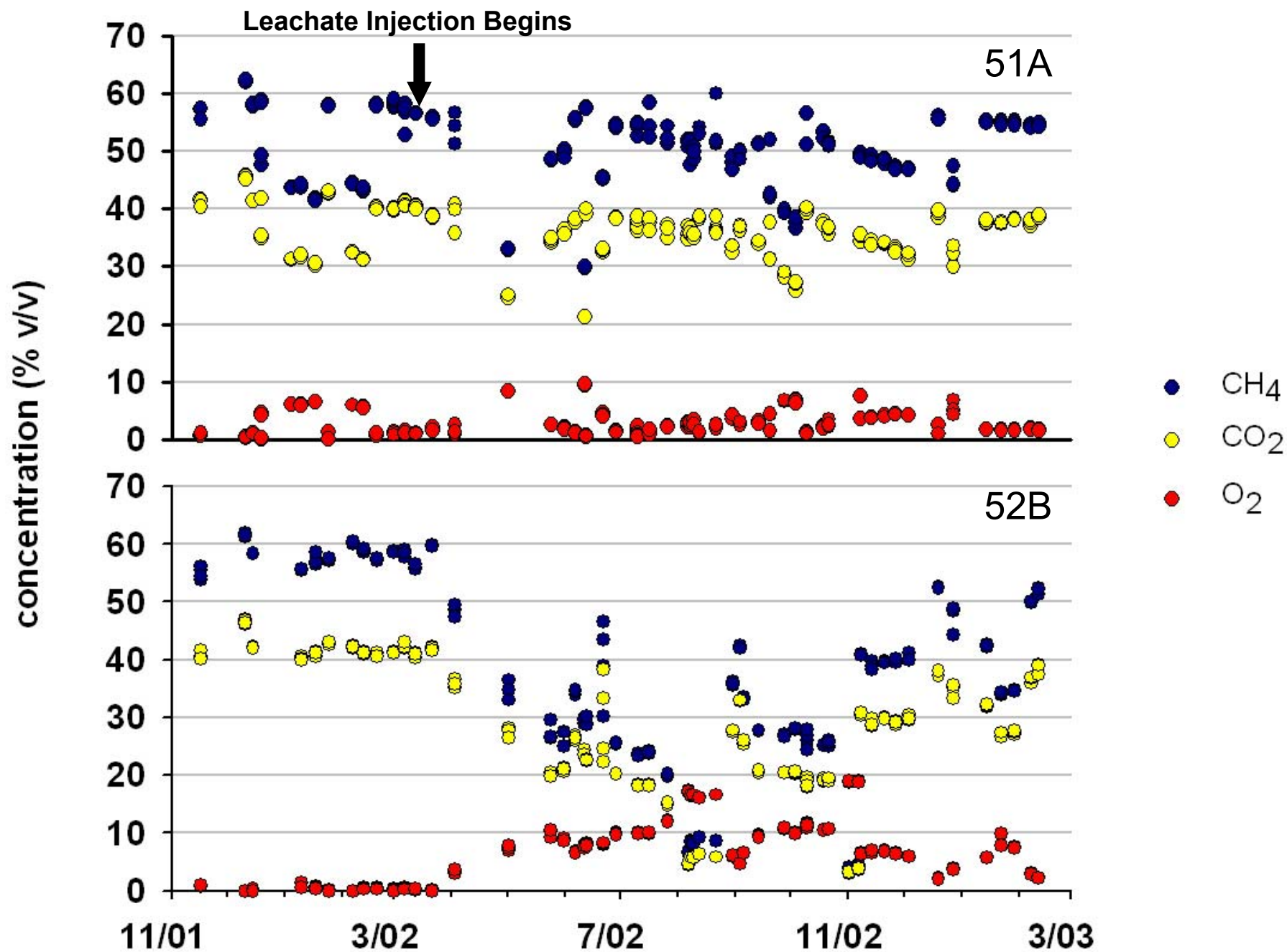


US EPA ARCHIVE DOCUMENT



Interim Leachate Results

Unit 5 FLB, Unit 7 AALB

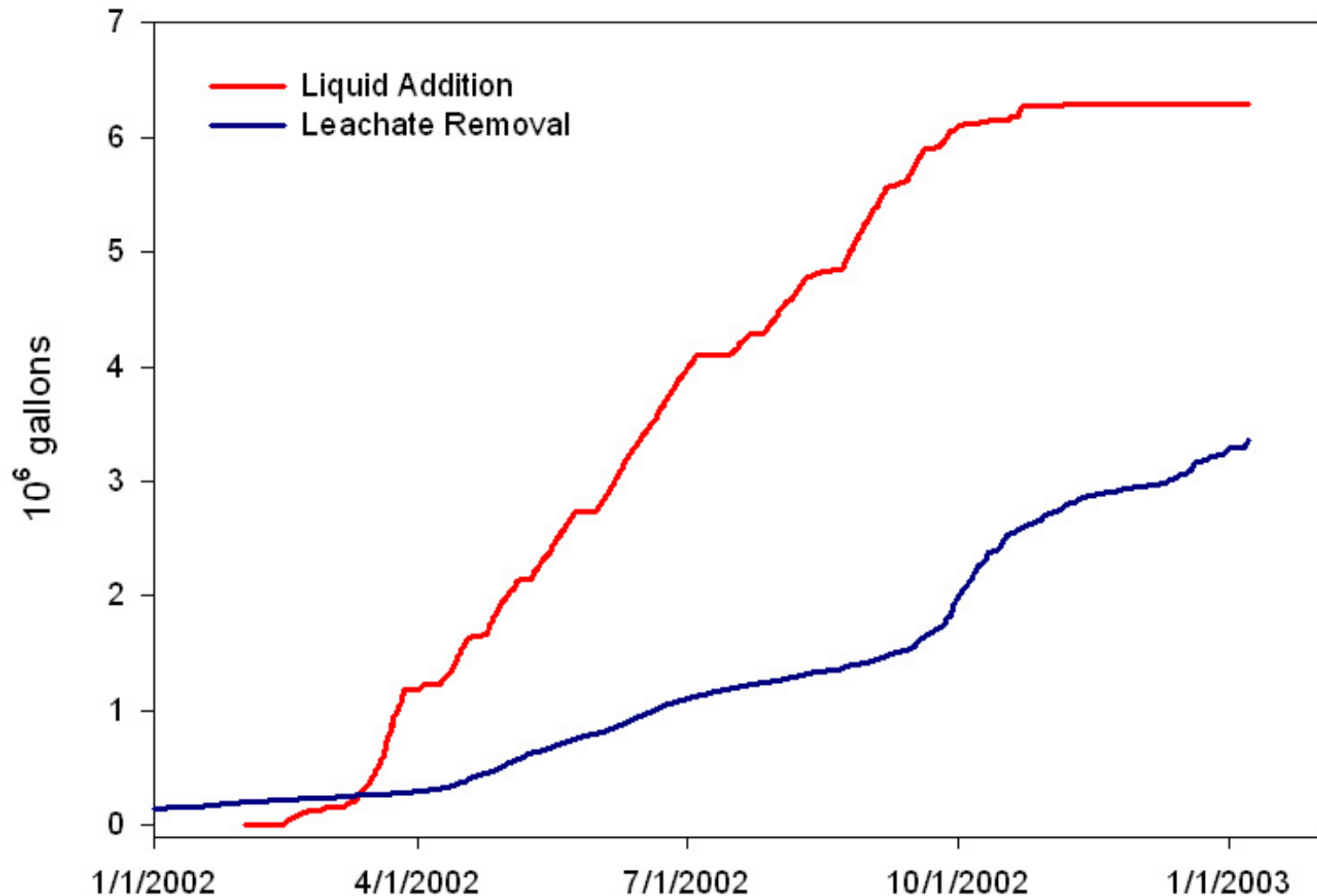


