**PROJECT TITLE:** Fugitive dust in Minnesota's air - why it matters

**LAWRENCE ZANKO:** Natural Resources Research Institute, University of Minnesota Duluth

**Key Qualifications:** Mr. Zanko is a Senior Research Program Manager (Researcher 7) for By-Product Reuse and Remediation within the Minerals, Metallurgy and Mining (M3) Initiative at the UMD – NRRI.

Since his start with NRRI in 1988, he has participated in or led a broad spectrum of research projects dealing with non-ferrous minerals, ferrous minerals, industrial minerals (with a focus on construction aggregates), contaminated sediment remediation and reuse, resource modeling and estimation, and related policy issues.

**Education:** Master of Geological Engineering, University of Minnesota, Twin Cities (UMTC); Bachelor of Geological Engineering; and B.S. Microbiology (UMTC). **NRRI Research:** 4 peer-reviewed professional publications, and over 40 publicly available technical reports. Transportation Research Board (TRB) of the National Academies: Aggregates (AFP70) and Resource Conservation and Recovery (ADC60) committees.

**GEORGE HUDAK:** Natural Resources Research Institute, University of Minnesota Duluth

**Key Qualifications:** Dr. Hudak is Initiative Director for Minerals, Metallurgy and Mining. As Initiative Director, he is responsible for overseeing both the Minerals Laboratory in Coleraine, Minn., and the Duluth Minerals Group. He guides the overall strategic plan for the Initiative. **Education:**  Post-Doctoral Research Fellowship, University of Minnesota Duluth, 1997-1998; Ph. D in Geology, University of Minnesota, 1996; MS in Geology, University of Minnesota Duluth, 1989; BA in Geology, Carleton College, 1984 **NRRI Research:** Dr. Hudak has been the Group Leader for the Particle and Materials Characterization Group. He is also the Associate Director of NRRI's Precambrian Research Center. He is a Registered Professional Geologist (P.G) in Minnesota and Wisconsin, and holds a Professional Geoscientist License (P.Geo.) License in Ontario.

**DEAN PETERSON** Natural Resources Research Institute, University of Minnesota Duluth

**Key Qualifications:** Dr. Peterson is the Program Manager of the Economic Geology Group within M3 at the Natural Resources Research Institute (NRRI), University of Minnesota Duluth. He had served as the Senior Vice President of Exploration at Duluth Metals Limited from 2008 to 2015 and as a Senior Research Associate of the NRRI since 1999. Dr. Peterson has 33 years' experience in mineral exploration, geological consulting, and developing economic geology research programs for a wide variety of deposit types including gold and VMS deposits; Duluth Complex Cu-Ni-PGE deposits; high-grade Cu-PGE vein systems; and Cu-Au-Mo porphyry deposits. **Education:** Ph.D. in Economic Geology and Geographic Information System Modeling from the University of Minnesota **NRRI Research**: Economic geology and mineral potential modeling of Minnesota, Natural Resource Atlas of Northern Minnesota, Soudan underground mine geobiology, acid rock drainage modeling of northern Minnesota, Duluth Complex Cu-Ni-PGE deposits of Minnesota, comprehensive GIS assembly of geologic data for Minnesota

**STEPHEN MONSON GEERTS** Natural Resources Research Institute, University of Minnesota Duluth

**Key Qualifications:** Stephen Monson Geerts is a Senior Geologist/Researcher 6 for the Minerals, Metallurgy and Mining (M3) Program at the UMD - NRRI. Mr. Monson Geerts has over 35 years of experience as a geologist/ 22 years of research experience with a focus on mineral characterization. **EDUCATION: M.S. Geology w/ Minor Hydrogeology.** University of Minnesota - Duluth. **B.S. Geology.** University of Minnesota - Duluth. **NRRI Research:** Principal and co-principal investigator, project coordination and management, manuscript/technical report preparation and presenter. Primarily minerals and materials characterization with emphasis on igneous intrusives and aerosol particulate matter, respectively, includes 3 peer-reviewed and 45+ publically available technical reports.

**ORGANIZATION DESCRIPTION**

**The Natural Resources Research Institute** is a University of Minnesota Duluth applied research organization. NRRI's mission is to deliver research solutions to balance Minnesota's economy, resources and environment for resilient communities.