

Reporting Period: 1/07/2023 - 1/07/2024 Environment Protection Licence No: 10232

Main Stack 1

Monitoring Location No: 1
Monitoring Type: Continuous
Sample Type: Air
Description: Exit point from Stack 1 to atmosphere

Opacity		Period: 6 Minutes	Limit: 20.00 %				
Start Time	End Time	Cause	Operational State	Explanation	Corrective Action	Max Reading	
19/07/23 13:06	19/07/23 14:54:	Recovery Boiler B ESP1	Normal (Steady State)	Precipitator 1 Cross chain conveyor motor/ gearbox key failed causing the shutdown of the ESP.	Reduce boiler firing to 5kg/s and shut Precipitator down while maintenance replaced the key and precipitator then returned to service.	89.49	
27/07/23 19:30	27/07/23 19:36:	Lime Kiln B	Normal (Steady State)	Issues with a blocked feed screw, chute was unblocked and dumped a large amount of lime into the kiln resulting in the exceedance.	Chute unblocked and process stabilized.	20.35	
31/07/23 07:06	31/07/23 07:24:	Power Boiler EP	Normal (Steady State)	Opacity exceedance due to upset with wet NCG gas spraying into boiler increasing flue velocity, this was caused by issues in the Evaporation plant and gas diverted to Power boiler.	Evaporation plant issues resolved with a card failure causing a huge upset in the evaporation plant affecting process valves, card replaced, and plant stabilized.	44.33	
07/08/23 08:36	07/08/23 08:42:	Auto Zero Span Verification	Normal (Steady State)	Process upset causing a high CO spike tripping the ESP	Process stabilized and ESP restarted	22.76	
12/08/23 14:36	12/08/23 14:48:	Recovery Boiler A ESP2	Normal (Steady State)	ESP 2 Rotary feeder shearing pin snapped off causing the Precipitator to trip.	Shearing pin replaced and inspected for any metal that could potentially trip / damage shear pin, nothing found, unit restarted and plant stabilized.	89.47	
23/08/23 07:24	23/08/23 07:30:	Lime Kiln A ESP	Normal (Steady State)	High CO spike - Low O2 Causing the ESP to trip.	Plant Stabilized and ESP restarted	51.10	
30/08/23 16:30	30/08/23 16:36:	Power Boiler	Normal (Steady State)	Exceeded opacity during soot-blowing, seems like we have ash build up in the boiler.	Soot-blowing completed and opacity back in spec	24.83	
30/08/23 16:48	30/08/23 17:00:	Power Boiler	Normal (Steady State)	Power boiler soot-blowing causing exceedance	Most likely ash build up in the boiler as the cause	24.69	
11/09/23 08:30	11/09/23 08:36:	Power Boiler	Normal (Steady State)	Changing fuel piles the silo levels dropped to 38% and the operator put gas burners in to counter fuel silos from running empty causing the ID fan to max out resulting in the exceedance.	Fuel Silo levels stabilized, and gas was removed returning conditions to normal.	20.74	
18/09/23 08:06	18/09/23 08:18:	Lime Kiln B ESP	Normal (Steady State)	Kiln ESP Tripped due to high CO Spike	Plant stabilized and ESP restarted.	54.23	
18/09/23 10:30	18/09/23 11:24:	Lime Kiln B	Normal (Steady State)	Kiln had a high CO spike that took a long time to come down and they also had the Procal cleaned	Plant stabilized and ESP started	61.77	

