

Reporting Period: 1/10/2023 - 1/11/2023 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 |
| 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 |
| 08/10/23 14:06 | 08/10/23 14:18 | Lime Kiln B ESP   | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 37.10 |
| 08/10/23 14:30 | 08/10/23 14:42 | Lime Kiln B ESP   | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 21.80 |
| 08/10/23 14:48 | 08/10/23 15:24 | Lime Kiln B ESP   | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 88.32 |
| 08/10/23 15:30 | 08/10/23 15:36 | Lime Kiln B       | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 29.03 |
| 08/10/23 22:00 | 09/10/23 05:00 | Lime Kiln B       | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 64.78 |
| 09/10/23 05:00 | 09/10/23 09:06 | Lime Kiln B       | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 30.12 |
| 09/10/23 09:12 | 09/10/23 12:42 | Lime Kiln B       | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 58.54 |
| 09/10/23 12:48 | 09/10/23 13:06 | Lime Kiln B       | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 26.45 |
| 09/10/23 13:24 | 09/10/23 13:36 | Lime Kiln B       | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 22.44 |
| 09/10/23 13:54 | 09/10/23 14:00 | Lime Kiln B       | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 21.07 |
| 09/10/23 14:12 | 09/10/23 15:36 | Recovery Boiler A | RB A Scheduled Start-up/Shut-down           | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 43.05 |
| 09/10/23 15:48 | 09/10/23 16:48 | Lime Kiln B       | Lime Kiln B Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 51.02 |
| 09/10/23 17:00 | 09/10/23 17:24 | Recovery Boiler A | RB A Scheduled Start-up/Shut-down           | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 64.43 |
| 09/10/23 17:36 | 09/10/23 19:42 | Lime Kiln A       | Lime Kiln A Scheduled Start-up/Shut-down    | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 41.88 |
| 09/10/23 20:54 | 10/10/23 05:00 | Recovery Boiler A | RB A Scheduled Start-up/Shut-down           | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 72.55 |
| 10/10/23 05:00 | 10/10/23 09:30 | Lime Kiln A       | RB A Scheduled Start-up/Shut-down           | Mill shutting down for MSD 2023   | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th | 50.75 |



|                |                |                        |  |  |   |       |
|----------------|----------------|------------------------|--|--|---|-------|
| 10/10/23 09:42 | 10/10/23 10:06 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Mill shutting down for MSD 2023  | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th  | 23.02 |
| 10/10/23 10:12 | 10/10/23 10:24 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Mill shutting down for MSD 2023  | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th  | 20.68 |
| 10/10/23 12:54 | 10/10/23 13:00 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Mill shutting down for MSD 2023  | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th  | 30.83 |
| 10/10/23 18:00 | 10/10/23 18:06 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Mill shutting down for MSD 2023  | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th  | 23.42 |
| 10/10/23 20:48 | 10/10/23 20:54 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Mill shutting down for MSD 2023  | MSD 2023 SHUT - Mill will restart from Oct.16th - Oct.19th  | 20.31 |
| 18/10/23 13:00 | 18/10/23 13:06 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Starting after MSD   | Plant started and being stabilized.   | 21.52 |
| 18/10/23 13:24 | 18/10/23 13:42 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Starting after MSD   | Plant started and being stabilized.   | 48.83 |
| 18/10/23 13:48 | 18/10/23 13:54 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Starting after MSD   | Plant started and being stabilized.   | 22.35 |
| 18/10/23 14:00 | 18/10/23 14:18 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Starting after MSD   | Plant started and being stabilized.   | 37.60 |
| 18/10/23 14:54 | 18/10/23 15:00 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Starting after MSD   | Plant started and being stabilized.   | 30.06 |
| 18/10/23 15:48 | 18/10/23 15:54 | Lime Kiln A            | Lime Kiln A Scheduled Start-up/Shut-down | Starting after MSD   | Plant started and being stabilized.   | 21.44 |
| 20/10/23 12:48 | 20/10/23 12:54 | Lime Kiln B            | Lime Kiln B Scheduled Start-up/Shut-down | Kiln B starting up after MSD 2023  | Plant and process stabilized.   | 22.44 |
| 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 |
| 23/10/23 18:48 | 23/10/23 18:54 | Recovery Boiler B ESP2 | Equipment Issue/Failure                  | ESP was shut down to tighten internal doors that was found by testing, the start-up caused the exceedance.             | Plant stabilized after equipment restarted  | 22.40 |
| 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 |



