

Supplementary material

Geochemical controls on aluminium concentrations in coastal waters

Brad M. Angel^{A,B}, *Simon C. Apte*^A, *Graeme E. Batley*^A and *Lisa A. Golding*^A

^ACSIRO Land and Water, Locked Bag 2007, Kirrawee, NSW 2232, Australia.

^BCorresponding author. Email: brad.angel@csiro.au

Table S1. Operationally defined size ranges used in the present study

Size range	Operationally defined size fraction
<0.001 μm	Dissolved aluminium (free ions and low molecular weight complexes)
>0.025 to <0.45 μm	Colloidal aluminium complexes
>0.45 μm	Particulate aluminium complexes

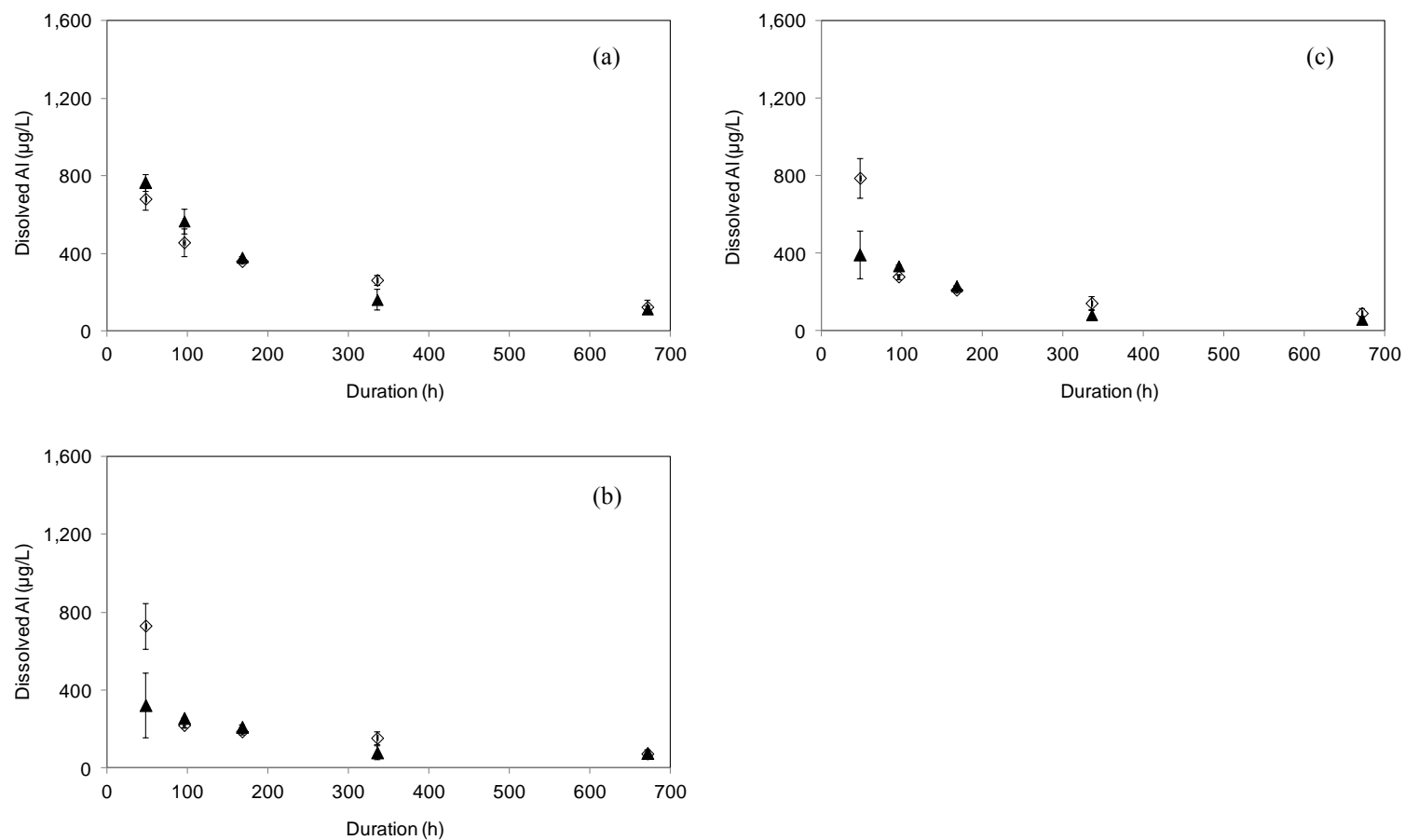


Fig. S1. The effect of time on the solubility of aluminium in filtered seawater (solid triangles) and seawater containing 30 mg L⁻¹ of suspended particulates (open diamonds) spiked with (a) 1000, (b) 5000 and (c) 10 000 µg L⁻¹ total aluminium. Error bars represent the standard deviation of three replicates.

