Incitec Fertiliser Operations Pty Ltd
39 Heron Road, Kooragang Island, NSW

OCTOBER 2024 MONITORING DATA

Notes on Monitoring Data

Environment Protection Licence: 11781
Date Published: 2 December 2024
Date Sampled: 21 and 25 October 2024
Date Sample Results Released: 8 November 2024
In relation to the monitoring data, IPL notes:

- The automatic sampler only triggers when a specified volume of rainfall has occurred. Sampling is currently initiated when the following two conditions are met:
    - A minimum 2 mm rainfall depth is measured in the preceding 60-minute period by the tipping bucket rain gauge; and
    - Stormwater flow over is detected by the flow sensor installed inside the drainage line.
    - Provided these conditions continue to be met, stormwater is sampled from the monitoring pit every 15 minutes and stored in sample bottles housed in a carousel within the auto sampler unit.

- Prior to analysis of collected stormwater samples “composite stormwater samples” are produced. Composite sampling consists of a collection of numerous individual discrete samples collected in a common container over a sampling period. Composite samples are collected from the discharge point and sent for analysis. The current sampling period is ‘per rainfall event’. This is defined as a continuous period where the flow and rainfall conditions are continued to be met and the time between sample collection is 15 minutes.
    - Due to technical issues with the automatic sampler, samples in October comprised ‘grab’ samples collected of accumulated water within the drain at site attendance.

- EPA Licence 11781 sets no specific pollutant limit on the site’s water discharges.

- IPL Newcastle has recently concluded the improvement works conducted within the Northern Drain network. These works included the diversion of clean roof water and the re-lining of all existing stormwater pipes. All stormwater flow is now diverted to the Central drain.

- **Figure 1** summarises the rainfall for October 2024.

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Central Drain Storm Water Drainage Analysis (EPL 7)

Pollutant	Units of Measure	Monitoring Frequency Required	No of Samples Analysed in month	Min. Value	Mean Value	Median Value	Max. Value
pH	pH Unit	Monthly during discharge	2	7.05	7.13	7.13	7.20
Total Suspended Solids	mg/L	Monthly during discharge	2	7.0	11.5	11.5	16.0
Sulfur as S	mg/L	Monthly during discharge	2	40.0	900.0	900.0	1760.0
Sulfate as SO_4	mg/L	Monthly during discharge	2	47.0	968.5	968.5	1890.0
Total Zinc	mg/L	Monthly during discharge	2	0.089	0.094	0.094	0.099
Ammonia as N	mg/L	Monthly during discharge	2	10.6	14.8	14.8	19.0
Nitrite as N	mg/L	Monthly during discharge	2	0.290	0.560	0.560	0.830
Nitrate as N	mg/L	Monthly during discharge	2	2.21	3.02	3.02	3.83
Nitrite and Nitrate as N	mg/L	Monthly during discharge	2	3.0	3.6	3.6	4.1
Total Kjeldahl Nitrogen as N	mg/L	Monthly during discharge	2	11.3	15.4	15.4	19.4
Total Nitrogen as N	mg/L	Monthly during discharge	2	14.3	18.9	18.9	23.5
Phosphorus (Total) as P	mg/L	Monthly during discharge	2	6.9	8.3	8.3	9.7
Phosphorus (Reactive) as P	mg/L	Monthly during discharge	2	7.3	8.4	8.4	9.5
Phosphate (Calculation from Total Phosphorus)	mg/L	Monthly during discharge	2	21.2	25.5	25.5	29.7

Not detected values defined as half the detection limit for the purpose of calculating the mean and median.

Rainfall & Flow Data

Each drain has a rain gauge and flow sensor. The rain gauge and flow sensor transmit the rain and flow information to a controller which then initiates the automatic sampler to take a sample in accordance with the site's EPL licence (EPL 11781).

Flow rate information is recorded on a continual basis via flow sensors located inside the discharge drain. A magnetic flow sensor has recently been installed to measure the flow at the Central drain.

