



Eraring Power Station - EPA Licence 1429

Rocky Point Rd, Dora Creek NSW 2264

Environmental Monitoring Data September 2019



Unit 1 Boiler Continuous Emission Monitoring Summary

EPA Identification no. 11 - Air emissions monitoring, Boiler 1 stack discharge to air

Unit 1 Out of Service 26 – 30 September 2019

| | NOX | | | Particulates | | | SOX | | |
|--------------|--------------------------|------------|------------|-------------------|------------|------------|--------------------------|------------|------------|
| | ppm (7% O ₂) | | | mg/m ³ | | | ppm (7% O ₂) | | |
| | Daily Ave | Max Hourly | Min Hourly | Daily Ave | Max Hourly | Min Hourly | Daily Ave | Max Hourly | Min Hourly |
| 1 September | 162 | 180 | 140 | 12.4 | 15.1 | 9.4 | 210 | 230 | 199 |
| 2 September | 167 | 188 | 140 | 13.5 | 16.6 | 10.9 | 225 | 237 | 188 |
| 3 September | 175 | 200 | 139 | 12.1 | 14.9 | 9.3 | 219 | 244 | 202 |
| 4 September | 186 | 205 | 159 | 13.0 | 15.2 | 11.0 | 218 | 240 | 197 |
| 5 September | 177 | 194 | 164 | 11.9 | 13.1 | 11.5 | 224 | 276 | 213 |
| 6 September | 179 | 196 | 146 | 13.3 | 18.3 | 10.9 | 232 | 246 | 200 |
| 7 September | 155 | 176 | 120 | 12.2 | 13.4 | 10.2 | 249 | 275 | 231 |
| 8 September | 158 | 189 | 129 | 12.9 | 14.2 | 11.8 | 230 | 270 | 218 |
| 9 September | 151 | 174 | 128 | 12.7 | 16.0 | 10.1 | 256 | 312 | 226 |
| 10 September | 153 | 173 | 134 | 13.2 | 15.6 | 12.1 | 216 | 270 | 185 |
| 11 September | 157 | 172 | 128 | 12.9 | 14.4 | 11.3 | 213 | 251 | 185 |
| 12 September | 157 | 182 | 134 | 12.8 | 18.9 | 9.1 | 209 | 226 | 175 |
| 13 September | 155 | 169 | 143 | 12.5 | 14.4 | 11.8 | 218 | 237 | 186 |
| 14 September | 158 | 169 | 122 | 11.6 | 13.3 | 8.7 | 212 | 238 | 176 |
| 15 September | 164 | 177 | 137 | 12.2 | 14.9 | 10.9 | 228 | 249 | 184 |
| 16 September | 181 | 196 | 148 | 12.8 | 14.5 | 11.4 | 237 | 270 | 222 |
| 17 September | 190 | 204 | 130 | 15.5 | 30.2 | 9.8 | 236 | 246 | 212 |
| 18 September | 183 | 201 | 150 | 16.0 | 23.7 | 12.1 | 228 | 246 | 211 |
| 19 September | 165 | 184 | 138 | 13.8 | 22.1 | 11.1 | 224 | 236 | 212 |
| 20 September | 176 | 193 | 140 | 12.6 | 16.3 | 11.0 | 243 | 269 | 223 |
| 21 September | 182 | 206 | 146 | 11.6 | 14.2 | 9.4 | 261 | 288 | 233 |
| 22 September | 177 | 208 | 133 | 11.1 | 13.1 | 8.5 | 255 | 302 | 221 |
| 23 September | 166 | 176 | 134 | 11.1 | 12.2 | 9.0 | 241 | 259 | 223 |
| 24 September | 149 | 182 | 111 | 12.4 | 16.1 | 9.7 | 219 | 245 | 175 |
| 25 September | 116 | 125 | 102 | 15.0 | 22.9 | 11.6 | 174 | 194 | 159 |
| 26 September | - | - | - | - | - | - | - | - | - |
| 27 September | - | - | - | - | - | - | - | - | - |
| 28 September | - | - | - | - | - | - | - | - | - |
| 29 September | - | - | - | - | - | - | - | - | - |
| 30 September | - | - | - | - | - | - | - | - | - |