				before the CO came down		
19/09/23 04:36	19/09/23 04:42:	Lime Kiln B ESP	Normal (Steady State)	While cleaning the inlet lime chut there was a High CO spike that tripped the ESP causing the Exceedance.	Plant stabilized and ESP restarted.	55.31
22/09/23 22:30	22/09/23 22:36:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Lime kiln A tripped on CO big ball inside. During fast barring dust was created and caused the opacity to go up.	Adjusted draft to help opacity.	30.24
22/09/23 22:54	22/09/23 23:42:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Lime kiln A tripped on CO big ball inside. During fast barring dust was created and caused the opacity to go up.	Adjusted draft to help opacity.	45.79
22/09/23 23:54	23/09/23 00:00:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Lime kiln A tripped on CO big ball inside. During fast barring dust was created and caused the opacity to go up.	Adjusted draft to help opacity.	25.72
23/09/23 00:12	23/09/23 00:18:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Lime kiln A tripped on CO big ball inside. During fast barring dust was created and caused the opacity to go up.	Adjusted draft to help opacity.	24.26
23/09/23 00:24	23/09/23 01:12:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Lime kiln A tripped on CO big ball inside. During fast barring dust was created and caused the opacity to go up.	Adjusted draft to help opacity.	35.49
23/09/23 01:18	23/09/23 01:54:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Lime kiln A tripped on CO big ball inside. During fast barring dust was created and caused the opacity to go up.	Adjusted draft to help opacity.	38.27
23/09/23 02:12	23/09/23 02:24:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Lime kiln A tripped on CO big ball inside. During fast barring dust was created and caused the opacity to go up.	Adjusted draft to help opacity.	30.12
23/09/23 17:00	23/09/23 17:06:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Increased draft during blockage on line from cyclone to smoke box.	Tried to reduce draft to keep opacity in spec. Cleared line precip back in service.	20.42
23/09/23 17:12	23/09/23 17:24:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Increased draft during blockage on line from cyclone to smoke box.	Tried to reduce draft to keep opacity in spec. Cleared line precip back in service.	37.93
23/09/23 19:18	23/09/23 19:30:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Increased draft during blockage on line from cyclone to smoke box.	Tried to reduce draft to keep opacity in spec. Cleared line precip back in service.	52.56
23/09/23 21:00	23/09/23 21:06:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Increased draft during blockage on line from cyclone to smoke box.	Tried to reduce draft to keep opacity in spec. Cleared line precip back in service.	21.48
23/09/23 23:00	23/09/23 23:24:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Increased draft during blockage on line from cyclone to smoke box.	Tried to reduce draft to keep opacity in spec. Cleared line precip back in service.	42.27
26/09/23 12:06	26/09/23 13:00:	Lime Kiln A ESP	Equipment Issue/Failure	High CO spike and losing the ESP on Interlock	Plant stabilized and equipment restarted.	81.47
26/09/23 13:12	26/09/23 13:18:	Lime Kiln B	Equipment Issue/Failure	Monitoring equipment froze and the process did not follow as required, called E&I to assist, Probes	Repairs done and equipment restarted.	38.55

