

Electronic Supplemental Information for

Morphology, Structure, and Metal Binding Mechanisms of Biogenic Manganese Oxides in a Superfund Site Treatment System

by

O.W. Duckworth,^{1,*} N.A. Rivera,^{1,2} T. G. Gardner,¹ M.Y. Andrews,^{1,§} C.M.
Santelli,³ and M.L. Polizzotto¹

*¹Department of Soil Science, North Carolina State University, Raleigh,
North Carolina 27695 USA*

*²Department of Civil and Environmental Engineering, Duke University,
Durham, NC 27708 USA*

*³Department of Earth Sciences, University of Minnesota, Minneapolis,
MN 55455 USA*

*§Current Address: Center for Integrated Fungal Research,
North Carolina State University, Raleigh, NC 27695, USA*

Four Pages, One Figure, One Table

Figure S1

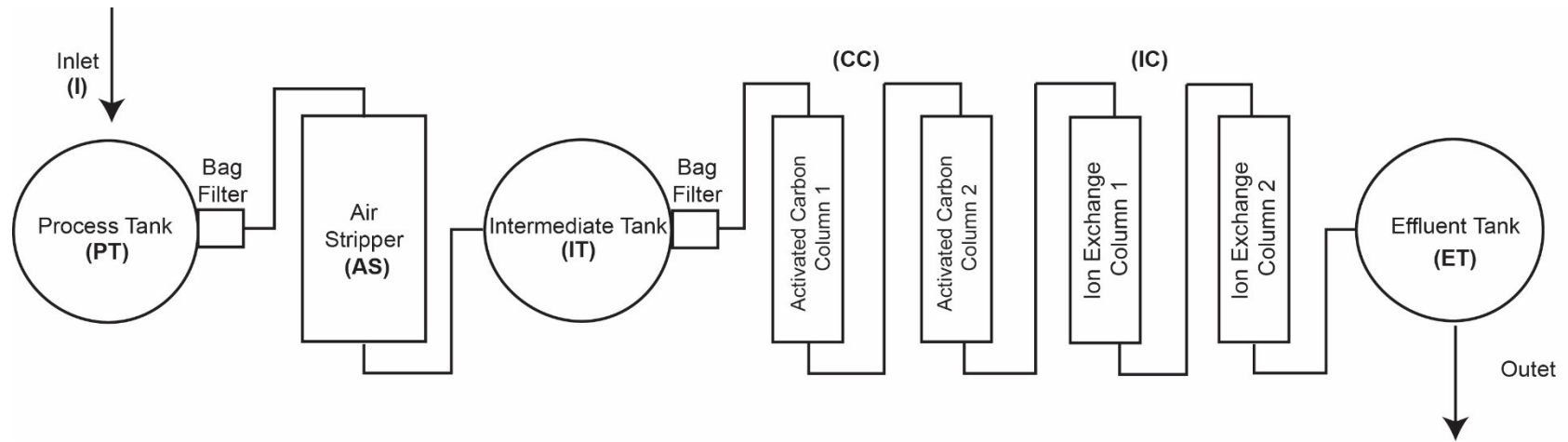


Figure S1. Schematic of “pump and treat” remediation system at the farm unit 1, lot 86 superfund site (“lot 86 site”) in Raleigh, NC.

Table S1. Standards used in XAS linear combination fitting.¹⁻⁶

Barium:

Ba(C₂H₃O₂)₂
Barium sorbed to birnessite
BaCl₂
BaO
Ba(OH)₂
BaCO₃
BaSO₄
Ba sorbed to Na-4 Mica

Cobalt:

Co₂O₃
CoO
Co₃O₄
Co(OH)₂
Co(OH)₃
CoCl₂
CoNO₃
Co sorbed to *P. putida* produced Mn oxide
Heterogenite (CoO(OH))

Manganese:

MnCl₂
Bixbyite (Mn₂O₃)
δ-MnO₂
Ca-triclinic birnessite
Na-birnessite
Coprinellus sp. produced Mn oxide
Todorokite ([Na,Ca,K]₂[Mn⁺⁴,Mn⁺³]₆O₁₂•3-4.5[H₂O])
Groutite (MnO(OH))
Rhodochrosite (MnCO₃)

Zinc:

Zn sorbed to birnessite
Zn(C₂H₃O₂)₂
Zn sorbed to Fe biominerals
Zn sorbed to ferrihydrite
Zn sorbed to *P. putida* produced Mn oxide
Zn sorbed to δ-MnO₂

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