Hunlock Creek Energy Center

Operator Logs

Week Beginning: 5/21/12

	Units	Min	Norm	Max	5/21/12		5/22/12		5/23/12		5/24/12		5/25/12		5/26/12		5/27/12	
					Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Steam Turbine Building																		
#1 CARP Tank Level		1/4	1/2		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
#1 CARP Temp	F				68	72	66	68	66	68	68	70	69	72	70	72	72	75
#2 CARP Tank Level		1/4	1/2		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
#2 CARP Temp	F				68	68	74	75	74	76	74	75	79	79	79	79	79	80
North Circ Pump Running	RUN/OFF				OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
North Circ Pump Oil Level		1/3	1/2	7/8	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Noth Circ Pump Packing leakage	yes/no				NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
South Circ Pump Running	RUN/OFF				RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN
South Circ Pump Oil Level		1/3	1/2	7/8	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
South Circ Pump Packing leakage	yes/no				YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
#4 SW Pump Run	RUN/OFF				RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN
#4 SW Pump Oil Level		1/3	1/2	7/8	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN
#4 SW Pump Packing Leakage	yes/no				YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
#5 SW Pump Run	RUN/OFF				OOS	OOS	OOS	OOS	OOS	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN
#5 SW Pump Oil Level		1/3	1/2	7/8	OOS	OOS	OOS	OOS	OOS	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN
#5 SW Pump Packing Leakage	yes/no				OOS	OOS	OOS	OOS	OOS	YES	YES	YES	YES	YES	YES	YES	YES	YES
SW Press at SW Pump	psig	20			120	120	120	120	120	125	130	130	130	130	129	131	128	127
SW Press at SW Filters	psig	20			114	116	115	113	114	120	114	112	120	118	120	119	119	115
SW Press To CCW	psig				94	96	95	93	94	96	94	93	96	96	96	96	95	93
#1 CCW Pump Oil Level		1/3	1/2	7/8	1/2 OFF	1/2 OFF	1/2 OFF	1/2	1/2 OFF	3/4	3/4 OFF	3/4	3/4	3/4 OFF	3/4 OFF	3/4 OFF	3/4	3/4 OFF
#2 CCW Pump Oil Level		1/3	1/2	7/8	3/4 RUN	3/4 RUN	3/4 RUN	3/4	3/4 RUN	3/4	3/4 RUN	3/4	3/4	3/4 RUN	3/4 RUN	3/4 OFF	3/4 RUN	3/4 RUN
EHC Resevoir Level	inches		7"		7"	7"	7"	7	7"	7	7	7	7	7	7"	7"	7"	7"
EHC Temp	F	90	95-105	110	99	102	100	103	101	105	104	103	105	107	104	105	100	104
EHC Press	psig	1750	1800	1835	1793	1790	1791	1790	1789	1788	1789	1790	1788	1788	1788	1785	1789	1788
#1 EHC Pump Filter D/P	psid	0		80	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#2 EHC Pump Filter D/P	psid	0		80	18	18	18	18	19	19	18	18	19	18	18	18	19	20
EHC Kidney Pump Filter D/P	psid	0		80	9	9	9	9	9	9	9	9	9	9	9	9	9	9
EHC OIL DESICCANT FILTER COLOR			BLUE	PINK	BLUE	BLUE	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Condensate Pump Running	3A or 3B				3B	3B	3B	3B	3B	3B	3B	3B	3B	3B	3B	3B	3B	3B
Oil Level		1/3	1/2	7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8	7/8 7/8
Iron Horse Oil Level					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Iron Horse Temp					82	100	95	105	105	105	106	105	105	108	108	109	109	110
In Line Strainer (turned 3 times)	yes/no				YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Seal Oil Pressure	psig				27.1	28.0	27.5	27	27	27	26.5	27	27	27.5	27.5	27.5	27.5	27.0
Backflush H2/Turbine LO Coolers	OK				OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Turbo-Toc	OK				OK RUN	OK RUN	OK RUN	OK	OK RUN	OK	OK RUN	OK	OK RUN	OK	OK RUN	OK	OK RUN	OK
BACK UP GENERATOR FUEL OIL LEVEL	Gal	1/2	FULL		FULL	FULL	FULL	FULL	FULL	FULL	FULL	FULL	FULL	FULL	FULL	FULL	FULL	FULL
Shift Supervisor Review					ESP	DW	ESP	[illegible]	ESP	[illegible]	ESP	[illegible]	DW	[illegible]	DW	[illegible]	DW	[illegible]

