Refinery Deviation Report
Plant: DR.EAST.CBO.CU
Current Shift
All Defined CPVs

Start: 2012-Aug-15 05:00
End: 2012-Aug-15 13:39
Duration: 8h40m
Reported on: 2012-Aug-15 13:39
Count Min: 0
Duration Min: 0%

SAFETY

DR.EAST.CBO.CU	State	Count	Total Duration	Pct	Current Value	Lo Lim	Hi Lim	While Active Min	While Active Max	While Active Avg	
4CU.F-1100A											
11HS111 - F1100A MIN FIRE B/P	High	1	6h51m	79%	1		0.1	1	1	1	-
11XA002D - F1100A CHOPPERS BYPASSD		0	0m	0%	0		0.1				-
4CU.F-1100B											
11HS211 - F1100B MIN FIRE B/P	High	1	6h51m	79%	1		0.1	1	1	1	-
11XA012D - F1100B CHOPPERS BYPASSD		0	0m	0%	0		0.1				-
4CU.F-1160											
11HS622 - F1160 MIN FIRE B/P	High	1	6h51m	79%	1		0.1	1	1	1	-
11XA062D - F1160 CHOPPERS BYPASSED		0	0m	0%	0		0.1				-

RELIABILITY

DR.EAST.CBO.CU	State	Count	Total Duration	Pct	Current Value	Lo Lim	Hi Lim	While Active Min	While Active Max	While Active Avg	
4CU.C-1100											
11FI004 - DRE4CUC-1100 ATMOS O/F		0	0m	0%							VOLT
11PC005 - DRE4CUC-1100 OVHDPRESS		0	0m	0%	0	15	30.5				
11TI037 - DRE4CUC-1100 5S/C DRWTMP		0	0m	0%							VOLT
11TI039 - DRE4CUC-1100 3S/C DRWTMP	Low	1	6h51m	79%	64.31	525	570	60.086	455.853	88.43	°F
11TI041 - DRE4CUC-1100 2S/C DRWTMP	Low	1	6h51m	79%	0	415	470	369.168	369.168	369.168	
11TI042 - DRE4CUC-1100 1S/C DRWTMP	Low	1	6h51m	79%	0	325	370	289.989	289.989	289.989	
11TI402 - DRE4CUC-1100 4S/C DRWTMP	Low	1	6h51m	79%	58.763	600	650	54.48	501.323	61.811	°F
4CU.C-1160											
11FC089 - DRE4CUC-1160 W/O RATE	Low	1	6h51m	79%	3.006	17.5		-1.25	16.353	1.44	MBPD
11LC061 - DRE4CUC-1160 BTM LVL	Low	1	6m	1%	83.845	30	70	83.125	85.17	84.37	%
11LC061 - DRE4CUC-1160 BTM LVL	High	2	7h40m	88%	83.845	30	70	-5	86.599	80.239	%
11PI609 - DRE4CUC-1160 W/O HDR		0	0m	0%							
11TC069 - DRE4CUC-1160 O/H TEMP		0	0m	0%	81.137		385				°F
11TC646 - P-1165 SUCT VAC BTMS		0	0m	0%	134.186		668				°F
11TI651 - DRE4CUC-11607 S/C D TMP	Low	1	6h51m	79%	68.832	495	600	60.456	472.549	94.794	°F
11TI662 - DRE4CUC-1160 TOP RMS HRN		0	0m	0%	131.42		350				°F
11TI671 - DRE4CUC-11606 S/C D TMP	Low	1	6h51m	79%	69.359	300	400	62.367	288.818	93.434	°F
11TI816 - DRE4CUC-11608 S/C D TMP	Low	1	6h51m	79%	76.471	585	660	60.275	538.696	127.78	°F
4CU.E-1103											
11MN0088.IT E-1103 TEMP PIPE PRES		0	0m	0%	0		150				PSIG
4CU.E-1115											
11FC115 - DRE4CUE-1115 ABCR FLO	Low	1	6h51m	79%	-0.203	15		-6.476	8.982	-0.548	MBPD
4CU.E-1160											
11QF_E1160.PH - DRE4CUE-1160 H2O PH	Low	1	6h51m	79%	0	7	9	0	0	0	PH
4CU.F-1100A											
11F1100ADT.VTAG - F1100A XFR TMP DEVIATION		0	0m	0%	3.897		8				°F
11F1100AOV-P2.VTAG - DRE4CUF-1100A OIL VEL P2	Low	1	6h51m	79%	0.012	4		-0.476	3.236	0.04	FT/S
11F1100AOV-P3.VTAG - DRE4CUF-1100A OIL VEL P3	Low	1	6h51m	79%	0.004	4		-0.015	1.234	0.016	FT/S
11F1100AOV-P4.VTAG - DRE4CUF-1100A OIL VEL P4	Low	1	6h51m	79%	0.031	4		-0.009	0.777	0.034	FT/S
11F1100AOV-P5.VTAG - DRE4CUF-1100A OIL VEL P5	Low	1	6h51m	79%	-0.01	4		-0.041	0.034	-0.008	FT/S
11F1100AOV-P6.VTAG - DRE4CUF-1100A OIL VEL P6	Low	1	6h51m	79%	-0.003	4		-0.476	2.139	0.177	FT/S
11F1100AOV-P7.VTAG - DRE4CUF-1100A OIL VEL P7	Low	1	6h51m	79%	-0.003	4		-0.035	0.342	-0.004	FT/S
11F1100AOV-P8.VTAG - DRE4CUF-1100A OIL VEL P8	Low	1	6h51m	79%	0.009	4		-0.476	1.171	-0.03	FT/S

