COMMITTEE REPORT

HOUSE

(11) FURTHER:

4/15/83 Date: 4/26/83

(Finance added 4/15/83)

Mr. Speaker:

The Committee on FINANCE has had HCR 29

Encouraging the Department of Transportation and Public Facilities to use calcium-magnesium acetate as an ice and dust control agent.

under consideration and reports it back as follows:

[X] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[ ] replace with CS for _____ _____ [ ] same title [ ] new title

and recommends _____

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note [X] Zero Fiscal Note Attached

[ ] reports it back without recommendation

[ ] referred to the _____ Committee

MEMBERS SIGNING
DO PASS

MEMBERS HAVING
OTHER RECOMMENDATIONS:

CHAIRMAN

Introduced: 3/30/83
Referred: Transportation

IN THE HOUSE

BY M.M.MILLER, DUNCAN AND GRUSSENDORF

HOUSE CONCURRENT RESOLUTION NO. 29

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTEENTH LEGISLATURE - FIRST SESSION

Encouraging the Department of Transportation and Public Facilities to use calcium-magnesium acetate as an ice and dust control agent.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS the corrosive chloride salts presently used by the state for ice and dust control on roads have substantial adverse effects on automobiles, bridge structures, and animal and plant life; and

WHEREAS the corrosion damage from chloride salts on automobiles in the state alone may exceed $20,000,000 annually; and

WHEREAS calcium-magnesium acetate is a noncorrosive, environmentally benign ice and dust control agent that could be used to replace the chlorides; and

WHEREAS national research into alternative deicing compounds has led to recognition of calcium magnesium acetate as the most viable substitute for the chlorides; and

WHEREAS the state has demonstrated that calcium-magnesium acetate can be produced locally through the dissolution of naturally occurring Alaska limestone in acetic acid produced from Alaska low grade petroleum; and

WHEREAS it is possible that the state could become a major producer and exporter of the low grade calcium-magnesium acetate to a national or international market;

BE IT RESOLVED by the Alaska State Legislature that the Department of Transportation and Public Facilities is encouraged to use calcium-magnesium acetate as an ice and dust control agent in place of chloride salts; and

BE IT FURTHER RESOLVED that the state continue research on calcium-magnesium acetate for feasibility as a product for export to a national or international market.

THE LEGISLATURE OF THE STATE OF ALASKA
THIRTEENTH LEGISLATURE

FISCAL NOTE

I. REQUEST
Bill/Resolution No. HCR 29
Title Encouraging DOTPF to use CMA as an ice and dust control agent
Requested by House Finance Date 4/23/83

II. FISCAL DETAIL
Agency Affected DOTPF/U of A
Program Category Affected
BRU, Program, Or Subprogram(s) Affected
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS,CLAIMS,ETC.						
TOTAL		0				

FUNDING (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER (Specify Source)						
		0				

POSITIONS 0

FULL TIME						
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instruction, Section III)

The funding requested to fund the pilot program has been provided in SB 162 signed by the Governor on 4/22/83.

IV. DATE 4/23/83 PREPARED BY Al Adams, Chair AAA
AGENCY House Finance Committee
PHONE 465-3706

Original: Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)

33-001 (Rev. 12/82)

The following individuals are expected to testify on HCR 29:

Representative Mike Miller (JNU), prime sponsor

A representative from DOTPF

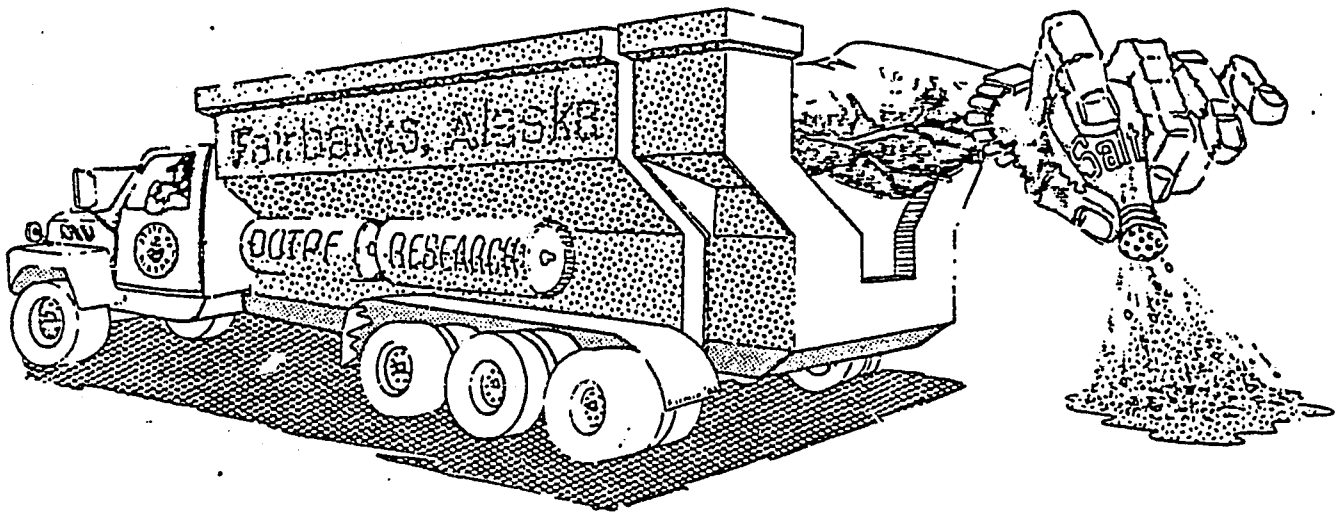
State of Alaska Department of Transportation and Public Facilities

RESEARCH NOTES

DIVISION OF PLANNING AND PROGRAMMING
RESEARCH SECTION

January 1983
Vol. 2 No. 7

CMA—An Alternative Road Deicer



The use of sodium chloride (common salt) and calcium chloride has raised controversy both in Alaska and nationwide. These materials can definitely reduce the hazard of wintertime driving but do so at tremendous expense. Pollution and corrosion damage attributable to chloride salts effectively boosts their real cost by a factor 10 to 15 when long term effects are considered. For example, sodium chloride presently selling in Fairbanks for about $125 per ton would be expected to generate long term damages in excess of $1,000. The regard for public safety which demands continued use of these readily available materials, has also fueled a search for something better. A safe and economically viable alternative may now be on the horizon.

National research aimed at providing improved road deicing compounds has identified Calcium Magnesium Acetate (CMA) as a potential substitute for calcium and sodium chloride. CMA is essentially made by dissolving crushed limestone into acetic acid. Its composition, $CaMg(CH_3COOO)_4$, is characterized by a varying ratio of calcium (Ca) to magnesium (Mg) which depends upon the type of limestone used. The deicing power of CMA increases with increasing Mg content but is generally within the range of standard chloride salts. The real advantage in its use stems from its low damage potential. It is non-corrosive to most metals, even when compared to tap water. Toxicity is also low and the material decomposes into the three harmless components; carbon dioxide, water and limestone. Limestone residue would actually serve as a soil conditioner for unpaved areas bordering the roadway in sharp contrast to the ground poisoning effect of a chloride salt. Unfortunately, calcium and magnesium acetates can presently be obtained only in the very costly and purified form of laboratory reagents. Availability of CMA in a much less expensive industrial grade must proceed its use as a deicing agent.

A DOTPF funded research project was recently completed which examined the possibility of manufacturing low grade CMA within Alaska. A final report outlining this study was authored by M. J. Economides and R. D. Ostermann of the University of Alaska titled "Preliminary Design and Feasibility Study for a Calcium-Magnesium Acetate Unit." The authors discuss production of a "highway grade" saturated CMA solution on a small scale not exceeding 75 tons (dry weight) per day. CMA was shown to be economical at production levels above approximately 17 tons per day with predicted costs running $290—$590 per ton depending on production rate and the base price of acetic acid. For comparison calcium chloride costs almost $650 per ton F.O.B. Fairbanks.