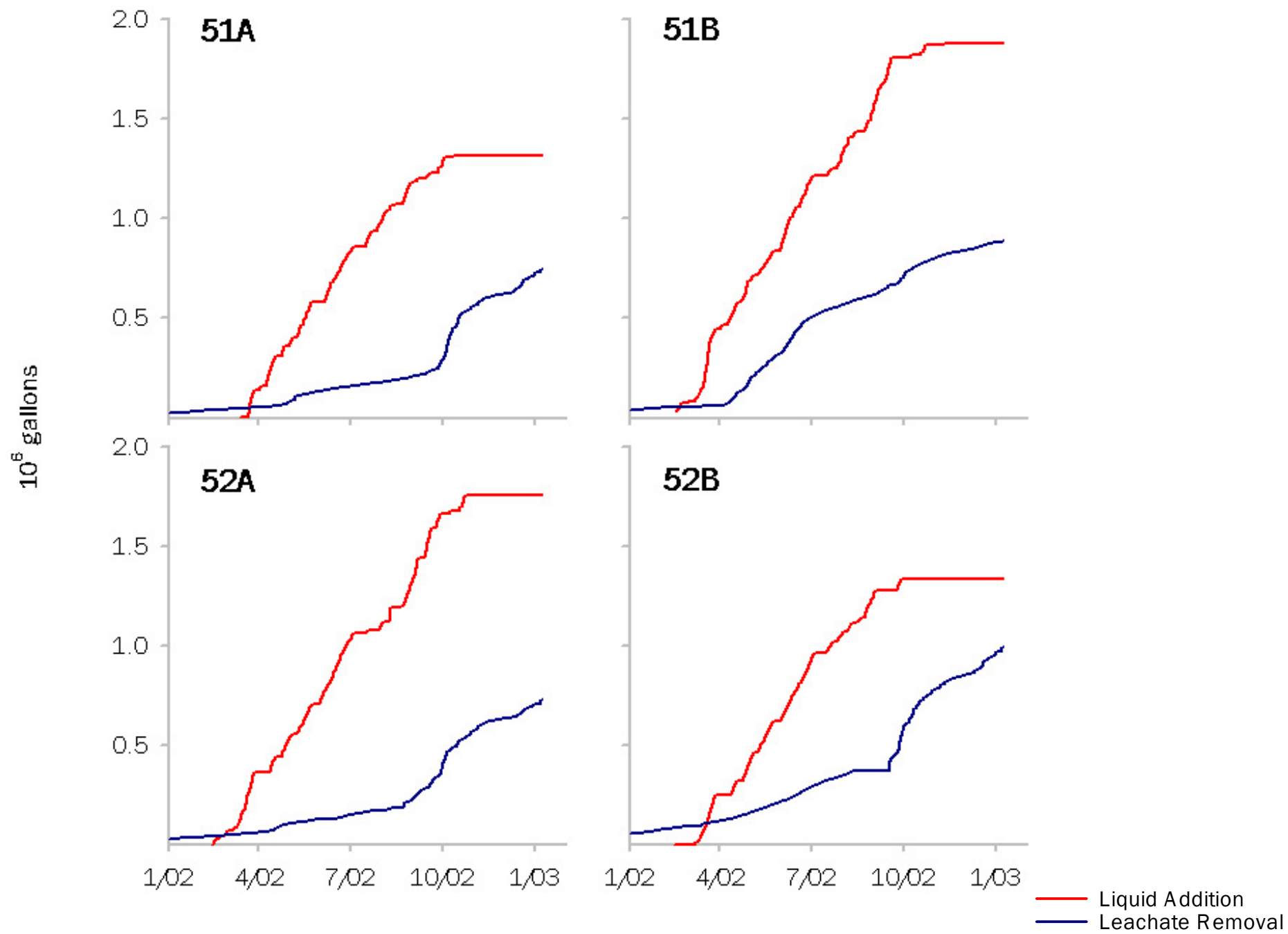
Area 5 Water Balance

- 2.5 million yd³ in place
- Average moisture content = 35%
- Density = 1,650 lb/yd³
- Moisture required to achieve 45%
= 36 gal/yd³