Unit 2 Boiler Continuous Emission Monitoring Summary

EPA Identification no. 12 - Air emissions monitoring, Boiler 2 stack discharge to air

| | NOX | | | Particulates | | | SOX | | |
|--------------|--------------------------|------------|------------|-------------------|------------|------------|--------------------------|------------|------------|
| | ppm (7% O ₂) | | | mg/m ³ | | | ppm (7% O ₂) | | |
| | Daily Ave | Max Hourly | Min Hourly | Daily Ave | Max Hourly | Min Hourly | Daily Ave | Max Hourly | Min Hourly |
| 1 September | 156 | 179 | 118 | 18.1 | 23.0 | 14.7 | 216 | 249 | 193 |
| 2 September | 161 | 181 | 130 | 18.4 | 21.0 | 15.3 | 221 | 256 | 185 |
| 3 September | 165 | 180 | 138 | 17.3 | 21.0 | 14.2 | 214 | 226 | 199 |
| 4 September | 177 | 190 | 144 | 16.5 | 19.5 | 12.8 | 220 | 238 | 194 |
| 5 September | 166 | 198 | 131 | 18.2 | 22.3 | 14.9 | 243 | 263 | 221 |
| 6 September | 176 | 194 | 143 | 16.9 | 21.8 | 12.8 | 233 | 247 | 215 |
| 7 September | 158 | 179 | 113 | 18.8 | 22.2 | 15.3 | 245 | 286 | 227 |
| 8 September | 144 | 173 | 107 | 18.8 | 22.0 | 16.0 | 246 | 281 | 222 |
| 9 September | 165 | 198 | 123 | 19.8 | 22.7 | 16.6 | 257 | 288 | 232 |
| 10 September | 170 | 189 | 106 | 20.2 | 22.6 | 16.3 | 224 | 279 | 180 |
| 11 September | 169 | 193 | 121 | 18.9 | 21.6 | 15.8 | 220 | 239 | 201 |
| 12 September | 175 | 205 | 111 | 17.7 | 24.2 | 13.9 | 214 | 236 | 184 |
| 13 September | 155 | 174 | 118 | 19.3 | 21.7 | 15.6 | 225 | 241 | 213 |
| 14 September | 149 | 187 | 121 | 20.3 | 23.8 | 16.1 | 219 | 248 | 195 |
| 15 September | 152 | 178 | 119 | 18.1 | 20.8 | 14.4 | 232 | 254 | 198 |
| 16 September | 160 | 172 | 129 | 17.6 | 19.1 | 14.4 | 244 | 274 | 232 |
| 17 September | 167 | 186 | 129 | 19.7 | 22.1 | 16.9 | 245 | 263 | 216 |
| 18 September | 172 | 186 | 129 | 19.1 | 21.6 | 15.8 | 238 | 261 | 224 |
| 19 September | 162 | 179 | 140 | 18.9 | 23.2 | 15.9 | 243 | 270 | 227 |
| 20 September | 163 | 191 | 126 | 18.4 | 21.5 | 16.2 | 255 | 288 | 236 |
| 21 September | 156 | 201 | 119 | 17.6 | 20.7 | 15.9 | 263 | 292 | 238 |
| 22 September | 183 | 230 | 119 | 19.0 | 23.8 | 16.0 | 274 | 312 | 243 |
| 23 September | 164 | 189 | 121 | 18.6 | 21.9 | 15.9 | 264 | 298 | 242 |
| 24 September | 175 | 243 | 144 | 19.8 | 22.5 | 16.3 | 249 | 266 | 215 |
| 25 September | 180 | 230 | 147 | 19.2 | 22.0 | 17.3 | 199 | 216 | 170 |
| 26 September | 171 | 212 | 129 | 19.1 | 21.7 | 17.8 | 203 | 239 | 166 |
| 27 September | 163 | 197 | 134 | 18.5 | 19.7 | 17.1 | 223 | 260 | 209 |
| 28 September | 176 | 193 | 151 | 19.1 | 22.2 | 17.5 | 219 | 229 | 187 |
| 29 September | 170 | 215 | 151 | 18.7 | 21.0 | 17.4 | 224 | 248 | 196 |
| 30 September | 163 | 194 | 117 | 18.9 | 20.3 | 17.9 | 231 | 256 | 197 |

Unit 3 Boiler Continuous Emission Monitoring Summary

EPA Identification no. 13 - Air emissions monitoring, Boiler 3 stack discharge to air