CUSA-CSB-0018863
EPA

11PC111 - FUEL GAS TO F1100A		0	0m	0%	-0.051		53				PSIG
11PI000 - F1100 CRUDE IN PRESS	**Low**	**1**	**6h51m**	**79%**	**5.781**	**250**		**5.495**	**87.576**	**7.23**	**PSIG**
11TC001 - DRE4CUF-1100A XFR		0	0m	0%	68.494		720				°F
11TI016 - DRE4CUF-1100A OUT P1		0	0m	0%	66.542		720				°F
11TI017 - DRE4CUF-1100A OUT P2		0	0m	0%	64.638		720				°F
11TI018 - DRE4CUF-1100A OUT P3		0	0m	0%	60.67		720				°F
11TI019 - DRE4CUF-1100A OUT P4		0	0m	0%	62.475		720				°F
11TI021 - DRE4CUF-1100A OUT P5		0	0m	0%	66.767		720				°F
11TI022 - DRE4CUF-1100A OUT P6		0	0m	0%	65.983		720				°F
11TI023 - DRE4CUF-1100A OUT P7		0	0m	0%	65.891		720				°F
11TI024 - DRE4CUF-1100A OUT P8		0	0m	0%	65.426		720				°F
11TI056 - F1100A BRIDGE WALL NO		0	0m	0%	63.684		1,600				°F
11TI057 - F1100A BRIDGE WALL SO		0	0m	0%	64.758		1,600				°F
11TI059 - F1100A STACK GAS	**Low**	**1**	**6h51m**	**79%**	**94.031**	**400**	**450**	**66.045**	**385.426**	**108.402**	**°F**
11TI061 - DRE4CUF-1100A RAD A1		0	0m	0%	62.341		1,050				°F
11TI061ROC.VTAG - DRE4CUF-1100A RDSKA1 ROC		0	0m	0%	1.254		50				°F
11TI062 - DRE4CUF-1100A RAD A2		0	0m	0%	63.774		1,050				°F
11TI062ROC.VTAG - DRE4CUF-1100A RDSKA2 ROC		0	0m	0%	0.179		50				°F
11TI063 - DRE4CUF-1100A RAD A3		0	0m	0%	62.251		1,050				°F
11TI063ROC.VTAG - DRE4CUF-1100A RDSKA3 ROC		0	0m	0%	0.896		50				°F
11TI064 - DRE4CUF-1100A RAD A4		0	0m	0%	64.132		1,050				°F
11TI064ROC.VTAG - DRE4CUF-1100A RDSKA4 ROC		0	0m	0%	0.09		50				°F
11TI065 - DRE4CUF-1100A RAD A5		0	0m	0%	61.265		1,050				°F
11TI065ROC.VTAG - DRE4CUF-1100A RDSKA5 ROC		0	0m	0%	1.255		50				°F
11TI066 - DRE4CUF-1100A RAD A6		0	0m	0%	62.789		1,050				°F
11TI066ROC.VTAG - DRE4CUF-1100A RDSKA6 ROC		0	0m	0%	0.179		50				°F
11TI068 - DRE4CUF-1100A RAD A8		0	0m	0%	63.684		1,050				°F
11TI068ROC.VTAG - DRE4CUF-1100A RDSKA8 ROC		0	0m	0%	0.358		50				°F
11TI070 - DRE4CUF-1100A RAD A7		0	0m	0%	62.341		1,050				°F
11TI070RDC.VTAG - DRE4CUF-1100A RDSKA7 ROC		0	0m	0%	1.612		50				°F
11TI071 - DRE4CUF-1100A RAD B1		0	0m	0%	63.863		1,050				°F
11TI071ROC.VTAG - DRE4CUF-1100A RDSKB1 ROC		0	0m	0%	1.7		50				°F
11TI072 - DRE4CUF-1100A RAD B2		0	0m	0%	63.326		1,050				°F
11TI072ROC.VTAG - DRE4CUF-1100A RDSKB2 ROC		0	0m	0%	1.611		50				°F
11TI073 - DRE4CUF-1100A RAD B3		0	0m	0%	0		1,050				°F
11TI073ROC.VTAG - DRE4CUF-1100A RDSKB3 ROC		0	0m	0%	0		50				°F
11TI074 - DRE4CUF-1100A RAD B4		0	0m	0%	63.774		1,050				°F
11TI074ROC.VTAG - DRE4CUF-1100A RDSKB4 ROC		0	0m	0%	1.164		50				°F
11TI075 - DRE4CUF-1100A RAD B5		0	0m	0%	64.132		1,050				°F
11TI075ROC.VTAG - DRE4CUF-1100A RDSKB5 ROC		0	0m	0%	0.895		50				°F
11TI076 - DRE4CUF-1100A RAD B6		0	0m	0%	62.43		1,050				°F
11TI076ROC.VTAG - DRE4CUF-1100A RDSKB6 ROC		0	0m	0%	1.523		50				°F
11TI077 - DRE4CUF-1100A RAD B7		0	0m	0%							
11TI077ROC.VTAG - DRE4CUF-1100A RDSKB7 ROC		0	0m	0%							
11TI080 - DRE4CUF-1100A RAD B8		0	0m	0%	61.623		1,050				°F
11TI080ROC.VTAG - DRE4CUF-1100A RDSKB8 ROC		0	0m	0%	2.598		50				°F
11TI081 - DRE4CUF-1100A RAD C1		0	0m	0%	62.699		1,050				°F
11TI081ROC.VTAG - DRE4CUF-1100A RDSKC1 ROC		0	0m	0%	1.701		50				°F
11TI082 - DRE4CUF-1100A RAD C2		0	0m	0%	63.595		1,050				°F
11TI082ROC.VTAG - DRE4CUF-1100A RDSKC2 ROC		0	0m	0%	1.79		50				°F
11TI083 - DRE4CUF-1100A RAD C3		0	0m	0%	62.341		1,050				°F
11TI083ROC.VTAG - DRE4CUF-1100A RDSKC3 ROC		0	0m	0%	2.06		50				°F
11TI084 - DRE4CUF-1100A RAD C4		0	0m	0%	63.595		1,050				°F
11TI084ROC.VTAG - DRE4CUF-1100A RDSKC4 ROC		0	0m	0%	1.164		50				°F
11TI086 - DRE4CUF-1100A RAD C6		0	0m	0%	0		1,050				
11TI086ROC.VTAG - DRE4CUF-1100A RDSKC6 ROC		0	0m	0%	0		50				
11TI087 - DRE4CUF-1100A RAD C7		0	0m	0%	61.265		1,050				°F
11TI087ROC.VTAG - DRE4CUF-1100A RDSKC7 ROC		0	0m	0%	2.509		50				°F
11TI088 - DRE4CUF-1100A RAD C8		0	0m	0%	62.699		1,050				°F
11TI088ROC.VTAG - DRE4CUF-1100A RDSKC8 ROC		0	0m	0%	1.433		50				°F
11TI098 - DRE4CUF-1100A RAD C5		0	0m	0%	63.057		1,050				°F
11TI098ROC.VTAG - DRE4CUF-1100A RDSKC5 ROC		0	0m	0%	0.806		50				°F
11TI130 - DRE4CUF-1100A P1 TUBE 6		0	0m	0%	0		1,050				

CUSA-CSB-0018864
EPA

11TI130ROC.VTAG - DRE4CUF-1100A P1TB6SK RC		0	0m	0%	0	50					
11TI131 - DRE4CUF-1100A P1 TUBE 7		0	0m	0%	63.774	1,050					°F
11TI131ROC.VTAG - DRE4CUF-1100A P1TB7SK RC		0	0m	0%	1.342	50					°F
11TI132 - DRE4CUF-1100A P1 TUBE 15		0	0m	0%	64.58	1,050					°F
11TI132ROC.VTAG - DRE4CUF-1100A P1TB15SKRC		0	0m	0%	1.61	50					°F
11TI133 - DRE4CUF-1100A P2 TUBE 6		0	0m	0%	62.968	1,050					°F
11TI133ROC.VTAG - DRE4CUF-1100A P2TB6SK RC		0	0m	0%	0.806	50					°F
11TI134 - DRE4CUF-1100A P2 TUBE 8		0	0m	0%	62.251	1,050					°F
11TI134ROC.VTAG - DRE4CUF-1100A P2TB8SK RC		0	0m	0%	1.881	50					°F
11TI135 - DRE4CUF-1100A P2 TUBE 11		0	0m	0%	63.147	1,050					°F
11TI135ROC.VTAG - DRE4CUF-1100A P2TB11SKRC		0	0m	0%	2.148	50					°F
11TI136 - DRE4CUF-1100A P3 TUBE 6		0	0m	0%	63.326	1,050					°F
11TI136ROC.VTAG - DRE4CUF-1100A P3TB6SK RC		0	0m	0%	0.537	50					°F
11TI137 - DRE4CUF-1100A P3 TUBE 8		0	0m	0%	64.848	1,050					°F
11TI137ROC.VTAG - DRE4CUF-1100A P3TB8SK RC		0	0m	0%	0.089	50					°F
11TI138 - DRE4CUF-1100A P3 TUBE 11		0	0m	0%	64.49	1,050					°F
11TI13BROC.VTAG - DRE4CUF-1100A P3TB11SKRC		0	0m	0%	2.504	50					°F
11TI139 - DRE4CUF-1100A P4 TUBE 6		0	0m	0%	62.43	1,050					°F
11TI139ROC.VTAG - DRE4CUF-1100A P4TB6 SKRC		0	0m	0%	0.627	50					°F
11TI140 - DRE4CUF-1100A P4 TUBE 7		0	0m	0%	63.416	1,050					°F
11TI140ROC.VTAG - DRE4CUF-1100A P4TB7SK RC		0	0m	0%	0.806	50					°F
11TI141 - DRE4CUF-1100A P4 TUBE 15		0	0m	0%							°F
11TI141ROC.VTAG - DRE4CUF-1100A P4TB15SKRC	**High**	**1**	**6h51m**	**79%**	**1,427.257**	**50**	**2.54**	**682.169**	**308.613**		**°F**
11TI142 - DRE4CUF-1100A P5 TUBE 6		0	0m	0%	63.147	1,050					°F
11TI142ROC.VTAG - DRE4CUF-1100A P5TB6SK RC		0	0m	0%	0.179	50					°F
11TI143 - DRE4CUF-1100A P5 TUBE 7		0	0m	0%	63.057	1,050					°F
11TI143ROC.VTAG - DRE4CUF-1100A P5TB7SK RC		0	0m	0%	0.537	50					°F
11TI144 - DRE4CUF-1100A P5 TUBE 15		0	0m	0%	67.887	1,050					°F
11TI144RDC.VTAG - DRE4CUF-1100A P5TB15SKRC		0	0m	0%	0.357	50					°F
11TI145 - DRE4CUF-1100A P6 TUBE 6		0	0m	0%	0	1,050					°F
11TI145ROC.VTAG - DRE4CUF-1100A P6TB6SK RC		0	0m	0%							
11TI146 - DRE4CUF-1100A P6 TUBE 8		0	0m	0%	62.968	1,050					°F
11TI146ROC.VTAG - DRE4CUF-1100A P6TB8SK RC		0	0m	0%	0.448	50					°F
11TI147 - DRE4CUF-1100A P6 TUBE 11		0	0m	0%	57.133	1,050					°F
11TI147ROC.VTAG - DRE4CUF-1100A P6TB11SKRC		0	0m	0%	2.517	50					°F
11TI148 - DRE4CUF-1100A P7 TUBE 6		0	0m	0%	62.341	1,050					°F
11TI148ROC.VTAG - DRE4CUF-1100A P7TB6SK RC		0	0m	0%	0.179	50					°F
11TI149 - DRE4CUF-1100A P7 TUBE 8		0	0m	0%	63.147	1,050					°F
11TI149ROC.VTAG - DRE4CUF-1100A P7TB8SK RC		0	0m	0%	0.09	50					°F
11TI150 - DRE4CUF-1100A P7 TUBE 11		0	0m	0%							
11TI150ROC.VTAG - DRE4CUF-1100A P7TB11SKRC		0	0m	0%							
11TI151 - DRE4CUF-1100A P8 TUBE 6		0	0m	0%	62.699	1,050					°F
11TI151ROC.VTAG - DRE4CUF-1100A P8TB6SK RC		0	0m	0%	0.985	50					°F
11TI152 - DRE4CUF-1100A P8 TUBE 7		0	0m	0%	63.416	1,050					°F
11TI152ROC.VTAG - DRE4CUF-1100A P8TB7SK RC		0	0m	0%	0.448	50					°F
11TI153 - DRE4CUF-1100A P8 TUBE 15		0	0m	0%	62.699	1,050					°F
11TI153ROC.VTAG - DRE4CUF-1100A P8TB15SKRC		0	0m	0%	1.075	50					°F