The DOTPF is continuing to sponsor a program of CMA research along two different lines. One study involves a refinement of the manufacturing process and will result in the design of a CMA pilot plant. Another project is attempting to take advantage of CMA's ability to retain moisture in a soil mixture. The possibility exists that it can be used to replace calcium chloride as a dust controller and soil stabilizer for unpaved roads.

Robert L. McHattie, P.E.
Senior Research Engineer

DOTPF RESEARCH

Further information on any of the topics covered in "Research Notes" may be obtained by contacting Larry Sweet, Research Manager. A list of publications produced by the Research Section may be obtained by writing Barbara Trego, Publications Specialist, 2301 Peger Road, Fairbanks, Alaska 99701 or by calling the Research Section at (907)479-2241.

State of Alaska
Dept. of Transportation and Public Facilities
Division of Planning and Programming
2301 Peger Road—Research Section
Fairbanks, Alaska 99701

Interior Graphics & Copy Inc 752 First Ave [illegible] ska 99701 (907)456-4982

University of Alaska
PETROLEUM ENGINEERING DEPARTMENT
ROOM 17, DUCKERING BUILDING
FAIRBANKS, ALASKA 99701

PETROLEUM ENGINEERING *(907) 474-7734*

April 11, 1983

Representative Mike Miller
Democrat, Juneau
Pouch V
Mailstop 3100
Juneau, AK 99811

Dear Representative Miller:

I am quite pleased with your demonstrated interest on the problems of deicing and our work to develop effective alternative deicing agents. The Research Section of the Alaska D.O.T. has already exercised a significant amount of effort on the subject and they have been most supportive and cooperative with us. Your resolution will certainly help our combined efforts.

I would like to take this opportunity to supply you with certain facts on the benefits and costs of road deicing.

A report by the Institute for Safety Analysis (Brenner and Moshman, 1976) indicates the following benefits associated with road deicing.

TABLE 1

ANNUAL ECONOMIC BENEFITS FROM ROAD DEICING

Category	Amount (In $ Millions)
Reduced Wage Losses	
(i) Lateness to work	12,200
(ii) Work Absenteeism	4,800
Reduced Production Losses	11,300
Reduced Losses in Goods Shipments	970
Reduced Fuel Costs	330
TOTAL	29,600

The numbers in Table 1 are inflated figures from Brenner and Moshman (1976) including 61% inflation to date.

While the annual economic benefits to the "national good" are unassailable, there are certain major costs associated with using the present deicing agents.

Sodium chloride (the common salt) and calcium chloride are the presently used compounds. By depressing the freezing temperature of water, they allow the melting of ice and, therefore, its removal either by natural runoff or by the movement of vehicles. Murray and Ernst (1976) have estimated the costs of road deicing.

TABLE 2

ANNUAL COSTS OF ROAD SALTING

Category	Amount (In $ Millions)
Water Supplies and Health	242
Vegetation	81
Highway Bridge Decks	805
Vehicles	3,220
Utilities	16
Salt Purchase and Application	332
TOTAL	4,686

The numbers in Table 2, also inflated since the 1976 figures, offer several interesting conclusions. The ratio between the annual benefits (Table 1) and the annual costs is 6.3 offering substantial reasons why road deicing, when viewed on the national scale, is a desirable undertaking.

However, a comparison between the cost of salt purchase to the damages that are associated with its use (1/15) leads to the obvious conclusion that alternative, noncorrosive and environmentally benign deicers are extremely attractive.

My estimates are that in Alaska, the corrosion costs to automobiles alone are approximately $40 million annually. This figure was derived by assuming 400,000 vehicles in Alaska sustaining an average of $100 corrosion damage annually. Considering that no salts are used for deicing in the Interior, the bulk of the damage must be assessed to southeast and south central Alaska. Bridge deck replacement in Fairbanks cost several hundred thousand dollars, recently.