Hunlock Creek Energy Center

Operator Logs

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	Units	Min	Norm	Max	5/21/12 Day	5/21/12 Night	5/22/12 Day	5/22/12 Night	5/23/12 Day	5/23/12 Night	5/24/12 Day	5/24/12 Night	5/25/12 Day	5/25/12 Night	5/26/12 Day	5/26/12 Night	5/27/12 Day	5/27/12 Night
HRSG																		
#5 HRSG Walkdown	OK/UNSAT		OK	UNSAT	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
#6 HRSG Walkdown	OK/UNSAT		OK	UNSAT	OOS	OOS	—	—	—		—	—	—	—	—	—	—	—
#5 Inlet House Prefilter D/P	in-Wg	0			0	0	0	0	0	0	0	0	0	0	0	0	0	
#5 Inlet House Filter D/P	in-Wg	0		3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	
#6 Inlet House Prefilter D/P	in-Wg	0			OOS	OOS	—	—	—	—	—	—	—	—	—	—	—	—
#6 Inlet House Filter D/P	in-Wg	0		3.5	OOS	OOS	—	—	—	—	—	—	—	—	—	—	—	—
#6 CTG Hydraulics Oil Level		1/3	FULL		OOS	OOS	—	—	—	—	—	—	—	—	—	—	—	—
#6 Turbine Lube Oil Level		1/3	3/4		OOS	OOS	—	—	—	—	—	—	—	—	—	—	—	—
#6 CTG Generator Oil Level		1/3	7/8		OOS	OOS	—	—	—	—	—	—	—	—	—	—	—	—
#5 CTG Hydraulics Oil Level		1/3	FULL		Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	
#5 Turbine Lube Oil Level		1/3	3/4		Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	
#5 CTG Generator Oil Level		1/3	7/8		7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	
#5 CEM Shack			OK	UNSAT	OK Log	OK	OK Log	OK	OK Log	OK	OK Log	OK	OK Log	OK	OK Log	OK	OK Log	OK
#6 CEM Shack			OK	UNSAT	OOS	OOS	—	—	—		—		—	—	—	—	—	—
Main Gas Inlet Press	psig	620	660	690	645	645	645	650	645	650	645	650	650	650	650	650	650	650
#5 Gas Coalescer D/P	psid		0-5	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#6 Gas Coalescer D/P	psid				OOS	OOS	—	—	—		—	—	—	—	—	—	—	—
NH3 Cont Level	inches		1-3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chem/FO Unloading Cont Level	inches		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CTG #5 DRAIN TANK VALT	EMPTY/UNSAT		EMPTY	PUMP	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
CTG #6 DRAIN TANK VALT	EMPTY/UNSAT		EMPTY	PUMP	3"	3"	3"	3"	3"	3"	3"	3"	3"	2"	2"	2"	2"	2"
CTG #5 TURBINE LUBE OIL FILTER D/P	psid		0-10	15	2.0	2.0	2.0	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CTG #5 SCAVENGING OIL FILTER D/P	psid		0-10	15	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
CTG #5 VG OIL FILTER D/P	psid		0-10	15	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
CTG #5 GENERATOR LUBE OIL FILTER D/P	psid		0-10	15	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
CTG #6 TURBINE LUBE OIL FILTER D/P	psid		0-10	15	OOS	OOS	—	—	—	—	—	—	—	—	—	—	—	—
CTG #6 SCAVENGING OIL FILTER D/P	psid		0-10	15	OOS	OOS	—	—	—	—	—	—	—	—	—	—	—	—
CTG #6 VG OIL FILTER D/P	psid		0-10	15	OOS	OOS	—	—	—	—	—	—	—	—	—	—	—	—
CTG #6 GENERATOR LUBE OIL FILTER D/P	psid		0-10	15	OOS	OOS	—	—	—	—	—	—	—	—	—	—	—	—
Shift Supervisor Review					ESP	DW	ESP	[illegible]	ESP	[illegible]	ESP	[illegible]	DW	[illegible]	DW	[illegible]	DW	[illegible]