					cleaned and returned to service.		
27/09/23 08:12	27/09/23 08:18:	Lime Kiln A ESP	Equipment Issue/Failure	Lime feed chute was cleaned resulting in low O2 causing a high CO spike tripping out the ESP	Process stabilized and ESP restarted.		30.96
28/09/23 05:30	28/09/23 05:36:	Lime Kiln B ESP	Equipment Issue/Failure	High CO Spike due to process upset causing the ESP to trip on Interlock.	Plant Stabilized and ESP restarted.		20.90
29/09/23 03:48	29/09/23 03:54:	Lime Kiln A ESP	Equipment Issue/Failure	Kiln Smoke box blocked up and while cleaning we lost the main flame, causing the exceedance with the kiln tripping.	Smoke box cleaned, plant restarted and stabilized.		20.74
29/09/23 04:42	29/09/23 04:54:	Lime Kiln A ESP	Equipment Issue/Failure	Kiln Smoke box blocked up and while cleaning we lost the main flame, causing the exceedance with the kiln tripping.	Smoke box cleaned, plant restarted and stabilized.		38.12
29/09/23 13:30	29/09/23 13:42:	Recovery Boiler A ESP1	Equipment Issue/Failure	ESP 1 Cross chain conveyor "Jam Switch" came on and tripped the ESP causing the Exceedance.	Nothing found in the conveyor and equipment restarted and stabilized.		58.93
30/09/23 15:00	30/09/23 15:06:	Lime Kiln B ESP	Equipment Issue/Failure	Kiln ESP tripped while cleaning the smoke box - high CO spike.	Plant Stabilized and ESP restarted.		25.77
02/10/23 19:54	02/10/23 20:00:	Lime Kiln A ESP	Lime Kiln A Un Scheduled Start-up/Shut-down	Cleaning smoke box with air lance, this caused a high CO spike and tripped the ESP.	Plant stabilized and ESP restarted. Refractory will be fixed in the MSD 08/10/2023.		53.15
04/10/23 15:06	04/10/23 15:18:	Power Boiler	Normal (Steady State)	Wet fuel caused an increase in CO and secondary air was increased to bring the CO down, as the fuel got worse the load burners was started and the sudden increase in air caused the ID fan to increase to maximum and drag more ash through the ESP than it could handle causing the exceedance.	Air was reduced once the burners as in and the ID fan returned to normal operation parameters.		29.56
04/10/23 17:12	04/10/23 17:24:	Lime Kiln B ESP	Equipment Issue/Failure	Kiln B ESP Tripped while blowing out the smoke box causing a high CO spike.	Process stabilized and ESP restarted		48.76
04/10/23 18:06	04/10/23 18:12:	Lime Kiln B ESP	Normal (Steady State)	Kiln B Opacity exceedance due to Field 1 and 2 of the ESP dropping current during heavy rain downpour causing the exceedance.	Electrical department to Investigate this issue - Noggin raised. 190377		20.15
06/10/23 01:42	06/10/23 01:48:	Power Boiler EP	Equipment Issue/Failure	ESP Field 2 tripped - suspect ash build up in ESP HOPPER 2	Back flushed hopper, suspect a buildup of ash bridging causing the trip, was restarted after backflush with air and seems to be ok now.		36.66
06/10/23 16:06	06/10/23 16:24:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Kiln issues while cleaning the smoke box and blocking the Cyclone, causing the Kiln and ESP to trip	Plant restarted and stabilized.		57.09
06/10/23 17:30	06/10/23 17:48:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Kiln issues while cleaning the smoke box and blocking the Cyclone, causing the Kiln and ESP to trip	Plant restarted and stabilized.		37.60
21/10/23 13:06	21/10/23 13:18:	Recovery Boiler A ESP2	Equipment Issue/Failure	Incorrect Impeller installed on the ID fan 2 during the MSD causing overload on ESP 2, We tripped the 2nd field twice.	More flue gas load have been diverted to ESP 1 to assist ESP2 until Impeller can be changed, PSD Dec.23		73.91
21/10/23 13:36	21/10/23 13:48:	Recovery Boiler A ESP2	Equipment Issue/Failure	Incorrect Impeller installed on the ID fan 2 during the MSD causing overload on ESP 2, We tripped the 2nd field twice.	More flue gas load have been diverted to ESP 1 to assist ESP2 until Impeller can be changed, PSD Dec.23		38.06
27/10/23 10:00	27/10/23 10:06:	Lime Kiln A ESP	Equipment Issue/Failure	Kiln A ESP tripped due to a high CO spike.	Plant stabilized and ESP restarted.		27.79

