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will be granted only for the milling and diesel generating facilities. Under these circumstances, EPA normally requires the permit process to be completed before the foundation for the mill can be started. By taking this approach, other time-dependent components of the project, such as access routes, tailings impoundment areas, etc., can be started. This will allow at least one year to be saved in the development of a project such as Red Dog. Cominco suggests DEC take the same approach.

2. Receiving Water Quality Standards of the Alaska Department of Environmental Conservation.

In the discharge of waste water from any mining operation, EPA has effluent standards which must be met in the discharge pipe. The State of Alaska has added receiving water standards for those waters to which effluent is disposed. Therefore, industry must meet one set of water quality standards in the discharge pipe and another in the waters which accept the effluent. The law states that, for those effluents which induce heavy metals into receiving waters, the effluent must meet or be lower than .001 of ambient water quality standards or 96 hour LC 50 for the most sensitive species of aquatic organism found in the stream.

If the stream does not meet the standard, then ambient water quality must be met. This standard must be met at the edge of a negotiable mixing zone. However, the regulations also state that for those effluents which contain heavy metals, no mixing zone will be allowed. This obviously creates significant problems for industry, because the State of Alaska has designed one of the most restrictive regulations for water quality in the world. The mining industry is being asked to meet extremely stringent water quality regulations at the edge of a mixing zone, when a mixing zone is not presently allowed by law.

The Alaska Department of Environmental Conservation is essentially asking the mining industry to meet regulations which are extremely stringent and ones to which facilities such as the Anchorage Waste Water Treatment Plant do not have to adhere.

Cominco and other major mining companies in Alaska have quietly expressed concern to DEC on this matter, and little progress is being made. The following actions are suggested:

a. The Legislature take a close look at the potential long term cost of such stringent regulations.

b. Water quality regulations be rewritten to allow standards to be equal for all waste water discharges in Alaska. For example: why should the Anchorage waste water treatment not have to meet the same water quality standards as the mining industry?

c. The Legislature should direct DEC to clarify the specific standards to which industry must adhere. The lack of formal standards makes it difficult to plan the feasibility of individual projects.

II. Federal Regulations

1. Proposed Water Quality Regulations for the Ore Mining and Processing Industry (EPA proposed rules).

The Environmental Protection Agency is presently reviewing proposed rules related to water quality management from the mining industry. The rules are described in the June 14, 1982 Federal Register (40 CFR Part 440). Of major concern to the mining industry in Alaska is paragraph (b) (1) of 440.124 which essentially requires a zero discharge of process water from mill tailings ponds. If the EPA were to implement these new regulations, it would effect many of the mining projects now under environmental review.

In summary, the EPA rules would require that no treatment process water coming from flotation mills be allowed to be discharged. The only treated water which could be released would be that amount which drained into the pond from rainfall. The need to recycle process water creates difficult problems in terms of metallurgy. These problems would require tailing ponds to be sized larger. This will add a significant cost burden to any new mining project in Alaska which uses a flotation milling process.

2. Clarification of Provisions Outlined in the Alaska National Interest Land Conservation Act (ANILCA).

There are a number of specific provisions dealing with mining projects and access to conservation units in the Alaska National Interest Lands Conservation Act (ANILCA) which are very ambiguous in description. One of the major points of language which is a concern to Cominco are those sections in the bill which refer to project planning and the identification of feasibility of project alternatives. The interpretation of feasibility, specifically economic feasibility by the resource agencies, looms as a major stumbling block in permit acquisition for mining projects. When mining projects are located in major conservation units, or wish to gain access through such units, the lead agency

must evalute potential alternative methods for developing the project (as outlined in the National Environmental Protection Act of 1970). This alternative analysis is based on the concept that any alternative listed in an EIS must be feasible to be included in the document. However, the interpretation of feasibility is presently somewhat unclear, particularly in regards to economic feasibility. When the question of economic feasibility arises during the EIS process, the lack of clear guidelines to allow decisions to be made has caused great confusion among the resource agencies. Without clear guidelines as to how economic feasibility should be measured, the agencies have taken the most conservative approach and view only those alternatives which do not make the entire project infeasible as acceptable from an economic viewpoint. However, their intent should be to allow the companies to maximize economic return while protecting environmental concerns to a reasonable extent.

Cominco would like to suggest that the State take an active role in the Federal process of defining the extent of the word "feasible" as outlined in ANILCA. A clear definition of this term will ease many of the problems associated with permit acquisition in conservations units in the State.

