Internet Reporting

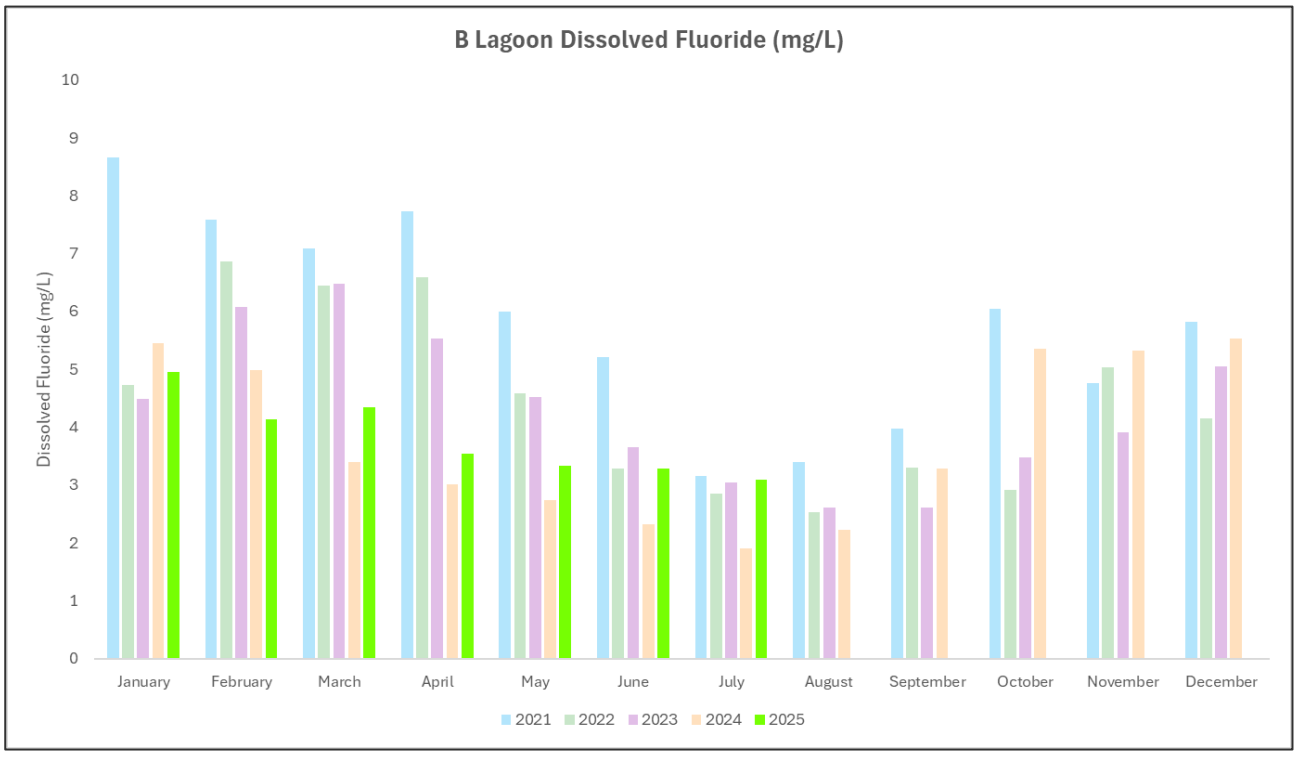
It was largely on the strength of Rio Tinto's voluntary pollution prevention (P2) planning process that the Province of British Columbia issued, in 1999, a "multimedia" environmental permit for our smelter operations. This was the first such permit ever issued in BC and establishes standards, and monitoring and reporting requirements, for a comprehensive range of emissions, effluents, and wastes. The P2 planning process is believed to have played a significant role in the more than 60 per cent reduction in environmental permit non-compliances achieved at the Kitimat smelter since 1996.