4CU.F-1100B

11F1100BOV-P1.VTAG - DRE4CUF-1100B OIL VEL P1	**Low**	**1**	**6h51m**	**79%**	**-0.009**	**4**	**-0.021**	**0.011**	**-0.011**	**FT/S**
11F1100BOV-P2.VTAG - DRE4CUF-1100B OIL VEL P2	**Low**	**1**	**6h51m**	**79%**	**0.022**	**4**	**0.001**	**1.021**	**0.021**	**FT/S**
11F1100BOV-P3.VTAG - DRE4CUF-1100B OIL VEL P3	**Low**	**1**	**6h51m**	**79%**	**0.004**	**4**	**-0.037**	**1.244**	**0.007**	**FT/S**
11F1100BOV-P4.VTAG - DRE4CUF-1100B OIL VEL P4	**Low**	**1**	**6h51m**	**79%**	**0.004**	**4**	**-0.056**	**0.046**	**0.003**	**FT/S**
11F1100BOV-P5.VTAG - DRE4CUF-1100B OIL VEL P5	**Low**	**1**	**6h51m**	**79%**	**0.016**	**4**	**-0.035**	**0.905**	**0.017**	**FT/S**
11F1100BOV-P6.VTAG - DRE4CUF-1100B OIL VEL P6	**Low**	**1**	**6h51m**	**79%**	**0**	**4**	**-0.018**	**1.563**	**0.037**	
11F1100BOV-P7.VTAG - DRE4CUF-1100B OIL VEL P7	**Low**	**1**	**6h51m**	**79%**	**0.005**	**4**	**-0.008**	**1.683**	**0.008**	**FT/S**
11F1100BOV-P8.VTAG - DRE4CUF-1100B OIL VEL P8	**Low**	**1**	**6h51m**	**79%**	**-0**	**4**	**-0.009**	**1.889**	**0.007**	**FT/S**
11F1100BXFRDT.VTAG - F1100B TRANSFER DT		0	0m	0%						
11PC211 - FUEL GAS TO F1100B		0	0m	0%	-0.032	53				PSIG
11TC011 - DRE4CUF-1100B XFR TMP		0	0m	0%	65.298	720				°F
11TI116 - DRE4CUF-1100B OUT-P1		0	0m	0%	65.832	720				°F
11TI117 - DRE4CUF-1100B OUT-P2		0	0m	0%	64.262	720				°F
11TI118 - DRE4CUF-1100B OUT-P3		0	0m	0%	62.264	720				°F
11TI119 - DRE4CUF-1100B OUT-P4		0	0m	0%	63.429	720				°F

CUSA-CSB-0018865
EPA

11TI121 - DRE4CUF-1100B OUT-P5		0	0m	0%	66.568		720					°F
11TI122 - DRE4CUF-1100B OUT-P6		0	0m	0%	64.831		720					°F
11TI123 - DRE4CUF-1100B OUT-P7		0	0m	0%	67.2		720					°F
11TI124 - DRE4CUF-1100B OUT-P8		0	0m	0%	64.161		720					°F
11TI156 - F1100B BRIDGE WALL NO		0	0m	0%	65.564		1,600					°F
11TI157 - F1100B BRIDGE WALL SO		0	0m	0%	67.083		1,600					°F
11TI159 - F1100B STACK GAS	**Low**	**1**	**6h51m**	**79%**	**94.997**	**400**	**450**	**67.163**	**382.833**	**107.951**		**°F**
11TI161 - DRE4CUF-1100B RAD A1		0	0m	0%	63.326		1,050					°F
11TI161ROC.VTAG - DRE4CUF-1100B RDSKA1 ROC		0	0m	0%	1.432		50					°F
11TI162 - DRE4CUF-1100B RAD A2		0	0m	0%	63.953		1,050					°F
11TI162ROC.VTAG - DRE4CUF-1100B RDSKA2 ROC		0	0m	0%	0.358		50					°F
11TI163 - DRE4CUF-1100B RAD A3		0	0m	0%	62.968		1,050					°F
11TI163ROC.VTAG - DRE4CUF-1100B RDSKA3 ROC		0	0m	0%	1.254		50					°F
11TI164 - DRE4CUF-1100B RAD A4		0	0m	0%	64.758		1,050					°F
11TI164ROC.VTAG - DRE4CUF-1100B RDSKA4 ROC		0	0m	0%	0.358		50					°F
11TI165 - DRE4CUF-1100B RAD A5		0	0m	0%	65.295		1,050					°F
11TI165ROC.VTAG - DRE4CUF-1100B RDSKA5 ROC		0	0m	0%	1.342		50					°F
11TI166 - DRE4CUF-1100B RAD A6		0	0m	0%	0		1,050					°F
11TI166ROC.VTAG - DRE4CUF-1100B RDSKA6 ROC		0	0m	0%								°F
11TI167 - DRE4CUF-1100B RAD A7		0	0m	0%								DEGF
11TI167ROC.VTAG - DRE4CUF-1100B RDSKA7 ROC		0	0m	0%								DEGF
11TI168 - DRE4CUF-1100B RAD A8		0	0m	0%	66.547		1,050					°F
11TI168ROC.VTAG - DRE4CUF-1100B RDSKA8 ROC		0	0m	0%	0		50					°F
11TI171 - DRE4CUF-1100B RAD B1		0	0m	0%	64.58		1,050					°F
11TI171ROC.VTAG - DRE4CUF-1100B RDSKB1 ROC		0	0m	0%	1.789		50					°F
11TI172 - DRE4CUF-1100B RAD B2		0	0m	0%	62.341		1,050					°F
11TI172ROC.VTAG - DRE4CUF-1100B RDSKB2 ROC		0	0m	0%	1.254		50					°F
11TI173 - DRE4CUF-1100B RAD B3		0	0m	0%	63.774		1,050					°F
11TI173ROC.VTAG - DRE4CUF-1100B RDSKB3 ROC		0	0m	0%	0.09		50					°F
11TI174 - DRE4CUF-1100B RAD B4		0	0m	0%	63.057		1,050					°F
11TI174ROC.VTAG - DRE4CUF-1100B RDSKB4 ROC		0	0m	0%	1.164		50					°F
11TI175 - DRE4CUF-1100B RAD B5		0	0m	0%	64.758		1,050					°F
11TI175ROC.VTAG - DRE4CUF-1100B RDSKB5 ROC		0	0m	0%	0.179		50					°F
11TI176 - DRE4CUF-1100B RAD B6		0	0m	0%								
11TI176ROC.VTAG - DRE4CUF-1100B RDSKB6 ROC		0	0m	0%								
11TI177 - DRE4CUF-1100B RAD B7		0	0m	0%	66.368		1,050					°F
11TI177ROC.VTAG - DRE4CUF-1100B RDSKB7 ROC		0	0m	0%	0.715		50					°F
11TI178 - DRE4CUF-1100B RAD B8		0	0m	0%	63.595		1,050					°F
11TI178ROC.VTAG - DRE4CUF-1100B RDSKB8 ROC		0	0m	0%	1.432		50					°F
11TI181 - DRE4CUF-1100B RAD C1		0	0m	0%								
11TI181ROC.VTAG - DRE4CUF-1100B RDSKC1 ROC		0	0m	0%	1.612		50					°F
11TI182 - DRE4CUF-1100B RAD C2		0	0m	0%								
11TI182ROC.VTAG - DRE4CUF-1100B RDSKC2 ROC		0	0m	0%								
11TI183 - DRE4CUF-1100B RAD C3		0	0m	0%	62.699		1,050					°F
11TI183ROC.VTAG - DRE4CUF-1100B RDSKC3 ROC		0	0m	0%	1.612		50					°F
11TI184 - DRE4CUF-1100B RAD C4		0	0m	0%	64.222		1,050					°F
11TI184ROC.VTAG - DRE4CUF-1100B RDSKC4 ROC		0	0m	0%	0.626		50					°F
11TI185 - DRE4CUF-1100B RAD C5		0	0m	0%	63.595		1,050					°F
11TI185ROC.VTAG - DRE4CUF-1100B RDSKC5 ROC		0	0m	0%	0.985		50					°F
11TI186 - DRE4CUF-1100B RAD C6		0	0m	0%								
11TI186ROC.VTAG - DRE4CUF-1100B RDSKC6 ROC		0	0m	0%								
11TI187 - DRE4CUF-1100B RAD C7		0	0m	0%	64.758		1,050					°F
11TI187ROC.VTAG - DRE4CUF-1100B RDSKC7 ROC		0	0m	0%	1.073		50					°F
11TI188 - DRE4CUF-1100B RAD C8		0	0m	0%	65.206		1,050					°F
11TI188ROC.VTAG - DRE4CUF-1100B RDSKC8 ROC		0	0m	0%	0.894		50					°F
11TI230 - DRE4CUF-1100B P1 TUBE 6		0	0m	0%	64.043		1,050					°F
11TI230ROC.VTAG - DRE4CUF-1100B P1TB6SK RC		0	0m	0%	1.074		50					°F
11TI231 - DRE4CUF-1100B P1 TUBE 7		0	0m	0%	63.147		1,050					°F
11TI231ROC.VTAG - DRE4CUF-1100B P1TB7SK RC		0	0m	0%	1.969		50					°F
11TI232 - DRE4CUF-1100B P1 TUBE 15		0	0m	0%	64.043		1,050					°F
11TI232ROC.VTAG - DRE4CUF-1100B P1TB15SKRC		0	0m	0%	0.537		50					°F
11TI233 - DRE4CUF-1100B P2 TUBE 6		0	0m	0%	63.774		1,050					°F
11TI233ROC.VTAG - DRE4CUF-1100B P2TB6SK RC		0	0m	0%	0.537		50					°F