Furthermore, as Murray and Ernst (1970) point out, "heavy salt use...upsets the natural ecological balance" causing irreversible damanges which cannot be assigned an actual dollar cost. These include the risk of increased hypertension. This item cannot be underestimated. Groundwater supplies have been severely affected. In the east of the country, several potable water sources have a salt content of more than 20 mg/liter, the maximum allowable for persons on low sodium diets. This has been directly linked to the use of salt as a deicing agent. Hence, while the cost on the permanent health degradation may be difficult to assess, it is likely to be very high.

Our research on calcium-magnesium acetate (CMA) has resulted in a compound that may be produced by using native Alaskan raw materials and at prices in the region of the acquisition costs of chloride salts. The environmentally benign and noncorrosive nature of CMA offer a compelling rationale in its favor.

We would like to explore with you the logistics of undertaking a controlled test in Juneau and elsewhere in the southeast. Sometime next winter, we could coordinate our efforts with the D.O.T. people. We have a limited supply of CMA on stock and we could have a significantly larger quantity by then.

Let us know how we could be of help.

Sincerely,

Michael J. Economides
Assistant Professor
Petroleum Engineering Department

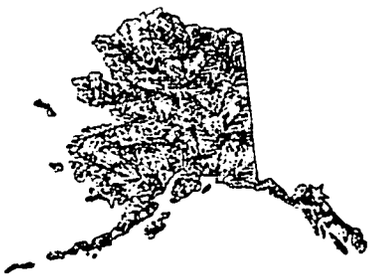
P.S. A copy of the Northern Engineer with one of our papers on CMA is enclosed.

References:

Brenner, R. and Moshman, J.: "Benefits and Costs in the Use of Salt to Deice Highways", Institute of Safety Analysis, Washington, DC, Nov. 1976.

Murray, D.M. and Ernst, V.F.W.: "An Economic Analysis of the Environmental Impact of Highway Deicing", U.S. E.P.A. Rept., EPA-600/2-76-105, May, 1976.

cc: Larry Sweet
MJE:bb



Alaska Environmental Lobby, Inc.

419 6th Street, Suite 328 Juneau, Alaska 99801 907-586-2345

To: Al Adams, Chairman House Finance Committee April 19, 1983

From: Jay Nelson, Executive Director

Subject: HCR 29: Calcium-Magnesium Acetate (CMA)

After reviewing available literature on CMA, the Alaska Environmental Lobby (AEL) supports this resolution. It appears that CMA is indeed environmentally benign, and in this respect, much preferable to the sodium chloride salt currently being used.

As pointed out in the literature and House Transportation testimony, CMA is more expensive to use than sodium chloride for de-icing. However, sodium chloride has high post-application costs related to corrosion damage to vehicles and road and bridge structures. Since CMA has no corrosive characteristics, it may represent substantial savings as far as maintenance costs. It appears CMA costs for dust control purposes are comparable to those of the calcium chloride currently in use.

The Alaska Environmental Lobby would like to see more manufacturing information/research as regards the production of industrial wastes and possible environmental hazards, if any, and what mitigating measures are needed for them. We hope CMA is found beneficial and feasible for use and manufacture on a large scale in Alaska.

cc: All Members House Finance Committee
Mike M. Miller

Alaska State Legislature

POUCH V
JUNEAU, ALASKA 99811

REPRESENTATIVE
ROBERT H. "BOB" BETTISWORTH

P.O. BOX 80288
COLLEGE, ALASKA 99708

April 21, 1983

Mr. H. Glenzer Jr.
Deputy Commissioner, Interior Region
Department of Transportation and Public Facilities
2301 Peger Road
Fairbanks, Alaska 99701

Dear Mr. Glenzer,

Pursuant to our discussions concerning the Calcium Magnesium Acetate appropriation contained in SB162 and the expected veto of the line item in the amount of $158.4 to UAF for the pilot plant project, I want to request that you expedite the reimbursable services agreement for $200.0 with the University of Alaska, Fairbanks. I am perfectly satisfied with the arrangement we came to on the CMA project at this point, but I would appreciate it very much if you would forward to my office, at your earliest convenience, some appropriate written documentation providing evidence of the RSA and cooperation between DOT/PF and UAF.

