

HB

390

Suneel Alaska Corporation
Seward Coal Terminal

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FAX NO. N/A

DATE: April 26, 1988

Number of pages to follow: -2-

To : LIO, JUNEAU *Sen. Kelly*

From : William C. Noll

Regarding : Written Testimony - please see below

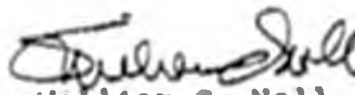
Comments :

Dear LIO:

Please give a copy of the following two pages of written testimony on CS for HB 390 to the following:

- All members of the Senate HESS Committee.
- All members of the Senate Labor & Commerce Committee.
- Representative Bette Cato.

Thank you very much. If you have any problems with this fax, please call me at 224-3120 in Seward.



William C. Noll
Vice President

Suneel Alaska Corporation
Seward Coal Terminal

PHONE (907) 224-3120
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603 OLD AIRPORT ROAD
P.O. BOX 1789
SEWARD, ALASKA 99684

April 26, 1988

To the Honorable Members of the Senate Committee for
Health, Education & Social Services and Labor & Commerce.

The purpose of this letter is to express our support for the Alaska Science and Technology Foundation. We are told that your respective committees will hear testimony on a bill, CS for House Bill 390, which would establish such a foundation. We hope that you will give the bill a favorable hearing and pass it. Some of the reasons for our support are briefly outlined below.

The Foundation, when established and endowed, will be a place where Alaskans can perform the research necessary for our own betterment. By the amount of effort we exert in such a direction, we Alaskans will that much more further from a reliance upon outside experts' opinions on how and why to, for example, develop our resources or a particular resource. In a real sense, we Alaskans will be a little less colonialist and more independent in our decision making processes.

I would like to cite a real example from our company's business experience. Suneel handles large volumes of Alaska's sub-bituminous coal. We buy it from Usibelli Coal Mine near Mount McKinley. We transport it by Alaska Railroad to our terminal in Seward. Then we arrange for shipping it to Korea.

Because this sub-bituminous coal from Usibelli has so much moisture -- normally 27-28% -- we, in effect, have a situation where we can really say that every fourth rail car and every fourth ship is carrying pure water. Only the other three rail cars and the other three ships are carrying anything of value: the calories which the end-users at the power plant really want.

This moisture is organically bound into the coal. It is not something which could be squeezed out. All coal, of course, has moisture. But the coals which are most successfully and easily traded internationally have far less moisture, say, five to ten percent. The clear comparison is that their rail cars and ships are carrying more of value, more calories per trip.

With that background information on sub-bituminous coal, it is also interesting to know that the same coal has a very low sulfur content. It is much lower than the sulfur content of most of Alaska's competitors. Power plant operators like that aspect of our sub-bituminous coal. However, the power plants cannot afford to pay for three ships of calories and one ship of water merely to get a bonus of the lower sulfur content. That high moisture content really is the single biggest reason that Alaska's coal is not being exported in larger volumes today.

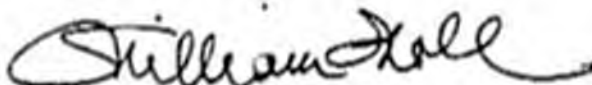
I believe that this situation is tailor made for the kind of research which could be done at the Foundation. When a means is found for lessening the moisture content of Alaska's sub-bituminous coal, putting it on a shipping-cost basis equal to our competitors in Australia, Canada and South Africa, then Alaska will have a premium-grade product which will fit well into the power plants of any of our Pacific Rim target market nations.

Why should Alaska rely on researchers in, say, Japan, Germany or even the Lower 48 to close the doors on possibilities when we Alaskans are the ones with our own interests in mind. To use the coal example again, it is in our own best interests to do the research necessary to produce a more competitive coal. It would not only serve our customers better but it would also expand Alaska's job base by increasing production and transportation sectors of the economy. Additional rewards would come directly to the Foundation itself and to the State in the form of license fees, taxes and royalties.