29/10/23 01:48	29/10/23 01:54:	Lime Kiln A ESP	Equipment Issue/Failure	Kiln A ESP tripped due to a High CO Spike	Plant Stabilized and ESP restarted.	42.17
02/11/23 07:42	02/11/23 07:54:	Recovery Boiler A ESP2	Equipment Issue/Failure	ESP 2 Field 2 tripped causing the exceedance.	Field 2 reset and started, we are having some issues with the ESP performance caused by the ESP ID fan which have the incorrect impeller fitted during the MSD, and this will be corrected on December 12th PSD.	89.46
03/11/23 06:42	03/11/23 07:00:	Recovery Boiler A	RB A Un Scheduled Start-up/Shut-down	RBA tripped on main Interlock, after investigation we found that the Primary air fan tripped on a contactor fault.	Contactor replaced and then we had another fault on one of the auxiliaries of the contactor (earth fault) this was repaired, then the boiler was restarted and stabilized.	53.49
03/11/23 08:12	03/11/23 08:24:	Recovery Boiler A	RB A Un Scheduled Start-up/Shut-down	RBA tripped on main Interlock, after investigation we found that the Primary air fan tripped on a contactor fault.	Contactor replaced and then we had another fault on one of the auxiliaries of the contactor (earth fault) this was repaired, then the boiler was restarted and stabilized.	31.21
07/11/23 12:54	07/11/23 13:00:	Lime Kiln B ESP	Equipment Issue/Failure	ESP Tripped due to high CO	Plant stabilized and ESP restarted	21.58
14/11/23 00:42	14/11/23 00:48:	Lime Kiln A	Equipment Issue/Failure	Kiln A ESP tripped while flushing the Lime mud feed pump.	Plant stabilized and ESP restarted.	52.04
17/11/23 06:06	17/11/23 06:18:	Lime Kiln A	Normal (Steady State)	Kiln had a big ring formed that was shot out while on low fire, this caused excessive dust which caused the exceedance while ramping up.	Plant ramped up and stabilized.	21.85
21/11/23 00:12	21/11/23 00:24:	Lime Kiln A ESP	Equipment Issue/Failure	Low level on the lime mud storage tank caused the feed pump to stop on interlock and tripped the ESP.	Lime level restored and equipment restarted.	52.98
21/11/23 05:42	21/11/23 05:48:	Power Boiler EP	Equipment Issue/Failure	Power boiler EP field 2 tripped out causing the opacity exceedance	Electrical support called to reset Field 2, same started and opacity back in spec.	23.36
21/11/23 22:00	21/11/23 22:06:	Lime Kiln A ESP	Equipment Issue/Failure	While cleaning the feed chute the O2 dropped, and Kiln A ESP tripped on high CO.	Plant Stabilized and ESP restarted.	39.04
24/11/23 17:36	24/11/23 17:42:	Lime Kiln A ESP	Equipment Issue/Failure	Kiln ESP tripped due low O2 and high CO.	Plant stabilized and ESP restarted.	49.07
25/11/23 12:18	25/11/23 12:42:	Recovery Boiler A	Equipment Issue/Failure	Main infeed cable to ESP flashed and burned ESP 1 first field cabinet also tripping the recovery boiler, Maintenance called out to repair.	ESP 1 separated from the busbar for maintenance and Recovery boiler was started with one ESP (2), Repairs was carried out and later ESP 1 was repaired and the liquor to the boiler was removed to reconnect the ESP back onto the busbar, afterward the Recovery boiler was restarted and stabilized.	77.43
25/11/23 13:00	25/11/23 13:36:	Recovery Boiler A	Equipment Issue/Failure	Main infeed cable to ESP flashed and burned ESP 1 first field cabinet also tripping the recovery boiler, Maintenance called out to repair.	ESP 1 separated from the busbar for maintenance and Recovery boiler was started with one ESP (2), Repairs was carried out and later ESP 1 was repaired and the liquor to the boiler was removed to reconnect the ESP back onto the busbar, afterward the Recovery boiler was restarted and stabilized.	30.66
25/11/23 17:24	25/11/23 17:36:	Recovery Boiler A	Equipment Issue/Failure	Main infeed cable to ESP flashed and burned ESP 1 first field cabinet also tripping the recovery boiler, Maintenance called out to repair.	ESP 1 separated from the busbar for maintenance and Recovery boiler was started with one ESP (2), Repairs was carried out and later ESP 1 was repaired and the liquor to the boiler was removed to reconnect the ESP back onto the busbar, afterward the Recovery boiler was restarted and stabilized.	31.80