Permit reporting

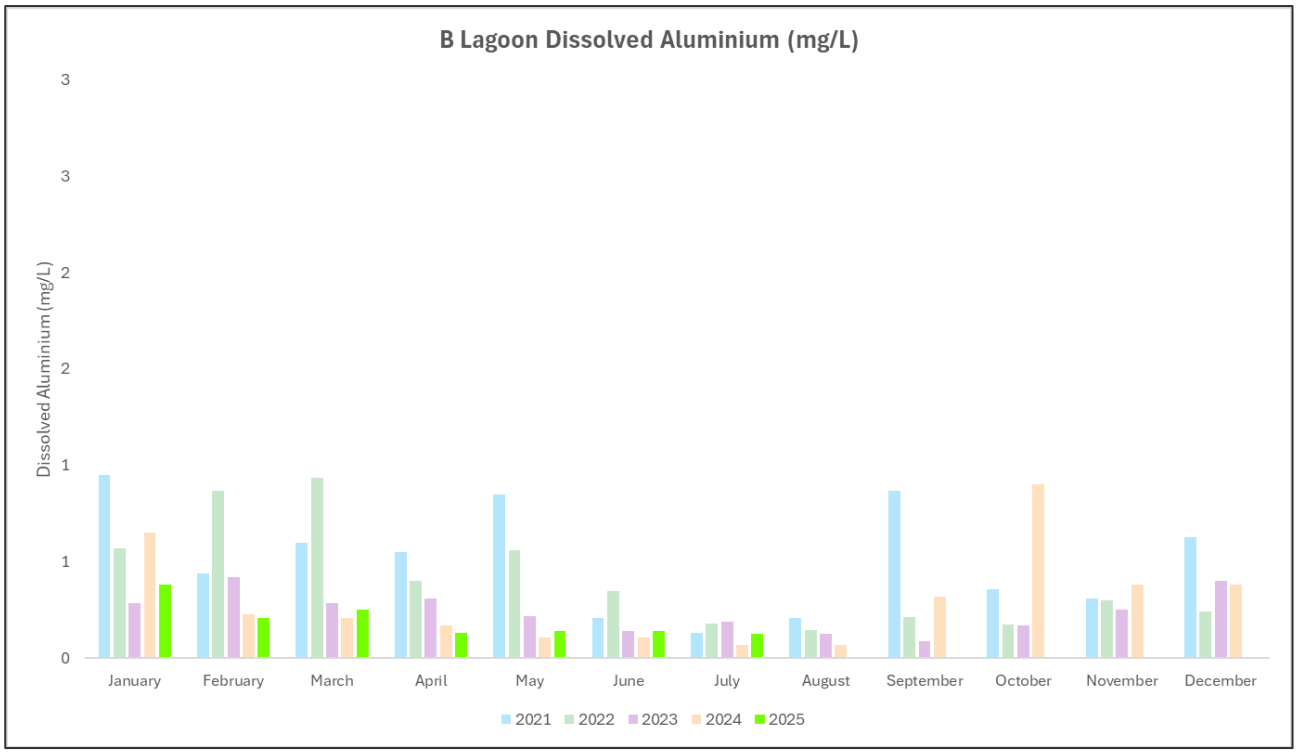
Rio Tinto's P2 Permit requires continuous reporting on several key parameters – from emissions to effluents, and other wastes. The following tables and graphs satisfy the P2 Permit clause 8.1.5 for internet reporting on the B-Lagoon, Reduction Roof vent Emissions, Sulphur dioxide emissions and emission control device upsets. Additional information on our environmental performance and improvement initiatives can be found in Rio Tinto's annual environmental report.

B - Lagoon

Permit section	Details
3.1 B Lagoon	Dissolved fluoride originates mainly from the leaching of a legacy (no longer used) landfill, as well as from raw-material losses. Ongoing housekeeping and storm water diversion work is conducted to reduce the fluoride concentration. B lagoon is sampled daily for dissolved fluoride and the results from the daily samples for each month are averaged and shown on the below graph. The permit limit for this parameter is 10.0 mg/L and it is applied to the daily results.



Permit section	Details
3.1 B Lagoon	Dissolved aluminium originates when alumina encounters precipitation, as well as from raw material losses. B lagoon is sampled daily for dissolved aluminium and the results from the daily samples for each month are averaged and shown on the below graph. The permit limit for this parameter is 3.0 mg/L, and it is applied to the daily results.

