

**Los Esteros Critical Energy Facility
Title V CEMS Semi-Annual Monitoring Report
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**Table VII - A
Applicable Limits and Compliance Monitoring Requirements
S-1, S-2, S-3, & S-4 COMBUSTION GAS TURBINES WITH WATER INJECTION,
S-7, S-8, S-9 & S-10 HEAT RECOVERY STEAM GENERATORS**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
NOx	*BAAQMD 9-9-301.2	N		9 ppmv @ 15% O2, dry Or 0.43 lbs/MW-hr	BAAQMD 9-9-501 and BAAQMD condition #23868, part 25c	C	CEM	N/A	
NOx	*BAAQMD 9-9-301.3	Y		9 ppmv @ 15% O2, dry	BAAQMD 9-9-501 and BAAQMD condition #23868, part 25c	C	CEM	N/A	
NOx	NSPS Subpart KKKK 40 CFR 60.4320(a) and (h)	Y		25 ppmv @ 15% O2, dry 30 day rolling average	NSPS 40 CFR 60.4335(b)(1)	C	CEM	N/A	
NOx	None	Y		None	40 CFR 75.10	C	CEM	N/A	
NOx (as NO ₂)	BAAQMD condition #23688, part 10	Y		1464 lb/day and 102 lb/hr for all turbines and HRSGs combined during commissioning, including startup and shutdown of turbine without catalyst	BAAQMD condition #23688, parts 7 and 25c	C	CEM		X*

- *There was one issue of non-compliance with Condition 11, NOx lb/hr limit, on May 25th, 2013 for S-3. Please refer to RCA #06K65 and #06K66. Currently the facility is in compliance with this Condition

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								Yes	No
NOx (as NO ₂)	BAAQMD condition #23688, part 10	Y		1464 lb/day and 61 lb/hr for all turbines and HRSGs combined during commissioning, including startup and shutdown of turbine with catalyst	BAAQMD condition #23688, parts 7 and 25c	C	CEM	N/A	
NOx	BAAQMD condition #23688, part 19a	Y		2 ppmv @ 15% O ₂ , dry, 1-hr average except during turbine startup or shutdown	BAAQMD condition #23688, parts 19a and 25c	C	CEM	N/A	
NOx	BAAQMD condition #23688, part 19a	Y		2 ppmv @ 15% O ₂ , dry, 1-hr average except during turbine startup or shutdown	BAAQMD condition #23688, part 26a	P/A	Source test	N/A	
NOx (as NO ₂)	BAAQMD condition #23688, part 22	Y		175.6 lb/day for each turbine/HRSG power train including startup and shutdown	BAAQMD condition #23688, part 25c	C	CEM	N/A	
NOx (as NO ₂)	BAAQMD condition #23688 part 22	Y		702.4 lb/day (as NO ₂) for all turbines and HRSGS combined, including startup and shutdown	BAAQMD condition #23688, part 25c	C	CEM	N/A	
NOx (as NO ₂)	BAAQMD condition #23688, part 22	Y		94.1 tons per year (as NO ₂) for all turbines and HRSGs combined, including startup or shutdown	BAAQMD condition #23688, part 25c	C	CEM	X	
CO	BAAQMD condition #23688, part 10	Y		1056 lb/day and 88 lb/hr for all turbines combined during commissioning, including startup and shutdown of turbine without catalyst	BAAQMD condition #23688, parts 7 and 25c	C	CEM	X	
CO	BAAQMD condition #23688, part 10	Y		984 lb/day and 41 lb/hr for all turbines and HRSGs combined during commissioning, including startup and shutdown of turbine with catalyst	BAAQMD condition #23688, parts 7 and 25c	C	CEM	N/A	