If drain tank valt has water it needs to be pumped down and documented and make sure it is pumped to an oil water seperator

*- Circle the running pump

Hunlock Cree nergy Center

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Chiller Building																		
3D Trasar #DT184 Tank Level	gal				28.5	28	28	28	27.8	27.5	27.0	27	27	27.5	26.9	27.0	26.9	27.5
3D Trasar #DT191 Tank Level	gal				55	54.8	54.5	54.5	54.5	54.3	54.0	54	54	54.5	53.8	54.5	53.5	54.5
Stabrex ST 70 Tank Level	gal				51.5	50.9	50.5	50.5	50.5	50	49.8	49.5	49	49.0	47.9	48.5	47	47.5
3D Trasar pH	pH		0-5	10	7.76	8.12	8.10	7.24	8.00	8.19	7.26	8.16	8.06	8.19	7.24	8.32	8.32	8.21
3D Trasar Conductivity	uMhos		0-5	10	1854	1941	1989	1588	1337	1516	1556	1665	1692	1862	1883	2078	2069	2321
#1 Raw Water Pump Oil Level		1/3	1/2	7/8	½ OFF	½ OFF	½ OFF	½	½ OFF	½	½ OFF	½	½	½	½	½	½	½
#2 Raw Water Pump Oil Level		1/3	1/2	7/8	(½) RUN	½ RUN	(½) RUN	(½)	(½) RUN	(½)	(½) RUN	(½)	(½) RUN	(½)	(½) RUN	(½) RUN	½ RUN	(½) RUN
Cooling Tower	OK/UNSAT		OK	UNSAT	OK AUTO	ON AUTO	OK AUTO	OK	OK AUTO	OK	OK AUTO	OK	OK	OK/AUTO	OK	OK/AUTO	OK	OK/AUTO
Chill Water Pumps	OK/UNSAT		OK	UNSAT	OK AUTO	ON AUTO	OK AUTO	OK	OK AUTO	OK	OK AUTO	OK	OK	OK/AUTO	OK	OK/AUTO	OK	OK/AUTO
Cooling Tower Pumps	OK/UNSAT		OK	UNSAT	OK AUTO	ON AUTO	OK AUTO	OK	OK AUTO	OK	OK AUTO	OK	OK	OK/AUTO	OK	OK/AUTO	OK	OK/AUTO
BFP Building																		
#5 BFP Running	OFF/RUN				RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN
Oil Level		1/3	1/2	7/8	½	½	½	½	½	½	½	½	½	½	½	½	½	½
STBY BFP Running	OFF/RUN				OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Oil Level		1/3	1/2	7/8	½	½	½	½	½	½	½	½	½	½	½	½	½	½
#6 BFP Running	OFF/RUN				OOS	OOS	—	—	—	—	—		—	—	—	—	—	—
Oil Level		1/3	1/2	7/8	OOS	OOS	—	—	—	—	—		—	—	—	—	—	—
5711 Tank Level	gal				43.5	43.2	43.0	43	42.8	42.8	42.5	42	42	42.5	41.5	42.0	41.2	41.5
RO Building																		
#1 Demin Pump Oil Level		1/3	1/2	7/8	(½) RUN	(½) RUN	(½) RUN	(½)	(½) RUN	(½)	(½) RUN	(½)	(½)	(½)	(½)	(½)	(½)	(½)
#2 Demin Pump Oil Level		1/3	1/2	7/8	½ OFF	½ OFF	½ OFF	½	½ OFF	½	½ OFF	½	½	½	½	½	½	½
Air Receiver Pressure	psig	90	130	150	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Air Receiver Filter D/P	psid		0-5	10	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Air Dryer Filter D/P	psid		0-5	10	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
Air Compressor Running	1 OR 2				1 S 2A	1 S 2A	1 S 2A	1A 2A	1 S 2A	2	1 S 2A	1	1A 2S	1 S 2A	1 S 2A	1 S 2A	1 S 2A	1 S 2A
Oil Level		1/3	1/2	7/8	2=7/8	2=7/8	2=7/8	2 7/8	2=7/8	7/8	2=7/8	7/8	7/8	2=7/8	2=7/8	2=7/8	2=7/8	2=7/8
Off line Air Compressor Oil Level		1/3	1/2	7/8	1=7/8	1=7/8	1=7/8	1 7/8	1=7/8	7/8	1=7/8	½	2=½	1=7/8	1=7/8	1=7/8	1=7/8	1=7/8
Aux Boiler																		
BT-3000 Tank Level	gal				72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5
Steam Turbine Building																		
Run Traveling Screens for 15 Minutes	OK/UNSAT				OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Add H2 as needed	OK/ADD				OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
#1 Turbine Bearing Temp	F				—	—	—	—	—	—	—	—	—	—	—	—	—	—
#2 Turbine Bearing Temp	F				126	126	127	125	124	127	124	129	122	126	124	126	122	128
#3 Turbine Bearing Temp	F				105	108	108	108	107	108	108	108	108	108	107	108	108	109
#4 Turbine Bearing Temp	F				132	146	144	144	144	142	142	142	142	143	143	143	143	144
#5 Turbine Bearing Temp	F				110	110	110	110	110	110	111	111	110	109	110	110	110	110
#6 Turbine Bearing Temp	F				107	106	107	106	107	108	109	108	108	107	107	107	107	107
Shift Supervisor Review					SSP	DW	SSP		SSP				DW	DW	DW		DW	

