

**Development of Standardized Test Procedures for Evaluating Deicing
Compounds (Project Number: 07-02)**

Progress Report #3

Covering the period of
Apr. 1 – Jun. 30, 2008

Submitted by

Xianming Shi, Ph.D., P.E.

and

Michelle Akin, M.Sc.

Montana State University

Bozeman, MT

Prepared for the

Wisconsin Department of Transportation

Research and Library Unit

4802 Sheboygan Avenue, Room 104

P.O. Box 7915, Madison, WI 53707

Attention: *Kim Linsenmayer*

on behalf of

The Clear Roads Program #TPF-5(092)



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Overview

Problem Statement

Every year manufacturers introduce new deicing chemicals, additives or mixtures for use in snow and ice operations. Users do not currently have a comprehensive methodology for evaluating the performance of these new products prior to purchasing.

Objective

The goal of this project is to establish laboratory tests that can be applied to all deicing chemicals, additives and mixtures to measure performance. Manufacturers would then be required to have the tests run at independent laboratories before they can be marketed or used by Clear Roads states.

Expected Results

A standard set of performance tests for deicing chemicals, additives and mixtures that will help agencies anticipate how products may work in their specific environment is expected.

Progress

The project is estimated to be on budget and on schedule, with approximately 38% of the scope completed. During this reporting period, the research team had an interim teleconference with the technical advisory committee (TAC) to discuss the results of Task 2 and plans for proceeding to Task 3. The team then developed a survey and, with approval from the TAC, distributed it nationwide to several relevant groups. The analysis of the survey results is currently underway.

Task Report

Task 0: Project Management (40% Complete)

The research team maintained communication with the TAC throughout the reporting period. The research team also hired an undergraduate student to assist with the laboratory tests.

On May 28, 2008, an interim teleconference provided an opportunity for the TAC and research team to discuss the interim report which provided the results of the literature review and survey from Tasks 1 and 2.

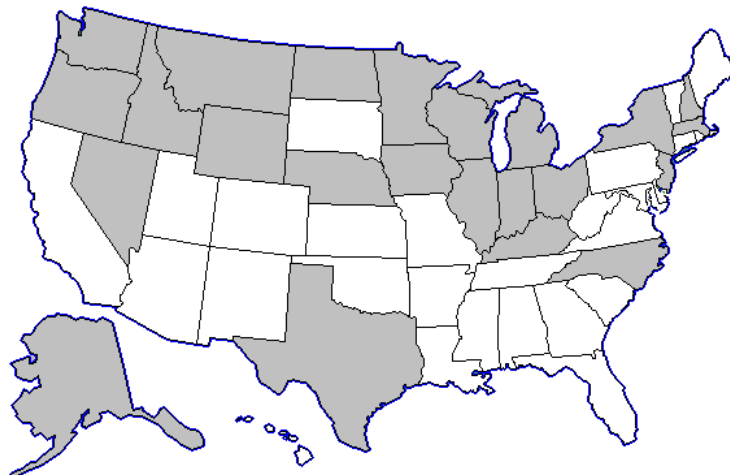
Task 1. Comprehensive literature search (100% Complete)

The literature review is complete and no additional comments were received from the TAC.

Task 2. Needs identification and recommendations (90% Complete)

The research team developed an interactive survey to gauge the needs of maintenance personnel for tests used to evaluate deicing products. Additionally, the survey provided an opportunity for agencies to indicate if previously developed tests had been used. The survey was distributed to

A total of 45 responses were received from the states shown in Figure 1, in addition to the following entities: AASHTO; Region of Waterloo, Ontario; Region of Peel, California; New York, New York; New York Thruway Authority; nine Wisconsin counties (Clark, Eau Claire, Fond du Lac, Jackson, La Crosse, Manitowoc, Polk, Portage, and Vilas); Cargill Deicing Technology; Dow Chemical Company; EnviroTech Services; Paradigm Chemicals; and Redmond Minerals. Twenty-one responses are attributed to states (and counties within states) that are members of the Clear Roads program, nine of which are the counties of Wisconsin that responded. After additional requests by Colleen Bos, responses were collected from Colorado, Ohio, and Utah. Colleen will continue to solicit responses from Missouri, and Virginia to ensure each Clear Roads member state participates in the survey. WTI will also solicit responses from South Dakota and Kansas based on the TAC's advice. The draft interim report provides detailed information collected from the survey, but will be updated once all additional survey responses are collected.



Task 3. Develop testing protocols, procedures and ranges (15% Complete)

In addition to the test methods, the groups also discussed during the teleconference the types of products that should be included in the test method development and baseline tests. Shane

Larson has assembled 5 five-gallon buckets of material (three with salt brine mixtures, one with calcium chloride, and one with Geomelt®) that WTI arranged for FedEx to pickup and deliver. Linda Taylor will send material from Minnesota to WTI that will also be tested.

Task 4. Conduct baseline tests (0% Complete)

No work has been completed on this task.

Task 5. Final report (0% Complete)

No work has been completed on this task.

Upcoming Activities (July. 1- September 30, 2008)

Task 2 and the Interim Report will be finalized after the few remaining survey responses are received.

Task 3 will continue when the deicing products are received from the TAC.

Project Schedule

Figure 2 shows the project schedule by month. The project is on schedule, with the exception of a few survey responses that need to be collected to finalize the Interim Report.


























| | | 2007 | | 2008 | | | | | | | | | | | | 2009 | | | | | | | | |
|--|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| Tasks | Milestones | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | | | | | |
| Task 0. Project Management | | | | | | | | | | | | | | | | | | | | | | | | |
| Project kickoff | 11/13/2007 |  | | | | | | | | | | | | | | | | | | | | | | |
| Quarterly progress reports | End of each quarter |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | | | | |
| Task 1. Comprehensive Literature Review | | | | | | | | | | | | | | | | | | | | | | | | |
| Interim Conference Call Meeting/Presentation | 1/8/2008 | | |  | | | | | | | | | | | | | | | | | | | | |
| Task 2. Needs Identification and Recommendations | | | | | | | | | | | | | | | | | | | | | | | | |
| Interim Report: Needs Identification and Recommendations Summary | 5/28/2008 | | | | | | |  | | | | | | | | | | | | | | | | |
| Task 3. Develop Testing Protocols, Procedures and Ranges | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 4. Conduct Baseline Tests | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 5. Final Report | | | | | | | | | | | | | | | | | | | | | | | | |
| Draft final report | Feb-09 | | | | | | | | | | | | | | | | | | |  | | | | |
| Face-to-face TAC meeting | Mar-09 | | | | | | | | | | | | | | | | | | |  |  | | | |
| Final report | Apr-09 | | | | | | | | | | | | | | | | | | | | |  | | |

Figure 2: Project schedule by month