Others in the resource industries will be able to cite similar examples of needed research which could properly be done at the Foundation. As for us at Suncel, we can point to very real work which can and should be done by Alaskans for Alaskans so well at the Alaska Science and Technology Foundation.

I am only sorry that we were not able to testify in person at your joint hearing on this bill. Please contact me with any comments or further questions you might have. Thank you for your consideration of our testimony. We hope for your positive support.

Respectfully,



William C. Noll
Vice President

Alaska Science and Technology Foundation
CSHB 390 (Fin)am / SB 469

What Does the Proposal Do?

- o Establishes a Science and Technology Foundation as a public corporation within the Department of Revenue. The Foundation has a nine-member board of directors and expert peer review panels to evaluate grant proposals.
- o Establishes an endowment account for the Foundation, consisting of appropriations made to the Permanent Fund's principal and invested on behalf of the Foundation by the Alaska Permanent Fund Corporation.
- o Funds grants for competitively selected basic and applied research projects, with preference given to Alaskan applicants.

Why does Alaska Need a Science and Technology Foundation?

- o To make Alaska competitive and help expand the economy. Applying technology to produce value-added products and encourage instate manufacturing will diversify Alaska's economy.
- o To solve critical Alaska problems that will not be addressed by others. Examples include:
 - reduction of moisture content in Beluga and Healy subbituminous coal for Pacific Rim trade
 - development of a strategic minerals industry, including rare earths
 - improved engineering of roads and foundations on permafrost, including export of Arctic technology
 - one-step conversion of natural gas to gasoline
 - establishment of reliable data bases and models for long-term predictive studies on pollock, salmon and crab
 - improvement of telecommunications capabilities and information resources
 - development of northern nutritious grasses for a red meat industry, and other improved northern crops
 - reduction in threat of infectious diseases, injury and suicide
- o To provide for the deliberate and long-term growth of Alaska's technical capability through the development of qualified personnel, laboratories and equipment.

Endorsements: Alaska Conference of Mayors
City of Fairbanks, City Council
Interior Alaska Manufacturers Association
University of Alaska, Fairbanks
Bering Sea Fishermen's Association

Alaska Miners Association
Fairbanks North Star Borough, Assembly
North Slope Borough, Office of the Mayor
Geophysical Institute, Univ. of AK-Fairbanks
Sigma Xi Scientific Research Society

CSHB 390 (Fin) am

Amendment No. 1:

Page 3, line 6: After "two", delete "nonvoting"

CSHB 390 (Fin) am

Amendment No. 2

Page 4, lines 27-29: Delete and replace with the following:

(d) The board shall give consideration to a broad geographic distribution of projects, particularly to address needs in rural, coastal and interior areas of the state. If consistent with other criteria stated in this act, a portion of available funds shall be distributed as grants of \$100,000 or less.



STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

January 22, 1988

HP 290
HP 291

The Honorable Ben Grussendorf
Speaker of the House
Alaska State Legislature
P.O. Box V
Juneau, AK 99811

Dear Representative Grussendorf:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill that establishes the Alaska Science and Technology Foundation, and a companion appropriation bill, appropriating \$100 million to fund an endowment for the foundation.

The Alaska Science and Technology Foundation is designed to promote economic and technological development and public health in Alaska through basic and applied research. The foundation is established as a public corporation in the Department of Revenue. The Alaska Permanent Fund Corporation will be the agent of the foundation for the purpose of investing the principal of the endowment. The endowment will be in an interest-bearing account, and it is anticipated that the interest generated will provide steady funding for research grants of approximately \$6 million to \$8 million each year.

A nine-member board of directors will govern the foundation. The board will solicit and award grants on a competitive basis. Foundation grants will be available for research projects that will pursue (1) the goals of product or process development; (2) the creation of "added value" to the state's natural resources; (3) the identification and development of new industries in the state; (4) the promotion of public health; and (5) other related research that furthers the purpose of the foundation. In awarding grants, preference will be given to Alaskan residents, organizations, and institutions. Grants to out-of-state applicants will be awarded when expertise in an area of science and technology research is not present in Alaska.

