Lance Nicholas Larson, Ph.D., EIT
Curriculum Vitae
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EDUCATION

Ph.D.	Fall 2013	Environmental Engineering and Biogeochemistry, Pennsylvania State University
M.Sc.	2010	Civil and Environmental Engineering, South Dakota School of Mines and Technology
B.Eng.	2008	Environmental Engineering, California Polytechnic State University, SLO

POSITIONS

2014-present	Postdoctoral Science Fellow, Natural Resources Defense Council (NRDC), Washington, DC.
2010-2013	Graduate Research Assistant, Pennsylvania State University, University Park, Pa
2008-2010	Graduate Research Assistant, South Dakota School of Mines and Technology

PUBLICATIONS

*Jones D.J., Kolesar C., Grettenberger C., **Larson L.N.**, Burgos W.D., Macaladay J.L. (2014). Ecological niches of Fe-oxidizing acidophiles in an acidic coal mine drainage.

***Larson L.N.,** Miller C., Macalady J.L., Borch T., Gorski C., Burgos W.D. (2014). Biogeochemical transformation of schwertmannite to goethite under a coal mine drainage impacted stream.

Larson L.N., Sánchez-España J., Kaley B., Sheng, Y., Bibby, K., Burgos W.D. (2014). Thermodynamic controls on the kinetics of microbial low-pH Fe(II) oxidation. *Environmental Science and Technology, 48* (16), pp 9246–9254

Larson L.N., Burgos W.D.**,** Sánchez-España J. (2014). Rates of Low-pH biological Fe(II) oxidation in the Appalachian Bituminous Coal Basin and the Iberian Pyrite Belt. *Applied Geochemistry, 47, 85-98.*

Larson L. N., Fitzgerald M., Singha K., Gooseff M. N., Macalady J. L. and Burgos W. (2013). Hydrogeochemical niches associated with hyporheic exchange beneath an acid mine drainage-contaminated stream. *Journal of Hydrology*, 501, 163-174.

Larson L. N., Kipp G. G., Mott H. V. and Stone J. J. (2012). Sediment pore-water interactions associated with arsenic and uranium transport from the North Cave Hills mining region, South Dakota, USA. *Applied Geochemistry*, 27, 879-891.

Burgos W. D., Borch T., Troyer L. D., Luan F., **Larson L. N.**, Brown J. F., Lambson J. and Shimizu M. (2012). Schwertmannite and Fe oxides formed by biological low-pH Fe(II) oxidation versus

abiotic neutralization: Impact on trace metal sequestration. *Geochimica et Cosmochimica Acta,* 76, 29-44.

Larson L. N., Stone J. J. (2011). Sediment-bound arsenic and uranium within the Bowman–Haley Reservoir, North Dakota. *Water, Air, Soil Pollution,* 219, 27-42.

* *In Preparation*

PUBLICATION ACKNOWLEDGEMENTS

Luan, F., Li Xie, Jie Sheng, Jun Li, Qi Zhou, Guiming Zhai, Reduction of nitrobenzene by steel convert slag with Fe(II) system: The role of calcium in steel slag, Journal of Hazardous Materials, Volumes 217–218, 30 May 2012, Pages 416-421, ISSN 0304-3894, 10.1016/j.jhazmat.2012.03.047.

Lupo C. Stone J.J. Bulk Atmospheric Mercury Fluxes for the Northern Great Plains, USA. Water, Air, Soil Pollution. 224, 1-12, 2013

TEACHING EXPERIENCE

2012, spring	Guest Lecturer, Pennsylvania State University. Water Quality Chemistry, CE 475.
2012, fall	Teaching Assistant, Pennsylvania State University. Environmental Engineering Capstone Design, CE 472W
2010, fall	Teaching Assistant, Pennsylvania State University. Introduction to Environmental Engineering, CE 370
2010, spring	Teaching Assistant, South Dakota School of Mines and Technology. Physical/Chemical Process Design and Laboratory, ENVE 426.
2006-2008	Multicultural Engineering Program Tutor, Cal Poly, San Luis Obispo, Ca.

CONFERENCE PRESENTATIONS AND ABSTRACTS

Larson, L.N., Comparison of field and laboratory low-pH Fe(II) oxidation rates. Presented at 14th annual Abandoned Mine Reclamation Conference, State College, Pa, August 2012

Borch, T., Troyer, L., **Larson, L.N.**, Stone, J.J., Impact of biogeochemical redox processes on U and As dynamics within a U mining impacted watershed. Presented at the International Workshop on Uranium Biogeochemistry: transformations and applications, Ascona Switzerland, March 2012.

Burgos, W., Fitzgerald, M., **Larson, L.N.**, Herwehe, L., Singha, K., Gooseff, M., Electrical resistivity imaging of a deep coal mine discharge. Presented at the 21st Annual Goldschmidt Geochemistry Conference, Prague, Czech Republic, August 2011.

Jones, D., Brown, J., **Larson, L.N.**, Mills, D., Burgos, W., Macalady, J., Ecological niches of Fe-oxidizing acidophiles in a coal mine discharge. Presented at the 21st Annual Goldschmidt Geochemistry Conference, Prague, Czech Republic, August 2011.

Larson, L.N., Luan, F., Troyer, L., Borch, T., Burgos, W., Schwertmannite and Fe oxides formed by biological low-pH Fe(II) oxidation versus abiotic neutralization. Presented at the 21st Annual Goldschmidt Geochemistry Conference, Prague, Czech Republic, August 2011.

Stone, J.J., **Larson, L.N.**, Kipp, G., Sediment pore-water equilibria interactions associated with arsenic and uranium transport within a historical uranium mining-impacted watershed in South Dakota. Proceedings from the 28th Annual Meeting of American Society of Mining and Reclamation, Bismarck, ND, 2011.

Kipp, G., Stone, J.J., **Larson, L.N.**. Arsenic and uranium transport in sediments near abandoned uranium mines in Harding County, South Dakota. Presented at the 2010 Geologic Society of American Denver Annual Meeting, Denver, CO, November 2010.

Troyer, L., Borch, T., **Larson, L.N.**, Stone, J.J. Impact of redox chemistry on the fate and transport of arsenic and uranium at an abandoned uranium mine. Presented at the 20th Annual Goldschmidt Geochemistry Conference, Knoxville, TN, June 2010.

Larson, L.N., Stone, J.J., Stetler, L., Troyer, L., Borch, T., Sediment pore-water equilibrium interactions associated with arsenic and uranium transport within a historical uranium mining impacted watershed, Harding County, SD. Presented at the joint meeting of the Rocky Mountain Section, Geologic Society of America 62nd Annual Meeting and the 2010 Western South Dakota Hydrology Conference, Rapid City, SD, April 2010.

Larson, L.N., Stone, J.J., Stetler, L., Arsenic and uranium impacted sediment behavior within the Bowman-Haley Reservoir, Bowman County, North Dakota. Presented at the joint meeting of the Rocky Mountain Section, Geologic Society of America 62nd Annual Meeting and the 2010 Western South Dakota Hydrology Conference, Rapid City, SD, April 2010.

Larson, L.N., Stone, J.J., Stetler, L.D., Development of an arsenic and uranium fate and transport model for historical uranium mining impacts from Custer National Forest, Harding County, South Dakota. Presented at 2009 Western South Dakota Hydrology Conference, Rapid City, SD, April 2009.