

State Planning and Research Program Quarterly Report

PROJECT TITLE: *Best Practices for the Prevention of Corrosion of Department of Transportation Equipment: A User's Manual*

OBJECTIVES:

This project will develop best practice guidelines using the information provided in the Phase I report and other relevant sources. The end result would be an easy-to-use guide that summarizes in layman's terms the best practices to prevent corrosion to maintenance equipment.

PERIOD COVERED:

Jan. 1, 2015 – March 31, 2015

PARTICIPATING AGENCIES:

Western Transportation Institute, Montana State University – Prime
Monte Vista Associates LLC, Arizona - Subcontractor

PROJECT MANAGER: Tom Peters

SP&R PROJECT NO:

PROJECT IS:

LEAD AGENCY: Mn/DOT

TPF-5(218)
99006, WO#5

Planning
 Research & Development

PRINCIPAL INVESTIGATOR:

Laura Fay

ANNUAL BUDGET:

\$49,950

PROJECT EXPENDITURES TO DATE:

\$49,950

WORK COMPLETED:

Task 0. Project Management (99% Completed)

In this quarter, communication with Clear Roads began to schedule the presentation of the Final Report.

Task 1: Review and Analyze Research (100% completed)

The researchers have compiled, reviewed, and analyzed the results of the Phase I final report (Best Practices and Guidelines for Protecting DOT Equipment from the Corrosive Effect of Chemical Deicers) and other relevant research that focuses on chloride corrosion. (Inhibitor blends are not a focus in this study). Recent research conducted by international sources were reviewed wherever available, along with the ongoing research and existing documents published by the Department of Defense (DoD), National Association of Corrosion Engineers (NACE), automotive/trucking industry, Departments of Transportation (DOTs), etc. The review has supplemented the one conducted in Phase I and focused on recent literature and literature useful for developing the user's guide or manual.

Task 2: Develop a Manual (100% completed)

Utilizing information from Task 1, the team has developed a user-friendly manual that documents best practices of managing the risk of equipment corrosion, especially in the presence of chemical deicers. This manual will serve as a "living document" that can be readily implemented and updated after the completion of this project. The audience for this manual will be operators, mechanics and garage-level supervisors. Readers will not have higher than a high school diploma and the manual will be written to avoid chemical jargon. The manual will focus more on instruction and less on the science behind corrosion.

Task 3. Final Report and Presentation (100% completed)

The researchers prepared a final report of the work completed, including an executive summary, introduction, methodology, results for each task, the user's manual, and concluding remarks (with recommendations for implementation). A final report presentation has been developed and is attached as an appendix in the Final Report. This will be presented as a conference call or webinar in the next quarter.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

Presentation of Final Report findings to the Clear Roads Technical Advisory Committee, and address any final comments or edits to the deliverables. Submit final draft deliverables for publication on Clear Roads and MnDOT webpages.

STATUS AND COMPLETION DATE:

A no-cost time extension was approved for this project and the project end date is now in June 2015.