An associated goal of the foundation is to promote the skills and enhance the knowledge of our state's scientific and technical community and thus assure the basis for our state's future development. Alaska is one of only seven states in the United States that has devoted no public money for research or the furtherance of technology.

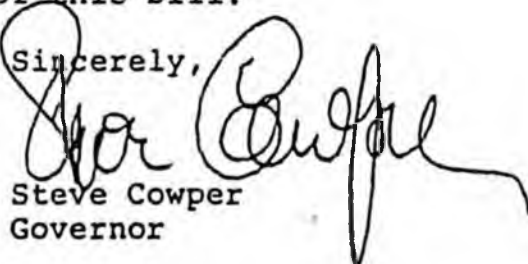
States and countries that fail to expand their technology base, educational facilities, or overall capacity for developmental change will fall behind with respect to other states and countries. As our vast oil resource gradually dwindles over the next two decades, we will lose our prime connection with the national and world economies. So, even as we introduce the "jobs bill" this year, which is expected to provide short-term economic relief and assistance, we must also engage in longer-term development strategies that will encourage and ensure a sustainable economy, bring new business to the state, and develop our own technological capabilities. I strongly believe that the Alaska Science and Technology Foundation will be the instrument that will accomplish these goals.

Section 2 of the bill amends AS 39.25.120(c) and places the executive director and staff of the foundation in the exempt service.

Section 3 of the bill amends the composition of the science and engineering advisory commission, making the executive director of the Alaska Science and Technology Foundation a member of the commission. Section 4 makes a corresponding amendment regarding the terms of commission members.

I strongly urge your support of this bill.

Sincerely,


Steve Cowper
Governor

STATE OF ALASKA
1988 LEGISLATIVE SESSION

BILL VERSION: CS HB 390 (FIN)
PUBLISH DATE: HOUSE 3/11/88

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: Establishing the Alaska Science
and Technology Foundation
Sponsor: _____
Requestor: _____

Agency Affected: Alaska Permanent Fund
Corporation
BRU: _____
Components: Alaska Permanent Fund
Corporation

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93
PERSONAL SERVICES		9.0	9.0	9.0	9.0	9.0
TRAVEL		3.0	3.0	3.0	3.0	3.0
CONTRACTUAL		87.0	87.0	87.0	87.0	87.0
SUPPLIES		1.0	1.0	1.0	1.0	1.0
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING		100.0	100.0	100.0	100.0	100.0
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER		100.0	100.0	100.0	100.0	100.0
TOTAL						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

Computed at the rate of 10 basis points per \$1000 of funds invested.
(Note: Costs above for FY 90-93 do not account for inflation.)
These costs are based on CSHB 390 (HESS) WITH attached Amendment No. 1.

Prepared by: Alaska Permanent Fund Corporation
Division: _____

Phone: 465-2047
Date: 3/2/88

Approved by Commissioner: *David A. Rose*
Agency: Alaska Permanent Fund Corporation

Date: 3/2/88

Distribution (by preparer):

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

Page 2 of 2
Fiscal Note
(Establishing the Alaska Science and Technology Foundation)

This bill establishes the Alaska Science and Technology Foundation as a fund to be invested by the Alaska Permanent Fund Corporation.

Passage of this bill would require the addition of part-time accounting support to the Alaska Permanent Fund Corporation for investments, accounting and financial reporting; bank custody fees; audit fees; investment management fees; and travel to report to the Science and Technology Foundation Board of Trustees.

FY 89 costs:	<u>Pers.</u> <u>Svcs.</u>	<u>Travel</u>	<u>Contr.</u>	<u>Suppl.</u>
Part-time Accounting	9.0			
Bank Custody, Audit, & Management Fees			87.0	
Investment Officer Travel		3.0		
Miscellaneous Supplies				<u>1.0</u>
<u>TOTAL</u> <u>\$100.0:</u>	\$ 9.0	3.0	87.0	1.0

CSHB 390 (Fin) am
SECTIONAL ANALYSIS

*** Section 1**

Sec. 37.17.010

The Alaska Science and Technology Foundation is housed in the Department of Revenue. Its purpose is to promote through basic and applied research: economic development and technological innovation in Alaska; public health; telecommunications, and sustained growth and development of Alaskan scientific and engineering capabilities.