Hunlock Cree[illegible] [illegible]nergy Center

Operator Logs

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	Units	Min	Norm	Max	5/21/12		5/22/12		5/23/12		5/24/12		5/25/12		5/26/12		5/27/12	
					Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
T3																		
Winding Temperature	DEG C				23	34	28	38	36	40	36	38	36	42	34	40	35	44
Oil Temperature	DEG C				27	35	28	38	36	40	36	38	36	42	36	40	35	44
Transformer Press	psig				-.5	.9	.1	1.5	[illegible].6	2.0	.9	1.5	.6	1.5	.5	1.1	.1	1.9
Liquid Level					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Bushing Levels					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Containment Level					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
52T3																		
SF6 Press	psig				70	74	72	74	72	75	72	74	72	72	72	72	72	74
Counter					367	367	368	368	368	369	369	369	369	369	369	369	369	369
SST3																		
Winding Temperature	DEG C				33	40	38	41	36	40	40	40	38	53	38	42	38	48
Oil Temperature	DEG C				33	36	36	40	36	40	40	39	39	53	39	41	38	45
Transformer Press	psig				1.8	2.5	2.2	2.5	2.0	2.5	2.1	2.0	2.2	3.0	2.1	2.5	2.0	3.5
Liquid Level					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Bushing Levels					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Containment Level					1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
T5																		
Winding Temperature	DEG C				58	78	72	77	72	76	66	68	66	80	65	79	61	80
Oil Temperature	DEG C				54	72	68	71	68	72	64	66	65	78	61	72	60	78
Pressure	psig				2.9	6.0	5.0	6.0	5.2	5.5	4.4	5.5	4.5	6.5	3.6	5.5	3.5	6.7
Liquid Level					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Containment Level					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Bushing Levels					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
T6																		
Winding Temperature	DEG C				18	22	19	38	38	40	41	42	42	45	41	43	40	48
Oil Temperature	DEG C				18	23	19	38	38	39	41	42	42	46	41	43	41	49
Pressure	psig				-1.0	-1.0	-.5	0	-.6	-1	-1.0	-.5	-.5	-.5	-.4	-.8	-.4	-.5
Liquid Level					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Containment Level					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Bushing Levels					OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
52T5																		
SF6 Pressure	psig				72	76	74	76	73	75	74	75	74	78	74	76	74	79
Counter					163	163	163	163	163	163	163	163	163	163	163	163	163	163
52T6																		
SF6 Pressure	psig				68	72	70	74	70	74	71	74	70	73	70	73	70	75
Counter					146	146	146	146	146	146	146	146	146	146	146	146	146	146
52U																		
SF6 Pressure	psig				64	66	64	70	65	70	65	70	66	69	65	69	65	71
Counter					97	97	97	97	97	97	97	97	97	97	97	97	97	97
Shift Supervisor Review	INIT				[illegible]	DW	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	DW	[illegible]	DW	[illegible]	DW	[illegible]

