**PROJECT TITLE:** DETECTING ROAD DUST CONTROL CHEMICALS IN AIR/WATER

**Component F. 2020 LCCMR Project Manager Qualifications and 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.

**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/ 25 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 35+ publically available technical reports.

**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) Program 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:** Includes 1 patent (co-inventor), 4 peer-reviewed professional publications, and over 40 publically-available technical reports. Recent and current membership on two committees of the Transportation Research Board (TRB) of the National Academies: Aggregates (AFP70) and Resource Conservation and Recovery (ADC60).

**Chan Lan Chun:** Natural Resources Research Institute, University of Minnesota Duluth

**Key Qualifications:** Dr. Chun is an assistant professor of civil engineering, performing her research at the NRRI. Her research focuses on the fate and transport of chemical and microbial contaminants in natural and engineered systems and the development of new water technology to treat contaminants. Likewise, Chun’s research group is working on water quality and microbial ecology on wild rice water, innovative bioreactor to treat sulfate in natural and industrial water, electromagnetic bioreactor to treat nutrients from agricultural drainage, biofiltration for stormwater treatment, and iron filtration to capture sulfide in water. **EDUCATION: Ph.D. (Civil, Environmental, Geo Engineering)**, University of Minnesota; and M.S. and B.S., **(Environmental Science and Engineering)**, Ewha Womans University. Peer review publications.

**Meijun Cai:** Natural Resources Research Institute, University of Minnesota Duluth

**Key Qualifications:** Dr. Cai is an environmental engineer with specialties in water quality at the NRRI, University of Minnesota Duluth since 2012. Her research focuses on the use of salvage material as filtration materials to treat water in order to improve water quality. She is also an environmental statistician. **EDUCATION: Postdoctoral (Environmental Engineering),** University of Tennessee – Knoxville; **Ph.D. (Environmental Engineering),** University of Tennessee – Knoxville. Peer review publications.