COVANTA
Powering Today. Protecting Tomorrow.

DYEC AMESA – Investigation Checklist

SAMPLE VERIFICATION	
Date (DD/MM/YYYY)	
_____	Verify date of receipt of XAD traps and hardware
_____	Verify installation date for XAD trap and hardware
_____	Verify removal date for XAD trap and hardware
_____	Verify date XAD trap and hardware received at the test lab
_____	Verify date XAD trap processed at the test lab
LAB FACTORS	
☐	Review proof certificate from lab
Y / N	Is lab proof <20 pgTEQ for the monthly sample? Value_____
DATA CALCULATION FACTORS	
☐	Check AMESA flow report for test period and confirm correct period
☐	Confirm calculations leading to table of TEQ's
AMESA FACTORS	
☐	Review AMESA measurement summary log (unusual events or alarms)
Y / N	Review AMESA logbook for maintenance activities performed or issues noted. Has the AMESA chiller operated within acceptable limits? Y/N If No: _____
Y / N	AMESA operating in non-isokinetic conditions (black plant) If YES, provide reason: _____ _____ _____ _____ _____
Y / N	AMESA chiller operating nominally and holding the correct temperature setpoint Temperature SP: _____ °C
Y / N	Were there any AMESA system faults during the run?

OPERATIONAL FACTORS	
	Gather paper based operational data for the period of investigation
☐	Shift Supervisor log
☐	CRO log
	Review Operational Data for the period of investigation
☐	Review boiler feed stops
☐	Review any boiler cleaning activities
☐	Review combustion trends
☐	Review Combustion Trends

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OPERATIONAL FACTORS	
	Tertiary Air Operation
Y / N	Airflow consistently above 9,000 m3?
Y / N	Flow balanced to both sides of the boiler (damper in correct position)
Y / N	Port plugging
☐	Trend tertiary air pressure (left/right)
DATE: (DD/MM/YY) _____	Date of last cleaning - ONLINE / OFFLINE
☐	Review economizer inlet and outlet temperature trends
	Combustion Air Operation
☐	Damper control or mechanical issues?
☐	Plugged underfire air hoppers?
☐	Feed chute water leaks (leading to poor combustion)
☐	Trend overfire air pressure – front/rear
☐	Trend CO, O_2, and combustion air temperature
	Review reagents
☐	Carbon feed rate • trend flows, ensure injection points are clear, not slagged over
☐	Lime feed rate • trend flows, ensure injection points are clear, not slagged over
☐	Quality of reagents – supplier, physical characteristics,
☐	Trend APC ash analysis trends (titrator)
☐	Test for residual carbon in both APC fly ash streams
☐	Trend dust monitor results on Citect (excessive dust emission may indicate bag failure)
☐	Open baghouse compartment covers and examine for fugitive dust.
☐	Visolite compartments
☐	Open baghouse hopper doors (dirty side) and look for plugged rows
☐	Open baghouse inlet duct and inspect baffle plates for plugging
	Review baghouse trends
☐	Trend Inlet and outlet temperatures. Were there any excursions?
☐	Trend BH DP. Were there periods of excessively low (poor cake thickness) or excessively high (plugged bags) pressure drop?
☐	Trend pulse system operation (non-functional solenoids leading to plugged rows and reduced baghouse efficiency). Were there periods of significant solenoid failures or reduced air pressure?
	Review recirculation hopper trends
☐	Trend temperature deviation trends between recirculation hoppers
☐	Trend airflow vs recirculation rate. Excessively high airflow will overrun the ability of the APC to recirculate sufficient fly ash.

OPERATIONAL FACTORS	
☐	Look for periods of time where combustion airflow caused the recirculation hopper rotary feeders to operate at > 50% speed each or << 40% (recirc rotaries run in the range of 43-49%) at normal combustion air flows
☐	Inspect rotary valves and verify no indication of plugged vanes
☐	Review quench tower trends (inlet/outlet temperature, results of spray lance inspection and cleaning frequency)
☐	Review APC physical operation (status of reactor, quench tower, lime addition equipment, carbon addition equipment)
EQUIPMENT FACTORS	
	Air leakage into process ductwork
Y / N	Plattco valves (superheaters and economizer)
Y / N	Hopper doors, rod out ports
☐	Trend economizer outlet O_2 and stack O_2 (Δ)
	Excessive hopper pluggage (from Shift Reports)
Y / N	2nd pass hopper
Y / N	A1 / A2 / A3 hoppers (Superheaters)
Y / N	APC Recirculation hoppers
☐	Review history of draft fluctuations on superheater and 2nd pass hoppers (with Plattco cycles)
☐	Review feedwater to stream ratio to determine any potential steam leaks