Unit 3 out of service 1 - 30 September 2019

| | NOX | | | Particulates | | | SOX | | |
|--------------|--------------------------|------------|------------|-------------------|------------|------------|--------------------------|------------|------------|
| | ppm (7% O ₂) | | | mg/m ³ | | | ppm (7% O ₂) | | |
| | Daily Ave | Max Hourly | Min Hourly | Daily Ave | Max Hourly | Min Hourly | Daily Ave | Max Hourly | Min Hourly |
| 1 September | - | - | - | - | - | - | - | - | - |
| 2 September | - | - | - | - | - | - | - | - | - |
| 3 September | - | - | - | - | - | - | - | - | - |
| 4 September | - | - | - | - | - | - | - | - | - |
| 5 September | - | - | - | - | - | - | - | - | - |
| 6 September | - | - | - | - | - | - | - | - | - |
| 7 September | - | - | - | - | - | - | - | - | - |
| 8 September | - | - | - | - | - | - | - | - | - |
| 9 September | - | - | - | - | - | - | - | - | - |
| 10 September | - | - | - | - | - | - | - | - | - |
| 11 September | - | - | - | - | - | - | - | - | - |
| 12 September | - | - | - | - | - | - | - | - | - |
| 13 September | - | - | - | - | - | - | - | - | - |
| 14 September | - | - | - | - | - | - | - | - | - |
| 15 September | - | - | - | - | - | - | - | - | - |
| 16 September | - | - | - | - | - | - | - | - | - |
| 17 September | - | - | - | - | - | - | - | - | - |
| 18 September | - | - | - | - | - | - | - | - | - |
| 19 September | - | - | - | - | - | - | - | - | - |
| 20 September | - | - | - | - | - | - | - | - | - |
| 21 September | - | - | - | - | - | - | - | - | - |
| 22 September | - | - | - | - | - | - | - | - | - |
| 23 September | - | - | - | - | - | - | - | - | - |
| 24 September | - | - | - | - | - | - | - | - | - |
| 25 September | - | - | - | - | - | - | - | - | - |
| 26 September | - | - | - | - | - | - | - | - | - |
| 27 September | - | - | - | - | - | - | - | - | - |
| 28 September | - | - | - | - | - | - | - | - | - |
| 29 September | - | - | - | - | - | - | - | - | - |
| 30 September | - | - | - | - | - | - | - | - | - |

Unit 4 Boiler Continuous Emission Monitoring Summary

EPA Identification no. 14 - Air emissions monitoring, Boiler 4 stack discharge to air

| | NOX | | | Particulates | | | SOX | | |
|--------------|--------------------------|------------|------------|-------------------|------------|------------|--------------------------|------------|------------|
| | ppm (7% O ₂) | | | mg/m ³ | | | ppm (7% O ₂) | | |
| | Daily Ave | Max Hourly | Min Hourly | Daily Ave | Max Hourly | Min Hourly | Daily Ave | Max Hourly | Min Hourly |
| 1 September | 167 | 189 | 153 | 10.9 | 12.8 | 9.8 | 255 | 275 | 227 |
| 2 September | 157 | 167 | 140 | 11.3 | 18.6 | 9.6 | 244 | 262 | 223 |
| 3 September | 165 | 176 | 158 | 10.6 | 12.6 | 9.5 | 250 | 283 | 223 |
| 4 September | 175 | 191 | 154 | 10.2 | 12.6 | 9.2 | 245 | 266 | 218 |
| 5 September | 176 | 196 | 164 | 10.6 | 13.6 | 9.4 | 264 | 302 | 245 |
| 6 September | 174 | 190 | 150 | 10.4 | 12.5 | 6.3 | 262 | 283 | 250 |
| 7 September | 166 | 188 | 139 | 17.0 | 17.9 | 16.8 | 293 | 345 | 266 |
| 8 September | 165 | 173 | 149 | 14.7 | 17.4 | 13.0 | 321 | 358 | 271 |
| 9 September | 169 | 202 | 151 | 13.2 | 15.1 | 12.0 | 294 | 332 | 275 |
| 10 September | 158 | 168 | 152 | 14.5 | 15.6 | 14.0 | 234 | 271 | 211 |
| 11 September | 161 | 172 | 152 | 14.7 | 15.6 | 14.0 | 238 | 262 | 223 |
| 12 September | 163 | 176 | 149 | 15.5 | 21.1 | 14.6 | 236 | 255 | 210 |
| 13 September | 165 | 176 | 144 | 15.0 | 15.9 | 14.2 | 253 | 269 | 237 |
| 14 September | 161 | 172 | 156 | 15.4 | 17.0 | 14.0 | 238 | 269 | 197 |
| 15 September | 170 | 199 | 158 | 14.8 | 16.7 | 13.7 | 260 | 298 | 208 |
| 16 September | 165 | 178 | 150 | 14.5 | 16.8 | 13.2 | 266 | 285 | 255 |
| 17 September | 176 | 195 | 163 | 15.2 | 17.0 | 14.2 | 262 | 277 | 249 |
| 18 September | 178 | 190 | 164 | 15.4 | 17.4 | 14.3 | 263 | 294 | 239 |
| 19 September | 175 | 192 | 155 | 16.1 | 19.5 | 15.3 | 259 | 282 | 241 |
| 20 September | 167 | 178 | 151 | 16.9 | 18.7 | 15.6 | 291 | 327 | 247 |
| 21 September | 157 | 179 | 122 | 18.1 | 21.0 | 17.0 | 299 | 321 | 280 |
| 22 September | 184 | 208 | 150 | 19.2 | 23.8 | 17.6 | 319 | 369 | 251 |
| 23 September | 175 | 195 | 155 | 21.0 | 26.6 | 18.3 | 282 | 307 | 249 |
| 24 September | 181 | 191 | 173 | 21.5 | 28.2 | 13.3 | 272 | 286 | 240 |
| 25 September | 177 | 187 | 169 | 14.1 | 15.5 | 13.3 | 228 | 244 | 185 |
| 26 September | 173 | 187 | 164 | 14.0 | 14.5 | 13.5 | 225 | 267 | 181 |
| 27 September | 170 | 186 | 154 | 14.6 | 16.8 | 13.5 | 257 | 302 | 233 |
| 28 September | 175 | 196 | 141 | 14.9 | 16.8 | 13.7 | 243 | 275 | 229 |
| 29 September | 178 | 231 | 142 | 15.5 | 18.6 | 13.5 | 254 | 302 | 235 |
| 30 September | 213 | 245 | 194 | 17.5 | 18.7 | 16.0 | 274 | 306 | 260 |