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								Yes	No
CO	BAAQMD condition #23688, part 19c	Y		2 ppmv @ 15% O ₂ , dry, 1-hr average except during turbine startup or shutdown	BAAQMD condition #23688, parts 19c and 25c	C	CEM	N/A	
CO	BAAQMD condition #23688, part 19c	Y		2 ppmv @ 15% O ₂ , dry, 1-hr average except during turbine startup or shutdown	BAAQMD condition #23688, part 26c	P/A	Source test	N/A	
CO	BAAQMD condition #23688, part 22	Y		97 lb/day for each turbine/HRSO power train including startup and shutdown	BAAQMD condition #23688, part 25c	C	CEM	N/A	
CO	BAAQMD condition #23688, part 22	Y		388 lb/day for all turbines and HRSO combined, including startup and shutdown	BAAQMD condition #23688, part 25c	C	CEM	N/A	
CO	BAAQMD condition #23688, part 22	Y		53.4 tons per year for all turbines and HRSOs combined, including startup and shutdown	BAAQMD condition #23688, part 25c	C	CEM	X	
CO ₂		Y		None	40 CFR 75.10	C	CEM (CO ₂) or CEM (O ₂) or fuel flow monitor	X	
SO ₂	BAAQMD 9-1-301	Y		GLC ¹ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO ₂	BAAQMD 9-1-302	Y		300 ppm (dry)	BAAQMD Condition 23688, Part 26f	P/A	Source test	N/A	
SO ₂	NSPS Subpart KKKK 40 CFR 60.4330 (a)(2)	Y		0.060lb SO ₂ /MMbtu	NSPS 40 CFR 60.4365(a)	N	None	N/A	

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								Yes	No
SO ₂	None	Y		None	40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3		Fuel measurements, calculations	N/A	
SO ₂	BAAQMD condition #23688, part 22	Y		6.43 tons/calendar year for all turbines and HRSGs combined including startup and shutdown of turbines	BAAQMD Condition 23688, Part 26f	P/A	Source Test	N/A	
Opacity	BAAQMD 6-1-301	N		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	None	X	
Opacity	SIP 6-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour		N	None	X	
Opacity	BAAQMD condition #23688, part 18	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour or equivalent 20% opacity		N	None	X	
FP	BAAQMD 6-1-310	Y		0.15 grain/dscf		N	None	N/A	
FP	SIP 6-310	Y		0.15 grain/dscf		N	None	N/A	
PM ₁₀	BAAQMD condition #23688, part 22	Y		38.5 tons/year for all turbines and HRSGS combined including startup and shutdown of turbines	BAAQMD condition #23688 part 26e	P/A	Source test, records & calculation	N/A	
POC	BAAQMD condition #23688 part 10	Y		288 lb/day for all turbines and HRSG combined during commissioning and including startup and shutdown of turbines without catalyst	BAAQMD condition #23688 part 26d	P/A	Source Test, records & calculation	X	
POC	BAAQMD condition #23688 part 10	Y		114 lb/day for all turbines and HRSG combined during commissioning and including startup and shutdown of turbines with catalyst	BAAQMD condition #23688 part 26d	P/A	Source Test, records & calculation	N/A	

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								Yes	No
POC	BAAQMD condition #23688, part 19d	Y		1 ppmv @ 15% O ₂ , dry, 1-hr average except during turbine startup or shutdown	BAAQMD condition #23688, part 26d	P/A	Source Test	N/A	
POC	BAAQMD condition #23688, part 22	Y		20.2 lb/day for each turbine/HRSG power train including startup and shutdown	BAAQMD condition #23688, part 26d	P/A	Source Test	N/A	
POC	BAAQMD condition #23688, part 22	Y		80.8 lb/day for all turbines and HRSG combined, including startup and shutdown	BAAQMD condition #23688, part 26d	P/A	Source Test	N/A	
POC	BAAQMD condition #23688 part 22	Y		12.3 tons/year for all turbines and HRSGs combined including startup and shutdown.	BAAQMD condition #23688, part 26d	P/A	Source Test	N/A	
NH ₃	BAAQMD condition #23688, part 19b	N		5 ppmv @ 15% O ₂ , dry, averaged over 3-hrs except during turbine startup or shutdown	BAAQMD condition #23688, parts 19b and 26b	C	NH ₃ flow meter	N/A	
NH ₃	BAAQMD condition #23688, part 19b	N		5 ppmv @ 15% O ₂ , dry, averaged over 3-hrs except during turbine startup or shutdown	BAAQMD condition #23688, part 26b	P/A	Source Test	N/A	
NH ₃	BAAQMD condition #23688, part 22	Y		104 lb/day for each turbine/HRSG power train including startup and shutdown	BAAQMD condition #23688, part 25b	P/A	Ammonia flow meter	N/A	
NH ₃	BAAQMD condition #23688, part 22	Y		416 lb/day for all turbines and HRSGs combined, including startup and shutdown	BAAQMD condition #23688, part 25b	P/A	Ammonia flow meter	N/A	
NH ₃	BAAQMD condition #23688 part 22	Y		56.9 tons/year for all turbines and HRSGs combined including startup and shutdown.	BAAQMD condition #23688, part 26b	P/A	Source test	N/A	