$$2.5 \text{ million yd}^3 \times 36 \text{ gal/yd}^3 = 91 \text{ Mgal}$$

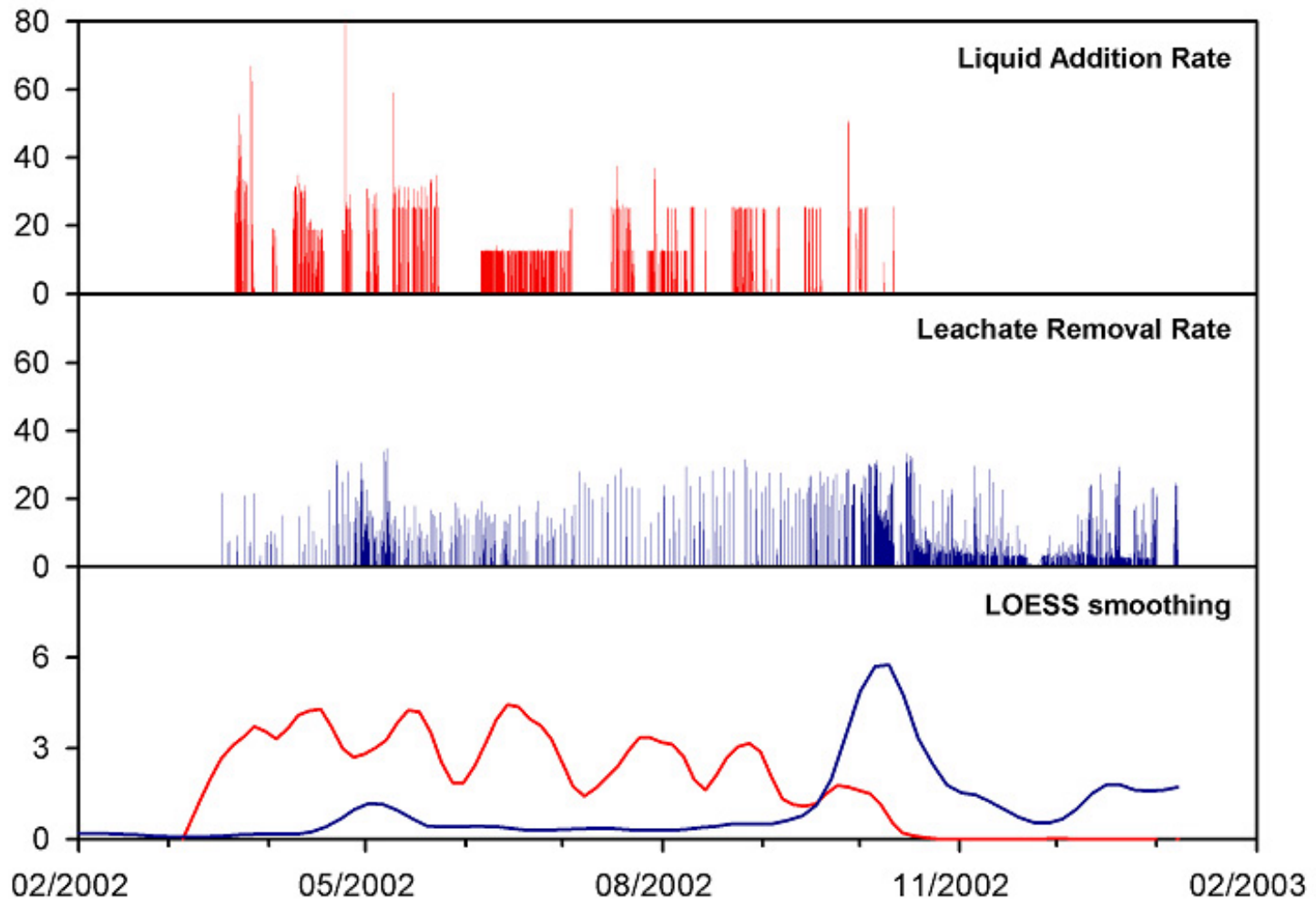
Cumulative Liquid Addition and Removal for the FLB



