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Road Salts

Review of January Action Items and Inter-Session Work

April 15, 2003

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Action Items

- electronic copies of minutes and presentations distributed to WG
- comments received on web site
- Implementation Plan drafted (discussion later today)
- Text developed for Annex A (discussion later today)
- Code of Practice, Annex B (Vulnerable Areas) and Annex C (Monitoring and Measuring) revised (discussion later today)
- Ferrocyanides contract awarded and work begun (presentation tomorrow)

Inter-Session Work

Parking Lots and Private Lands

- Distributed survey in February to members of the Canadian Parking Association to:
 - gather information on common practices
 - contact potential stakeholders
- Next steps:
 - assess information acquired to date
 - develop a management plan
 - initiate discussion with stakeholders

Success Stories

- Goal: To feature a story for each area of concern with representation from small and large organizations across Canada
- Format:
 - Brief
 - Description of practices implemented
 - Achievement highlights
 - Cost/Benefit analysis where applicable

Infrastructure Funding

- New Infrastructure Canada funding program at beginning stages
- In discussions to influence criteria that would allow road salts projects to be considered for funding

Insurance Considerations

- Met with IBC
- EC to pursue various methods to inform IBC members about the Code of Practice and how it will be implemented

Comments

- No comments received from Corresponding Members
- Further comments received from Working Group members after the meeting



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Code of Practice For The Environmental Management Of Road Salts

Version 3

15 April, 2003

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Overview of Changes Made

- Clarified existing statements
- Tried to address issues brought to our attention at the last meeting
- Relocated several sentences and paragraphs to make the code clearer and flow better

Improved Organization and Flow of the Code

- The following sections were shortened and clarified:
 - Title
 - Foreword
 - Implementation
 - Record-Keeping and Reporting
 - Review of Progress and Need for Further Action

The Following Substantive Issues Were Addressed

- **APPLICATION** now replaces **SCOPE** and outlines criteria to identify to whom the Code applies
- **Criteria:**
 - population of 10,000 or 500 tonnes use, or territory includes vulnerable areas

Threshold - Rationale for Criteria

- populations of 10,000 would include 400 cities representing 78% of the population
- salt use data shows that cities with a population around 10,000 use about 500 tonnes of salt per year
- vulnerable area criterion may apply to smaller municipalities where salt use could result in a large environmental impact

SALT MANAGEMENT PLAN

- reorganized to include all statements related directly to what should be considered in preparing a plan
- reference is made to the level of detail of the plan in S. 14
- reference is made to organizations which fall below the threshold
- several paragraphs have been moved here from other sections

BEST MANAGEMENT PRACTICES

- This section has been completely rewritten as per suggestion to reflect objectives rather than listing practices

IMPLEMENTATION

- Implementation requirements have been standardized for everyone
- the contractor statement has been simplified, stating that they must comply with any measures in the road authority's salt management plan

Purpose and Content of Annex A

- To provide guidance in determining the environmental thresholds associated with impacts from the use of road salts
- Gives indication of natural (background) chloride concentrations
- Data based on findings from the assessment report
- The text is essentially the chart in words

Purpose and Content of Annex B

- To provide guidance in identifying areas that may be vulnerable to road salts
- Organizations determine the vulnerability and additional measures, if required
- Guidance is flexible so it can be applied in all regions

Changes

- Added possible need to consult with provincial departments of environment or agriculture, ENGOs, farm and commodity organizations, and/or constituents
- Added note reiterating the importance of safety
- Tightened wording to make guidance more specific

Purpose and Content of Annex C

- To provide a common format and approach for monitoring and reporting progress
 - BMP implementation
 - salt use
 - concentrations in the environment
 - impacts on safety
- To be discussed later today

Opportunities to Comment

- now and during the following discussions
- in writing after the meeting by mid-May
- after Gazette publication, “60 day” public comment period



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Annex C

Monitoring and Measuring Progress

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Purpose of Annex C

- To provide a common format and approach for monitoring and reporting progress in BMP implementation, salt use, concentration in the environment and impacts on road safety
- Data gathering and reporting must:
 - make sense,
 - provide useful information, and
 - take advantage of info that is readily or easily available.