The regulatory problems discussed in this letter are somewhat specific in nature. However, the major problems related to government regulations which face industrial development in Alaska are rooted in how the "NEPA" process (environmental review) is administered by State agencies. Large or controversial projects are subject to long review by numerous single-purpose State agencies. The potential for legal action by environmental groups has led these agencies into requiring an excessive level of detail in the data gathering and analysis of impacts by industry. This attention to detail requires large sums of money to be expended and long lead time in the development of new projects.

Alaska needs to consider a method by which resource agencies can be coordinated in their input on projects and how differing agency views can be mediated. The present State clearinghouse system ineffective and industry is forced to negotiate with each agency as to the terms upon which individual projects will be developed. In general, a well-conceived permit structure, with specific time frames and methods to mediate concerns presented by individual resource agencies, would be a helpful addition to land use planning in Alaska.

I hope this review has been helpful. Please feel free to request any additional information which you may require.

Sincerely,

H.M. Giegerich
President & General Manager

HMG/jmr

GCO Minerals Company
HOUSTON, TEXAS 77210

W. H. TONKING
EXECUTIVE VICE PRESIDENT

P O BOX 4258
713/651-9261

January 5, 1983

Mr. H. M. Giegerich
President and General Manager
Cominco Alaska
5660 "B" Street
Anchorage, AK 99502

Dear Hank:

This refers to my letter of 27 October 1982 and to the telephone conversations, one with Marc and several I have had with Mike LaFleur since then.

As you know, Mike suggested that GCO might wish to submit an additional letter that would either accompany or explain our initially proposed draft agreement to you. He indicated that you would not object to a common approach by us to the BLM or the State of Alaska for a non-exclusive transportation corridor and port facility application which would facilitate the developmental and operational needs of our respective programs in, and NANA's objectives for, the DeLong Mining District.

As a means of clarifying GCO's position in this matter, for your needs as well as those of other affected parties, you may be assured of GCO's interest in joining with Cominco and NANA to file a joint application for such a non-exclusive transportation right of way and port facility. In our view the urgent need to obtain early approval of a transportation corridor and port facility that can be planned, built, and operated to meet our respective corporate objectives is of equal importance to the specific route selection.

Our strong preference is to join with NANA and Cominco in a joint effort to encourage the State of Alaska to develop and finance a publicly owned transportation corridor and port facility that would not only serve our needs but would serve other public or private entities seeking to develop the natural resources of the area. We would assume that you agree that it is in the best interest for all parties to make certain that a publicly owned and operated facility is planned and developed to meet all requirements, known or anticipated, and we are of course willing to work with you to assure that those interests are clearly presented to the appropriate governmental offices as they go forward with such a plan.

Although we greatly prefer the foregoing course of action, as we said in our 27 October letter, we would consider working with you and NANA to develop an application for a non-exclusive corridor and port facility which might be planned by us independently of governmental assistance and which might require private financing to insure its development. As we have said, however, we would have to have some assurance that GCO's objectives, where they might differ from those of Cominco, will be taken into consideration both in the planning and the development stages. As you can appreciate we are not ready to agree to commit to such a program until we have a better concept of the magnitude of the engineering required, the financial commitment involved, or the operational restrictions which might be imposed on one or both of us.

With the above understanding, we are ready to discuss the next step to be taken to insure early decisions either on a publicly financed and operated facility or one that we might jointly wish to undertake on our own or in conjunction with other private or public participants. Should Cominco be interested in this, we will arrange our schedule to be available to meet with you on a date you select. Once basic agreements have been reached, GCO would approach the several agencies with whom we are now working to propose such modifications of our current applications to conform to new plans to which we may have mutually agreed at that time.

Wishing you a happy and prosperous 1983.

Best regards,

W. H. Tonking

WHT:VL

cc: M. F. LaFleur, Cominco American

b/cc: J. M. Britton
L. V. Clark
J. A. Moore
A. D. Wood
M. F. Wray - information only

Cominco Alaska · 60 "B" Street/Anchorage, Alaska 99502/Tel. ') 274-8566

Cominco Alaska

W.H. Tonking
Executive Vice President
GCO Minerals Company
P.O. Box 4258
Houston TX 77210

January 14, 1983

Dear Bill:

I wish to acknowledge with thanks your letter of January 5 in regard to our application for a transportation route from the Red Dog/Lik area to the Chukchi Sea.