My relationship with Interior Region DOT/PF has always been rewarding and productive and I feel assured, based on our discussions, that this state of affairs will continue during the current administration.

I want to make it clear that if I am not reassured that the RSA we discussed is not forthcoming within a time frame well in advance of adjournment of the current legislative session I will place adequate funding in the general appropriation act.

I look forward to hearing from you soon and also look forward to talking with you personally during the remainder of session and during the interim.

Sincerely,

Robert H Bettisworth

Bob Bettisworth
Representative, District 20A

RHB/rob

SUMMARY
Economic Analysis -- Environmental Impact Highway De-Icing

320 references provided this data:

* Total annual national cost of salt related damages = $3 billion

  (about 15 times the annual cost for salt & application)
  (6 times the entire annaul national budget for snow & ice removal)

* largest cost from vehicle damage

* most serious damage seems to be water pollution & degradation of health which may result
  (can't put a dollar figure on this)

Findings DO indicate that salt use should be reduced. Amount of reduction should be determined on basis of local conditions. Damages are very large but not uniform across all locations.

There is a huge dollar figure on annual cost to the states from road salt use. (SEE attached - pg. 1)

Heavy salt use can upset the natural ecological balance -- this cannot be assigned a dollar figure.

Several states have found increases of salt in groundwater and surface drinking water -- this has been directly linked to de-icing salts.

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO.	2.	3. RECIPIENT'S ACCESSION NO.
EPA-600/2-76-105		PB-253 268

4. TITLE AND SUBTITLE	5. REPORT DATE
AN ECONOMIC ANALYSIS OF THE ENVIRONMENTAL IMPACT OF HIGHWAY DEICING	May 1976 (Issuing Date)
	6. PERFORMING ORGANIZATION CODE

7. AUTHOR(S)	8. PERFORMING ORGANIZATION REPORT NO.
Donald M. Murray Ulrich F. W. Ernst	

9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT NO.
Abt Associates Inc. 55 Wheeler Street Cambridge, Massachusetts 02138	1BC611
	11. CONTRACT/ NO.
	68-03-0442

12. SPONSORING AGENCY NAME AND ADDRESS	13. TYPE OF REPORT AND PERIOD COVERED
Municipal Environmental Research Laboratory Office of Research and Development U.S. Environmental Protection Agency Cincinnati, Ohio 45268	Final 8/74 to 7/75
	14. SPONSORING AGENCY CODE
	EPA-ORD

15. SUPPLEMENTARY NOTES

Hugh Masters, Project Officer, FTS 342-7541

16. ABSTRACT

This study involves an analysis of the cost of damages that result from the use of salt (sodium chloride and calcium chloride) on highways to melt snow and ice. A large literature search and several surveys were carried out in order to determine the types and extent of damages that have occurred. The report contains over 320 references.

An in-depth analysis was performed on all of the data obtained. The major cost sectors examined were: Water supplies and health, vegetation, highway structures, vehicles, and utilities. For each of the sectors a cost estimate was developed. The total annual national cost of salt-related damage approaches $3 billion dollars, or about 15 times the annual national cost for salt purchase and application. While the largest costs result from damage to vehicles, the most serious damage seems to be the pollution of water supplies and the degradation of health which may result. It is particularly difficult to assign costs in this latter area and therefore the estimate may substantially understate the actual indirect costs to society.

These findings indicate that the level of salt use should be reduced. The amount of the reduction should be determined on the basis of local conditions.