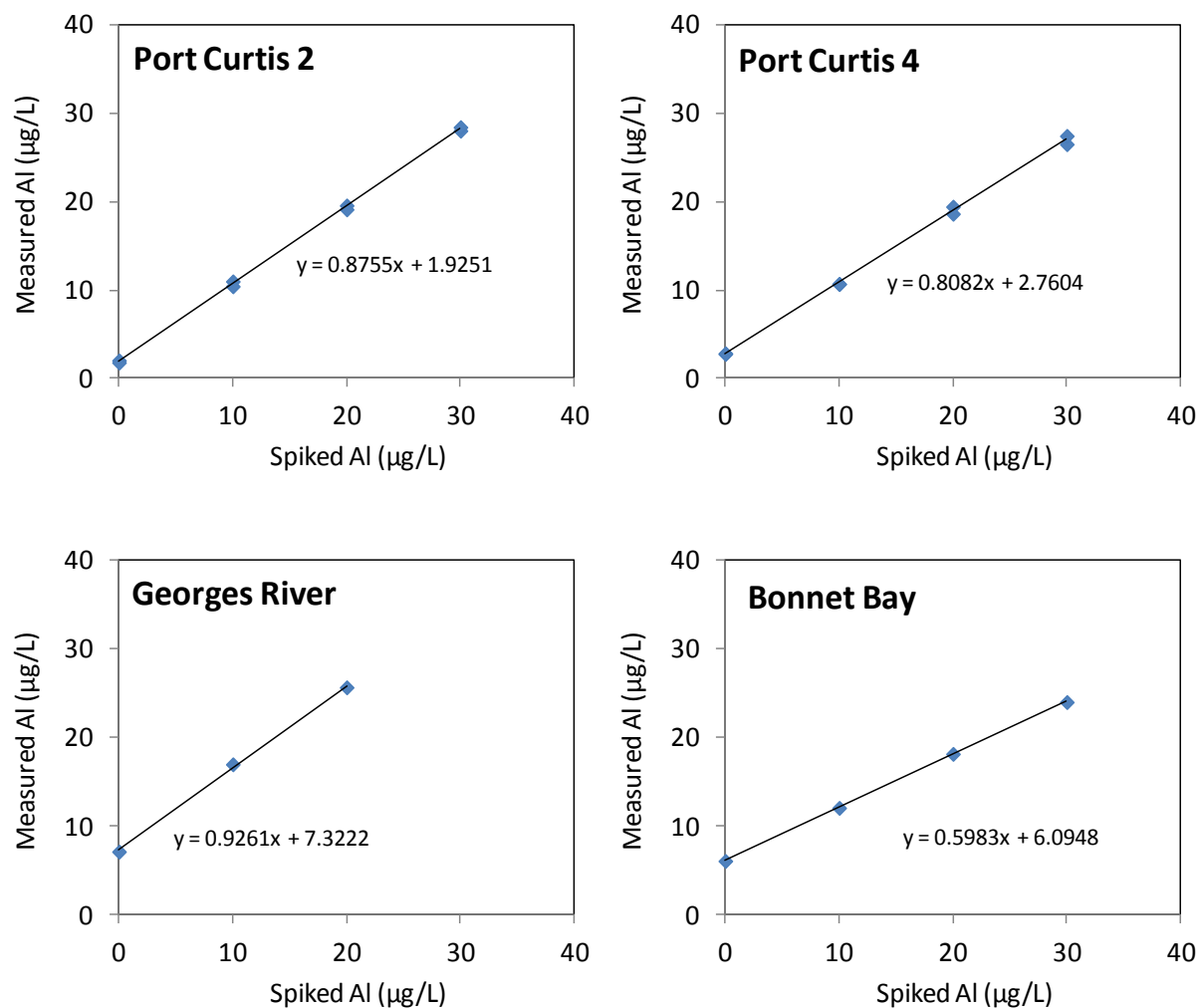


Fig. S2. The spiked and measured total dissolved (<0.45 µm) aluminium concentrations measured for adsorption isotherm tests of suspended particulates from each site. Spike controls that were prepared in filtered (<0.45 µm) seawater, mixed and allowed to stand for 24 h, showed that spiked concentrations were within 5 % of nominal values, indicating spikes were accurate and that there was negligible adsorption in the absence of suspended particulates.