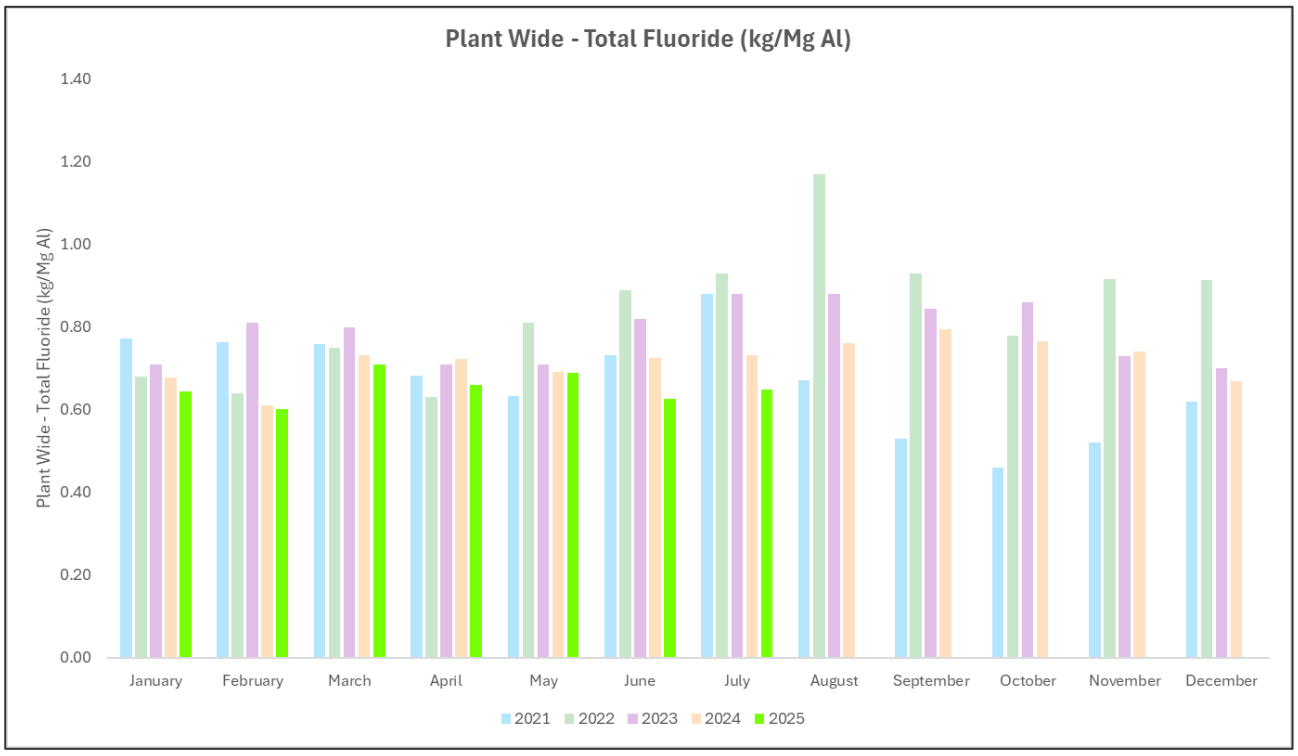


Permit section	Details
3.1 B Lagoon	The $96LC_{50}$ test measures the effect of the sampled water on rainbow trout over 96 hours. This test is completed quarterly, and B lagoon and the test routinely passes with 100% survivability.