CUSA-CSB-0018866
EPA

11TI234 - DRE4CUF-1100B P2 TUBE 8		0	0m	0%	62.251	1,050				°F
11TI234ROC.VTAG - DRE4CUF-1100B P2TB8SK RC		0	0m	0%	3.134	50				°F
11TI235 - DRE4CUF-1100B P2 TUBE 11		0	0m	0%	63.595	1,050				°F
11TI235ROC.VTAG - DRE4CUF-1100B P2TB11SKRC		0	0m	0%	1.7	50				°F
11TI236 - DRE4CUF-1100B P3 TUBE 6		0	0m	0%	64.222	1,050				°F
11TI236ROC.VTAG - DRE4CUF-1100B P3TB6SK RC		0	0m	0%	0.447	50				°F
11TI237 - DRE4CUF-1100B P3 TUBE 8		0	0m	0%	64.669	1,050				°F
11TI237ROC.VTAG - DRE4CUF-1100B P3TB8SK RC		0	0m	0%	0.895	50				°F
11TI238 - DRE4CUF-1100B P3 TUBE 11	**High**	**1**	**6h51m**	**79%**	**1,396.536**	**1,050**	**2,271.121**	**2,498**	**2,478.86**	**°F**
11TI238ROC.VTAG - DRE4CUF-1100B P3TB11SKRC	**High**	**1**	**55m**	**11%**	**1,101.464**	**50**	**41.864**	**197.738**	**142.655**	**°F**
11TI239 - DRE4CUF-1100B P4 TUBE 6		0	0m	0%	64.669	1,050				°F
11TI239ROC.VTAG - DRE4CUF-1100B P4TB6SK RC		0	0m	0%	0.805	50				°F
11TI240 - DRE4CUF-1100B P4 TUBE 7		0	0m	0%	63.684	1,050				°F
11TI240ROC.VTAG - DRE4CUF-1100B P4TB7SK RC		0	0m	0%	0.269	50				°F
11TI241 - DRE4CUF-1100B P4 TUBE 15		0	0m	0%	65.564	1,050				°F
11TI241ROC.VTAG - DRE4CUF-1100B P4TB15SKRC		0	0m	0%	11.854	50				°F
11TI242 - DRE4CUF-1100B P5 TUBE 6		0	0m	0%	65.027	1,050				°F
11TI242ROC.VTAG - DRE4CUF-1100B P5TB6SK RC		0	0m	0%	0.268	50				°F
11TI243 - DRE4CUF-1100B P5 TUBE 7		0	0m	0%	64.043	1,050				°F
11TI243ROC.VTAG - DRE4CUF-1100B P5TB7SK RC		0	0m	0%	0.448	50				°F
11TI244 - DRE4CUF-1100B P5 TUBE 15		0	0m	0%						
11TI244ROC.VTAG - DRE4CUF-1100B P5TB15SKRC		0	0m	0%						
11TI245 - DRE4CUF-1100B P6 TUBE 6		0	0m	0%	64.401	1,050				°F
11TI245ROC.VTAG - DRE4CUF-1100B P6TB6SK RC		0	0m	0%	0.179	50				°F
11TI246 - DRE4CUF-1100B P6 TUBE 8		0	0m	0%	63.237	1,050				°F
11TI246ROC.VTAG - DRE4CUF-1100B P6TB8SK RC		0	0m	0%	0.537	50				°F
11TI247 - DRE4CUF-1100B P6 TUBE 11		0	0m	0%						
11TI247ROC.VTAG - DRE4CUF-1100B P6TB11SKRC		0	0m	0%						
11TI248 - DRE4CUF-1100B P7 TUBE 6		0	0m	0%	65.385	1,050				°F
11TI248ROC.VTAG - DRE4CUF-1100B P7TB6SK RC		0	0m	0%	1.969	50				°F
11TI249 - DRE4CUF-1100B P7 TUBE 8		0	0m	0%	66.189	1,050				°F
11TI249ROC.VTAG - DRE4CUF-1100B P7TB8SK RC		0	0m	0%	1.52	50				°F
11TI250 - DRE4CUF-1100B P7 TUBE 11		0	0m	0%						
11TI250ROC.VTAG - DRE4CUF-1100B P7TB11SKRC		0	0m	0%						
11TI251 - DRE4CUF-1100B P8 TUBE 6		0	0m	0%	64.043	1,050				°F
11TI251ROC.VTAG - DRE4CUF-1100B P8TB6SK RC		0	0m	0%	0.895	50				°F
11TI252 - DRE4CUF-1100B P8 TUBE 7		0	0m	0%	65.832	1,050				°F
11TI252ROC.VTAG - DRE4CUF-1100B P8TB7 SKRC		0	0m	0%	0.983	50				°F
11TI253 - DRE4CUF-1100B P8 TUBE 15		0	0m	0%	64.222	1,050				°F
11TI253ROC.VTAG - DRE4CUF-1100B P8TB15SKRC		0	0m	0%	0.088	50				°F
4CU.F-1160										
11F1160DT.VTAG - F1160 XFR TEMP DEVIATION		0	0m	0%	1.156	8				°F
11F1160OV-P1.VTAG - DRE4CUF-1160 OIL VEL P1	**Low**	**1**	**6h51m**	**79%**	**0.006**	**4**	**-0.476**	**1.779**	**0.041**	**FT/S**
11F1160OV-P2.VTAG - DRE4CUF-1160 OIL VEL P2	**Low**	**1**	**6h51m**	**79%**	**-0.015**	**4**	**-0.476**	**4.674**	**0.115**	**FT/S**
11F1160OV-P3.VTAG - DRE4CUF-1160 OIL VEL P3	**Low**	**1**	**6h51m**	**79%**	**0.009**	**4**	**-0.476**	**4.823**	**0.184**	**FT/S**
11F1160OV-P4.VTAG - DRE4CUF-1160 OIL VEL P4	**Low**	**1**	**6h51m**	**79%**	**-0.004**	**4**	**-0.476**	**2.257**	**0.024**	**FT/S**
11F1160OV-P5.VTAG - DRE4CUF-1160 OIL VEL P5	**Low**	**1**	**6h51m**	**79%**	**0**	**4**	**-0.476**	**3.364**	**-0.093**	
11F1160OV-P6.VTAG - DRE4CUF-1160 OIL VEL P6	**Low**	**1**	**6h51m**	**79%**	**1.573**	**4**	**-0.476**	**3.988**	**1.484**	**FT/S**
11F1160OV-P7.VTAG - DRE4CUF-1160 OIL VEL P7	**Low**	**1**	**6h51m**	**79%**	**0.007**	**4**	**-0.476**	**3.396**	**0.037**	**FT/S**
11F1160OV-P8.VTAG - DRE4CUF-1160 OIL VEL P8	**Low**	**1**	**6h51m**	**79%**	**0.901**	**4**	**-0.476**	**3.783**	**0.87**	**FT/S**
11F1160VS-P1.VTAG - DRE4CUF-1160 VEL STM P1		0	0m	0%	909.6	0				LB/BBL
11F1160VS-P2.VTAG - DRE4CUF-1160 VEL STM P2		0	0m	0%	-115.701	0				LB/BBL
11F1160VS-P3.VTAG - DRE4CUF-1160 VEL STM P3	**Low**	**2**	**7h24m**	**85%**	**553.325**	**0**	**-1,238.17**	**2,499.707**	**-153.842**	**LB/BBL**
11F1160VS-P4.VTAG - DRE4CUF-1160 VEL STM P4	**Low**	**1**	**6h51m**	**79%**	**-820.313**	**0**	**-38,340.16**	**20,296.186**	**-818.59**	**LB/BBL**
11F1160VS-P5.VTAG - DRE4CUF-1160 VEL STM P5		0	0m	0%	15.584	0				LB/BBL
11F1160VS-P6.VTAG - DRE4CUF-1160 VEL STM P6		0	0m	0%	2.332	0				LB/BBL
11F1160VS-P7.VTAG - DRE4CUF-1160 VEL STM P7	**Low**	**1**	**6h51m**	**79%**	**-15.139**	**0**	**-1,085.442**	**473.108**	**-19.984**	**LB/BBL**
11F1160VS-P8.VTAG - DRE4CUF-1160 VEL STM P8		0	0m	0%	3.496	0				LB/BBL
11PC066 - F1160 DRAFT		0	0m	0%	-0.218	0				INH2O
11PC622 - F1160 FUEL GAS PRESS		0	0m	0%	-0.053	53				PSIG
11TC060 - DRE4CUF-1160 XFR TMP		0	0m	0%	143.689	782				°F
11TI005 - DRE4CUF-1160 P2 CNV-TSKN		0	0m	0%						
11TI005ROC.VTAG - DRE4CUF-1160 P2CNVTBSKRC		0	0m	0%						