25/11/23 17:42	25/11/23 18:12:	Recovery Boiler A	Equipment Issue/Failure	Main infeed cable to ESP flashed and burned ESP 1 first field cabinet also tripping the recovery boiler, Maintenance called out to repair.	ESP 1 separated from the busbar for maintenance and Recovery boiler was started with one ESP (2), Repairs was carried out and later ESP 1 was repaired and the liquor to the boiler was removed to reconnect the ESP back onto the busbar, afterward the Recovery boiler was restarted and stabilized.	35.64
25/11/23 21:42	25/11/23 22:12:	Recovery Boiler A	Equipment Issue/Failure	Main infeed cable to ESP flashed and burned ESP 1 first field cabinet also tripping the recovery boiler, Maintenance called out to repair.	ESP 1 separated from the busbar for maintenance and Recovery boiler was started with one ESP (2), Repairs was carried out and later ESP 1 was repaired and the liquor to the boiler was removed to reconnect the ESP back onto the busbar, afterward the Recovery boiler was restarted and stabilized.	44.05
29/11/23 02:18	29/11/23 02:42:	Lime Kiln B	Equipment Issue/Failure	Lost Kiln Main flame when gas generator tripped causing the exceedance.	Gas generator reset, plant restarted and stabilized.	36.66
29/11/23 10:54	29/11/23 11:00:	Power Boiler EP	Equipment Issue/Failure	Power boiler fuel rotary tripped started both load burners and the increase of combustion air to the boiler caused the exceedance.	Blockage cleared in the rotary and it was started again, load burners removed from boiler.	34.59
30/11/23 10:36	30/11/23 10:42:	Lime Kiln A ESP	Equipment Issue/Failure	Kiln ESP Tripped due to a high CO Spike - process upset.	Plant stabilized and ESP restarted.	29.73
02/12/23 22:12	02/12/23 22:18:	Lime Kiln B ESP	Equipment Issue/Failure	Kiln B ESP Tripped on a high CO spike - process upset during start up.	Plant Stabilized and ESP restarted.	32.35
05/12/23 09:54	05/12/23 10:12:	Lime Kiln B	Equipment Issue/Failure	Tripped lime kiln on high gas generator temperature, restart same opacity exceeded during start up.	Plant restarted and stabilized.	27.86
05/12/23 13:42	05/12/23 14:00:	Lime Kiln B	Equipment Issue/Failure	Tripped kiln on high turbo oil temperature (wiring issue)	Equipment sorted out and plant restarted.	32.48
11/12/23 19:12	11/12/23 19:36:	Lime Kiln B ESP	Lime Kiln B Un Scheduled Start-up/Shut-down	LK B ESP tripped while cleaning the smoke box	Restarted the ESP	54.65
18/12/23 17:42	18/12/23 17:54:	Lime Kiln A ESP	Lime Kiln A Un Scheduled Start-up/Shut-down	Lime mud feed screw blocked - CO spiked and tripped Precip	Unblock feed screw and restart ESP	47.73
19/12/23 17:42	19/12/23 17:48:	Lime Kiln B	Lime Kiln B Un Scheduled Start-up/Shut-down	Tripped Precip on high CO	restart Precip and opacity back in control	21.25
31/12/23 08:54	31/12/23 10:24:	Recovery Boiler A ESP1	Equipment Issue/Failure	ESP 1 Field 3 TR set tripped, initial reset did not work and upon further investigation a blown fuse was found causing the trip.	Fuse replaced and TR set 3 restarted and emissions brought under control.	45.62
05/01/24 10:18	05/01/24 10:24:	Lime Kiln A ESP	Equipment Issue/Failure	Kiln A had a high CO spike causing the ESP to trip out.	Process adjusted and ESP restarted and plant stabilized.	29.52
06/01/24 19:42	06/01/24 19:48:	Recovery Boiler A ESP2	Equipment Issue/Failure	ESP 2 Field 3 Rectifier tripped causing the exceedance	Unit reset no issues found and restarted.	26.49
23/01/24 16:24	23/01/24 16:36:	Recovery Boiler A	Equipment Issue/Failure	Recovery boiler tripped due to a flashover on a VFD (Feedwater pump Breaker) taking out all the VFD motors.	Temporary repairs done and Boiler restarted.	66.08
27/01/24 06:42	27/01/24 06:48:	Power Boiler EP	Equipment Issue/Failure	Faulty high-level switch on Ash hopper 2 caused the 2nd field of the ESP to trip causing the exceedance.	Level switch back to normal and Field 2 of ESP restarted.	28.14
28/01/24 16:54	28/01/24 17:00:	Recovery Boiler A ESP2	Equipment Issue/Failure	TR Set 3 tripped, no issues found by E&I.	TR Set reset and started with no additional issues	44.23