Unit 1 Boiler Emission Test Results

EPA Identification no. 11 - Air emissions monitoring, Boiler 1 stack discharge to air

| <u>Name</u> | <u>Reading</u> | <u>Units</u> | <u>Licence Limit</u> | <u>Date</u> |
|--|----------------|---------------------|----------------------|---------------|
| Cadmium | <0.0002 | mg/m ³ | 0.2 | 13-14/11/2018 |
| Carbon Dioxide (Wet) | 13.8 | % | - | 13-14/11/2018 |
| Carbon Monoxide | <40 | ppm | - | 13-14/11/2018 |
| Chlorine | 0.008 | mg/m ³ | 200 | 13-14/11/2018 |
| Copper | 0.0003 | mg/m ³ | - | 13-14/11/2018 |
| Dry Gas Density | 1.33 | kg/m ³ | - | 13-14/11/2018 |
| Fluoride As HF - Total | 8.7 | mg/m ³ | 50 | 13-14/11/2018 |
| Hazardous Substances (Metals) - Total | ≤0.0081 | mg/m ³ | 1 | 13-14/11/2018 |
| Hydrogen Chloride | 14.4 | mg/m ³ | 100 | 13-14/11/2018 |
| Mercury | 0.00020 | mg/m ³ | 0.2 | 13-14/11/2018 |
| Moisture | 5.9 | % | - | 13-14/11/2018 |
| Particulates - Total | 1.2 | mg/m ³ | 50 | 13-14/11/2018 |
| Stack Gas Molecular Weight | 29.9 | kg/k-mole | - | 13-14/11/2018 |
| Temperature | 127 | degC | - | 13-14/11/2018 |
| Velocity | 14 | m/sec | - | 13-14/11/2018 |
| Volatile Organic Compounds (VOC) - Total | <0.02 | ppm | - | 13-14/11/2018 |
| Volumetric Flow Rate (Dry At STP) | 348 | m ³ /sec | - | 13-14/11/2018 |

Unit 2 Boiler Emission Test Results

EPA Identification no. 12 - Air emissions monitoring, Boiler 2 stack discharge to air

| <u>Name</u> | | <u>Units</u> | <u>Licence Limit</u> | <u>Date</u> |
|--|---------|---------------------|----------------------|-------------|
| Cadmium | <0.0005 | mg/m ³ | 0.2 | 19/02/2019 |
| Carbon Dioxide (Wet) | 11.9 | % | - | 19/02/2019 |
| Carbon Monoxide | <40 | ppm | - | 19/02/2019 |
| Chlorine | <0.007 | mg/m ³ | 200 | 6/06/2019 |
| Copper | 0.0036 | mg/m ³ | - | 19/02/2019 |
| Dry Gas Density | 1.32 | kg/m ³ | - | 19/02/2019 |
| Fluoride As HF - Total | 5.4 | mg/m ³ | 50 | 6/06/2019 |
| Hazardous Substances (Metals) - Total | <0.033 | mg/m ³ | 1 | 19/02/2019 |
| Hydrogen Chloride | 4.6 | mg/m ³ | 100 | 6/06/2019 |
| Mercury | 0.00057 | mg/m ³ | 0.2 | 19/02/2019 |
| Moisture | 6.8 | % | - | 19/02/2019 |
| Particulates - Total | 4.2 | mg/m ³ | 50 | 19/02/2019 |
| Stack Gas Molecular Weight | 29.6 | Kg/k-mole | - | 19/02/2019 |
| Temperature | 124 | degC | - | 19/02/2019 |
| Velocity | 15.5 | m/sec | - | 19/02/2019 |
| Volatile Organic Compounds (VOC) - Total | 0.033 | ppm | - | 6/06/2019 |
| Volumetric Flow Rate (Dry At STP) | 351 | m ³ /sec | - | 19/02/2019 |