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								Yes	No
Formaldehyde	BAAQMD condition #23688 part 43	N		6480 lbs/year for all turbines and HRSGs combined	BAAQMD condition #23688, Parts 44 & 45	P (Startup and biennial thereafter)	Source Test	N/A	
Acetaldehyde	BAAQMD condition #23688 part 43	N		3000 lbs/year for all turbines and HRSGs combined	BAAQMD condition #23688, Parts 44 & 45	P (Startup and biennial thereafter)	Source Test	N/A	
Specific PAHs	BAAQMD condition #23688 part 43	N		3.2 lbs/year for all turbines and HRSGs combined	BAAQMD condition #23688, Parts 44 & 45	P (Startup and biennial thereafter)	Source Test	N/A	
Acrolein	BAAQMD condition #23688 part 43	N		65.3 lbs/year for all turbines and HRSGs combined	BAAQMD condition #23688, Parts 44 & 45	P (Startup and biennial thereafter)	Source Test	N/A	
Sulfuric Acid Mist	BAAQMD condition #23688 part 43	Y		7 tons/year for all turbines and HRSGs combined	BAAQMD condition #23688, Parts 27	P/SA (May be lowered after 2 tests based on variability)	Source Test	N/A	
Heat input limit	BAAQMD condition #23688, part 24	Y		500 MM BTU/ hr (HHV), for each turbine	BAAQMD condition #23688, part 25d	C	Fuel meter, firing monitor, calculations	X	
Heat input limit	BAAQMD condition #23688, part 24	Y		500 MM BTU/ hr (HHV), for each turbine	BAAQMD condition #23688, part 25d	P/M	Fuel composition analysis	X	
Heat input limit	BAAQMD condition #23688, part 24	Y		500 MM BTU/ hr (HHV), for each turbine	BAAQMD condition #23688, part 25d	P/A	Source test	N/A	
Heat input limit	BAAQMD condition #23688, part 24	Y		639 MM BTU/day (HHV) for each turbine w/ Duct Burner	BAAQMD condition #23688, part 25d	C	fuel meter, firing monitor, calculations	N/A	