Sec. 37.17.020

The endowment of the Alaska Science and Technology Foundation is managed along with other moneys of the permanent fund, but the interest on this money is distributed as grant funds. This interest will not be included in the computations that determine permanent fund net income for other uses, e.g. inflation proofing and dividends.

Sec. 37.17.030

- a) Net annual realized capital gains may be split between the principal and income of the endowment. If approved under the Executive Budget Act, at the request of the board of directors the appropriated interest income from the endowment shall be released to the foundation.
- b) In addition, to endowment income, the foundation can distribute money received from gifts, grants, and other aid; funds received by the foundation do not lapse.
- c) The foundation's administrative expenses come from the endowment income, subject to the Executive Budget Act.
- d) Grants are distributed through a competitive bidding process.
- e) Subject to the Executive Budget Act, income may be deposited to the principal, but cannot be withdrawn by the board at a later time.

Sec. 37.17.040

The nine members of the board of directors are appointed by the Governor to staggered four year terms and may be removed for cause. The membership is specified and is designed to represent the interests of the scientific community as well as the general public with emphasis on resource development, manufacturing, finance, telecommunications, or public health. Four members must be scientists or engineers, two voting members from in-state and two non-voting members from out-of-state.

Sec. 37.17.050

The board shall elect its officers to terms of no more than two years.

Sec. 37.17.060

A majority of the voting members of the board constitutes a quorum.

Sec. 37.17.070

The board must meet at least twice a year. Members receive per diem and travel expenses.

Sec. 37.17.080

This section provides for the hiring of an executive director and additional staff. All employees are in the exempt service.

Sec. 37.17.090

- a) Notice of all solicitations for grant proposals must be given at least annually. When soliciting proposals, preference shall be given to projects that would use or enhance basic and applied research capabilities in the state.
- b) Grant proposals shall be reviewed by an anonymous peer review panel appointed by the board. Members of this panel receive travel and per diem expenses. Grants of less than \$5000 may be exempted from this peer review.
- c) Grant awards will be consistent with the policy and research priorities for the state set by the Alaska Science and Engineering Advisory Commission.
- d) At least 50 percent of endowment income must go to grants of \$100,000 or less.

- e) The board will specify the amount of each grant that can be used for overhead.
- f) Grant recipients will be required to file reports. Research results will be distributed to the public regularly (and in a format of the most use to the scientific community and the general public), unless deemed proprietary by the board prior to the granting of the award.
- g) A fair percentage of income from royalties, licenses, and patents resulting from grant research shall be paid to the endowment principal subject to the Executive Budget Act.
- h) All qualified Alaskans may be eligible for grants. Preference shall be given to Alaskan grant proposals be they individuals, firms, organizations, or academic institutions. Out-of-state recipients may have to associate with an Alaska organization. Grants must further purposes of the foundation to solve Alaska problems.
- i) If grant money is awarded for equipment purchases, the foundation owns that equipment.
- j) An annual report to the Governor and legislature is required.

Sec. 37.17.100

The Alaska Executive Branch Ethics Law shall apply to board members, and they shall adopt a conflict of interest policy for themselves and the peer review panel.

Sec. 37.17.110

This section permits the board to adopt necessary regulations.

*** Section 2**

Sec. 39.25.110

Adds the executive director and staff of the foundation to the exempt service.

*** Section 3**

Sec. 44.19.257(a)

The executive director of the foundation is added to the membership of the Alaska Science and Engineering Advisory Commission. Membership on this

commission is broadened to include a member representing an academic institution *in* the state, rather than *of* the state.