PRICES SUBJECT TO CHANGE

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Deicers Snowstorms Ice Control Economic Analysis Sodium Chlorides Water Pollution	Salt Stormwater Runoff Environmental Impact Snow Control	13B

18. DISTRIBUTION STATEMENT	19. SECURITY CLASS (This Report)	21. NO. OF PAGES
Release to Public	Unclassified	
	20. SECURITY CLASS (This page)	
	Unclassified	

USGPO: 1976 — 657-695/5410 Region 5-11

SECTION 1

FINDINGS AND CONCLUSIONS

1.1 SUMMARY OF FINDINGS

There have been a substantial number of reports of salt related damage in the literature. Most of the reports are deficient in hard cost data. Consequently, by examining different small subsets of the data, various individuals have arrived at opposite conclusions: in some cases that salt damage is insignificant and in other cases, that road salting must be discontinued completely. Examination of all of the literature and contact with hundreds of persons and agencies who are aware of salt related damage has led to the finding that, in general, the damages are very large although not uniform across all localities. Through analysis of all of the available data, the best estimate (in many cases the lower bound) of the annual cost to the snowbelt states that results from the use of road salt is as follows:

	Total (in millions)
Water Supplies and Health	$ 150
Vegetation	50
Highway Structures	500
Vehicles	2,000
Utilities	10
Salt Purchase and Application	200
Total	$ 2.91 Billion

damage to vehicles alone is ~10 x the salt purchase & application cost ~$4,000,000 in Alaska

$\left(\frac{500,000}{250,000,000}\right)\$2,000,000,000 = \$4,000,$ very

Furthermore, heavy salt use in many instances upsets the natural ecological balance resulting in damages which cannot be assigned a dollar figure. This is one of the many reasons that the above dollar amounts must be considered as lower bounds. The most potentially serious of all these damages are the irreversible ones, such as the risk of increased hypertension that results from the heightened levels of sodium in water supplies. For example, groundwater supplies have been most severely affected. Over 90 communities in Massachusetts have one or more supplies

with a sodium content greater than 20 mg/liter, the maximum allowed for persons on low sodium diets. Over 30 water supplies in Connecticut contain more than 20 mg/l sodium and the number is increasing. As much as 5% of the population consuming water contaminated by road salt may be adversely affected.

The use of salt for winter maintenance generally results in better traction on the highways, but because of a number of confounding factors, especially driver behavior, the link between salt and safety has not been proved. While several studies have reported that salt reduces accidents, the methods of data collection and analysis have been found to be mathematically unsound.

Finally, carefully designed reduced salting policies seem to have gained public acceptance as a result of public information programs. The most notable case is the State of Connecticut where state salt use was reduced by 33% because of rising sodium content in water supplies. There is every reason to believe that the residents of individual cities and towns or other states would accept a salt reduction if the salt related damages were made known to them.

1.2 CONCLUSIONS

In the past a number of claims have attempted to downgrade the seriousness of road salt related damage by placing emphasis on the comparisons of the effectiveness of salt and sand, or by concentrating on the lack of importance of vegetation in comparison to human lives (i.e., safety on the roads). Because these claims do not address the whole problem, they are superficial, misleading, and in a few cases, irresponsible. The facts are:

- Several states have experienced significant increases of salt in groundwater and surface drinking water supplies that have been directly linked to the use of deicing salts.
- In particular cases, the levels exceed Public Health Service safety standards set in 1962 and in most cases the levels exceed the standards set by leading researchers, heart specialists and the American Heart Association.
- The cost in terms of permanent health degradation is extremely difficult to measure, but is likely to be very high.
- The cost of actual damage to vehicles, highways and structures, utilities, and vegetation are immense. The annual damage costs at a very lower bound, approach $3 billion. This "hidden" cost is almost 15 times the annual national budget for the purchase and application of road salt, and about 6 times the entire annual national budget for snow and ice removal.

The implications of these facts are clear. Without a doubt the most serious problem is our water supplies. While the cost of damage to bridge decks and vehicles is high, but reversible, the damage to health may not be reversed. We can no longer afford to ignore the fact that we are depositing large quantities of salt into the water that nature provides us and upon which are dependent every moment of our lives. The most advanced medical research indicates that water with more than 20 mg/l sodium is unhealthy and detrimental to a substantial fraction of the population. The American Heart Association supports this fact. Disregard for the quality of drinking water in this and any instance is extreme negligence and we must face the issue squarely. Road salt may be only one of the many serious pollutants in our environment, but that is no excuse to allow the present situation to exist any longer. In order to avoid further damage and high costs, salt use for winter maintenance must be reduced in many areas.