CUSA-CSB-0018867
EPA

11TI006 - DRE4CUF-1160 P2 T-14 SKN		0	0m	0%	115.147	1,050				°F
11TI006ROC.VTAG - DRE4CUF-1160 P2TB145K RC		0	0m	0%	3.055	50				°F
11TI025 - DRE4CUF-1160 P2 T-9 SKN		0	0m	0%	117.766	1,050				°F
11TI025ROC.VTAG - DRE4CUF-1160 P2TB9SK ROC		0	0m	0%	0.436	50				°F
11TI079 - DRE4CUF-1160 P3 CNV-TSKN		0	0m	0%	256.113	1,050				°F
11TI079ROC.VTAG - DRE4CUF-1160 P3CNVTBSKRC		0	0m	0%	6.173	50				°F
11TI089 - DRE4CUF-1160 P3 T-14 SKN		0	0m	0%						
11TI089ROC.VTAG - DRE4CUF-1160 P3TB14SK RC		0	0m	0%						
11TI093 - DRE4CUF-1160 P3 T-5 SKN		0	0m	0%	256.113	1,050				°F
11TI093ROC.VTAG - DRE4CUF-1160 P3TB5SK RC		0	0m	0%	54.175	50				°F
11TI094 - DRE4CUF-1160 P4 CNV-TSKN		0	0m	0%	142.824	1,050				°F
11TI094ROC.VTAG - DRE4CUF-1160 P4CNVTBSKRC		0	0m	0%	0.174	50				°F
11TI095 - DRE4CUF-1160 P4 T-14 SKN		0	0m	0%	119.336	1,050				°F
11TI095ROC.VTAG - DRE4CUF-1160 P4TB14SK RC		0	0m	0%	1.483	50				°F
11TI097 - DRE4CUF-1160 P4 T-5 SKN		0	0m	0%	160.264	1,050				°F
11TI097ROC.VTAG - DRE4CUF-1160 P4TB5SK ROC		0	0m	0%	16.311	50				°F
11TI099ROC.VTAG - DR4CUF-1160 P3TB9SK ROC	**High**	**1**	**7m**	**1%**	**20.123**	**50**	**1.561**	**59.356**	**19.221**	**°F**
11TI125 - DRE4CUF-1160 P5 CNV-TSKN		0	0m	0%	260.345	1,050				°F
11TI125ROC.VTAG - DRE4CUF-1160 P5CNVTBSKRC		0	0m	0%	4.413	50				°F
11TI169 - DRE4CUF-1160 P5 T-14 SKN		0	0m	0%	154.973	1,050				°F
11TI169ROC.VTAG - DRE4CUF-1160 P5TB14SK RC		0	0m	0%	8.5	50				°F
11TI179 - DRE4CUF-1160 P5 T-5 SKN		0	0m	0%	257.523	1,050				°F
11TI179ROC.VTAG - DRE4CUF-1160 P5TB5SK RC		0	0m	0%	5.911	50				°F
11TI189 - DRE4CUF-1160 P6 CNV-TSKN		0	0m	0%	263.963	1,050				°F
11TI189ROC.VTAG - DRE4CUF-1160 P6CNVTBSKRC		0	0m	0%	2.827	50				°F
11TI190 - DRE4CUF-1160 P1 CNV-TSKN		0	0m	0%						DEGF
11TI190ROC.VTAG - DR4CUF-1160 P1CNVTB5KRC		0	0m	0%	3.352	50				°F
11TI191 - DRE4CUF-1160 P1 T-14 SKN		0	0m	0%						
11TI191ROC.VTAG - DR4CUF-1160 P1TB14SK ROC		0	0m	0%	0	50				
11TI192 - DRE4CUF-1160 P1 T-5 SKN		0	0m	0%	219.806	-99,999 1,050				°F
11TI192ROC.VTAG - DR4CUF-1160 P1TB5SK ROC		0	0m	0%	0.524	50				°F
11TI254 - DRE4CUF-1160 P2TB3SKN		0	0m	0%	181.517	1,050				°F
11TI254ROC.VTAG - DRE4CUF-1160 P2TB3SKN RC		0	0m	0%	7.028	50				°F
11TI255 - DRE4CUF-1160 P4 TBSKN		0	0m	0%	196.805	1,050				°F
11TI255ROC.VTAG - DRE4CUF-1160 P4TBSKN ROC	**High**	**2**	**19m**	**4%**	**17.894**	**50**	**39.098**	**73.268**	**53.112**	**°F**
11TI256 - DRE4CUF-1160 P6 TBSKN		0	0m	0%	128.222	1,050				°F
11TI256ROC.VTAG - DRE4CUF-1160 P6TBSKN ROC		0	0m	0%	0.783	50				°F
11TI257 - DRE4CUF-1160 P8 TBSKN		0	0m	0%	262.816	1,050				°F
11TI257ROC.VTAG - DRE4CUF-1160 P8TBSKN ROC		0	0m	0%	0.088	50				°F
11TI308 - DRE4CUF-1160 P8 TUBE SKN		0	0m	0%	259.551	1,050				°F
11TI308ROC.VTAG - DRE4CUF-1160 P8 TBSK ROC		0	0m	0%	3.088	50				°F
11TI309 - DRE4CUF-1160 P8 T-14 SKN		0	0m	0%						
11TI309ROC.VTAG - DRE4CUF-1160 P8TB14SK RC		0	0m	0%						
11TI401 - DRE4CUF-1160 P8 T-5 SKN		0	0m	0%	256.201	1,050				°F
11TI401ROC.VTAG - DRE4CUF-1160 P8TB5SK ROC		0	0m	0%	11.764	50				°F
11TI575 - DRE4CUF-1160 P6 T-14 SKN		0	0m	0%	123.171	1,050				°F
11TI575ROC.VTAG - DRE4CUF-1160 P6TB145K RC		0	0m	0%	2.091	50				°F
11TI576 - DRE4CUF-1160 P6 T-8 SKN		0	0m	0%	131.702	1,050				°F
11TI576ROC.VTAG - DRE4CUF-1160 P6TB8SK ROC		0	0m	0%	1.131	50				°F
11TI577 - DRE4CUF-1160 P6 T-5 SKN		0	0m	0%	129.701	1,050				°F
11TI577ROC.VTAG - DRE4CUF-1160 P6TB5SK ROC		0	0m	0%	1.047	50				°F
11TI591 - DRE4CUF-1160 P1 RDSKD		0	0m	0%						DEGF
11TI591ROC.VTAG - DRE4CUF-1160 P1RDSKD ROC		0	0m	0%						
11TI592 - DRE4CUF-1160 P3 RDSKD		0	0m	0%						
11TI592ROC.VTAG - DRE4CUF-1160 P3RDSKD ROC		0	0m	0%						
11TI593 - DRE4CUF-1160 P3 RDSKE		0	0m	0%						
11TI593RDC.VTAG - DRE4CUF-1160 P3RDSKE ROC		0	0m	0%						
11TI594 - DRE4CUF-1160 P1 RDSKE		0	0m	0%	115.584	1,050				°F
11TI594ROC.VTAG - DRE4CUF-1160 P1RDSKE ROC		0	0m	0%	1.047	50				°F
11TI595 - DRE4CUF-1160 P6 RDSKE		0	0m	0%	126.916	1,050				°F
11TI595ROC.VTAG - DRE4CUF-1160 P6RDSKE ROC		0	0m	0%	2.698	50				°F
11TI596 - DRE4CUF-1160 P7 RDSKD		0	0m	0%						
11TI596ROC.VTAG - DRE4CUF-1160 P7RDSKD ROC		0	0m	0%						