*** Section 4**

Sec. 44.19.259

The executive director of the foundation is exempted from the staggered term provision of the Science and Engineering Advisory Commission.

*** Section 5**

Immediate effective date.

Division of Policy
8 April 1988

CSHB 390 (Fin) and
SECTIONAL ANALYSIS

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A STATEMENT ON LEGISLATION
TO ESTABLISH AN ALASKA SCIENCE, ENGINEERING, AND TECHNOLOGY FOUNDATION
PRESENTED TO THE ALASKA SENATE
COMMITTEES ON HEALTH, EDUCATION, AND SOCIAL SERVICES AND
LABOR AND COMMERCE

BY

Lyle D. Perrigo
1921 Congress Circle, Apartment B
Anchorage, Alaska 99507

April 27, 1988

Members, Chairmen and members of the State Senate Committees on Health, Education, and Social Services and Labor and Commerce, my name is Lyle D. Perrigo. My comments today on Senate Bill 469 to establish an Alaska Science, Engineering, and Technology Foundation, are based on 30 years of experience in conducting and leading applied research programs in a national laboratory, a nonprofit research institute, and a center of the University of Alaska. Also relevant are the one and one-half years in which I was the senior science director for the University of Alaska Foundation; in that period I participated in the work reported in the document entitled "A Challenge to Alaska." I believe my background provides a useful perspective on how research can be and often is used for pragmatic and economic purposes as well as some of the major research needs that face Alaska. Although I am the deputy director of the Arctic Environmental Information and Data Center (AEIDC), University of Alaska, and I work directly with the U.S. Arctic Research Commission, this statement is solely my own and does not necessarily reflect the views of our center, the University of Alaska, or the U.S. Arctic Research Commission.

Before advancing some specific thoughts about the legislation being considered by your committee, some comments concerning to research, views on its

687/255

POSITION PAPERS

importance, and programs elsewhere in the nation which foster research are in order to lay a foundation for my recommendations.

- Research is often considered to be comprised of two types of endeavor, basic and applied research. The former comprises work to increase man's knowledge and understanding of natural phenomena and human interactions. The latter is a term used to describe pragmatic efforts to solve problems and employ the products, processes, or systems developed from existing knowledge for economic benefit or the well-being of industry, the government, and/or people. Both types of research are needed in Alaska.
- Except for certain technology transfer activities even applied research takes significant amounts of time before tangible results are apparent; for example, five to ten years may pass between onset of an applied research project and achievement of significant economic benefits.
- Economic or pragmatic success, even in applied research, is uncertain. Perhaps one project in ten will result in a large payoff, while two in ten may provide acceptable economic or other valued benefits. The remainder likely produced useful scientific and technical results but are otherwise not directly viable.
- Basic research is often done in universities. Nonprofit, for-profit, industry, and national laboratories as well as special multidisciplinary centers within some universities comprise the world of applied research. Some focus their work on one or two areas, while others pursue a wider

spectrum of activity. The spawning of small nonprofit and for-profit research organizations is one step in the diversification process.

- At the present time 43 of the 50 states have programs to stimulate research. Emphasis on the acquisition and application of new knowledge is of interest because they lead to economic diversification and new jobs. Some of the more successful programs are found in Massachusetts, North Carolina, Ohio, Pennsylvania, and Texas.

- The U.S. Arctic Research Commission visited Juneau in mid-March. The Commission met with the Senate HESS Committee other committees of the legislature, the governor, and the Juneau public to support the concept embodied in SB 469. The Commission stated it supported the concept of such a foundation. This body further stated that a research foundation would provide a means of broadening the base of well-qualified research scientists and engineers in the state and acquiring a better understanding of physical, biological, social and medical phenomena in the North. Having an Alaska Science, Engineering, and Technology Foundation is not considered as a gambit that would lessen work on federal and national issues; it would speed the process.