Unit 3 Boiler Emission Test Results

EPA Identification no. 13 - Air emissions monitoring, Boiler 3 stack discharge to air

| <u>Name</u> | | <u>Units</u> | <u>Licence Limit</u> | <u>Date</u> |
|--|---------|---------------------|----------------------|--------------|
| Cadmium | <0.0002 | mg/m ³ | 0.2 | 7-8 May 2019 |
| Carbon Dioxide (Wet) | 13 | % | - | 7-8 May 2019 |
| Carbon Monoxide | 126 | ppm | - | 7-8 May 2019 |
| Chlorine | 0.007 | mg/m ³ | 200 | 7-8 May 2019 |
| Copper | 0.00064 | mg/m ³ | - | 7-8 May 2019 |
| Dry Gas Density | 1.32 | kg/m ³ | - | 7-8 May 2019 |
| Fluoride As HF - Total | 10 | mg/m ³ | 50 | 7-8 May 2019 |
| Hazardous Substances (Metals) - Total | <0.010 | mg/m ³ | 1 | 7-8 May 2019 |
| Hydrogen Chloride | 9.5 | mg/m ³ | 100 | 7-8 May 2019 |
| Mercury | <0.0002 | mg/m ³ | 0.2 | 7-8 May 2019 |
| Moisture | 6.7 | % | - | 7-8 May 2019 |
| Particulates - Total | 5.9 | mg/m ³ | 50 | 7-8 May 2019 |
| Stack Gas Molecular Weight | 29.6 | kg/k-mole | - | 7-8 May 2019 |
| Temperature | 122 | degC | - | 7-8 May 2019 |
| Velocity | 15 | m/sec | - | 7-8 May 2019 |
| Volatile Organic Compounds (VOC) - Total | <0.008 | ppm | - | 7-8 May 2019 |
| Volumetric Flow Rate (Dry At STP) | 345 | m ³ /sec | - | 7-8 May 2019 |

Unit 4 Boiler Emission Test Results

EPA Identification no. 14 - Air emissions monitoring, Boiler 4 stack discharge to air

| <u>Name</u> | <u>Reading</u> | <u>Units</u> | <u>Licence Limit</u> | <u>Date</u> |
|--|----------------|---------------------|----------------------|---------------|
| Cadmium | <0.0001 | mg/m ³ | 0.2 | 20-21/08/2018 |
| Carbon Dioxide (Wet) | 13.2 | % | - | 20-21/08/2018 |
| Carbon Monoxide | 54 | ppm | - | 20-21/08/2018 |
| Chlorine | <0.006 | mg/m ³ | 200 | 20-21/08/2018 |
| Copper | 0.00054 | mg/m ³ | - | 20-21/08/2018 |
| Dry Gas Density | 1.36 | kg/m ³ | - | 20-21/08/2018 |
| Fluoride As HF - Total | 10.5 | mg/m ³ | 50 | 20-21/08/2018 |
| Hazardous Substances (Metals) - Total | ≤0.0093 | mg/m ³ | 1 | 20-21/08/2018 |
| Hydrogen Chloride | 6.7 | mg/m ³ | 100 | 20-21/08/2018 |
| Mercury | 0.0013 | mg/m ³ | 0.2 | 20-21/08/2018 |
| Moisture | 6.4 | % | - | 20-21/08/2018 |
| Particulates - Total | 2.6 | mg/m ³ | 50 | 20-21/08/2018 |
| Stack Gas Molecular Weight | 29.7 | kg/k-mole | - | 20-21/08/2018 |
| Temperature | 121 | degC | - | 20-21/08/2018 |
| Velocity | 15.5 | m/sec | - | 20-21/08/2018 |
| Volatile Organic Compounds (VOC) - Total | 0.025 | ppm | - | 20-21/08/2018 |
| Volumetric Flow Rate (Dry At STP) | 370 | m ³ /sec | - | 20-21/08/2018 |

Eraring Depositional Dust Gauges

*EPA Identification no. 18, 25, 26 & 27 - Depositional dust monitoring within 1km
of the coal handling operations*

| | Deposited Matter | | |
|-----------|-------------------------|-------------|-----------|
| | g/m ² /month | | |
| | Ash | Combustible | Insoluble |
| E2 | 0.6 | 0.3 | 0.9 |
| E4 | 0.8 | 0.6 | 1.4 |
| E6 | 0.5 | 1.2 | 1.7 |
| U6 | 0.9 | 0.9 | 1.8 |