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								Yes	No
Heat input limit	BAAQMD condition #23688, part 24	Y		639 MM BTU/day (HHV) for each turbine w/ Duct Burner	BAAQMD condition #23688, part 25d	P/M	Fuel composition Analysis	N/A	
Heat input limit	BAAQMD condition #23688, part 24	Y		639 MM BTU/day (HHV) for each turbine w/ Duct Burner	BAAQMD condition #23688, part 25d	P/A	Source Test	N/A	
Heat input limit	BAAQMD condition #23688, part 24	Y		12,000 MM BTU/day (HHV) for each turbine	BAAQMD condition #23688, part 25d	C	fuel meter, firing monitor, calculations	X	
Heat input limit	BAAQMD condition #23688, part 24	Y		12,000 MM BTU/day (HHV) for each turbine	BAAQMD condition #23688, part 25d	P/Q	Fuel composition Analysis	X	
Heat input limit	BAAQMD condition #23688, part 24	Y		15,366 MM BTU/day (HHV) for each turbine w/ Duct Burner	BAAQMD condition #23688, part 25d	C	fuel meter, firing monitor, calculations	N/A	
Heat input limit	BAAQMD condition #23688, part 24	Y		15,366 MM BTU/day (HHV) for each turbine w/ Duct Burner	BAAQMD condition #23688, part 25d	P/Q	Fuel composition Analysis	N/A	
Heat input limit	BAAQMD condition #23688, part 24	Y		18,215,000 MM BTU/yr (HHV) for all turbines w/ Duct Burner	BAAQMD condition #23688, part 25d	C	fuel meter, firing monitor, calculations	X	
Heat input limit	BAAQMD condition #23688, part 24	Y		16,560,000MM BTU/yr. (HHV) for all turbines w/ Duct Burner	BAAQMD condition #23688, part 25d	P/Q	Fuel composition analysis	X	
Unabated firing	BAAQMD condition #23688, part 8	Y		250 hours during commissioning	BAAQMD condition #23688, part 8	P/H	Records	X	

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								Yes	No
MW	N/A			None	BAAQMD condition #23688, part 26h	P/A	Source test	N/A	
Gas temperature	N/A			None	BAAQMD condition #23688, part 26j	P/A	Source test	N/A	
Stack gas flow	N/A			None	BAAQMD condition #23688, part 26i	P/A	Source test	N/A	
NH ₃ injection rate	N/A			None	BAAQMD condition #23688, part 26k	P/A	Source test	N/A	
Water Injection Rate	N/A			None	BAAQMD condition #23688, part 26l	P/A	Source test	N/A	

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**Table VII – B
Applicable Limits and Compliance Monitoring Requirements
S-5 FIRE PUMP DIESEL ENGINE**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
Opacity	BAAQMD 6-1-303.1	Y		>Ringelmann No.2 for no more than 3 minutes in any hour		N		X	
Opacity	SIP Regulation 6-303.1	Y		>Ringelmann No.2 for no more than 3 minutes in any hour		N		X	
FP	BAAQMD 6-1-310	Y		0.15 gr/dscf Particulate Weight Limitation		N		X	
FP	SIP Regulation 6-310	Y		0.15 gr/dscf		N		X	
SO ₂	BAAQMD 9-1-301	N		GLC ¹ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO ₂	BAAQMD 9-1-304	Y		0.5% sulfur in fuel by weight	BAAQMD Condition #23688, part 39	P/E	Fuel certification	X	
Hours of operation	BAAQMD Regulation 9-8-330.1	N		Emergency use for an unlimited number of hours	BAAQMD Regulation 9-8-530	P	Records	X	
Hours of operation	40 CFR Part 63, Subpart ZZZZ, 63.6640(f) (1)(ii)	Y		Maintenance checks and readiness testing less than 100 hr/yr	40 CFR Part 63, Subpart ZZZZ, 63.6655(e)	P	Records	X	
Hours of operation	BAAQMD Condition #23688, part 39	N		Reliability related activities less 50 hr/yr	BAAQMD Condition #23688, parts 41 & 42	C P/E	Records	X	

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**Table VII – C
Applicable Limits and Compliance Monitoring Requirements
S-11 SIX CELL COOLING TOWER**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
Opacity	BAAQMD 6-1-301	Y		>Ringelmann No.1 for no more than 3 minutes in any hour		N		N/A	
Opacity	SIP 6-301	Y		>Ringelmann No.1 for no more than 3 minutes in any hour		N		N/A	
FP	BAAQMD 6-1-310	Y		0.15 gr/dscf		N		N/A	
FP	SIP 6-310	Y		0.15 gr/dscf		N		N/A	
Drift Rate	BAAQMD Condition #23688, part 46	N		0.0005%	BAAQMD Condition #23688, part 47	P Initial (5 th and 15 th Year if required by CPM)	Source Test	N/A	
TDS	BAAQMD condition #23688, part 46	N		<6,000 ppmw	BAAQMD condition #23688, part 46	P/D	TDS Test	N/A	