						issues.		
05/02/24	06:06	05/02/24	06:18:	Power Boiler EP	Equipment Issue/Failure	ESP Field 2 tripped out causing the exceedance.	Field 2 reset and started and conditions returned to normal.	26.89
08/02/24	13:30	08/02/24	13:36:	Lime Kiln B ESP	Equipment Issue/Failure	LKB ESP Tripped due to a high CO spike.	Process adjusted and ESP restarted.	33.46
14/02/24	16:06	14/02/24	16:12:	Lime Kiln B ESP	Equipment Issue/Failure	Kiln B ESP Tripped due to a high CO spike caused when the AVEVA controller was switched off, upsetting the process.	Process stabilized and ESP restarted.	46.04
20/02/24	08:42	20/02/24	08:48:	Lime Kiln A	Equipment Issue/Failure	Hammer Crusher tripped causing the feed system to stop, Low O2 resulting in high CO, tripping the ESP.	Plant reset, restarted and stabilized, ESP online.	20.85
02/03/24	17:00	02/03/24	17:06:	Lime Kiln A	Equipment Issue/Failure	Blockage in Feed Screw, lost flame - tripping and starting caused the exceedance.	Blockage cleared and plant restarted and stabilized.	23.14
02/03/24	17:12	02/03/24	17:18:	Lime Kiln A	Equipment Issue/Failure	Blockage in Feed Screw, lost flame - tripping and starting caused the exceedance.	Blockage cleared and plant restarted and stabilized.	21.88
09/03/24	22:24	09/03/24	22:30:	Recovery Boiler A ESP1	Equipment Issue/Failure	ESP 1 Field 2 tripped, no reason found, but it could be overloading due to field one being out of service.	Field 2 reset and started, field 1 will be repaired with the PSD on the 26th.	41.16
15/03/24	02:06	15/03/24	02:12:	Lime Kiln B	Equipment Issue/Failure	Issues with the Gas generator, main flame out.	Maintenance solved the issue with gas generator and plant was restarted and stabilized.	20.59
15/03/24	03:00	15/03/24	03:06:	Lime Kiln B	Equipment Issue/Failure	Issues with the Gas generator, main flame out.	Maintenance solved the issue with gas generator and plant was restarted and stabilized.	23.18
15/03/24	10:18	15/03/24	10:24:	Lime Kiln B	Lime Kiln B Un Scheduled Start-up/Shut-down	Kiln flue gas dropped off causing thee kiln main burner to trip.	Kiln restarted and plant stabilized.	22.50
04/04/24	04:24	04/04/24	04:30:	Lime Kiln A ESP	Equipment Issue/Failure	High CO caused the ESP to trip causing the Exceedance, there was some process changes made that could have contributed to the high CO.	Plant stabilized and ESP restarted.	34.17
05/04/24	20:30	05/04/24	20:36:	Lime Kiln A	Normal (Steady State)	Kiln on low fire due to a large rock in Kiln A, shooting rock causing lots of dust.	Shooting rock out of kiln.	37.19
05/04/24	21:24	05/04/24	21:48:	Lime Kiln A	Normal (Steady State)	Kiln on low fire due to a large rock in Kiln A, shooting rock causing lots of dust.	Shooting rock out of kiln.	31.76
05/04/24	22:00	05/04/24	23:24:	Lime Kiln A	Normal (Steady State)	Kiln on low fire due to a large rock in Kiln A, shooting rock causing lots of dust.	Shooting rock out of kiln.	47.92
06/04/24	02:36	06/04/24	02:42:	Lime Kiln A	Equipment Issue/Failure	Lost kiln flame? double flap valve closed and tripped flame on high CO/dust.	Kiln Restarted and Stabilized	22.60
07/04/24	07:12	07/04/24	07:18:	Power Boiler	Normal (Steady State)	Boiler combustion became unstable with heavy rain and very wet fuel.	Gas burners was fired up to stabilize the boiler combustion and emissions returned to normal.	26.88
17/04/24	23:24	18/04/24	00:12:	Recovery Boiler A ESP2	Equipment Issue/Failure	ESP Collecting conveyor tripped with pieces of metal jamming the conveyor tripping the ESP with interlock.	Boiler reduced to 5kg/s liquor firing, ESP shut and isolated for maintenance to remove the metal, plant restored and ESP restarted.	89.54
18/04/24	00:30	18/04/24	00:36:	Recovery Boiler A ESP2	Equipment Issue/Failure	ESP Collecting conveyor tripped with pieces of metal jamming the conveyor tripping the ESP with interlock.	Boiler reduced to 5kg/s liquor firing, ESP shut and isolated for maintenance to remove the metal, plant restored and ESP restarted.	20.95
18/04/24	04:06	18/04/24	04:48:	Recovery Boiler A ESP2	Equipment Issue/Failure	ESP Collecting conveyor tripped with pieces of metal jamming the conveyor tripping the ESP with interlock.	Boiler reduced to 5kg/s liquor firing, ESP shut and isolated for maintenance to	89.52