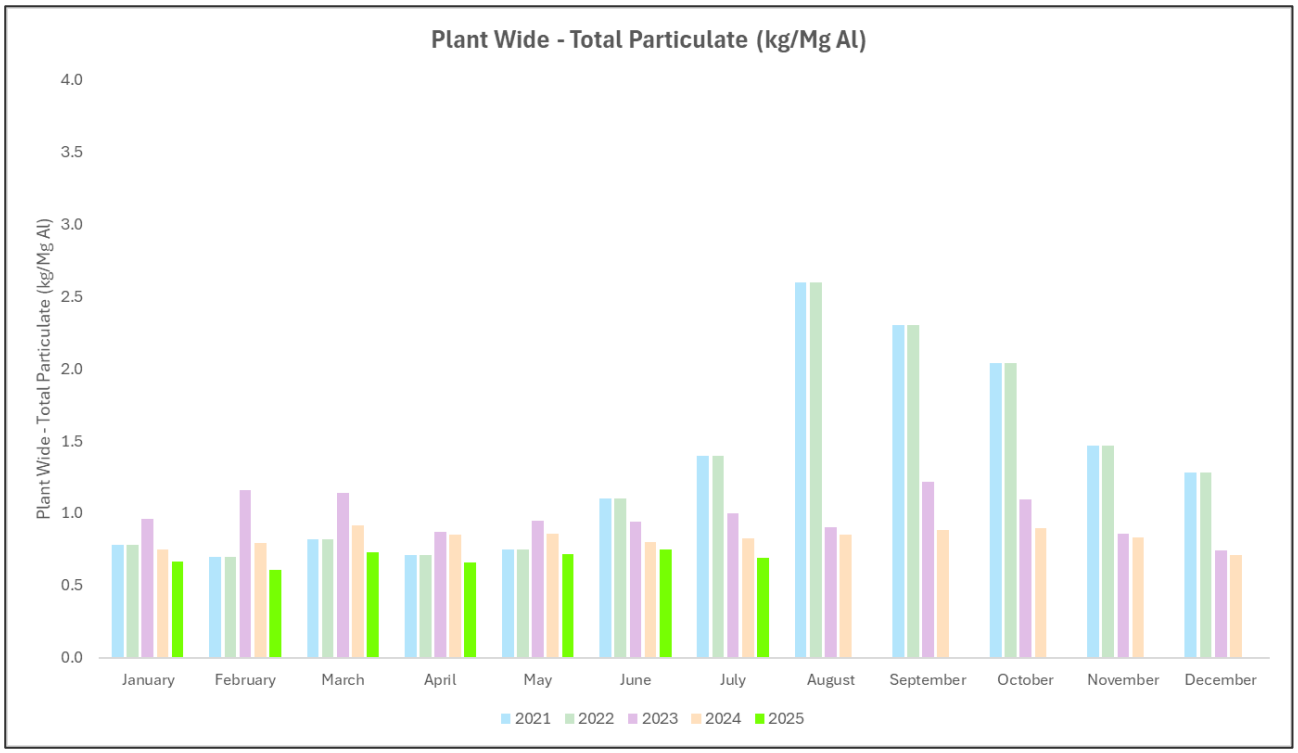
B-Lagoon Toxicity (96LC50)					
Year	2021	2022	2023	2024	2025
Q1	Pass	Pass	Pass	Pass	Pass
Q2	Pass	Pass	Pass	Pass	Pass
Q3	Pass	Pass	Pass	Pass	
Q4	Pass	Pass	Pass	Pass	

Prebake Potline Emissions

Permit section	Details
4.10 Fluoride Emissions	Fluoride total is produced during the electrolytic process. Majority of the fluoride emissions are captured and treated by the two gas treatment centres, however some fugitive emissions are released through the reduction building roof vents. The fugitive emissions are monitored and reported on a monthly basis against a monthly plant wide fluoride total permit limit of 0.9 kg of Ft/ Mg Al is used to determine compliance. The plant wide permit limit also includes sources of fluoride total from the gas treatment centres, the pallet storage building and the fume treatment centre.