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		Units	Min	Norm	Max	5/21/12 Day	5/21/12 Night	5/22/12 Day	5/22/12 Night	5/23/12 Day	5/23/12 Night	5/24/12 Day	5/24/12 Night	5/25/12 Day	5/25/12 Night	5/26/12 Day	5/26/12 Night	5/27/12 Day	5/27/12 Night
RO Unit																			
Online or Offline		ON/OFF				OFF	ON	ON	ON	ON	ON	ON	ON	OFF	ON	OFF	ON	OFF	ON
Multi Media Filter	**Tag Number**																		
press diff between water inlet and outlet	PDIS 103	psid		3	5		3.0	3.1	3.5	3.4	3.5	3.6	3.6		4.1		4.0		4.7
inlet water flow meter	FIT 101	GPM		165			193.7	181.7	199.5	199.8	211.2	207.4	215.5		206.4		191.3		202.7
outlet water pressure	PI 102	psig		40			42	42	42	42	42	42	42		39		38		39
inlet water pressure	PI 101	psig		40			48	48	48	48	48	48	48		46		46		46
RO (south side)	**Tag Number**																		
2nd pass reject pressure	PI 218	psig		65			58	56	56	56	56	56	56		55		55		55
RO feed	PI 215	psig		90			74	75	75	75	75	74	74		73		70		70
3rd stage In	PI 210	psig		90			84	86	86	84	84	82	84		81		86		80
RO feed	PI207	psig		120			120	124	120	122	122	122	122		120		120		120
booster pump 1st pass pressure	PI 205	psig		288			285	285	285	280	285	284	285		286		285		285
booster pump 2nd pass pressure	PI 213	psig		280			290	290	290	290	290	290	290		291		291		293
Fil-Trek water pressure into filter	PI203	psig		35			38	40	40	40	40	40	40		40		38		36
Fil-Trek water pressure out of filter	PI 204	psig		35			40	40	40	40	40	40	40		36		34		34
Left of Panel (chemistry)	**Tag Number**																		
2nd pass permeate conductivity	AIT 203	us/cm					1.914	1.969	1.837	1.847	1.894	1.945	1.771		2.067		2.155		2.007
feed conductivity	AIT 202A	us/cm					128.3	132.2	139.2	138.1	137.5	141.6	145.4		139.7		172.4		145.7
1st pass permeate conductivity	AIT 202B	us/cm					2.530	2.708	2.650	2.774	2.770	2.930	2.734		2.769		4.090		3.030
Feed ORP	AIT 201	Mv	100	200	250+		201	206	185	186	186	188	178		197		191		177
Fil-Trek press diff between inlet and outlet	PDIS 201	psid					0	0	0	0	0	0	0		0		0		0
Panel	**Tag Number**																		
1st pass Recovery rate	%						72	75	72	72	72	72	73		74		73		72