CUSA-CSB-0018868
EPA

11TI597 - DRE4CUF-1160 P7 RDSKE		0	0m	0%	174.488		1,050				°F
11TI597ROC.VTAG - DRE4CUF-1160 P7RDSKE ROC	**High**	**2**	**14m**	**3%**	**4.602**		**50**	**3.909**	**58.662**	**26.354**	**°F**
11TI598 - DRE4CUF-1160 P6 RDSKD		0	0m	0%	132.398		1,050				°F
11TI598ROC.VTAG - DRE4CUF-1160 P6RDSKD ROC		0	0m	0%	2.956		50				°F
11TI601 - DRE4CUF-1160 P7 CNV-TSKN		0	0m	0%	260.609		1,050				°F
11TI601ROC.VTAG - DRE4CUF-1160 P7CNVTBSKRC		0	0m	0%	3.354		50				°F
11TI607 - DRE4CUF-1160 P7 T-14 SKN		0	0m	0%							
11TI607ROC.VTAG - DRE4CUF-1160 P7TB14SK RC		0	0m	0%							
11TI609 - DRE4CUF-1160 P2 TB SKN		0	0m	0%	260.904		1,050				°F
11TI609ROC.VTAG - DRE4CUF-1160 P2 TBSK ROC		0	0m	0%	3.674		50				°F
11TI617 - DRE4CUF-1160 OUT-P1		0	0m	0%	125.046		850				°F
11TI618 - DRE4CUF-1160 OUT-P2		0	0m	0%	107.025		850				°F
11TI619 - DRE4CUF-1160 OUT-P3		0	0m	0%	142.38		850				°F
11TI621 - DRE4CUF-1160 OUT-P4		0	0m	0%	120.745		850				°F
11TI622 - DRE4CUF-1160 OUT-P5		0	0m	0%	158.73		850				°F
11TI623 - DRE4CUF-1160 OUT-P6		0	0m	0%	115.213		850				°F
11TI624 - DRE4CUF-1160 OUT-P7		0	0m	0%	150.219		850				°F
11TI625 - DRE4CUF-1160 OUT-P8		0	0m	0%	149.872		850				°F
11TI626 - DRE4CUF-1160 RAD SKNA-P1		0	0m	0%	125.785		1,050				°F
11TI626ROC.VTAG - DRE4CUF-1160 P1 RDSKA RC		0	0m	0%	0.174		50				°F
11TI627 - DRE4CUF-1160 RAD SKNA-P2		0	0m	0%							
11TI627ROC.VTAG - DRE4CUF-1160 P2 RDSKA RC		0	0m	0%							
11TI628 - DRE4CUF-1160 RAD SKNA-P3		0	0m	0%	0		1,050				°F
11TI628ROC.VTAG - DRE4CUF-1160 P3 RDSKA RC		0	0m	0%	0		50				°F
11TI629 - DRE4CUF-1160 RAD SKNA-P4		0	0m	0%							°F
11TI629ROC.VTAG - DRE4CUF-1160 P4 RDSKA RC		0	0m	0%	0		50				°F
11TI631 - DRE4CUF-1160 RAD SKNA-P5		0	0m	0%	194.632		1,050				°F
11TI631ROC.VTAG - DRE4CUF-1160 P5 RDSKA RC	**High**	**1**	**7m**	**1%**	**8.514**		**50**	**10.179**	**72.616**	**36.63**	**°F**
11TI632 - DRE4CUF-1160 RAD SKNA-P6		0	0m	0%	129.005		1,050				°F
11TI632ROC.VTAG - DRE4CUF-1160 P6 RDSKA RC		0	0m	0%	3.566		50				°F
11TI633 - DRE4CUF-1160 RAD SKNA-P7		0	0m	0%	165.554		1,050				°F
11TI633ROC.VTAG - DRE4CUF-1160 P7 RDSKA RC		0	0m	0%							°F
11TI634 - DRE4CUF-1160 RAD SKNA-P8		0	0m	0%	157.315		1,050				°F
11TI634ROC.VTAG - DRE4CUF-1160 P8 RDSKA RC	**High**	**1**	**11m**	**2%**	**0.694**		**50**	**3.209**	**88.254**	**54.506**	**°F**
11TI635 - DRE4CUF-1160 RAD SKNB-P1		0	0m	0%	173.968		1,050				°F
11TI635ROC.VTAG - DRE4CUF-1160 P1 RDSKB RC	**High**	**1**	**8m**	**2%**	**6.679**		**50**	**3.383**	**83.423**	**45.364**	**°F**
11TI636 - DRE4CUF-1160 RAD SKNB-P2		0	0m	0%	122.823		1,050				°F
11TI636ROC.VTAG - DRE4CUF-1160 P2 RDSKB RC		0	0m	0%	0.087		50				°F
11TI637 - DRE4CUF-1160 RAD SKNB-P3		0	0m	0%							
11TI637ROC.VTAG - DRE4CUF-1160 P3 RDSKB RC		0	0m	0%							
11TI638 - DRE4CUF-1160 RAD SKNB-P4		0	0m	0%	139.611		1,050				°F
11TI638ROC.VTAG - DRE4CUF-1160 P4 RDSKB RC		0	0m	0%	7.474		50				°F
11TI639 - DRE4CUF-1160 RAD SKNB-P5		0	0m	0%	254.88		1,050				°F
11TI639ROC.VTAG - DRE4CUF-1160 P5 RDSKB RC		0	0m	0%	4.841		50				°F
11TI641 - DRE4CUF-1160 RAD SKNB-P6		0	0m	0%	127.09		1,050				°F
11TI641RDC.VTAG - DRE4CUF-1160 P6 RDSKB RC		0	0m	0%	2.35		50				°F
11TI642 - DRE4CUF-1160 RAD SKNB-P7		0	0m	0%	210.646		1,050				°F
11TI642ROC.VTAG - DRE4CUF-1160 P7 RDSKB RC		0	0m	0%	31.308		50				°F
11TI643 - DRE4CUF-1160 RAD SKNB-P8		0	0m	0%	218.671		1,050				°F
11TI643ROC.VTAG - DRE4CUF-1160 PB RDSKB RC		0	0m	0%	18.386		50				°F
11TI675 - DRE4CUF-1160 P7 T-9 SKN		0	0m	0%	186.813		1,050				°F
11TI675ROC.VTAG - DRE4CUF-1160 P7TB9SK RC		0	0m	0%	15.908		50				°F
11TI686 - DRE4CUF-1160 RAD SKNC-P1		0	0m	0%	270.415		1,050				°F
11TI686ROC.VTAG - DRE4CUF-1160 P1 RDSKC RC		0	0m	0%	4.16		50				°F
11TI687 - DRE4CUF-1160 RAD SKNC-P2		0	0m	0%	268.028		1,050				°F
11TI687ROC.VTAG - DRE4CUF-1160 P2 RDSKC RC		0	0m	0%	3.892		50				°F
11TI688 - DRE4CUF-1160 RAD SKNC-P3		0	0m	0%	264.052		1,050				°F
11TI688ROC.VTAG - DRE4CUF-1160 P3 RDSKC RC		0	0m	0%	1.501		50				°F
11TI689 - DRE4CUF-1160 RAD SKNC-P4		0	0m	0%	263.875		1,050				°F
11TI689ROC.VTAG - DRE4CUF-1160 P4 RDSKC RC		0	0m	0%	4.329		50				°F
11TI690 - DRE4CUF-1160 P2 T-5 SKN		0	0m	0%	136.744	-10	1,050				°F
11TI690ROC.VTAG - DRE4CUF-1160 P2TB5SKN RC		0	0m	0%	1.477		50				°F
11TI691 - DRE4CUF-1160 RAD SKNC-P5		0	0m	0%	256.906		1,050				°F