## Power Boiler

Monitoring Location No: 3

Monitoring Type: Continuous

Sample Type: Air

Description: Discharge duct downstream of Power Boiler prior to junction with Stack 1

| Carbon Monoxide (CO) |                | Period: 60 Minutes | Limit: 140.00 mg/Nm3                      |   |  |             |
|----------------------|----------------|--------------------|---|---|--|-------------|
| Start Time           | End Time       | Cause              | Operational State                         | Explanation   | Corrective Action                                | Max Reading |
| 17/10/23 04:00       | 17/10/23 05:00 | Power Boiler       | Power Boiler Scheduled Start-up/Shut-down | Starting up period after MSD  | Plant started and stabilized.                    | 194.33      |
| 17/10/23 05:00       | 17/10/23 08:00 | Power Boiler       | Power Boiler Scheduled Start-up/Shut-down | Starting up period after MSD  | Plant started and stabilized.                    | 249.53      |
| 17/10/23 11:00       | 17/10/23 12:00 | Power Boiler       | Power Boiler Scheduled Start-up/Shut-down | Starting up period after MSD  | Plant started and stabilized.                    | 176.61      |
| 17/10/23 13:00       | 17/10/23 15:00 | Power Boiler       | Power Boiler Scheduled Start-up/Shut-down | Starting up period after MSD  | Plant started and stabilized.                    | 247.45      |
| 18/10/23 14:00       | 18/10/23 17:00 | Power Boiler       | Power Boiler Scheduled Start-up/Shut-down | Starting up period after MSD  | Plant started and stabilized.                    | 241.29      |
| 18/10/23 17:00       | 19/10/23 05:00 | Power Boiler       | Power Boiler Scheduled Start-up/Shut-down | Starting up period after MSD  | Plant started and stabilized.                    | 249.89      |
| 19/10/23 05:00       | 19/10/23 17:00 | Power Boiler       | Power Boiler Scheduled Start-up/Shut-down | Starting up period after MSD  | Plant started and stabilized.                    | 250.00      |
| 20/10/23 08:00       | 20/10/23 09:00 | Power Boiler       | Equipment Issue/Failure                   | High CO in Power Boiler caused by incorrect set-up of Secondary Airport dampers coming out of the MSD | Airports was adjusted and CO returned to normal. | 207.29      |
| 20/10/23 19:00       | 20/10/23 20:00 | Power Boiler       | Equipment Issue/Failure                   | High CO in Power Boiler caused by incorrect set-up of Secondary Airport dampers coming out of the MSD | Airports was adjusted and CO returned to normal. | 160.50      |
| 21/10/23 05:00       | 21/10/23 06:00 | Power Boiler       | Equipment Issue/Failure                   | High CO in Power Boiler caused by incorrect set-up of Secondary Airport dampers coming out of the MSD | Airports was adjusted and CO returned to normal. | 148.09      |
| 22/10/23 04:00       | 22/10/23 05:00 | Power Boiler       | Equipment Issue/Failure                   | High CO in Power Boiler caused by incorrect set-up of Secondary Airport dampers coming out of the MSD | Airports was adjusted and CO returned to normal. | 153.04      |

|                |                |              |                         |   |   |        |
|----------------|----------------|--------------|-------------------------|---|---|--------|
| 22/10/23 05:00 | 22/10/23 07:00 | Power Boiler | Equipment Issue/Failure | High CO in Power Boiler caused by incorrect set-up of Secondary Airport dampers coming out of the MSD | Airports was adjusted and CO returned to normal.  | 231.20 |
| 22/10/23 11:00 | 22/10/23 15:00 | Power Boiler | Equipment Issue/Failure | High CO in Power Boiler caused by incorrect set-up of Secondary Airport dampers coming out of the MSD | Airports was adjusted and CO returned to normal.  | 167.57 |
| 22/10/23 16:00 | 22/10/23 17:00 | Power Boiler | Equipment Issue/Failure | High CO in Power Boiler caused by incorrect set-up of Secondary Airport dampers coming out of the MSD | Airports was adjusted and CO returned to normal.  | 195.88 |
| 22/10/23 17:00 | 22/10/23 21:00 | Power Boiler | Equipment Issue/Failure | High CO in Power Boiler caused by incorrect set-up of Secondary Airport dampers coming out of the MSD | Airports was adjusted and CO returned to normal.  | 249.80 |
| 24/10/23 04:00 | 24/10/23 05:00 | Power Boiler | Equipment Issue/Failure | Secondary air set up issues   | After some trial set ups we got the right settings on the air set up and CO returned to normal. | 140.38 |
| 24/10/23 17:00 | 24/10/23 18:00 | Power Boiler | Equipment Issue/Failure | Secondary air set up issues   | After some trial set ups we got the right settings on the air set up and CO returned to normal. | 168.46 |
| 24/10/23 22:00 | 25/10/23 01:00 | Power Boiler | Equipment Issue/Failure | Secondary air set up issues   | After some trial set ups we got the right settings on the air set up and CO returned to normal. | 201.92 |