Unfortunately, there appears to be a misunderstanding on the part of GCO in regard to Cominco's position on this application, and our proposal that GCO support the application. I would, therefore, like to clarify Cominco's position.

The key points of our proposal to GCO are as follows:

1. GCO will withdraw its application for the northern route access to the Chukchi Sea.

2. GCO will officially support Cominco's application for a transportation route from Red Dog to the Chukchi Sea along the southern corridor.

3. Cominco will be the sole applicant for the transportation route.

4. Cominco will in good faith negotiate with GCO for use of the transportation corridor if the system is constructed at Cominco's expense.

5. Cominco will use its best efforts to obtain agreement of third parties for GCO's use of the transportation route, if this agreement is required.

6. If public ownership and operation of the transportation system becomes a fact, we recognize that the system will be open to any company to use, for the purpose for which it was constructed, under an appropriate tariff structure.

I trust this will clear up any misunderstanding on GCO's part. If it appears that it is not possible for you to work with us under these conditions, then I see no useful purpose in continuing our discussions, and Cominco will carry on with the application and permitting for the southern route, without your support or assistance.

Yours truly,

H.M. Giegerich
President & General Manager

HMG/jmb

cc: MFLaFleur
LFBeaudoin

Alaska State Legislature

Senate

Official Business

Pouch V
State Capitol
Juneau, Alaska 99811

Memo

To: Bettye

From: Pat

Subject: Cominco Briefing, Feb. 9, 1983--Participants

The following folks will be either presenting or accompanying the Cominco people:

1) HANK GIEGERICH, President and General Manager, Cominco Alaska

2) JOHN SCHAEFFER, President,NANA

3) JOHN SHIVELY, Senior Vice President, NANA Development Corp.

4) Don Argetsinger, Vice President, NANA Development Corp.

5) Eric Wolforth, Wolfworth and Flint, attorneys

Don and Eric will probably be introduced by others and may or may not participate in presentation.

Alaska State Legislature

Senate

Official Business

Pouch V
State Capitol
Juneau, Alaska 99811

Memo

To: Bettye

From: Pat

Subject: Cominco Briefing/Red Dog Mine, Feb. 9, 1983

Although most points will probably be covered in the briefing we should probably make sure the following questions are brought out or clarified:

1) What are the constraints now preventing mine development (e.g. economic factors, more exploration, infrastructure, etc .)

2) When might the mine be operational assuming the above could be overcome?

3) If infrastructure problems are key, what are the minimum facilities necessary for initial mine production?

4) If a regional transportation authority were not established are there other possible alternatives for infrastructure development?

5) Although a regional transportation authority contemplates the use of revenues from users to pay back revenue bonds, can user fees fully cover infrastructure costs or will state funds and appropriations be necessary? How much? Federal appropriations?

6) Are there other industrial/mining users anticipated for these facilities? (GCO Minerals--Lik deposit; Su deposit nearby)

7) What public benefits/users would be anticipated from port, road development

8) Is any part of this project in the North Slope Borough? If so, how would this relate to a regional transportation authority? (I think part of the claims are in the Borough)

9) Would any state lands be involved in the project or related infrastructure?

10) Are there any potential land trades involving state lands in the infrastructure development? (I think there is possibility)

11) What types of wastes/pollution would be generated by the milling/mining operations?

Mining can give fisheries a helping hand

Discovery and development of a world-class copper, lead and zinc deposit near Kotzebue could have an interesting positive impact on subsistence fisheries nearby.

In the early 1970s, pilot Bob Baker suggested to the U.S. Geological Survey that it investigate a reddish seep in an area 30 miles north of Kotzebue. Baker was owner of the Red Dog Air Service, and the mineral deposit discovered because of his tip has come to be known as the Red Dog mine.

USGS did investigate the seep and discovered a massive sulfide deposit rich in copper, lead and zinc. In 1978 NANA Corp. selected the area under the Alaska Native Claims Settlement Act. In 1982 Cominco, currently operating the Polaris mine in the Northwest Territories, and NANA reached final agreement on the development of this massive deposit. Plans call for an open pit mine with a life expectancy of 50 years.

Red Dog Mine is scheduled to start construction in mid-1984 with production to begin in 1986. However, this is contingent upon the world economic situation, as the market has been depressed for the past few years, according to a Cominco spokesman.