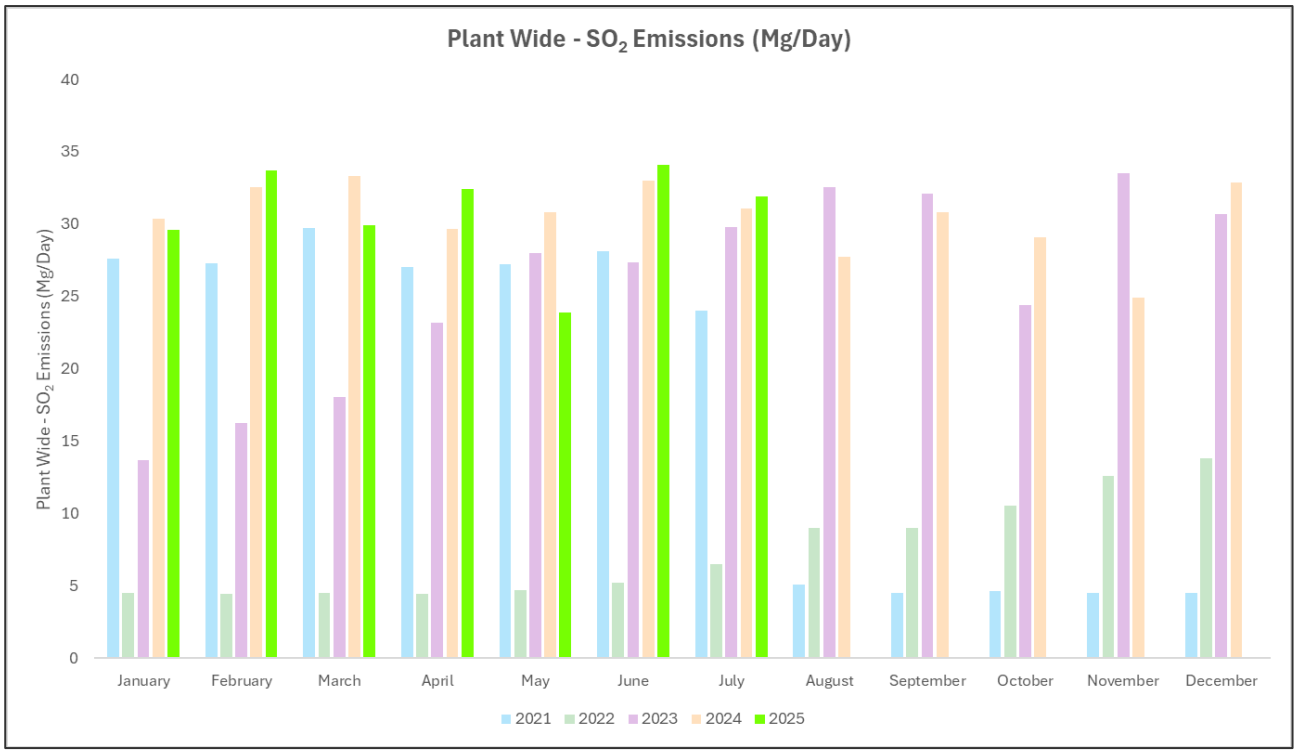


Permit section	Details
4.1.2.1 Prebake Potline Emissions	Total particulate are air-borne solids that are composed mainly of alumina and are produced during the electrolytic process. Most particulate emissions are captured by the two gas treatment centres; however, some fugitive particulate emissions are released through the reduction building roof vents. The fugitive emissions are monitored and reported monthly against a monthly plant wide total particulate permit limit of 1.3 kg of TP/ Mg Al is used to determine compliance. This permit limit also includes sources of total particulate from the gas treatment centres.



Plant Wide Sulphur Dioxide

Permit section	Details
4.2 SO_2 emissions	Sulphur dioxide (SO2) originates from the green coke (a by-product of petroleum refining) used to manufacture anodes, and is released both during coke calcining, anode baking and anode consumption during the electrolytic process. The permit limit of 42 Mg/day and is displayed in the graph below.



Emission Control Device Upset/Bypass

Permit section	Details
7.1.1.2	Emission control devices are pieces of equipment that are designed to reduce contaminants emitted to the atmosphere from operations through scrubbing, filtration or incineration. Emission control devices are critical to reducing BC Works environmental footprint. At BC Works there are many minor emission control devices located throughout the operation as well as several critical devices such as the Fume Treatment Center (FTC), Gas Treatment Center (GTC), Liquid Pitch Incinerator (LPI) & Pyroscrubber. An upset or bypass of an emissions control device occurs when the operation continues to produce emissions, but the emissions control device is no longer treating the emissions as per specification for a period. Upsets may require to completed scheduled maintenance safely, when scheduled maintenance works results in an upset or bypass of an emissions control device the work must be approved prior to commencing. The table below is a 12-month summary for all scheduled upsets.