Comments on Proposed Legislation

Because an Alaska Science and Technology Foundation could play a very important role in diversifying the economy of the state and providing a better

future for its residents, I support the concept behind SB 469. Several reasons as well as particular needs in the state call for the passage of SB 469 in this session of the legislature. These points are summarized below:

° Starting the Diversification Process. Diversifying an economy at the present time whether in Alaska, other parts of the nation or elsewhere in the world is dependant upon the development of new technologies or the creative adaptation of older methods to newer situations. Development and adaptation come from research directed at the solution of practical problems. Putting new processes on line may take 5-10 years before a favorable impact is noticed while the economic return from adaptations often occurs quicker. We must start the development and adaptation work now if we are to have a more diversified economy by the turn of the century.

° Nurturing an Applied Research Capability. At present the only comprehensive applied research capability in Alaska resides in the oil and gas industries. We need similar expertise to address a host of opportunities and problems in the state attendant with the wise development of our other resources, the health and welfare of our residents and the balanced care and preservation of the environment. Acquiring those skills and deriving the economic as well as achieving quality of life benefits come only from work on practical Alaskan problems in those areas.

° Addressing Alaskan Problems. For decades the economy of Alaska has depended upon the results of research done to solve federal problems.

outside perceptions of our needs, or to enhance the development of a particular resource in a particular geographic area.

Quite necessarily those agendas are driven by the balanced best interests of those other entities. Needed now are capabilities focussed on the problems and issues facing Alaska today and those that will provide a promising future.

- Completing the System. The attached diagram of similarities between the federal and state science and technology systems is instructive about the role that could be played by the Alaska Science, Engineering, and Technology Foundation. In summary, the passage of SB 469 is needed to complete the system. Without an organization to support the research needed in the state, the system has no muscle nor can pragmatic results be expected; there would be ~~ample opportunities~~ only for discussion, the development of policy, and providing advice. Although agreement, a sense of direction, and a feeling of importance are essential, concrete results in the form of newer or more viable processes, products, and equipment are required for a favorable economic impact.

In February I made a similar statement before your sister organization, the House HESS Committee. At that time I pointed out several suggestions that I believe would strengthen the proposed legislation. I continue to believe the bill forming the foundation could be made more practical and efficient. Amendments to achieve the following would meet those objectives:

SIMILARITIES

Level	Policy	Advice	Study	Funding
State	AK Science & Eng'y Advisory Commission	Governor's Science Advisor	Agencies, Industry, ad hoc	AK Science & Technology Foundation
Federal	Arctic Res. Comm. & Interagency Arctic Comm.	President's Science Advisor	Agencies, Ind. National Academy	National Science Foundation

° Organization and Reportability. Placing the proposed foundation within any existing department could make it a political football. What is needed is a public corporation similar to the Alaska Railroad. Considerable autonomy is required so that good science and technology rather than other agendas govern the preparation of priorities, consideration of proposals, the distribution of funds and evaluations of performance and results. There are always legislative and administrative procedures to disestablish such a body if it violates the trust placed in it.

° Focus and Interests. Language should be included in the legislation to clearly focus the foundation's attention on Alaskan problems and interests. There are parallel federal and national interests in certain parts of the state and in certain scientific fields. There should be no wording to give the impression that Alaskan dollars might be spent to solve federal/national problems. We have more than enough of our own problems to handle without taking care of part of those belonging to the federal government.

° Governing Board. Considerable care in defining the length of terms and categorizing qualifications for membership is needed. First, the terms should run for six, rather than four years. We need stability and considerable insulation from political processes. Second, placing exclusionary language in the bill limiting the number of people from Alaskan universities to one will help allay public fears about the creation of a backdoor funding mechanism for universities. Further, at least one board member should come from each of the following basic

industries: (a) oil and gas, (b) fisheries, (c) mining and minerals, and (d) forestry/forest products. Nominees from those sectors may or may not be scientists or engineers. We need someone from outside the state on the board; one, not two. A draft version of this bill had the speaker of the house and the president of the senate naming one member each. I hope such wording is not reinserted because naming one member each could involve the legislature in administrative matters. It seems to me that both bodies would wish to be in a position to overview operations. Entanglements could make that a more difficult process.