Water Quality - Lake Monitoring LM10

EPA Identification no. 4 - The waters of Lake Macquarie located midway between cooling water inlet and Hungary Point

| | Temp | pH | Salinity | Dissolved Oxygen | | Secchi |
|------------------|-------|------|----------|------------------|------|--------|
| | degC | | ppt | % | mg/L | m |
| Depth/Air | 16.3 | | | | | |
| 010cm | 17.52 | 8.45 | 32.2 | 81.5 | 6.22 | 2.75 |
| 050cm | 17.57 | 8.46 | 32.2 | 79.6 | 6.08 | |
| 100cm | 17.46 | 8.48 | 32.9 | 74.4 | 5.69 | |
| 150cm | 16.46 | 8.50 | 34.2 | 72.9 | 5.58 | |
| 200cm | 16.24 | 8.52 | 34.5 | 71.5 | 5.50 | |
| 250cm | 16.11 | 8.50 | 34.9 | 73.4 | 5.66 | |
| Bottom | 16.13 | 8.56 | 35.0 | 73.2 | 5.63 | |

Water Quality - Lake Monitoring LM12

EPA Identification no. 6 - The waters of Lake Macquarie located at the Eraring/Vales Point mixing zone off Fishery Point

| | Temp | pH | Salinity | Dissolved Oxygen | | Secchi |
|------------------|-------|------|----------|------------------|------|--------|
| | degC | | ppt | % | mg/L | m |
| Depth/Air | 16.2 | | | | | |
| 010cm | 16.70 | 8.43 | 31.4 | 91.4 | 7.10 | 2.25 |
| 050cm | 16.72 | 8.45 | 31.8 | 91.8 | 7.13 | |
| 100cm | 16.74 | 8.47 | 32.0 | 92.2 | 7.16 | |
| 150cm | 16.72 | 8.48 | 32.0 | 89.3 | 6.95 | |
| 200cm | 16.58 | 8.49 | 33.0 | 89.3 | 6.92 | |
| 250cm | 16.12 | 8.50 | 34.2 | 84.9 | 6.56 | |
| 300cm | 16.06 | 8.50 | 34.5 | 83.7 | 6.51 | |
| 350cm | 15.91 | 8.51 | 35.2 | 84.4 | 6.54 | |
| 400cm | 15.92 | 8.54 | 35.2 | 79.9 | 6.17 | |
| 450cm | 15.94 | 8.53 | 35.3 | 77.7 | 5.97 | |
| 500cm | 15.96 | 8.54 | 35.4 | 77.0 | 5.96 | |
| 550cm | 15.99 | 8.54 | 35.4 | 74.1 | 5.76 | |
| 600cm | 16.00 | 8.53 | 35.5 | 74.8 | 5.75 | |
| 650cm | 16.02 | 8.53 | 35.6 | 73.7 | 5.66 | |
| Bottom | 16.07 | 8.47 | 35.6 | 71.7 | 5.51 | |

Water Quality - Lake Monitoring LM4

EPA Identification no. 7 - The northern waters of Lake Macquarie east off Lake Macquarie Yacht Club

| | Temp | pH | Salinity | Dissolved Oxygen | | Secchi |
|------------------|-------|------|----------|------------------|------|--------|
| | degC | | ppt | % | mg/L | m |
| Depth/Air | 15.14 | | | | | |
| 010cm | 15.00 | 8.24 | 29.1 | 83.0 | 6.79 | 1.75 |
| 050cm | 15.07 | 8.27 | 29.9 | 81.6 | 6.65 | |
| 100cm | 15.26 | 8.32 | 32.0 | 78.4 | 6.27 | |
| 150cm | 15.53 | 8.35 | 33.6 | 78.2 | 6.25 | |
| 200cm | 15.60 | 8.38 | 33.9 | 74.2 | 5.81 | |
| 250cm | 15.61 | 8.42 | 34.0 | 75.7 | 5.91 | |
| 300cm | 15.59 | 8.44 | 34.1 | 76.5 | 5.99 | |
| 350cm | 15.59 | 8.46 | 34.2 | 72.3 | 5.65 | |
| 400cm | 15.70 | 8.46 | 34.3 | 70.1 | 5.47 | |
| 450cm | 15.73 | 8.47 | 34.3 | 71.0 | 5.52 | |
| 500cm | 15.76 | 8.47 | 34.4 | 71.5 | 5.54 | |
| 550cm | 15.73 | 8.47 | 34.4 | 76.1 | 5.95 | |
| 600cm | 15.71 | 8.45 | 35.0 | 68.6 | 5.31 | |
| 650cm | 15.68 | 8.46 | 35.0 | 72.0 | 5.61 | |
| 700cm | 15.61 | 8.47 | 35.1 | 67.0 | 5.21 | |
| 750cm | 15.51 | 8.47 | 35.1 | 71.8 | 5.60 | |
| 800cm | 15.58 | 8.47 | 35.3 | 72.9 | 5.68 | |
| 850cm | 15.60 | 8.47 | 35.4 | 70.4 | 5.46 | |
| 900cm | 15.62 | 8.46 | 35.5 | 61.6 | 4.78 | |
| Bottom | 15.61 | 8.45 | 35.5 | 57.8 | 4.45 | |