NaCl gram molecule

Na 22.99

35.45 = 58.44 grams

.051 gram salt/lt.

20 ppm

.393 gm Na/gm of NaCl

.051 gm NaCl

Staff Memo. To: mm Milks

TO: MM

FROM: dz dl

DATE: 13/April 1983

RE: HCR 29/Calcium Magnesium Acetate

Complaints regarding rusting automobiles in Juneau prompted introduction of this resolution.

When trying to find statewide statistics on salt damage to automobiles, it was also found that salt has corrosive effects on bridge structures. Four bridge structures were replaced in Fairbanks at a cost of $641,000.00. It is estimated that damage to bridges in Anchorage and the Southeast, where salt is used more frequently, is significantly higher. Unfortunately, there are no statewide Dept. of Transportation statistics regarding corrosive damage. Estimates on corrosion costs to automobiles alone in Alaska are approximately $40 million annually. Attached are federal statistics.

Sodium Chloride (common salt) and Calcium Chloride are compounds that are presently used for de-icing.

Previous studies with Calcium Magnesium Acetate (CMA) have shown that it exhibits excellent de-icing characteristics. CMA is also non-corrosive, does not harm plants and does not pollute water. It has in fact been shown to be benificial to soil. CMA also can work as a de-icing agent at temperatures below 20°F whereas salt can't.

Nowhere is CMA manufactured in bulk so that wide-scale testing can be done. The University of Alaska does have a bench scale pilot plant ready to produce this material. (U of A requested $196. to complete the pilot plant. Bettisworth has put $158.4 into his capital supplemental to fund this project.)

CMA can be produced from limestone, water, and acetic acid. Limestone is readily available in Alaska (Cantwell area is reported to have large quantities of this material). Currently, acetic acid must be imported from the Lower 48, but could be produced locally from refinery by-products if a market were shown available. This may open the doors for the state to become a major producer and exporter of CMA to a national or international market.

This resolution, if passed, will encourage the Dept. of Transportation to use CMA as a non-corrosive ice control agent and continue research on this material. By D. O. T. working with the University of Fairbanks and completion of the pilot plant, the effectiveness of CMA as a de-icing and dust control agent could be done in comparison with salt. Read fiscal note analysis.

Attached is a technical report from Massachusetts regarding salt damage. Finding indicate that the level of salt use should be reduced because of the harmful effects that it has on pollution of water supplies. The Alaska Environmental Lobby is supporting the resolution for these reasons. Continued research is encouraged.

Introduced: 3/30/83
Referred: Transportation

BY M.M.MILLER, DUNCAN AND GRUSSENDORF

IN THE HOUSE

HOUSE CONCURRENT RESOLUTION NO. 29

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTEENTH LEGISLATURE - FIRST SESSION

Encouraging the Department of Transportation and Public Facilities to use calcium-magnesium acetate as an ice and dust control agent.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS the corrosive chloride salts presently used by the state for ice and dust control on roads have substantial adverse effects on automobiles, bridge structures, and animal and plant life; and

WHEREAS the corrosion damage from chloride salts on automobiles in the state alone may exceed $20,000,000 annually; and

WHEREAS calcium-magnesium acetate is a noncorrosive, environmentally benign ice and dust control agent that could be used to replace the chlorides; and

WHEREAS national research into alternative deicing compounds has led to recognition of calcium magnesium acetate as the most viable substitute for the chlorides; and

WHEREAS the state has demonstrated that calcium-magnesium acetate can be produced locally through the dissolution of naturally occurring Alaska limestone in acetic acid produced from Alaska low grade petroleum; and

WHEREAS it is possible that the state could become a major producer and exporter of the low grade calcium-magnesium acetate to a national or international market;

BE IT RESOLVED by the Alaska State Legislature that the Department of Transportation and Public Facilities is encouraged to use calcium-magnesium acetate as an ice and dust control agent in place of chloride salts; and

BE IT FURTHER RESOLVED that the state continue research on calcium-magnesium acetate for feasibility as a product for export to a national or international market.