## 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 %              |                       |                  |                   |             |
| Start Time        | End Time       | Cause                       | Operational State     | Explanation      | Corrective Action | Max Reading |
| 01/10/23 14:18    | 01/10/23 14:24 | Auto Zero Span Verification | Normal (Steady State) | Auto Calibration | n/a               | 22.21       |
| 02/10/23 14:18    | 02/10/23 14:24 | Auto Zero Span Verification | Normal (Steady State) | Auto Calibration | n/a               | 22.14       |
| 03/10/23 14:18    | 03/10/23 14:24 | Auto Zero Span Verification | Normal (Steady State) | Auto Calibration | n/a               | 21.23       |



|                |                |                             |                                   |   |   |       |
|----------------|----------------|-----------------------------|-----------------------------------|---|---|-------|
| 04/10/23 14:12 | 04/10/23 14:24 | Recovery Boiler B ESP1/ESP2 | Equipment Issue/Failure           | Both ESP's Powered down during the heavy rain we had yesterday but not tripping causing the exceedance. | Both units slowly came up to full power after the rain subsided, Electrical department will follow up on this incident. | 25.69 |
| 04/10/23 14:36 | 04/10/23 15:18 | Recovery Boiler B ESP1/ESP2 | Equipment Issue/Failure           | Both ESP's Powered down during the heavy rain we had yesterday but not tripping causing the exceedance. | Both units slowly came up to full power after the rain subsided, Electrical department will follow up on this incident. | 25.07 |
| 05/10/23 14:18 | 05/10/23 14:24 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 23.89 |
| 06/10/23 14:18 | 06/10/23 14:24 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 24.39 |
| 07/10/23 14:18 | 07/10/23 14:24 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 22.21 |
| 08/10/23 13:36 | 08/10/23 13:54 | Recovery Boiler B ESP1/ESP2 | RB B Scheduled Start-up/Shut-down | Starting Shut down for MSD2023  | Plant shutting down for the Main Shut 2023  | 42.39 |
| 08/10/23 14:18 | 08/10/23 14:24 | Recovery Boiler B ESP1/ESP2 | RB B Scheduled Start-up/Shut-down | Starting Shut down for MSD2023  | Plant shutting down for the Main Shut 2023  | 24.63 |
| 08/10/23 16:12 | 08/10/23 16:18 | Recovery Boiler B ESP1/ESP2 | RB B Scheduled Start-up/Shut-down | Starting Shut down for MSD2023  | Plant shutting down for the Main Shut 2023  | 24.89 |
| 08/10/23 17:30 | 08/10/23 21:00 | Recovery Boiler B ESP1/ESP2 | RB B Scheduled Start-up/Shut-down | Starting Shut down for MSD2023  | Plant shutting down for the Main Shut 2023  | 59.70 |
| 08/10/23 21:06 | 08/10/23 22:30 | Recovery Boiler B ESP1/ESP2 | RB B Scheduled Start-up/Shut-down | Starting Shut down for MSD2023  | Plant shutting down for the Main Shut 2023  | 57.02 |
| 08/10/23 22:36 | 08/10/23 22:42 | Recovery Boiler B ESP1/ESP2 | RB B Scheduled Start-up/Shut-down | Starting Shut down for MSD2023  | Plant shutting down for the Main Shut 2023  | 21.26 |
| 08/10/23 22:48 | 08/10/23 23:00 | Recovery Boiler B ESP1/ESP2 | RB B Scheduled Start-up/Shut-down | Starting Shut down for MSD2023  | Plant shutting down for the Main Shut 2023  | 28.73 |
| 08/10/23 23:06 | 08/10/23 23:12 | Recovery Boiler B ESP1/ESP2 | RB B Scheduled Start-up/Shut-down | Starting Shut down for MSD2023  | Plant shutting down for the Main Shut 2023  | 22.06 |
| 09/10/23 08:12 | 09/10/23 08:24 | Recovery Boiler B ESP1/ESP2 | RB B Scheduled Start-up/Shut-down | Starting Shut down for MSD2023  | Plant shutting down for the Main Shut 2023  | 36.39 |
| 17/10/23 07:06 | 17/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 22.80 |
| 18/10/23 07:06 | 18/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 24.17 |
| 19/10/23 07:06 | 19/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 23.43 |
| 20/10/23 07:06 | 20/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 26.49 |
| 21/10/23 07:06 | 21/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 24.47 |
| 22/10/23 07:06 | 22/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 25.20 |
| 23/10/23 07:06 | 23/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State)             | Auto Calibration  | n/a   | 27.35 |
|                |                |                             |                                   |   |   |       |

|                |                |                             |                       |                  |     |       |
|----------------|----------------|-----------------------------|-----------------------|------------------|-----|-------|
| 24/10/23 07:06 | 24/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State) | Auto Calibration | n/a | 23.94 |
| 25/10/23 07:06 | 25/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State) | Auto Calibration | n/a | 29.62 |
| 26/10/23 07:06 | 26/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State) | Auto Calibration | n/a | 26.71 |
| 27/10/23 07:06 | 27/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State) | Auto Calibration | n/a | 28.19 |
| 28/10/23 07:06 | 28/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State) | Auto Calibration | n/a | 26.47 |
| 29/10/23 07:06 | 29/10/23 07:12 | Auto Zero Span Verification | Normal (Steady State) | Auto Calibration | n/a | 21.12 |

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