1st pass reject flow	GPM						35.8	32	36.4	35.1	36.9	33.4	34.6		32.9		33.4		35.2
2nd pass reject Flow	FIT 204	GPM		14			10.0	9.9	9.6	10.0	9.9	9.8	9.9		9.3		9.5		10.1
2nd pass recovery rate	%						91	92	92	91	92	92	92		92		92		92
Demin Tank level	%		50	90	100	94	94	93	94	94	94	94	89	96	92	44	92	46	94
Permeate tank level	%		50	80	100	82	79	74	72	71	72	78	76	81	79	70	77	81	71
RO (north side)	**Tag Number**																		
1st pass reject flow	FIT 202	GPM		30			36.02	34.02	37.26	35.07	36.26	33.41	32.14		33.92		32.92		35.14
1st pass permeate flow	FIT 201	GPM		80			92.06	90.99	91.26	92.18	92.56	92.93	91.80		92.49		92.04		93.70
2nd pass permeate flow	FIT 203	psig		85			100.2	108.2	106.3	105.5	108.0	107.6	108.0		105		107.4		109.6
2nd stage In	PI 217	psig		80			66	65	65	65	65	65	65		63		63		64
2nd pass permeate flow pressure	PI 216	psig		10			13	12	12	12	12	12	12		12		12		12
1st pass reject flow pressure	PI 211	psig		70			64	65	65	64	64	64	63		61		60		60
1st pass permeate flow pressure	PI 208	psig		25			38	41	40	40	40	41	40		40		43		40
2nd stage In	PI 209	psig		100			101	102	100	102	100	101	100		97		99		100
Chemicals																			
Antiscalant (hypersperse MDC 700) level		US Gal	10		70	62	62	61	60	60	60	60	59	59	59	59	59	59	59
Antiscalant pump pressure		psig				40	42	40	42	42	42	42	42		40		40		40
Sodium Bisulfite (permacare PC-7408) level		US Gal	10		70	26	26	25	22	22	20	20	19	18	17	15	15	12	10
Sodium Bisulfite pump pressure		psig				40	38	40	40	42	42	42	42		46		44		40
Permeate Pumps to Demin Tank																			
Permeate Transfer pump		#1 or #2				NONE	1	NONE	2	NONE	NONE	NONE	2	NONE	#2	NONE	#2	NONE	NONE
Transfer Press	PI 301	PSI				26	56	26	56	26	27	26	52	26	58	26	57	26	27
Demin Tank filter serial Number	# 15904	on/off				ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Demin Tank filter serial Number	# 15885	on/off				OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Shift Supervisor Review						ESP	[illegible]	ESP	[illegible]	ESP	[illegible]	ESP	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Hunlock Creek Energy Center

