Main Engines Lubricant Analysis Results

Company: WSF KLAHOWYA 2901 3RD AVE SUITE 500 SEATTLE WA 98121-3104		Comp. Descr.: #1 MAIN ENGINE		Fuel Type: Diesel		Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562	
Customer No: 20386660		Make: EMD		Oil Brand: CHEVRON		End User:	
Unit No: KLAHOWYA		Model: 12-645F7B		Oil Type: MREO DELO477CFO		End Loc:	
Equip. Make:		Equip. Model:		Fluid Grade: 20W40		Ser.No: 100221312	

Lab No	Date Taken	Time on Oil on Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINIUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
57592	08/01/08	1771	14	2	8	19	0	2	0	0	0	0	6	25	5780	0	0	5	115	5
Normal	08/07/08	1771																		
48893	06/30/08	1079	11	1	5	15	1	2	0	0	0	0	7	21	5406	0	0	6	95	4
Normal	07/08/08	1350																		
42457	06/08/08	772	11	0	5	12	0	2	0	0	0	0	7	24	5160	0	0	5	112	4
Normal	06/11/08	772																		
32503	05/01/08	271	5	0	2	5	0	2	0	0	0	0	6	22	5534	0	0	6	116	2
Normal	05/05/08	271																		

Lab No	CONTAMINATION								PHYSICAL PROPERTIES					
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration
57592	2	2	6	0	0	NO	<1	0.1	14.50	127.86	8	11.8	4.0	16
48893	2	3	7	0	0	NO	<1	0.1	14.79	135.59	7	11.8	2.9	15
42457	2	3	7	0	0	NO	<1	0.1	14.65	127.38	6	12.8	2.3	12
32503	2	2	6	0	0	NO	<1	0.1	14.28	131.59	3	14.1	2.6	5

Lab No	LMOA				ADDITIONAL OILADD				SAE				VI			
	57592	0.82%				356				40				114		
48893	0.95%				102				40				109			
42457	0.49%				151				40				116			
32503	0.12				%				40				106			

Lab No	Brand	Product	Grade	Recommendation
57592	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
48893	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
42457	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.
32503	CHEVRON	MREO DELO477CFO	40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.

* Fuel results reported as "<" may have been determined by inference from viscosity measurements and may have been confirmed by instrument specific analysis as required.

Appendix H: Main Engines Lubricant Analysis Results

Company: WSF KLHOWYA 2901 3RD AVE SUITE 500 SEATTLE, WA 98121-3104 USA			Comp. Descr.: #2 MAIN ENGINE			Fuel Type: Diesel			Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)											
Customer No: 20386660			Make: EMD			Oil Brand: CHEVRON														
Unit No: KLHOWYA			Model: 12-645F7B			Oil Type: MREO DELO477CFO														
			Equip. Make:			Fluid Grade: 20W40			End User:											
			Equip. Model:			Ser.No: 100221313			End Loc:											
Lab No	Date Taken	Time on Oil on Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINIUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
85699	10/31/08	3510	17	3	15	32	7	2	0	0	0	0	8	24	5517	0	0	6	110	7
Normal	11/10/08	3510																		
75375	10/01/08	2962	17	2	13	30	7	3	0	0	0	0	7	28	5905	0	2	6	126	7
Normal	10/08/08	2962																		
64859	09/01/08	2368	17	1	11	26	4	3	0	0	0	0	7	27	5958	0	6	6	135	7
Normal	09/04/08	2368																		
57593	08/01/08	1802	16	0	10	23	5	2	0	0	0	0	9	25	5564	0	0	7	117	5
Normal	08/07/08	1802																		
Lab No	CONTAMINATION								PHYSICAL PROPERTIES											
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration						
85699	2	3	8	0	0	NO	<1	0.1	14.70	138.74	10	10.5	3.5	16						
75375	3	2	7	0	0	NO	<1	0.2	15.10	141.03	8	10.1	2.7	15						
64859	3	4	7	0	0	NO	<1	0.1	15.01	140.73	8	9.8	3.0	15						
57593	2	4	9	0	0	NO	<1	0.1	15.15	138.15	8	11.9	3.6	15						
Lab No	LMOA				OILADD				SAE		VI									
85699	0.77%				567				40		106									
75375	0.59%				507				40		109									
64859	0.64%				435				40		108									
57593	0.69%				317				40		112									
Lab No	Brand	Product	Grade	Recommendation																
85699	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																
75375	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																
64859	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																
57593	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																

* Fuel results reported as "<" may have been determined by inference from viscosity measurements and may have been confirmed by instrument specific analysis as required.

Appendix H: Main Engines Lubricant Analysis Results

Company: WSF KLHOWYA 2901 3RD AVE SUITE 500 SEATTLE, WA 98121-3104 USA			Comp. Descr.: #2 MAIN ENGINE			Fuel Type: Diesel			Lab: 4943 NW FRONT AVENUE PORTLAND, OR 97210 (800-770-4128, FAX (503)286-1562)											
Customer No: 20386660			Make: EMD			Oil Brand: CHEVRON														
Unit No: KLHOWYA			Model: 12-645F7B			Oil Type: MREO DELO477CFO														
			Equip. Make:			Fluid Grade: 20W40			End User:											
			Equip. Model:			Ser.No: 100221313			End Loc:											
Lab No Condition	Date Taken Tested	Time on Oil on_Unit	WEAR METALS (ppm)										ADDITIVES							
			IRON	CHROMIUM	LEAD	COPPER	TIN	ALUMINIUM	NICKEL	SILVER	TITANIUM	VANADIUM	SODIUM	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC	MOLYBDENUM	BORON
57593 Normal	08/01/08 08/07/08	1802 1802	16	0	10	23	5	2	0	0	0	0	9	25	5564	0	0	7	117	5
48894 Normal	06/30/08 07/08/08	1080 1350	12	1	8	20	7	2	0	0	0	0	11	22	5715	0	0	8	102	4
42458 Normal	06/08/08 06/11/08	908 908	11	0	8	16	3	2	0	0	0	0	10	24	5026	0	0	7	109	4
32504 Normal	05/01/08 05/05/08	274 274	6	0	4	10	4	3	0	0	0	0	8	20	6074	0	0	8	114	3
Lab No	CONTAMINATION								PHYSICAL PROPERTIES											
	Aluminum	Silicon	Sodium	Potassium	Water	Coolant	Fuel *	Solids/Soot	Visc100	Visc40	Oxidation	TBN	TAN	Nitration						
57593	2	4	9	0	0	NO	<1	0.1	15.15	138.15	8	11.9	3.6	15						
48894	2	3	11	0	0	NO	<1	0.1	14.61	135.98	7	12.1	2.6	13						
42458	2	3	10	0	0	NO	<1	0.1	14.10	135.44	6	12.8	2.1	11						
32504	3	1	8	0	0	NO	<1	0.1	13.46	132.78	4	15.2	2.9	7						
Lab No	LMOA				OILADD				SAE		VI									
57593	0.69%				317				40		112									
48894	0.74%				123				40		108									
42458	0.48%				114				40		101									
32504	0.04%				34				40		96									
Lab No	Brand	Product	Grade	Recommendation																
57593	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																
48894	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																
42458	CHEVRON	MREO DELO477CFO	20W40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																
32504	CHEVRON	MREO DELO477CFO	40	RESULTS OF TEST PERFORMED INDICATE NO CORRECTIVE ACTION REQUIRED.																

* Fuel results reported as "<" may have been determined by inference from viscosity measurements and may have been confirmed by instrument specific analysis as required.