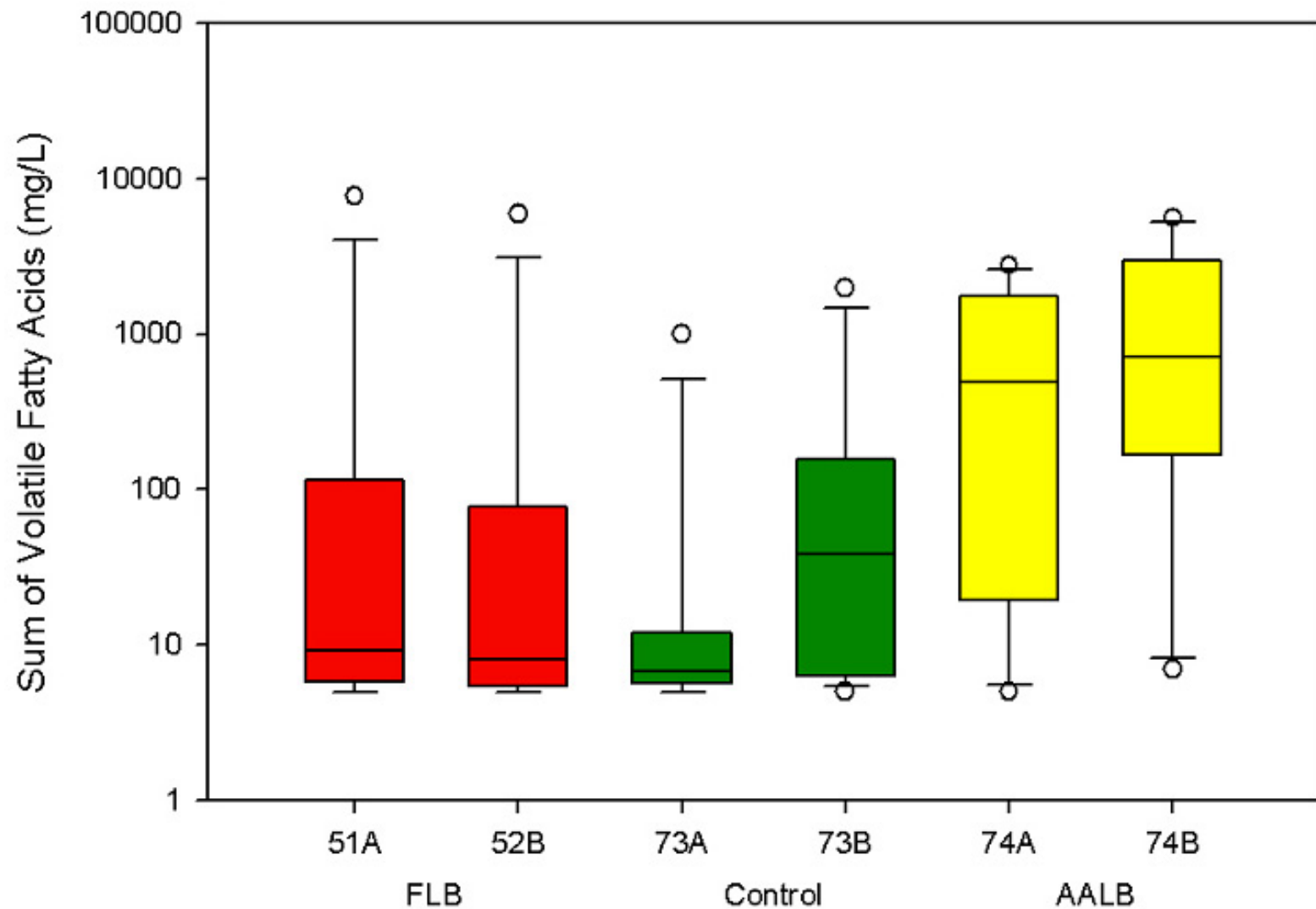


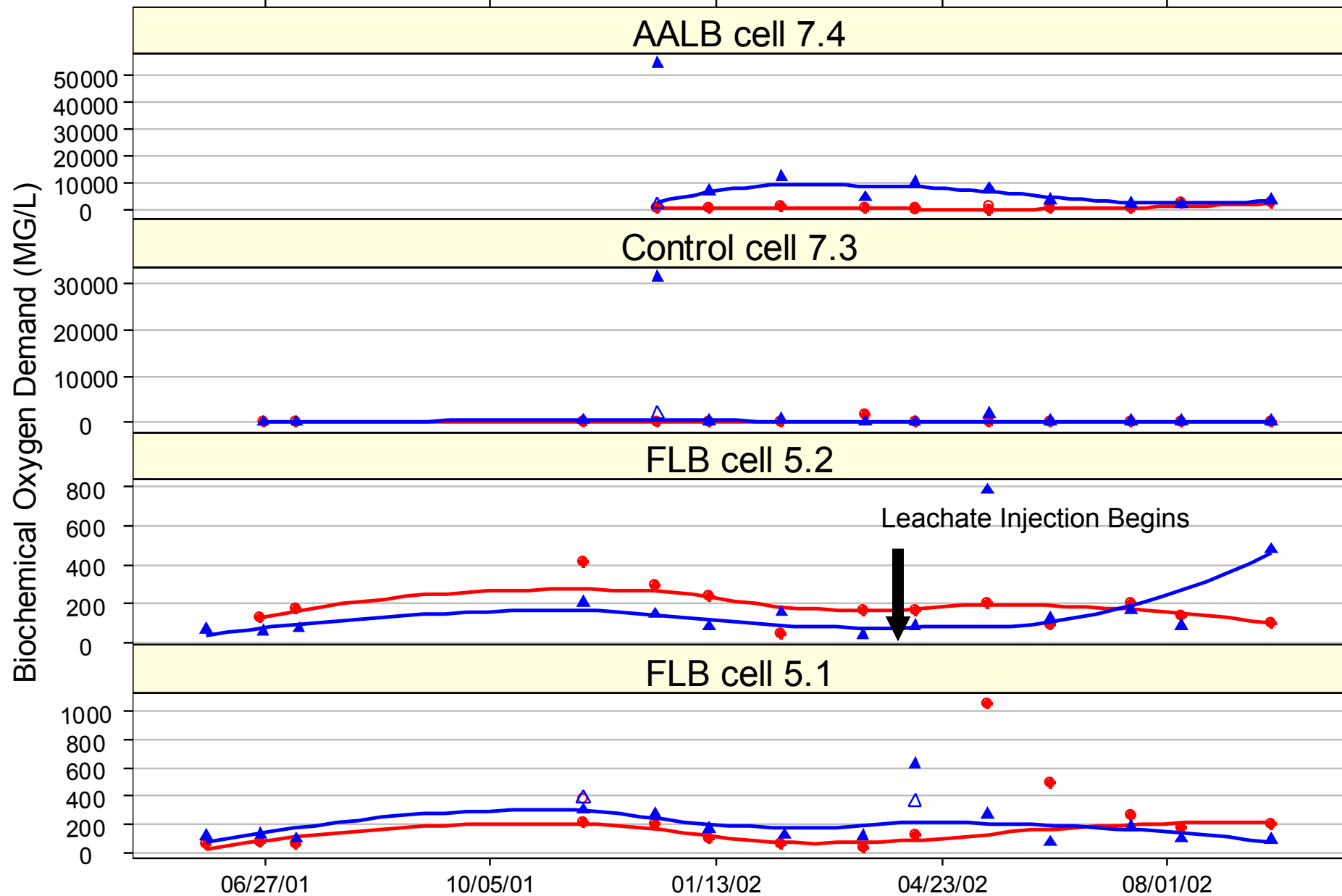
Liquid Addition Rate Summary for Cell 51A