03/05/24 02:06	03/05/24 02:12:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Lime Kiln A tripped on interlock protection for high CO concentration. Reason is that the condensate could not supply enough for density control of the lime mud (too many users at once).	remove the metal, plant restored and ESP restarted. Finish filling condensate for the acid wash on the X Filter then restart the kiln with the density in control.	42.25
10/05/24 15:36	10/05/24 15:42:	Lime Kiln A	Lime Kiln A Un Scheduled Start-up/Shut-down	Operations was cleaning the LMF feed chute and lost the flame in LK A due to high CO (interlock protection).	Finish cleaning task and restart LK A and ESP - all back in service.	57.36
16/05/24 07:42	16/05/24 07:48:	Lime Kiln B	Lime Kiln B Un Scheduled Start-up/Shut-down	Lime Kiln B stopped for high CO interlock protection. Co spiked to fast to catch.	Restart kiln	22.00
19/05/24 05:30	19/05/24 06:06:	Recovery Boiler A ESP2	Equipment Issue/Failure	Shear pin on RBA EP2 ash rotary feeder sheared off. and tripped EP2 T/R sets.	Replaced shear pin and restart ESP 2	89.46
21/05/24 10:36	21/05/24 11:00:	Recovery Boiler A ESP2	Equipment Issue/Failure	Precipitator 2 rotary feeder shearing pin broke, could have been something that went through it, guys had some issues with replacing due to incorrect sized pins supplied.	Shear pin replaced, rotary and precipitator 2 started, opacity returned to normal.	89.55
21/05/24 23:42	21/05/24 23:54:	Recovery Boiler A ESP2	Equipment Issue/Failure	Precipitator 2 rotary feeder shearing pin broke, could have been something that went through it, guys had some issues with replacing due to incorrect sized pins supplied.	Shear pin replaced, rotary and precipitator 2 started, opacity returned to normal.	35.12
28/05/24 01:30	28/05/24 01:42:	Recovery Boiler A ESP1	Equipment Issue/Failure	Precipitator 1 field 3 tripped, boiler firing reduced while Elect.Dept. was working to solve issue	Field 3 issue resolved and started; opacity returned to normal.	38.56
05/06/24 12:54	05/06/24 13:18:	Lime Kiln B	Lime Kiln B Un Scheduled Start-up/Shut-down	Kiln B lost main flame and had to restart the plant; exceedance was recorded while purging the kiln for restart.	Kiln started and stabilized.	50.83
05/06/24 18:54	05/06/24 19:00:	Lime Kiln A ESP	Equipment Issue/Failure	Kiln A ESP tripped due to a high CO spike.	Plant stabilized and ESP restarted.	27.86
07/06/24 15:24	07/06/24 15:36:	Lime Kiln A	Normal (Steady State)	Both Kiln A and B tripped due to a low level in the Lime mud storage tank.	Kilns restarted and stabilized.	32.33
18/06/24 12:12	18/06/24 12:30:	Lime Kiln B ESP	Normal (Steady State)	Kiln B Precipitator tripped due to a high CO / low O2 spike	Plant Stabilized and equipment restarted	53.58
28/06/24 02:42	28/06/24 02:48:	Lime Kiln B	Normal (Steady State)	Cleaning out feed chute in the backend caused the exceedance.	Opacity settled after cleaning of feed chute was completed.	20.24