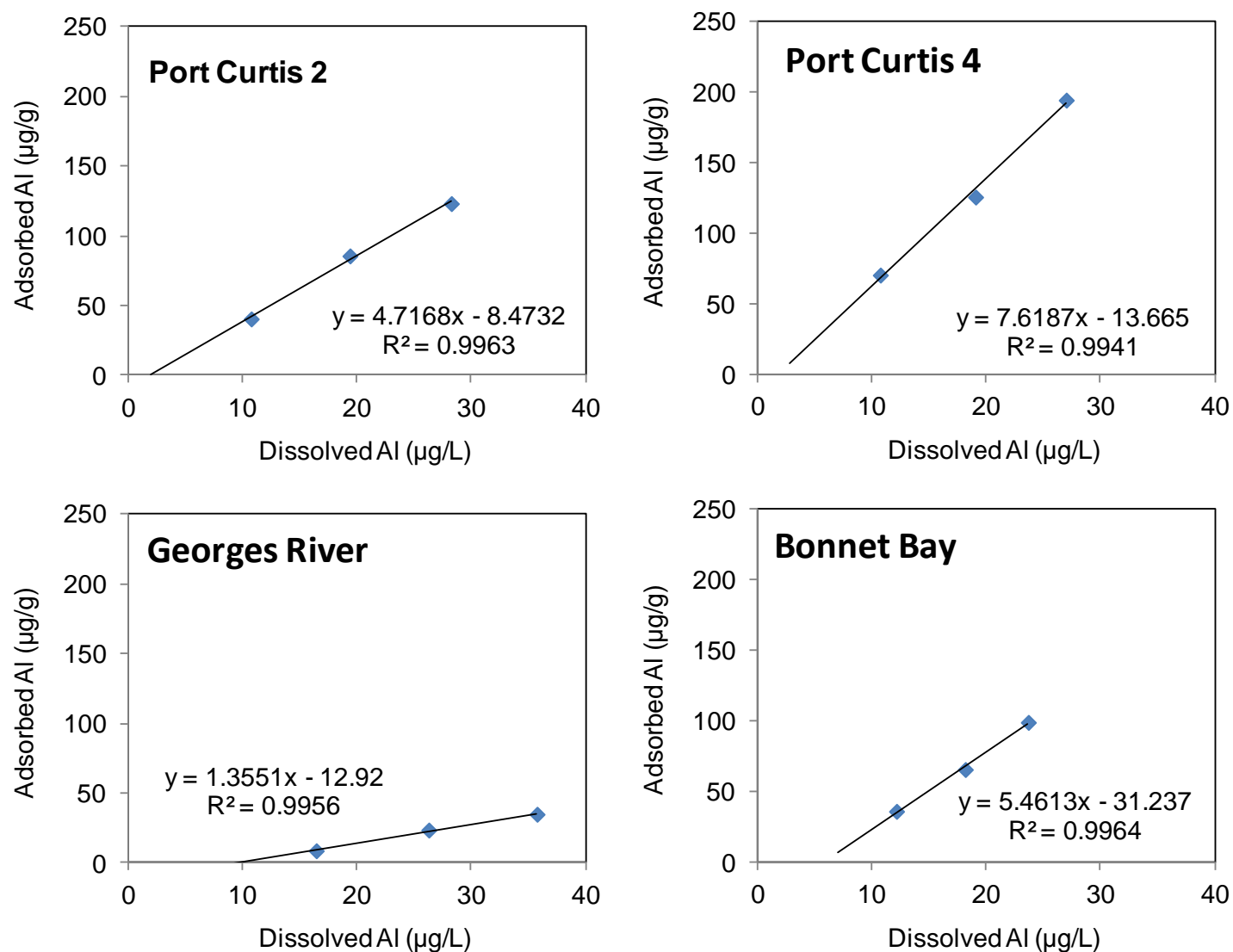


Fig. S3. Adsorption isotherms for the unfiltered waters from each site.