Themes

- Information is collected for the following:
 - Background Information (salt use, road lengths, etc...)
 - Implementation of the SMP
 - Environmental Releases
 - Safety
- Reporting Period = Sept 1 - May 31

Background Info

- Basic organization/contact information
- Salt Use
 - quantity and concentration of materials used in reporting period
 - baseline = 5-year rolling average (if not avail., average will be created when enough data has been collected)
- Road Length and LOS
 - length of road and LOS for each type of classification used by the organization

Background Information (Con't)

- Winter Severity - Two Options
 1. Municipal organizations report meteorological data (provincial winter severity determined by municipal data)
 2. EC uses relevant meteorological data from Meteorological Service of Canada
- Baseline = 30-year average based on MSC data

Implementation of the SMP

- Implementation of the SMP (date prepared, date implemented)
- Implementation of BMPs in:
 - Equipment & Materials,
 - Salt, Salt/Sand and Liquid Storage Sites,
 - Snow Disposal,
 - Vulnerable Areas, and
 - Training
- Baseline = First Reporting Year

Environmental Releases

- Four-pronged approach:
 1. Report release or monitoring data that organizations are already collecting
 2. Follow up with case studies used in the assessment
 3. Collect information from existing water quality monitoring programs
 4. Conduct water quality monitoring in key locations (to fill gaps from previous sources)

Environmental Releases - Organization Reporting

- If available, organizations report average chloride concentrations during reporting period from:
 - stormwater outfalls
 - wastewater treatment plants with combined sewers
 - monitoring wells (including wells located at or near salt storage and snow disposal sites)
- Baseline = 5-year rolling average

Environmental Releases - Case Studies

- 22 Canadian case studies used in EC's assessment of road salts
- demonstrated impacts on vegetation, surface water, groundwater and soil from salt spreading, salt storage and snow disposal
- EC to determine if any studies are on-going and can serve as surrogates to measure environmental improvements

Environmental Releases - Water Quality Monitoring

- With the help of EC's Environmental Quality Monitoring Office, EC will identify:
 - programs that already monitor chlorides, where EC can have access to the data
 - new and existing programs, where EC can negotiate the addition of chloride monitoring

Environmental Releases - Additional Monitoring

- Where there are information gaps (i.e., impacts in a particular geographical region, specific impact, etc.), EC will investigate commissioning new studies to collect the information

Safety

- Two Options:
 1. Organizations report safety data
 2. EC collects safety data from Transport Canada, IBC and provincial public insurance corporations (data can be provided nationally or provincially, but not municipally)
- Baseline (for both options) = 5-year rolling average



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Implementation Strategy for the Code of Practice

15 April, 2003

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Purpose

- develop a strategy that would lead to successful implementation of the Code
- determine who does what and when

Elements of a Successful Strategy

- obtain buy-in and participation in goals and objectives
- assign responsibilities
 - communication
 - administration
 - training
 - compliance promotion

Steps in the Strategy (1)

- Before publication of the proposed Code (Now to Fall 2003)
- Upon publication of the proposed Code (Fall 2003 to Fall 2004)
- Upon final publication of the Code (Fall 2004)

Steps in the Strategy (2)

- One year after publication of the Code (Fall 2005)
- Progress Report 2 years after publication (Fall 2006)
- Review of progress 5 years after publication (Fall 2009)

Next Steps

April 2003

- Review draft plan

September 2003

- Complete plan (WG meeting)

Winter 2004

- WG meeting to finalize Code of Practice and, if necessary, amend plan

2005 to 2009

- Yearly WG meeting to discuss progress under the plan



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Investigation of Alternatives to and Reduction Potential for Ferrocyanide as an Anti-Caking Agent in Road Salt in Canada

April 16, 2003

Canada

Purpose of Study

- To update information on alternatives to and reduction potential for ferrocyanide
- To investigate possible environmental impacts from the use of alternatives
- To provide background information that will help form an objective for an Environmental Performance Agreement (EPA) with salt producers

Where we are at...