° Applied and Basic Research. Our university research apparatus is generally geared, with a few exceptions such as the Arctic Environmental Information and Data Center (AEIDC), to undertake basic research. A basic emphasis is normally the role of most universities: getting new products, processes, and equipment into the market requires applied research. That type of work is often done by private groups and not-for-profit research institutes and occasionally special, multidisciplinary arms of universities. I hope that the final wording used in the bill will clearly call for both types of research and leave the door open for participation to the private sector and nonprofit organizations as well as universities.

Wording charging the foundation with responsibility to support technology transfer of projects with promising results is one means of strengthening the applied side of research. In the sense I use the phrase technology transfer, I mean demonstration and applications research. It is far broader than information transfer, which often involves distributing

reports, talking with interested people and accessing files via computer linkages.

- ° Limits on Size of Grants. Current wording calling for half the grants from the foundation to be \$100,00 or less is unnecessarily restrictive. First, there may be fewer technically sound proposals in any one year that might fall below that limit than there are realistic demands for projects costing more money. Second, inflation degrades the dollar's purchasing power. Hanging a specific value on a program such as this creates housekeeping problems for future legislatures unless those dollars are indexed.

All of the above are fine-tuning changes. None should be considered as a reason for rejecting legislation.

In summary, I have given information on the importance of research, the stages through which it moves from the generation of new knowledge to application and some processes by which research leads to diversification. Also, I presented ideas on methods to strengthen and make workable the concept outlined in views on the need for a science, engineering, and technology foundation and SB 469.

Thank you for this opportunity to express my views.

Alaska Science and Technology Foundation
CSHB 390 (Fin)am / SB 469

What Does the Proposal Do?

- o Establishes a Science and Technology Foundation as a public corporation within the Department of Revenue. The Foundation has a nine-member board of directors and expert peer review panels to evaluate grant proposals.
- o Establishes an endowment account for the Foundation, consisting of appropriations made to the Permanent Fund's principal and invested on behalf of the Foundation by the Alaska Permanent Fund Corporation.
- o Funds grants for competitively selected basic and applied research projects, with preference given to Alaskan applicants.

Why does Alaska Need a Science and Technology Foundation?

- o To make Alaska competitive and help expand the economy. Applying technology to produce value-added products and encourage instate manufacturing will diversify Alaska's economy.
- o To solve critical Alaska problems that will not be addressed by others. Examples include:
 - reduction of moisture content in Beluga and Healy subbituminous coal for Pacific Rim trade
 - development of a strategic minerals industry, including rare earths
 - improved engineering of roads and foundations on permafrost, including export of Arctic technology
 - one-step conversion of natural gas to gasoline
 - establishment of reliable data bases and models for long-term predictive studies on pollock, salmon and crab
 - improvement of telecommunications capabilities and information resources
 - development of northern nutritious grasses for a red meat industry, and other improved northern crops
 - reduction in threat of infectious diseases, injury and suicide
- o To provide for the deliberate and long-term growth of Alaska's technical capability through the development of qualified personnel, laboratories and equipment.

Endorsements: Alaska Conference of Mayors
City of Fairbanks, Ci., Council
Interior Alaska Manufacturers Association
University of Alaska, Fairbanks
Bering Sea Fishermen's Association

Alaska Miners Association
Fairbanks North Star Borough, Assembly
North Slope Borough, Office of the Mayor
Geophysical Institute, Univ. of AK-Fairbanks
Sigma Xi Scientific Research Society

CSHB 390 (Fin) am

Amendment No. 1:

Page 3, line 6: After "two", delete "nonvoting"

CSHB 390 (Fin) am

Amendment No. 2

Page 4, lines 27-29: Delete and replace with the following:

(d) The board shall give consideration to a broad geographic distribution of projects, particularly to address needs in rural, coastal and interior areas of the state. If consistent with other criteria stated in this act, a portion of available funds shall be distributed as grants of \$100,000 or less.