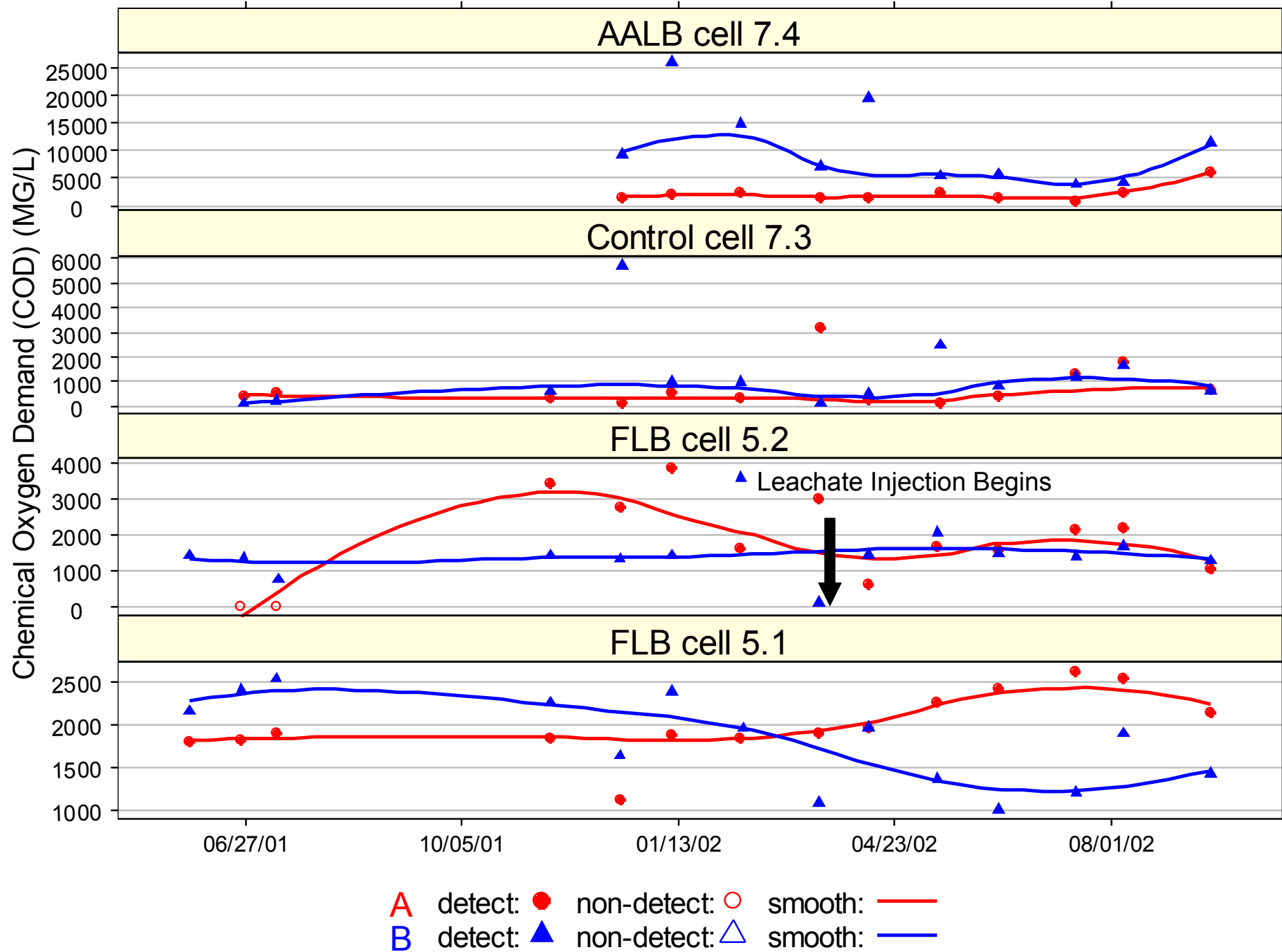
GPM



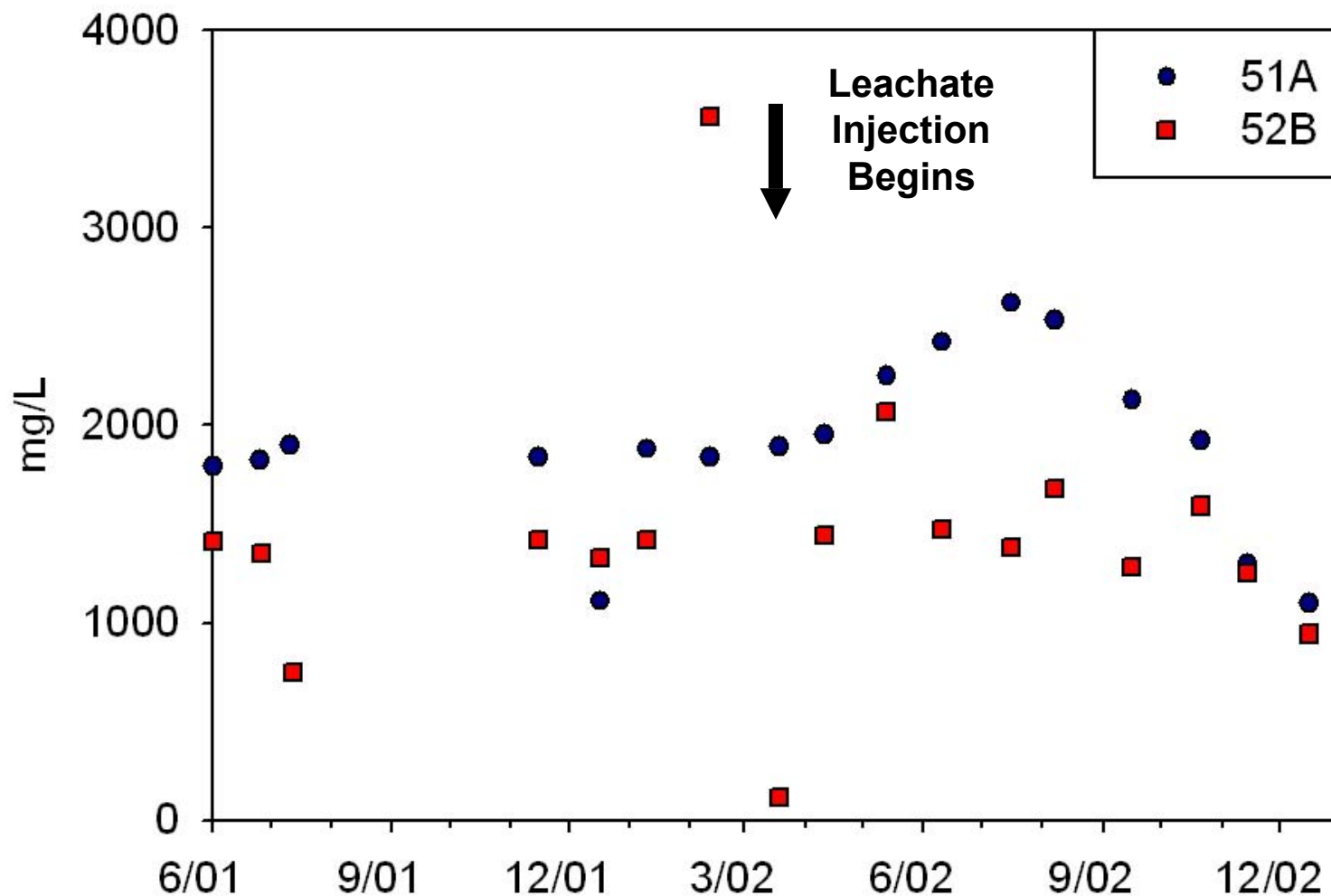
Volatile Organic Acid Comparison

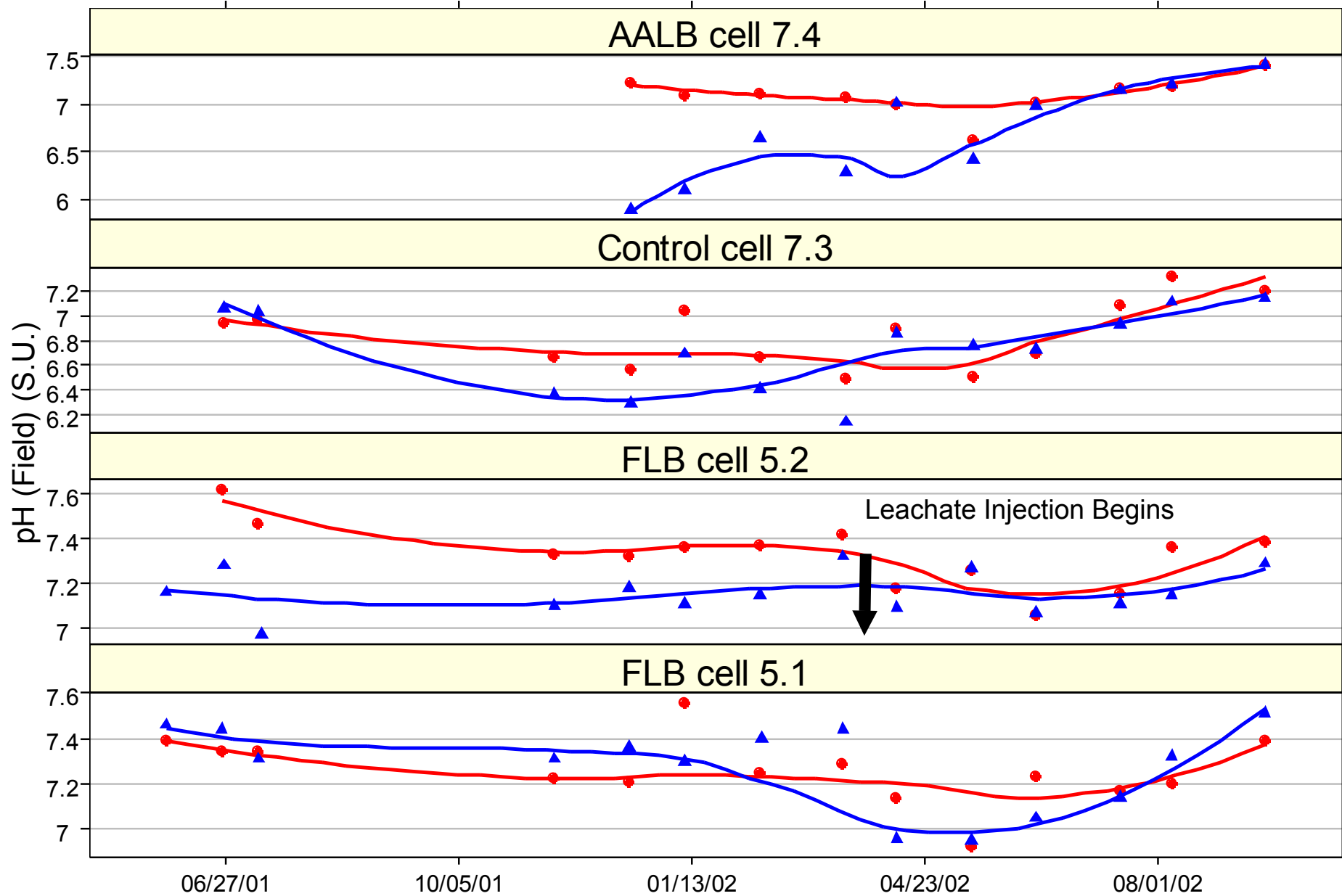


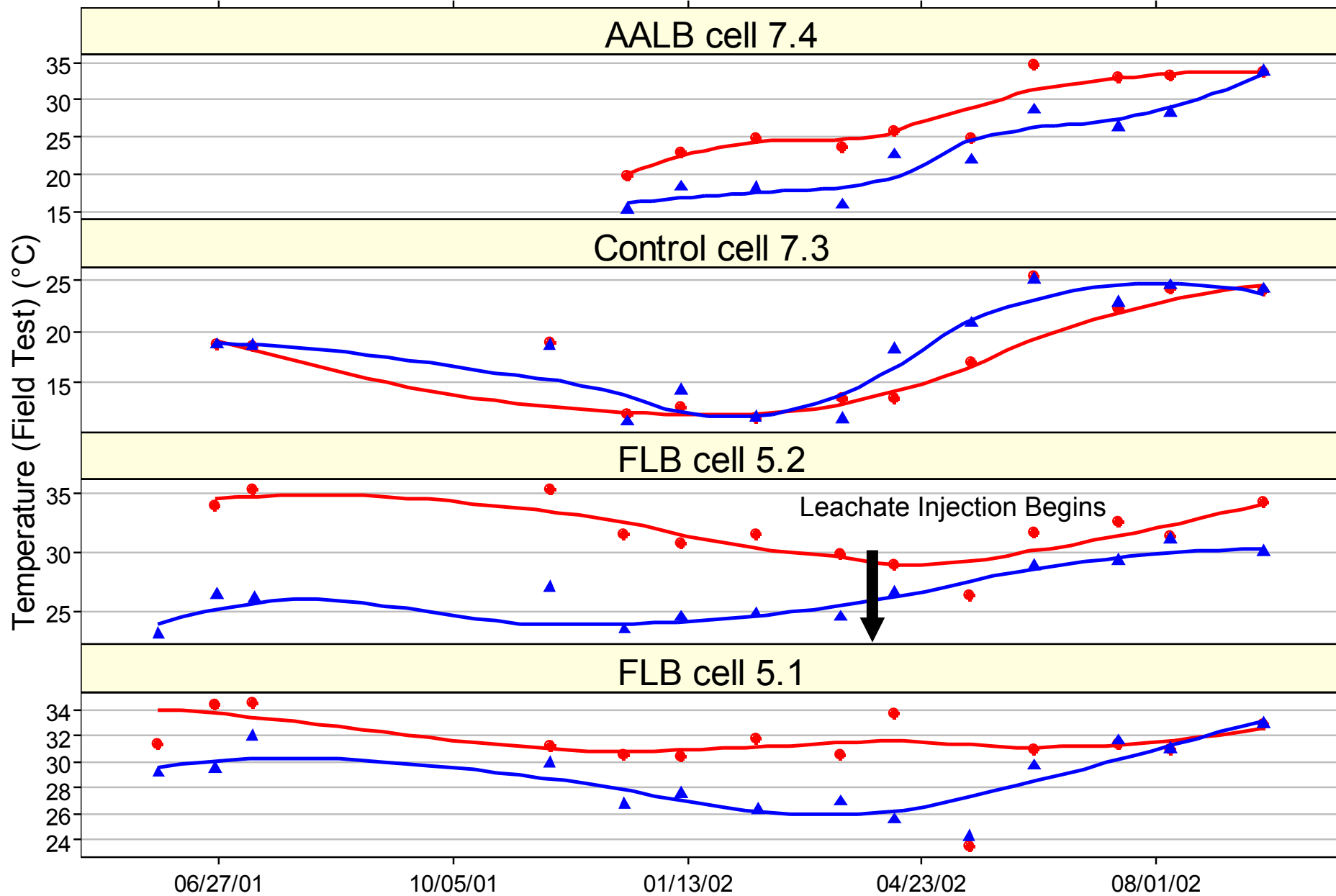




COD: FLB Cells



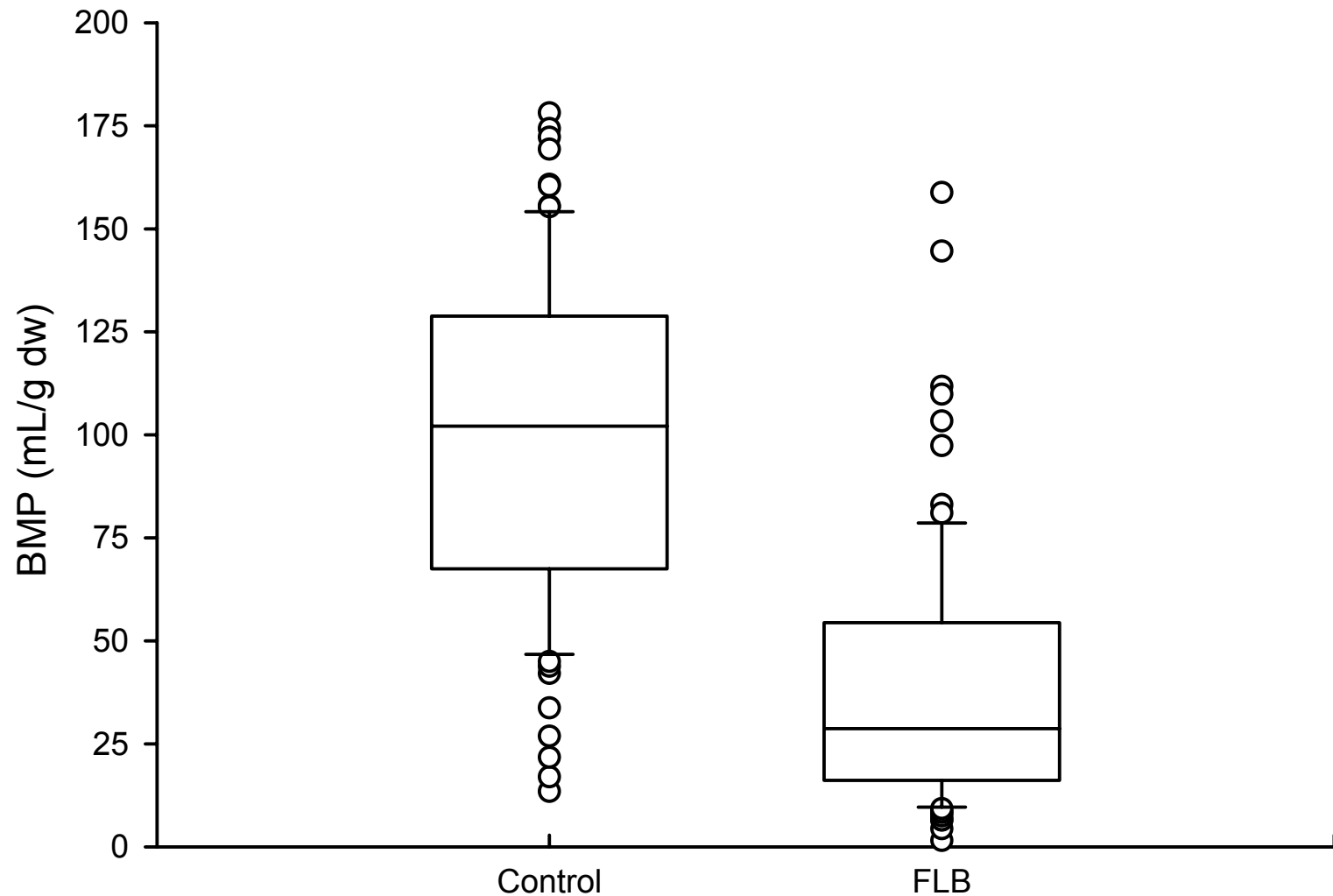




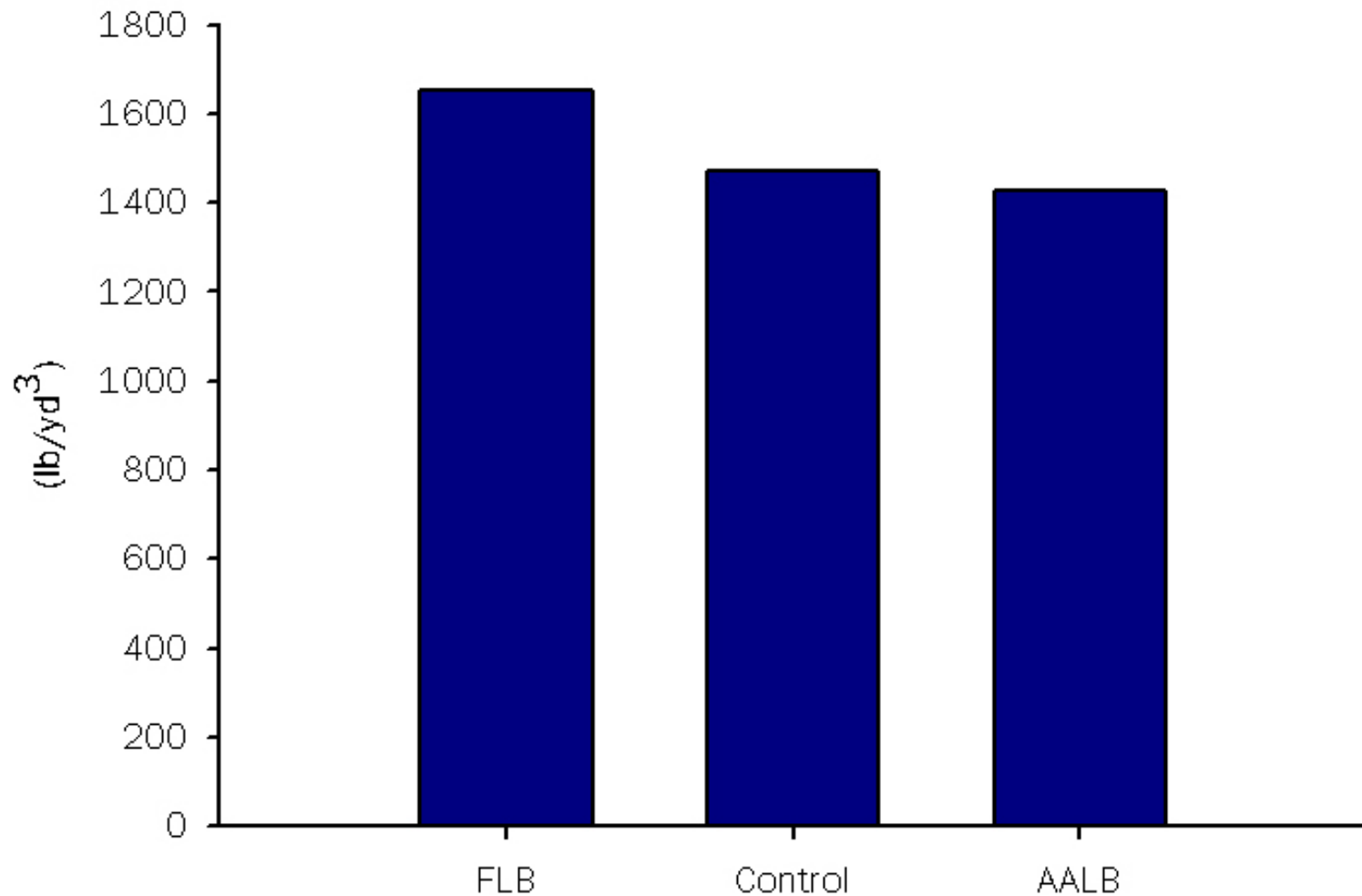
Interim Solids Results



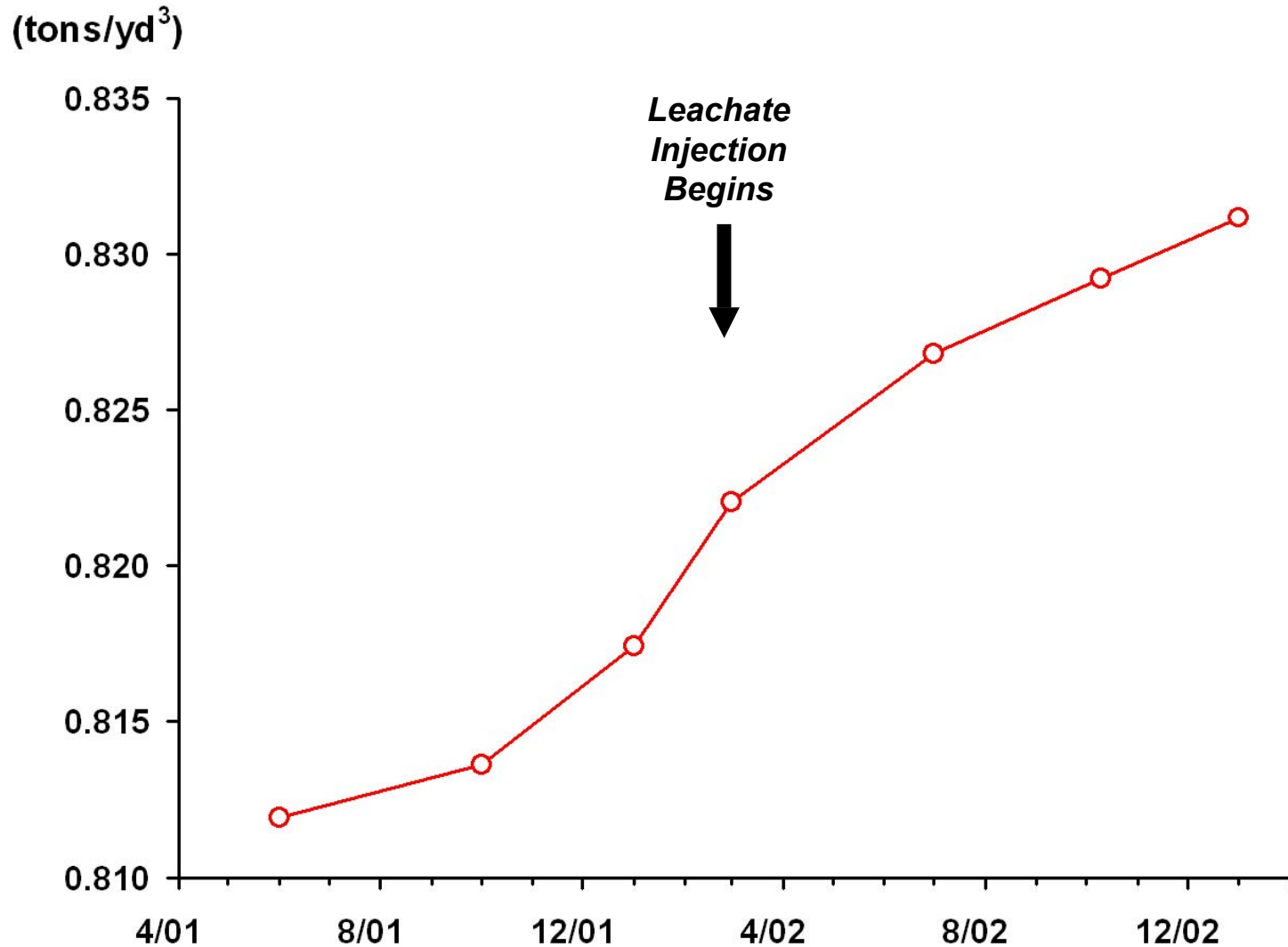
Biochemical Methane Potential: Baseline