- Contract awarded to John Emery Geotechnical Engineering Ltd.
- Study began March 6
- Contractor is currently reviewing literature and developing an industry profile
- Draft report due May 5
- Final report due May 26

Preliminary Data

- Based on comments by members of the Salt User Group, no replacements are being seriously considered by salt users
 - Emphasis on reducing salt use and improving distribution methods

Preliminary Data (Con't)

- The following potential anti-caking agents have been identified for further investigation: calcium silicate, calcium aluminum silicate, sodium aluminum silicate, iron ammonium citrate, tri-calcium phosphate, stearates, proprietary products such as Microsal

Next Steps

- Review draft and final reports
- Develop objective for EPA with salt producers
- Re-form ferrocyanide sub group to help draft the EPA



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Progress and Challenges

**Where Are We coming From?
Where Do We Go From Here?**

16 April, 2003

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Original Working Group Objectives

Develop format and key elements of a Code of Practice for the environmental management of road salts by

- reviewing and commenting on materials prepared by EC
- sharing information, transferring technology and ideas
- developing a common approach to addressing the issues

Principles Established at the 1st Meeting

- We don't want to compromise road safety
- Let's build on the existing work done by TAC and road authorities
- Take into account the capacity of small municipalities
- Flexibility and agency-based approach needed
- Training is crucial
- Communication is important
- Recommendations should be practical and feasible
- Costs should be considered
- Implementation is most important phase
- Monitoring progress is necessary

Progress Accomplished

- Drafted a Code of Practice
- Guidance on identifying vulnerable areas
- Format for monitoring progress
- Agreement with TAC on update for Best Management Practices
- Guidance on training, snow disposal

Other issues being addressed separately

- parking lots and institutional use
- dust suppression
- ferrocyanides

Challenges

- Implementation
- Buy-in
- Maintaining momentum
- Training
- Monitoring
- Reporting
- Reviewing progress

Have We Forgotten Anything?

Communicating the Road Salt Code of Practice

Ottawa, Ontario

April 16, 2003

Heather Hurst

Communications, Environment Canada

Introduction

- An outline for communications
- Seek feedback for effective communications
- Find synergies, how we can work together to achieve the same goals

Communications Goals

- Raise awareness among municipalities/
roadway authorities of the Code of
Practice
- Explain its purpose to Canadians
reinforce road safety and balance with
environmental concern
- Create realistic expectations
timeframes, results

Key Audiences

- Municipalities, roadway authorities
- General public and the media
- Environmental organizations

Messages

- Better management can still ensure road safety and reduce harm to the environment
- While road salts are not harmful to human health, in high concentrations around storage and disposals sites and through runoff into streams and rivers, they do pose a serious threat to animals, plants and the aquatic environment.

Messages

- Many municipalities have already begun looking at improving the way they use road salt to achieve cost savings for their taxpayers. By sharing best practices and using improved technology to maintain winter roads, municipalities may be able to reap other rewards while protecting the environment.

How will we reach our audiences?

- Use existing lines of communication:
 - FCM
 - TAC
 - CEPA NAC (prov'l depts of municipal affairs)
- Media Relations around announcement of Code
- Active but specialized media relations after science journals and programs

How do we reach them?

- EC's Road Salts Website
- Industry Newsletters
- Prov'l Roadway Authority Associations
- Presentations (where?)
- Enviro Tip Sheet radio spots

Points for Discussion

- Other messages?
- Will proposed approach/tactics work? Other suggestions?
- What role will different organizations play in communications?

Opportunity to promote existing tools that different organizations have:

- eg. TAC guidance tools
- eg. Training programs



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Next Steps

Bernard Madé

16 April, 2003

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Next Steps

- Code of practice (body, Annex A and B)
stakeholders to submit comments by May 5
EC to finalize proposal by end of May
- Annex C
EC will prepare a new draft by end of April
Sub-group to hold conference call by May 10
EC to finalize proposal by end of May
- EC to publish proposed code (September?)

Next Steps

- Implementation Plan

Stakeholders to submit comments by May 15

EC to prepare a new draft by end of June

To be discussed in September

- Communication Plan

Stakeholders to submit comments by May 15

EC to prepare a draft by end of May and circulate by e-mail for comments

We will keep in touch

Next Steps

- EC to issue meeting minutes by end of June
- EC to keep in touch by e-mail
This morning's notes

Next Meeting

- September 25 (day after end of TAC meeting) in St. John's, NL
- One day meeting
- Agenda
 - Implementation plan
 - Communication activities
 - Review of issues to be addressed in proposed code