Water Quality - Lake Monitoring LM7

EPA Identification no. 5 - The waters of Lake Macquarie located off old Wangi power station inlet point in Myuna Bay

| | Temp | pH | Salinity | Dissolved Oxygen | | Secchi |
|------------------|-------|------|----------|------------------|-------|--------|
| | degC | | ppt | % | mg/L | m |
| Depth/Air | 17.12 | | | | | |
| 010cm | 19.48 | 8.25 | 25.5 | 84.8 | 6.77 | 1.25 |
| 050cm | 20.29 | 8.31 | 27.7 | 90.2 | 6.76 | |
| 100cm | 21.69 | 8.36 | 30.8 | 95.1 | 6.79 | |
| 150cm | 21.80 | 8.38 | 32.1 | 102.9 | 7.28 | |
| 200cm | 18.58 | 8.46 | 33.4 | 120.0 | 8.90 | |
| 250cm | 16.41 | 8.51 | 34.3 | 127.1 | 9.79 | |
| 300cm | 16.13 | 8.52 | 34.4 | 126.0 | 9.78 | |
| 350cm | 16.04 | 8.53 | 34.4 | 130.5 | 10.12 | |
| 400cm | 16.04 | 8.53 | 34.5 | 133.0 | 10.29 | |
| 450cm | 16.00 | 8.52 | 34.6 | 137.0 | 10.60 | |
| 500cm | 16.04 | 8.51 | 34.7 | 143.7 | 11.10 | |
| 550cm | 16.11 | 8.46 | 35.3 | 59.0 | 4.51 | |
| Bottom | 16.14 | 8.41 | 35.4 | 54.1 | 4.19 | |

Eraring Ash Dam Effluent Quality Monitoring

EPA Identification no. 10 - Discharge point below siphon pond weir at Ash Dam

| <u>Name</u> | <u>Reading</u> | <u>Units</u> | <u>Licence Limit</u> | <u>Date</u> |
|----------------------------------|----------------|--------------|----------------------|-------------|
| Total Suspended Solids | 5 | mg/L | - | 5/09/2019 |
| Nitrite and Nitrate as N | 5420 | ug/L | - | 5/09/2019 |
| Phosphorus Reactive as P - Total | 560 | ug/L | - | 5/09/2019 |
| Phosphorus as P - Total | 560 | ug/L | - | 5/09/2019 |

Eraring Cooling Water Inlet Canal

EPA Identification no. 8 - Inlet canal of the cooling water intake from Lake Macquarie

| <u>Name</u> | <u>Reading</u> | <u>Units</u> | <u>Licence Limit</u> | <u>Date</u> |
|-----------------------|----------------|--------------|----------------------|-------------|
| Temperature – Average | 18.5 | deg C | - | 5/09/2019 |
| Temperature – Minimum | 15.3 | deg C | - | 5/09/2019 |
| Temperature - Maximum | 21.5 | deg C | - | 5/09/2019 |

Eraring Cooling Water Outlet Canal

EPA Identification no. 1 - Cooling water outlet canal to Myuna Bay

| <u>Name</u> | <u>Reading</u> | <u>Units</u> | <u>Licence Limit</u> | <u>Date</u> |
|--------------------------------------|----------------|--------------|----------------------|-------------|
| Temperature – Average | 26.8 | deg C | 37.5 | 5/09/2019 |
| Temperature – Minimum | 21.3 | deg C | 37.5 | 5/09/2019 |
| Temperature - Maximum | 30.3 | deg C | 37.5 | 5/09/2019 |
| Maximum Daily Discharge from Ash Dam | 31.15 | ML | 150 | 5/09/2019 |
| Monthly Discharge from Ash Dam | 408.6 | ML | - | 5/09/2019 |

Emergency Discharge – Toe Drain Pond

EPA Identification no. 17 - Emergency discharge to toe drain collection pond

| <u>Name</u> | <u>Reading</u> | <u>Units</u> | <u>Licence Limit</u> | <u>Date</u> |
|--------------------------|----------------|--------------|----------------------|-------------|
| Nitrite and Nitrate as N | 214 | ug/L | - | 5/09/2019 |
| Phosphorus as P – Total | 28 | ug/L | - | 5/09/2019 |