Operator Logs

Week Beginning: 5/21/12

	Units	Min	Norm	Max	5/21/12 Day	5/21/12 Night	5/22/12 Day	5/22/12 Night	5/23/12 Day	5/23/12 Night	5/24/12 Day	5/24/12 Night	5/25/12 Day	5/25/12 Night	5/26/12 Day	5/26/12 Night	5/27/12 Day	5/27/12 Night
Chiller Logs Unit 1*																		
Online or Offline	on/off				OFF	ON	ON	ON	ON	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON
Valves Lined Up or By-passed	in/out				IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN
Evaporator																		
Inlet Temp	Deg F					51.0	50.6	51.6	50.8	54.2	55.7	50.9	55.3	52.9	55.7	52.9	56.9	54.1
Outlet Temp	Deg F					46.9	46.9	46.9	47.0	46.9	54.2	46.9	54.3	46.9	54.0	46.9	55.6	46.9
Refrigerant Press						-7.8	-8.1	-8.1	-8.1	-7.7	-6.4	-8.1	-6.3	-7.7	-6.5	-8.1	-6.0	-7.7
Condenser																		
Inlet Temp	Deg F					70.9	71.0	71.2	69	73.1	71.2	70.8	70.5	75.9	68.2	76.2	71.4	79.5
Outlet Temp	Deg F					74.9	74.6	75.7	72.8	75.1	71.1	74.9	70.7	81.7	68.5	82.1	71.7	86.4
Refrigerant Press						-8.0	-1.8	-1.4	-2.3	-8.0	-6.5	-1.7	-6.4	-8.0	-6.5	-0.6	-6.1	-8.0
Compressor																		
Starts						72	73	74	74	74	74	75	75	76	76	77	77	77
Runtime	Hours					413.23	414.58	422:36	431:55	431:55	431:55	443:41	447.55	447.56	447.56	457.53	462:12	462.12
Oil Tank Pressure	psig					-8.1	-7.8	-7.7	-8.1	-8.1	-6.6	-7.8	-6.5	-8.1	-6.6	-7.9	-6.2	-8.1
Oil Discharge Pressure	psig					-8.2	16.1	15.8	-8.2	-8.2	-6.0	15.9	-6.5	-8.2	-6.7	16.2	-6.2	-8.2
Oil Differential Pressure	psid					0	23.76	23.61	.01	0	0	23.70	0	0	0	23.69	0	0
Oil Level			*		OK		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Oil Tank Temp	Deg F					146	109.8	110.8	144.1	143.5	141.4	112	142	141.4	138.8	115.1	145.7	141.3
IGV 1 Position	%					0	18.4	23.5	0	0	0	21	0	0	0	35.9	0	0
IGV 2 Position	%					0	68.5	75	0	0	0	72.2	0	0	0	83.3	0	0
IGV 1 Steps						0	9547	12278	0	0	0	10926	0	0	0	18600	0	0
IGV Steps						0	32608	35685	0	0	0	31337	0	0	0	39613	0	0
Motor																		
% RLA L1, L2, L3	%					0	45.9	51.5	0	0	0	48	0	0	0	67.3	0	0
Amps L1, L2, L3	amps					0	118	136	0	0	0	123	0	0	0	174.0	0	0
Volts AB, BC, CA	Volts					2363	2354	2353	2354	2364	2367	2370	2368	2369	2386	2387	2382	2366
Power kW	kW					0	283.2	462.9	0	0	0	426.4	0	0	0	633.6	0	0
pF						0	.87	.85	0	0	0	.84	0	0	0	0.88	0	0
Winding Temp #1	Deg F					78.2	96.6	94.9	76.9	74.3	70.6	92.5	77.5	79.7	73.1	105.8	80.1	77.8
Winding Temp #2	Deg F					72.1	88.8	92.9	78.4	74.8	71.5	90.8	78.9	80.5	74.2	105.9	81.6	78.3
Winding Temp #3	Deg F					71.7	90.4	95.2	77.7	74.6	71.1	92.6	78.0	80.0	73.8	110	80.5	78.2
Shift Supervisor Review					ESP	DW	ESP	[illegible]	ESP	[illegible]	ESP	[illegible]	DW	RP	DW	RP	DW	RP

*= OIL SUMP IS LOCATED ON THE ROAD SIDE OF THE CHILLER UNIT. NORMAL OIL LEVEL SHOULD BE; BOTTOM SIGHT GLASS FULL AND JUST BE SEEN IN TOP GLASS. THERE ARE BALLS IN THE SIGHT GLASS IT MAKE IT EASIER TO SEE. (BOTTOM GLASS BALL AT THE TOP AND TOP GLASS BALL ON THE BOTTOM).