A rainfall gauge independent to the ISCO samplers is also located on site. The rainfall summary is shown in **Figure 1**.

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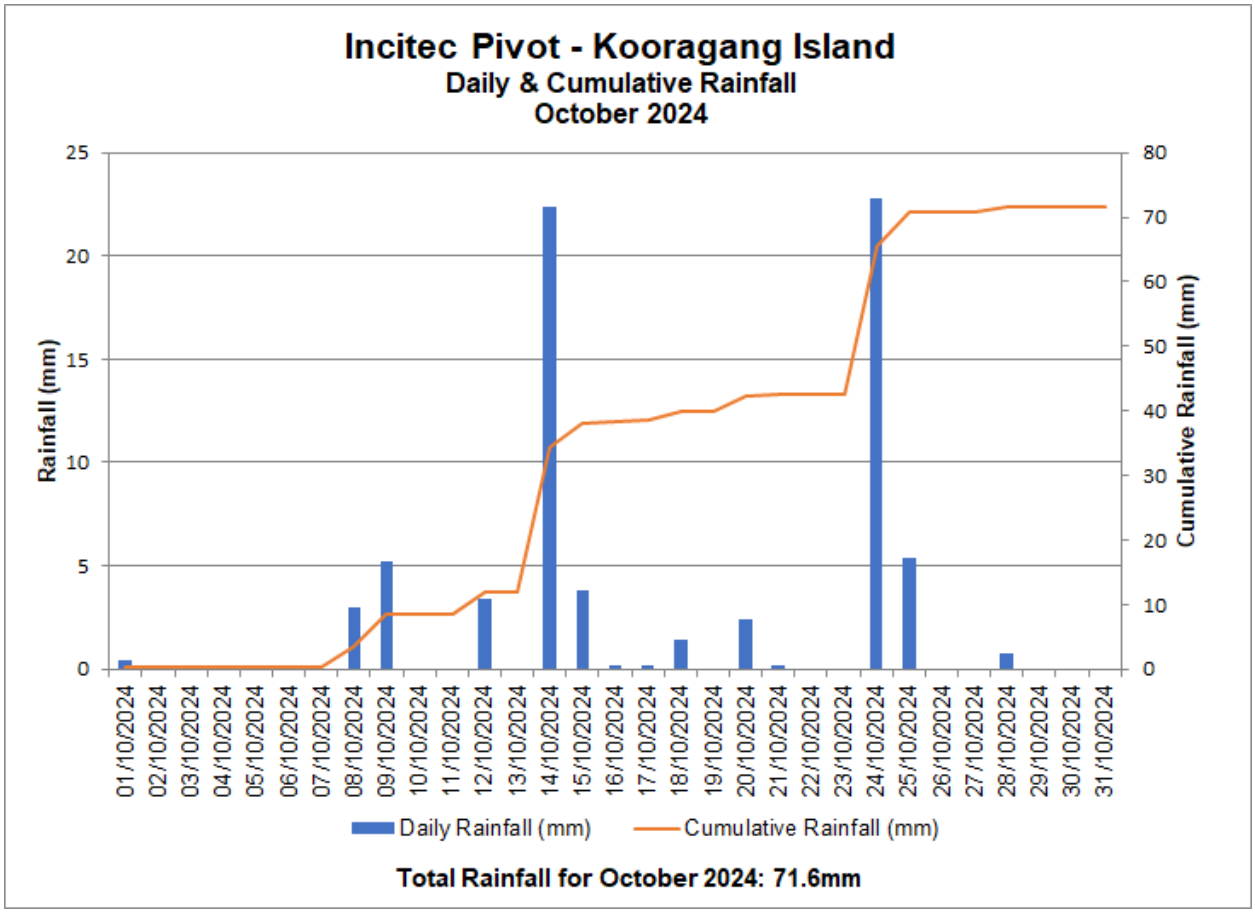

Figure 1 *October 2024 Rainfall Summary*