Groundwater Monitoring

Groundwater Well – MW01

EPA Identification no. 21 – Groundwater Monitoring Well 01

| Name | Reading | Units | Date |
|-------------------------|---------|--------|------------|
| Arsenic | <0.2 | ug/L | 27/06/2019 |
| Cadmium | <0.05 | ug/L | 27/06/2019 |
| Calcium | <1000 | ug/L | 27/06/2019 |
| Chromium | 0.7 | ug/L | 27/06/2019 |
| Copper | 4.2 | ug/L | 27/06/2019 |
| Electrical Conductivity | 0.350 | mS/cm | 27/06/2019 |
| Iron | 89 | ug/L | 27/06/2019 |
| Lead | 0.7 | ug/L | 27/06/2019 |
| Magnesium | 4000 | ug/L | 27/06/2019 |
| Manganese | 55.7 | ug/L | 27/06/2019 |
| Nickel | 6.0 | ug/L | 27/06/2019 |
| pH | 4.87 | pH | 27/06/2019 |
| Potassium | 4000 | ug/L | 27/06/2019 |
| Selenium | <0.2 | ug/L | 27/06/2019 |
| Standing Water Level | 9.72 | metres | 27/06/2019 |
| Zinc | 151 | ug/L | 27/06/2019 |

Groundwater Well – MW02

EPA Identification no. 22 – Groundwater Monitoring Well 02

| Name | Reading | Units | Date |
|-------------------------|---------|--------|------------|
| Arsenic | 23.4 | ug/L | 19/06/2019 |
| Cadmium | 0.02 | ug/L | 19/06/2019 |
| Calcium | 328000 | ug/L | 19/06/2019 |
| Chromium | 1.6 | ug/L | 19/06/2019 |
| Copper | 1.1 | ug/L | 19/06/2019 |
| Electrical Conductivity | 13.200 | mS/cm | 19/06/2019 |
| Iron | 9070 | ug/L | 19/06/2019 |
| Lead | 1.3 | ug/L | 19/06/2019 |
| Magnesium | 206000 | ug/L | 19/06/2019 |
| Manganese | 1290 | ug/L | 19/06/2019 |
| Nickel | 2.3 | ug/L | 19/06/2019 |
| pH | 6.40 | pH | 19/06/2019 |
| Potassium | 101000 | ug/L | 19/06/2019 |
| Selenium | <2.0 | ug/L | 19/06/2019 |
| Standing Water Level | 4.32 | metres | 19/06/2019 |
| Zinc | 25 | ug/L | 19/06/2019 |

Groundwater Well – MW06

EPA Identification no. 23 – Groundwater Monitoring Well 06

| Name | Reading | Units | Date |
|-------------------------|---------|--------|------------|
| Arsenic | 7.0 | ug/L | 19/06/2019 |
| Cadmium | <0.02 | ug/L | 19/06/2019 |
| Calcium | 469000 | ug/L | 19/06/2019 |
| Chromium | 0.8 | ug/L | 19/06/2019 |
| Copper | <1.0 | ug/L | 19/06/2019 |
| Electrical Conductivity | 17.000 | mS/cm | 19/06/2019 |
| Iron | 14000 | ug/L | 19/06/2019 |
| Lead | <0.2 | ug/L | 19/06/2019 |
| Magnesium | 263000 | ug/L | 19/06/2019 |
| Manganese | 400 | ug/L | 19/06/2019 |
| Nickel | 1.2 | ug/L | 19/06/2019 |
| pH | 6.52 | pH | 19/06/2019 |
| Potassium | 122000 | ug/L | 19/06/2019 |
| Selenium | <2.0 | ug/L | 19/06/2019 |
| Standing Water Level | 1.81 | metres | 19/06/2019 |
| Zinc | <5 | ug/L | 19/06/2019 |

Groundwater Well – EGM/D26

EPA Identification no. 24 – Groundwater Monitoring Well D26

Groundwater well was dry during sampling in June 2019

| Name | Reading | Units | Date |
|-------------------------|---------|--------|------|
| Arsenic | | ug/L | |
| Cadmium | | ug/L | |
| Calcium | | ug/L | |
| Chromium | | ug/L | |
| Copper | | ug/L | |
| Electrical Conductivity | | mS/cm | |
| Iron | | ug/L | |
| Lead | | ug/L | |
| Magnesium | | ug/L | |
| Manganese | | ug/L | |
| Nickel | | ug/L | |
| pH | | pH | |
| Potassium | | ug/L | |
| Selenium | | ug/L | |
| Standing Water Level | | metres | |
| Zinc | | ug/L | |