2025: Emission control device upset/bypass

Date	Equipment	Category	Upset Type	Duration	Reason for upset
1-Jan-25	B221 Cruce cleaning	Offline	Approved	3 months*	B4440 DC replacement project
2-Jan-25	Stn3-DC-11	Dusting	Unplanned	5d 2h 50m	Urgent reroute without DC online
7-Jan-25	B-Lagoon	Upset	Unplanned	3 days	Lost power to the wireless bridge
10-Jan-25	Stn3-DC-11	Dusting	Unplanned	8 hours	Maintenance
2-Feb-25	LPI	Upset	Unplanned	50 mins	Incinerator tripped
19-Feb-25	Air slide into E Silo	Upset	Unplanned	3h 45m	Missing filters
22-Feb-25	Bin-21-DC-19	Upset	Unplanned	3d 30m	Part repair
27-Feb-25	FTC	Mode 2	Unplanned	1h 45m	Damaged motor belt
11-Mar-25	FTC	Mode 2	Planned	7h 55m	Routine maintenance
11-Mar-25	FC3 Day Tank	Offline	Unplanned	6h 16m	Incinerator tripped
2-Apr-25	5710-DCB-004	Dusting	Unplanned	30 mins	Broken bag
3-Apr-25	5710-DCB-004	Dusting	Unplanned	29 mins	Broken bag
21-Apr-25	B565-DC-9	Dusting	Unplanned	4d 8h 45m	Damaged parts
24-Apr-25	5710-DCB-004	Dusting	Unplanned	1h 30m	Broken filter bag
26-May-25	B565-DC-9	Dusting	Approved	17d 15h*	Part replacement
7-May-25	FC-3 Day Tank	Bypass	Unplanned	4h 54m	No plant air
12-May-25	Stn4-DC-13	Dusting	Unplanned	6 mins	Filter change
12-May-25	Bin 21-DC-19	Dusting	Unplanned	6 mins	Filter change
7-Jun-25	B Lagoon	Upset	Unplanned	7 days	Plugged fluoride monitoring system
16-Jun-25	West GTC	No Exhaust	Unplanned	26 mins	Power trip
17-Jun-25	East GTC	No Feed	Planned	4h 25m	Part repair
23-Jun-25	B565-DC-9	Dusting	Unplanned	1d 2h 54m	Rotary valve repair
23-Jun-25	5610-DCB-007	Dusting	Unplanned	9 hours	Damaged parts
24-Jun-25	FTC	Mode 2	Planned	8h 5m	Routine maintenance

07-Jul-25	FTC	Mode 2-3-4	Unplanned	2 h 23 m	No flow for cooling tower water pump
16-Jul-25	FTC	Mode 2-3-4	Unplanned	41 m	System set up error during maintenance
22-Jul-25	B134-DC-17	Upset	Unplanned	2h 24 m	Plugged DC bags
27-Jul-25	B5811 Dust Collector*	Upset	Unplanned	1 hr	Plugged DC filter
30-Jul-25	Stn4-DC-13	Upset	Unplanned	8 m	Plugged DC bags
31-Jul-25	West GTC	No Feed	Planned	8 hrs	Non-routine maintenance
31-Jul-25	West GTC	No Feed	Unplanned	2 hrs	Unexpected maintenance delay

*Approved bypass of the emission control device while deploying the mobile dust collector to control dust emission.

2025 Cumulative Hours of Scheduled Bypasses of Works Hours as of July 31, 2025 (P2 Clause 7.1.1)

Equipment	Cumulative Bypass Hours	Last Scheduled Works Date	Remaining Hours*
East GTC	9 h	June 17, 2025	23 h
West GTC	8 h	July 31, 2025	24 h
FTC	16h	June 24, 2025	56 h
LPI	0 h	NA	180 h
FC-3 Day Tank	0 h	NA	28 h

* Remaining hours from the total approved bypasses of works under the listed condition on P2 Clause 7.1.1 after subtracting the cumulative bypass hours for the current year.