CUSA-CSB-0018869
EPA

11TI691ROC.VTAG - DRE4CUF-1160 P5 RDSKC RC		0	0m	0%	6.616		50					°F
11TI692 - DRE4CUF-1160 RAD SKNC-P6		0	0m	0%	136.744		1,050					°F
11TI692ROC.VTAG - DRE4CUF-1160 P6 RDSKC RC		0	0m	0%	3.736		50					°F
11TI693 - DRE4CUF-1160 RAD SKNC-P7		0	0m	0%								
11TI693ROC.VTAG - DRE4CUF-1160 P7 RDSKC RC		0	0m	0%								
11TI694 - DRE4CUF-1160 RAD SKNC-P8		0	0m	0%	262.11		1,050					°F
11TI694ROC.VTAG - DRE4CUF-1160 P8 RDSKC RC		0	0m	0%	4.857		50					°F
11TI695 - DRE4CUF-1160 P7 T-5 SKN		0	0m	0%	236.34		1,050					°F
11TI695ROC.VTAG - DRE4CUF-1160 P7TB5SK RC		0	0m	0%	27.005		50					°F
11TI696 - F1160 BRIDGE WALL NO		0	0m	0%	141.174		1,600					°F
11TI697 - F1160 BRIDGE WALL SO		0	0m	0%	137.526		1,600					°F
11TI698 - F1160 STACK GAS	**Low**	**1**	**6h51m**	**79%**	**165.742**	**400**	**550**	**75.53**	**394.955**	**160.384**		**°F**
4CU.P-1101												
11PI050 - DRE4CUP-1101 SUCT PRES		0	0m	0%	50.833	15	55					PSIG
11PI052 - DRE4CUP-1101 D PRS E1102		0	0m	0%	22.499		550					PSIG
4CU.P-1103												
11FI024 - DRE4CUP-1103 H2O INJ O/H	**Low**	**1**	**6h51m**	**79%**	**0**	**300**		**-25**	**-25**	**-25**		
4CU.P-1104												
11C-11247 - DRE4CUP-1104 NAOH INJ		0	0m	0%								
11FI553 - DRE4CUP-1104 CAUSTIC STM	**Low**	**1**	**6h51m**	**79%**	**0.197**	**50**		**0.159**	**24.611**	**1.223**		**GPM**
4CU.P-1109/A												
11H2ODSLTR.VTAG - DRE4CUP-1109/A H2O DSLTR	**High**	**3**	**7h06m**	**82%**	**-3.769**	**2**	**4**	**-1,518.351**	**11.48**	**5.757**		**%**
11H2ODSLTR.VTAG - DRE4CUP-1109/A H2O DSLTR	**Low**	**3**	**45m**	**9%**	**-3.769**	**2**	**4**	**-28.993**	**109.801**	**5.211**		**%**
4CU.P-1109B												
11H2OE1101S.VTAG - DRE4CUP-1109B H2O E1101S	**Low**	**1**	**6h51m**	**79%**	**0**	**2**	**3**	**-1.529**	**2.799**	**-0.007**		
4CU.P-1158/A												
11FC059 - DRE4CUP-1158/A W/O RATE		0	0m	0%	0	4						
4CU.SEAL_DRUM												
11FI067 - C1160 VENT GAS		0	0m	0%	0		0.5					MMSCFD
4CU.STABILIZER												
11PC091A - V1190 VENT GAS TO K1171		0	0m	0%	0.642		90					PSIG
11TI907 - C1190 REFLUX TEMP		0	0m	0%	59.675	50	100					°F
4CU.T-1108												
11QF_TK1108NH3.P-NH3 - DRE4CUT-1108 NH3 CONC		0	0m	0%								
4CU.V-1100												
11AC050 - DRE4CUV-1100 PH ANALYZ	**Low**	**1**	**6h51m**	**79%**	**0**	**6.5**	**7.5**	**2.658**	**3.142**	**2.997**		
11FI024 - RECYCLE H2O TO C1100 OH	**Low**	**1**	**6h51m**	**79%**	**0**	**300**		**-25**	**-25**	**-25**		
11QF_V1100OVH.P-NH3 - DRE4CUV-1100 NH3 CONC		0	0m	0%	0		350					MG/L
11QM_V1100OVH.P-CHLOR - DRE4CUV-1100 H2O CHLRIDS		0	0m	0%	32	5	50					PPM
11TI054 - E1100 OUTLET	**Low**	**1**	**6h51m**	**79%**	**66.884**	**80**	**130**	**56.658**	**80.048**	**64.356**		**°F**
4CU.V-1102												
11EI521 - V1102 CELL 1 VOLTS	**Low**	**1**	**6h51m**	**79%**	**-25.871**	**450**	**550**	**-25.984**	**3.664**	**-25.681**		**VOLT**
11EI522 - V1102 CELL 2 VOLTS	**Low**	**1**	**6h51m**	**79%**	**-18.731**	**300**	**400**	**-18.844**	**5.772**	**-18.601**		**VOLT**
11EI523 - V1102 CELL 3 VOLTS	**Low**	**1**	**6h51m**	**79%**	**-26.83**	**200**	**400**	**-26.942**	**4.34**	**-26.56**		**VOLT**
11PC051 - V1102 PRESSURE	**Low**	**1**	**6h51m**	**79%**	**0**	**190**	**210**	**133.315**	**133.315**	**133.315**		
11QF0003 - DRE4CUV-1102 DESALT CRD		0	0m	0%	0.5	0	1.75					LB/MBBL
11QF_P1101BCRUDE.API - DRE4CUV-1101CRUDE IN API		0	0m	0%	34.2	32	37					API
11QF_P1101BCRUDE.P-SW - DRE4CUV-1102 CRUDE BS&W		0	0m	0%	0		2					VOLPCT
11TC533 - DRE4CUV-1102 DESALT TMP	**Low**	**1**	**6h51m**	**79%**	**71.701**	**285**	**323**	**63.831**	**279.883**	**95.77**		**°F**
4CU.V-1103												
11PD055 - DRE4CUV-1103 FLSH DRM DP		0	0m	0%	0	7.5	11.5					
11TI539 - P1102 SUCTION TEMP		0	0m	0%								

OPTIMIZATION

DR.EAST.CBO.CU	State	Count	Total Duration	Pct	Current Value	Lo Lim	Hi Lim	While Active Min	While Active Max	While Active Avg	