Sulphur Dioxide (SO2)

Period: 60 Minutes **Limit:** 250.00 mg/Nm3

Start Time	End Time	Cause	Operational State	Explanation	Corrective Action	Max Reading
19/07/23 14:00	19/07/23 15:00:	Power Boiler	Burning NCG/Stripper Gases in Power Boiler	Reducing the Recovery boiler for the Precipitator outage required the NCG gasses to be diverted to the Power boiler for the duration.	Precipitator repaired and gasses returned to the Recovery boiler	410.60
12/02/24 16:00	12/02/24 17:00:	Power Boiler	Normal (Steady State)	Diverted SOG to the Power boiler to steam flame arrester, seems to be blocking up.	Diverted back to RBA and normalized.	282.44
14/02/24 08:00	14/02/24 10:00:	Power Boiler	Normal (Steady State)	Diverted SOG to Power boiler while steaming the blocked Flame arrester.	Flame arrester steamed and gases diverted back to RBA. We are also planning to replace the SOG flame arrester with a new design in the week of Feb.26th	293.82
20/02/24 21:00	20/02/24 22:00:	Power Boiler	Equipment Issue/Failure	NCG / SOG Diverted to Power boiler due to Burner 3 tripping and having issues to restart.	Cleaned Burner Igniter, tested outside of boiler - seemed ok, burner started after a few attempts and gasses diverted back to RBA.	276.77

25/02/24 22:00	26/02/24 00:00:	Recovery Boiler A	Equipment Issue/Failure	Burner 3 tripped and SOG / NCG gasses was diverted to the Power Boiler, struggled to get burner ignited - 1.5hrs.	Burner 3 was eventually started and Gasses diverted back to RBA	316.64
18/04/24 00:00	18/04/24 05:00:	Power Boiler	Normal (Steady State)	With the Recovery boiler A ESP tripping and boiler reduced the SOG/NCG gasses was diverted to the power boiler for the duration of the outage.	ESP on RBA restarted, and Gasses diverted back to Recovery boiler.	615.06
18/06/24 09:00	18/06/24 10:00:	Recovery Boiler A	Normal (Steady State)	NCG/SOG gas burner tripped out, had some issues with restart.	Gas burner restarted and plant stabilized Our Maintainers of the instruments will be onsite again soon and will either increase	297.66

Main Stack 2

Monitoring Location No: 22
Monitoring Type: Continuous
Sample Type: Air
Description: Exit point from Stack 2 to atmosphere

Opacity **Period:** 6 Minutes **Limit:** 20.00 %

27/12/23 00:54	27/12/23 01:00:	Recovery Boiler B ESP2	Equipment Issue/Failure	Lost ESP1 field 1 - opacity still okay, but when trying to restart the ESP, the group start function caused all the fields in ESP2 to stop and restart.	Restart ESP. To follow up is to review the start-up logic and omit the group start to simplify the restart process.	38.12
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