The Red Dog is one of two world-class ore bodies discovered in Alaska by government geologists. Red Dog creek is located in a lightly timbered area on the west end of the Brooks Range. It flows into Ikalukrok Creek which, in turn, flows into the Wulik River. For years the Wulik has been, and still is, used for subsistence fishing for the village of Kivilina. However, since the 1970s there have been a large number of natural fish kills documented in the area.

When NANA Corp. and the Cominco Co. made their first agreement to develop the mine, the first order of business was to prepare an environmental impact statement. Several consulting firms were hired to collect data. In 1981 35 sampling stations were set up, and in 1982 36 sampling stations were used. The data led to the discovery that the cadmium, lead and zinc levels in the water far exceeded the allowable levels set by the Environmental Protection Agency.

Tissues from char and grayling were sampled. The gills from these fish showed dissolved metals, which is probably a leading factor in their mortality. Adult grayling caught in the Ikalukrok above the mouth of Red Dog Creek were caged and placed in the waters of Red Dog Creek. These fish didn't survive more than 24 to 36 hours and often succumbed after only eight hours of exposure to the waters directly below the ore deposit. When the fish died they exhibited several traumatic effects—their eyes became cloudy which was attributed to dissolved metals deposited on them. They became discolored and exhibited erratic behavior before they expired. One fish had a cancer-like growth on the liver.

It was discovered that the iron and zinc oxide precipitates caused a natural turbidity of the creek that was way above the accepted standards. When there is a weathered surface on a sulfide deposit, natural leaching takes place, changing or oxidizing the sulfide ore into a sulfate. Sulfates will leach or weather from the exposed surface of the sulfide rock. Thus, once the cycle is started, it is practically impossible to stop. Bacteria will occasionally colonize on the surface of sulfide ore and use it as a source of energy thereby accelerating the leaching process.

Will the Red Dog Mine, when it finally comes on line, actually help to preserve the life of the Arctic char, grayling and salmon in that area? The experts are now working on that very question—but all indications are that it is possible.

At the present time, the waters of Red Dog Creek are in violation of most of the water quality standards of Alaska. According to the Department of Environmental Conservation's handbook, the Red Dog and every other fresh water stream in Alaska is classified as good for drinking; culinary and food processing; water recreation; agriculture, which includes irrigation and stock watering; contact recreation and growth and propagation of fish and other aquatic life. Clearly the classification is not in the best interest of the public.

It is possible that mining in this area will improve the quality of the receiving waters for Red Dog Creek as well as other waters downstream. This points to the importance of studying each area and each specific creek for existing conditions prior to issuing a blanket classification, as was done when the present water quality regulations were implemented. This water has proven high quantities of natural heavy metal content and should never have been classified as fit for human use. Is it possible that other areas in historic mining districts already in production would have shown the same data prior to mining activities? Heavy concentrations of metals in water now being blamed on the effects of ongoing mining are often caused by natural leaching and erosion in highly mineralized areas.

Modern prospecting techniques and the experience at Red Dog indicate that high concentrations of heavy metals in water are the same to the prospector as tracks are to a hunter.

* * *

Rybachek welcomes questions and comments. Readers may write to her care of Fairbanks Daily News-Miner, P.O. Box 710, Fairbanks, AK 99707.

ROSE RYBACHEK
Resources columnist

Columnist named

Today we introduce a new columnist whose views will be published here every other week.

Long-time Fairbanksan Rose Rybachek will be telling our readers about natural resource development, with an emphasis on mining.

Rybachek, a member of the Alaska Miners Association, Alaska Women in Mining and president of the Tolovana Mining District, with her husband, Stanley, has been operating a placer hydraulic mine in the Livengood area since 1961. She has lived in Alaska since 1958.

Mining is not her only interest. She has served on the boards of the state and national PTA, was 20th District Republican Party secretary, hosted a television talk show, "Rose's Window," for two years, and worked in television advertising sales.

TRANSPORTING ALASKA'S NATURAL RESOURCES —

A PROPOSAL TO CREATE
REGIONAL TRANSPORTATION AUTHORITIES
IN ALASKA

AN EXECUTIVE SUMMARY

TRANSPORTING ALASKA'S NATURAL RESOURCES — A PROPOSAL TO CREATE REGIONAL TRANSPORTATION AUTHORITIES IN ALASKA

EXECUTIVE SUMMARY

The purpose of this briefing paper is to illustrate the need for a wider variety of options for developing needed transportation facilities in unincorporated regions of the state to allow development of the state's natural resources. The benefits of such resource development and improved rural transportation in one such region - northwest Alaska - are discussed, using the Red Dog zinc/lead deposit as an example. A regional transportation authority could provide maximum flexibility in the financing, construction and operation of needed transportation facilities.