Hunlock Creek Energy Center

Operator Logs

Week Beginning: 5/21/12

	Units	Min	Norm	Max	5/21/12 Day	5/21/12 Night	5/22/12 Day	5/22/12 Night	5/23/12 Day	5/23/12 Night	5/24/12 Day	5/24/12 Night	5/25/12 Day	5/25/12 Night	5/26/12 Day	5/26/12 Night	5/27/12 Day	5/27/12 Night
Chiller Logs Unit 2*																		
Online or Offline	on/off				OFF	ON	ON	ON	ON	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON
Valves Lined Up or By-passed	in/out				IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN
Evaporator																		
Inlet Temp	Deg F					51.0	50.4	51.6	50.6	52.4	55.7	50.9	55.3	52.9	55.7	53.0	53.9	54.1
Outlet Temp	Deg F					46.9	46.9	46.9	46.9	46.9	54.2	46.9	54.3	46.9	54.0	46.9	55.6	46.9
Refrigerant Press						-8.1	-7.1	-6.9	-8.2	-8.2	-6.2	-7.0	-6.4	-7.7	-6.3	-8.1	-6.1	-7.7
Condenser																		
Inlet Temp	Deg F					72.9	71.0	71.2	70	73.9	71.1	70.8	70.5	75.9	68.2	76.2	71.4	79.5
Outlet Temp	Deg F					74.9	74.6	75.7	73.6	79.1	71.2	74.9	70.7	81.7	68.5	82.1	71.7	86.9
Refrigerant Press						-6.8	-7.3	-7.1	-2.1	-.5	-6.3	-7.4	-6.5	8.0	-6.3	-0.6	-6.3	-8.0
Compressor																		
Starts						77	77	78	79	79	79	78	79	80	80	80	80	81
Runtime	Hours					375.5	380:11	380:12	380:33	391:59	386:54	390:39	396:34	409:0	414:09	414:09	414:09	423:16
Oil Tank Pressure	psig					-7.8	-7.4	-7.2	-7.9	-7.6	-6.4	-7.5	-6.6	-7.4	-6.4	-7.2	-6.4	-7.1
Oil Discharge Pressure	psig					14.3	-7.3	-7.1	14.4	14.7	-6.3	-7.9	-6.5	-13.1	-6.3	-7.1	-6.3	11.7
Oil Differential Pressure	psid					22.02	0	0	22.19	22.16	139.7	0	0	20.44	0	0	0	18.84
Oil Level			*		OK		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Oil Tank Temp	Deg F					102.7	142.5	139.8	110	109.7	137.7	145.3	139.9	113	143.3	139.7	145.9	115.7
IGV 1 Position	%					19.9	0	0	18.2	27.6	0	0	0	34.7	0	0	0	47.0
IGV 2 Position	%					70.5	0	0	68.4	78.4	0	0	0	82.7	0	0	0	88.1
IGV 1 Steps						10677	0	0	5690	14684	0	0	0	13299	0	0	0	24745
IGV 2 Steps						33033	0	0	32032	36684	0	0	0	38226	0	0	0	41304
Motor																		
% RLA L1, L2, L3	%					42.6	0	0	41.7	51.4	0	0	0	59.4	0	0	0	71.9
Amps L1, L2, L3	amps					468	0	0	118	150	0	0	[illegible]	170	0	0	0	206
Volts AB, BC, CA	Volts					2360	2361	0	2354	2360	2370	2379	2374	2357	2385	2365	2385	2358
Power kW	kW					4829	0	0	388.7	518.7	0	0	0	612	0	0	0	756
pF						0.81	0	0	.80	.85	.01	0	0	0.85	0	0	0	0.86
Winding Temp #1	Deg F					88.1	77.6	77.2	86.4	95	78.2	74.6	70.6	100.4	78.4	76.6	72.6	109.9
Winding Temp #2	Deg F					88.1	72.8	77.7	86.4	95.2	78.7	74.5	70.6	100.6	79.6	76.7	72.7	107.7
Winding Temp #3	Deg F					93.9	78.6	78.4	92.4	102.9	79.1	76.0	72.0	109.8	79.7	78.1	73.2	122.4
Shift Supervisor Review					ESP	DW	ESP	SH	ESP	SH	ESP	JH	DW	RK	DW	RP	DW	JP

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