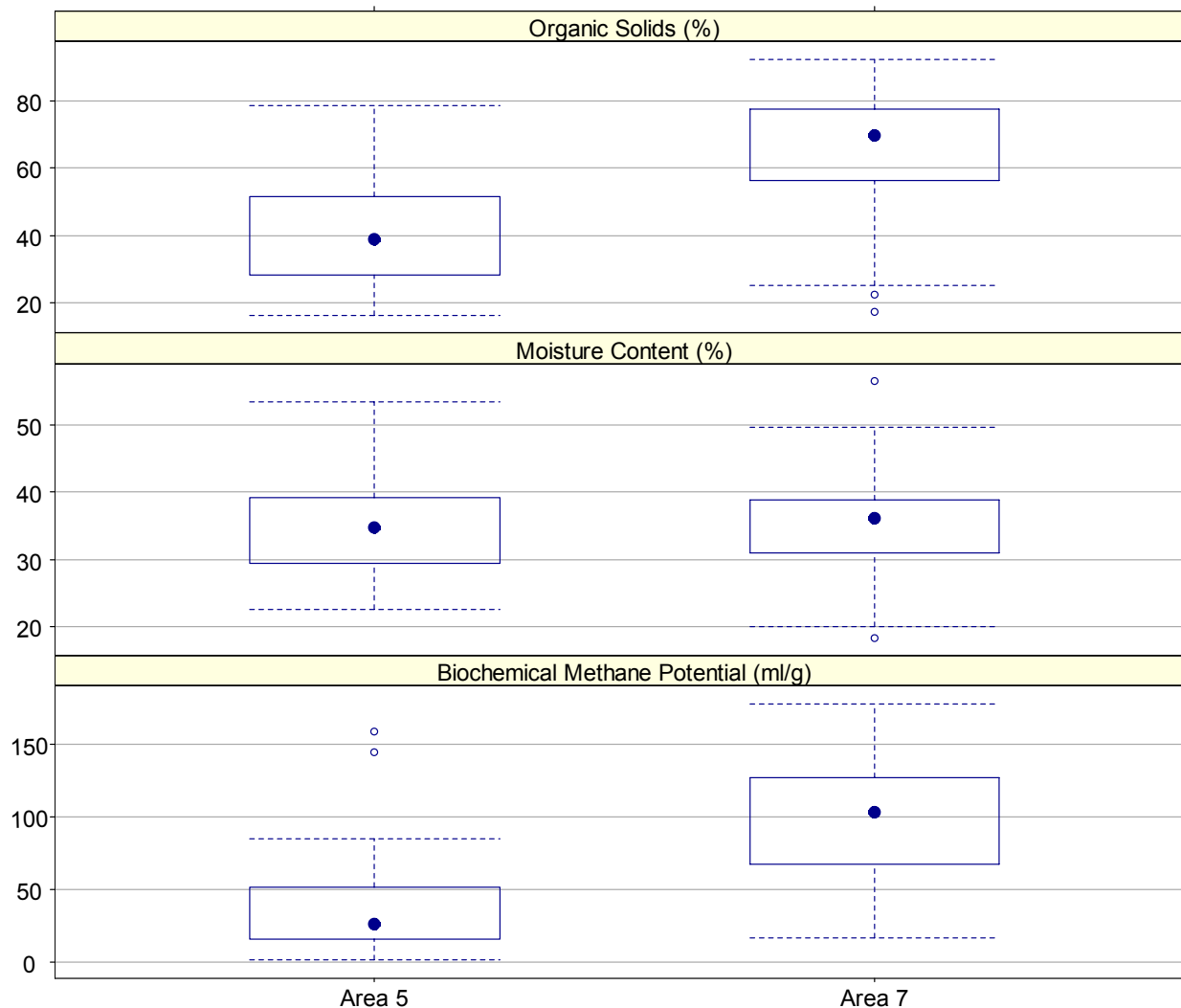
Waste Density Comparison



Waste Density: Unit 5



Organic Solids, Moisture and BMP



Critical Measures as Expected?

Parameter	FLB (Unit 5)	AALB (Unit 7)	Comments
<u>Gas</u> Production Rate, CH ₄ , CO ₂ , O ₂ , Balance Gases	Some inhibition may be taking place, injection rate may be too high, O ₂ intrusion in desiccated cover	Early stages of experiment	Changes Made in Operations at Unit 5
<u>Leachate</u> Head on liner, Leachate production COD, BOD, Temperature, pH, VOA	Early in process, but as expected	Early stages of experiment	
<u>Waste</u> Temperature, Settlement Density, Volatile solids, BMP, moisture content, pH	Early in process, but as expected	Early stages of experiment	

Future of Project

- Continue monitoring until at least 2005
 - Modify monitoring parameters and/or frequency?
 - Interim Report this year
- Add new bioreactor site(s)?

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- Kentucky Department for Environmental Protection
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- Morton Barlaz, N.C. State University
- University of Cincinnati
- Neptune Inc.

Thank You

Contacts:

- David Carson: carson.david@epa.gov
 - EPA Bioreactor Website:
<http://www.epa.gov/epaoswer/non-hw/muncpl/landfill/bioreactors.htm>
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