CUSA-CSB-0018870
EPA

4CU.C-1100											
11FC002 - C-1100 STRIP STEAM	**High**	**1**	**6h51m**	**79%**	**0**	**10**	**23**	**28**	**28**	**28**	
11FC028 - ATCR TO C-1100		0	0m	0%	0	80	160				
11FC048 - ABCR TO C-1100		0	0m	0%	0	40	70				
11LC000 - DRE4CUC-1100 BTM LVL	**High**	**1**	**6h51m**	**79%**	**105**	**30**	**70**	**87.082**	**105**	**101.346**	**%**
11PC005 - DRE4CUC-1100 O/H PRESS		0	0m	0%	0	15	30.5				
11PD001 - DRE4CUC-1100 TRAY48-42DP		0	0m	0%	0		2.1				PSIG
11PD002 - DRE4CUC-1100 TRAY42-35DP		0	0m	0%	0		1.8				PSIG
11PD003 - DRE4CUC-1100 TRAY35-19DP		0	0m	0%	0		2.85				PSIG
11PD004 - DRE4CUC-1100 TRAY18-11DP		0	0m	0%	0.019		1.4				PSIG
11PI006 - C1100 FLASH ZONE	**Low**	**1**	**6h51m**	**79%**	**0.025**	**25**	**40**	**-0.005**	**21.235**	**0.143**	**PSIG**
11TC002 - DRE4CUC-1100 O/H TMP	**Low**	**1**	**6h51m**	**79%**	**-20**	**250**	**300**	**-20**	**213.654**	**-19.22**	
11TI029 - DRE4CUC-1100 F/Z TMP	**Low**	**1**	**6h51m**	**79%**	**65.708**	**630**	**690**	**65.451**	**540.756**	**102.609**	**°F**
4CU.C-1160											
11FC068 - C1160 STRIP STEAM	**Low**	**1**	**6h51m**	**79%**	**0**	**5**	**15**	**0.021**	**0.023**	**0.022**	
11FC069 - VTCR TO C1160	**Low**	**1**	**6h51m**	**79%**	**0**	**55**	**87**	**9.346**	**9.757**	**9.527**	
11FC088 - VBCR TO C1160	**Low**	**1**	**6h51m**	**79%**	**19.747**	**35**	**65**	**-4**	**62.604**	**17.382**	**MBPD**
11PC631 - DRE4CUC-1160 OH PRESS	**High**	**1**	**6h51m**	**79%**	**7.662**		**-25.5**	**0.75**	**17.425**	**6.911**	**INHG**
11PC631 - DRE4CUC-1160 OVHD VAC	**High**	**1**	**6h51m**	**79%**	**7.662**		**-25.5**	**0.75**	**17.425**	**6.911**	**INHG**
11PI061 - DRE4CUC-1160 F/Z PRESS	**High**	**1**	**6h51m**	**79%**	**7.807**		**-25**	**0.887**	**17**	**7.135**	**INHG**
11QM_7SC.D2887-05 - DRE4CUC-1160 7SC 5PCT PT		0	0m	0%	683	660	725				°F
11QM_8SC.D2887-90 - DRE4CUC-1160 8SC 90PCTPT		0	0m	0%	1,030	990					°F
11QM_C1190BTM.D2887-EP - DRE4CUC-1160 C1190BTM EP		0	0m	0%	318		395				°F
11TI067 - C1160 FLASH ZONE	**Low**	**1**	**6h51m**	**79%**	**84.679**	**715**	**765**	**83.569**	**696.954**	**140.71**	**°F**
11TI648 - C1160 TRAY 1	**Low**	**1**	**6h51m**	**79%**	**136.853**	**500**		**132.712**	**499.895**	**151.663**	**°F**
11TI662 - C1160 1 RAMS HORN		0	0m	0%	131.42		500				°F
11TI663 - C1160 2 RAMS HORN		0	0m	0%	131.148		500				°F
11TI664 - C1160 3 RAMS HORN	**Low**	**1**	**6h51m**	**79%**	**131.556**	**500**		**62.687**	**495.353**	**120.894**	**°F**
11TI665 - C1160 4 RAMS HORN	**Low**	**1**	**6h51m**	**79%**	**130.536**	**500**		**60.095**	**492.758**	**119.731**	**°F**
4CU.F-1100A											
11AI000N - F-1100A NORTH O2	**High**	**1**	**6h51m**	**79%**	**0**		**3.5**	**17.609**	**18.916**	**18.311**	**%**
11AI000S - F-1100A SOUTH O2	**High**	**1**	**6h51m**	**79%**	**0**		**3.5**	**12.388**	**12.598**	**12.493**	**%**
4CU.F-1100B											
11AI010N - F-1100B NORTH O2	**High**	**1**	**6h51m**	**79%**	**0**		**3.5**	**22.668**	**22.968**	**22.834**	**%**
4CU.F-1160											
11AI060N - F-1160 NORTH O2	**High**	**1**	**6h51m**	**79%**	**0**		**3.5**	**21.075**	**21.595**	**21.354**	**%**
11AI060S - F-1160 SOUTH O2	**High**	**1**	**6h51m**	**79%**	**0**		**3.5**	**3.491**	**21.805**	**4.432**	**%**
11TI190 - DR4CUF-1160 P1 CNV TBSKN		0	0m	0%							DEGF
11TI191 - DR4CUF-1160 P1 TB14 SKN		0	0m	0%							
11TI192 - DR4CUF-1160 P1 TB5 SKN		0	0m	0%	219.806		1,050				°F
4CU.FEED											
11FI050 - FEED TO F1100 A/B	**Low**	**1**	**6h51m**	**79%**	**0**	**180**		**0.298**	**0.298**	**0.298**	
11FI531 - CRUDE TO E1102A	**Low**	**1**	**6h51m**	**79%**	**0.264**	**100**		**-0.316**	**23.703**	**0.123**	**MBPD**
11FI532 - CRUDE TO E1104	**Low**	**1**	**6h51m**	**79%**	**11.767**	**100**		**-7.5**	**33.164**	**5.646**	**MBPD**
11FI541 - CRUDE TO E1108A	**Low**	**1**	**6h51m**	**79%**	**17.304**	**80**		**-19.986**	**34.867**	**5.497**	**MBPD**
11FI542 - CRUDE TO E1112	**Low**	**1**	**6h51m**	**79%**	**-0.268**	**80**		**-7.5**	**13.024**	**0.236**	**MBPD**
11QM_7SC.D2887-95 - 7 S/C 95PCT POINT		0	0m	0%	912	900	940				°F
11TI092 - DESALT CRUDE FROM E1165	**Low**	**1**	**6h51m**	**79%**	**65.133**	**485**		**64.374**	**472.642**	**82.96**	**°F**
4CU.P-1168											
11PC069 - P-1168 SUCT PRESS	**Low**	**1**	**6h11m**	**71%**	**16.639**	**20.4**		**13.881**	**20.417**	**16.588**	**PSIG**
4CU.SEAL_DRUM											
11FC009 - V1160 VAC OVHD OIL		0	0m	0%							
4CU.STABILIZER											
11PC083.OP - C-1190 BTMS TO TANKAGE		0	0m	0%	106.9		20				%
4CU.V-1100											
11LC001 - DRE4CUV-1100 RFLX DRM	**Low**	**1**	**6h51m**	**79%**	**0**	**30**	**70**	**29.222**	**29.222**	**29.222**	
4CU.V-1102											
11LC052 - V1102 H2O LEVEL	**Low**	**1**	**6h51m**	**79%**	**-1.249**	**30**	**55**	**-1.259**	**-1.24**	**-1.246**	**%**

CUSA-CSB-0018871
EPA

4CU.V-1103											
11LC054 - DRE4CUV-1103FLSH DRM LVL		0	0m	0%	0	40	65				
11PC059 - V1103 FLASH DRUM PRESS		0	0m	0%	0		55				PSIG

ENVIRONMENTAL

DR.EAST.CBO.CU	State	Count	Total Duration	Pct	Current Value	Lo Lim	Hi Lim	While Active Min	While Active Max	While Active Avg	
4CU.DEBRU_V-3212											
42PX012 - 4CUV3212 PAR_ALM42PC012		0	0m	0%	0		0.1				-
4CU.F-1100A											
11AX000N - 4CUF1100 PAR_ALM11AI000N	High	1	6h51m	79%	1		0.1	1	1	1	-
11AX000S - 4CUF1100 PAR_ALM11AI000S	High	1	6h51m	79%	1		0.1	1	1	1	-
11AX005 - 4CUF1100A CEM_ALM11AI005	High	1	6h51m	79%	1		0.1	1	1	1	-
11AX006 - 4CUF1100A CEM_ALM11AI006	High	1	6h51m	79%	1		0.1	1	1	1	-
11F0ANOXRATE - F1100A DAILY NOx EMISSION RATE		0	0m	0%	0		0.026				LBS/MMBTU
11FX111 - 4CUF1100A PAR_ALM11FI111	High	1	6h51m	79%	1		0.1	1	1	1	-
11PX110 - 4CUF1100A PAR_ALM11PC111	High	1	6h51m	79%	1		0.1	1	1	1	-
4CU.F-1100B											
11AX010N - 4CUF1100 PAR_ALM11AI010N	High	1	6h51m	79%	1		0.1	1	1	1	-
11AX010S - 4CUF1100 PAR_ALM11AI010S	High	1	6h51m	79%	1		0.1	1	1	1	-
11AX015 - 4CUF1100B CEM_ALM11AI015	High	1	6h51m	79%	1		0.1	1	1	1	-
11AX016 - 4CUF1100B CEM_ALM11AI016	High	1	6h51m	79%	1		0.1	1	1	1	-
11F0BNOXRATE - F1100A DAILY NOx EMISSION RATE		0	0m	0%	0		0.027				LBS/MMBTU
11FX211 - 4CUF1100B PAR_ALM11FI211	High	1	6h51m	79%	1		0.1	1	1	1	-
11PX210 - 4CUF1100B PAR_ALM11PC211	High	1	6h51m	79%	1		0.1	1	1	1	-
4CU.F-1160											
11AX060N - 4CUF1160 PAR_ALM11AI060N	High	1	6h51m	79%	1		0.1	1	1	1	-
11AX060S - 4CUF1160 PAR_ALM11AI060S	High	1	6h51m	79%	1		0.1	1	1	1	-
11AX065 - 4CUF1160 CEM_ALM11AI065	High	1	6h51m	79%	1		0.1	1	1	1	-
11AX066 - 4CUF1160 CEM_ALM11AI066	High	1	6h51m	79%	1		0.1	1	1	1	-
11F60NOXRATE - F1160 DAILY NOx EMISSION RATE	High	1	6h51m	79%	0		0.029	0.032	0.129	0.11	LBS/MMBTU
11FX622 - 4CUF1160 PAR_ALM11FI622	High	1	6h51m	79%	1		0.1	1	1	1	-
11PX067 - 4CUF1160 PAR_ALM11PC067	High	1	6h51m	79%	1		0.1	1	1	1	-
4CU.FEED											
11DEBRUTOTFEED.DAVG - DEBRU DAILY THROUGHPUT		0	0m	0%	4.868		26,030				BPD

CUSA-CSB-0018872
EPA