I. Alaska's Mineral Potential

There is growing interest in the mineral potential of Alaska, much of which remains relatively little-explored. Northwestern Alaska contains a number of highly mineralized areas with future development potential. The DeLong Mountain District, in particular, contains some major deposits, among them the world class Red Dog zinc/lead deposit. These deposits are relatively close to tidewater; however, there is currently no surface transportation system in the region. A developing mining sector could provide jobs and income for local residents, expand economic activity in the region, lower the high costs of goods, reduce rural areas' high dependence on government spending by strengthening the private sector, and produce revenues for federal, state and local governments.

II. The Need for an Improved Transportation System

Many rural areas of the state lack even the rudiments of a transportation system, frustrating resource development, especially mining. Lack of transportation can keep a mineral deposit from being developed even when market conditions would otherwise allow, and the front-end expense of privately constructing a system for an individual project, sometimes years before full production is achieved, can make the project infeasible. In Alaska, where much of the state lies outside the jurisdiction of any local

or regional government, state assistance in the only alternative. Given the competition for limited state funds and the benefits which would be realized from responsible mineral development, a wider range of options for financing and operating regional transportation systems is critically needed.

Authorizing the creation of regional transportation authorities in unorganized areas of the state would allow greater flexibility in combining public and private funding and also provide rural residents with greater control over the future development of their region. The authority would be created by the region's voters, and operated by a locally-elected board with state representation. Using its revenue-bonding ability in conjunction with industry and state funds, it could develop the basics of a regional transportation network to encourage resource development. State funds would thus be targeted to public facilities of regional or statewide importance. An authority would not only provide a variety of options in transportation financing, but also in construction and operation. Such a mechanism would produce the greatest benefits to the region, the state and industry at the least social, environmental and financial cost to all involved.

III. Potential Benefits of Mineral Development: A Case Study of the Red Dog Deposit in Northwestern Alaska

The Red Dog Deposit. Owned by NANA Regional Corporation and leased to Cominco Alaska, the Red Dog deposit ranks among the best and largest known zinc/lead deposits in the world. Reserves are estimated at 85 million tons, running 17.1% zinc and 5.0% lead. It also contains 2.4 oz/ton silver and an undetermined amount of barite.

If it is decided to proceed with development, Red Dog will be an open pit mine from which ultimately 2 million tons of ore will be mined annually. Production is expected to start in 1987 and expand in 1993. After expansion, the mill will produce 700,000 tons of zinc and lead concentrate annually which will be transported by road or railroad to a port on the coast.

Cominco has agreed to a number of special measures designed to safeguard environmental and cultural values, particularly subsistence, and to ensure the region benefits from the mine's development. These measures include a local hire preference, an extensive training program, strict environmental controls and use of a rotating work force.

Potential Benefits of the Red Dog Deposit.† The NANA Region is characterized by historically high unemployment rates, low average annual per capita incomes, a small private sector and heavy dependence on government spending, leaving the region vulnerable to federal and state funding cutbacks. The most critical economic priority in the NANA Region is expanding private sector employment.

The Red Dog Project will create up to 430 new, permanent, year round jobs plus 30 seasonal jobs in the region and an additional ten in Anchorage. Hiring policies will give preference to 1) residents of the NANA region, 2) other residents of the northwest region, and 3) other Alaskans. Local hire is expected to range from 50-85% in the first five years; ultimately, it is planned that local hire will reach 100%.

The annual payroll will be approximately $13 million, most of which will be paid to NANA region residents and other Alaskans. The NANA Region will also see approximately $700,000 for air charters, up to $100,000 for supplies, repair services, etc. and up to $1 million for loading concentrates onto ships at the port. A portion of the $24 million allocated annually for operating supplies will flow into the Alaskan economy. In addition, Anchorage will benefit from annual expenditures of $1 million for an accounting and purchasing office, up to $1 million for repair supplies and part of the $1.3 million earmarked for commercial airlines. These expenditures will in turn stimulate the regional and state economies, causing additional jobs and income to be generated.

State, federal and local governments will benefit from additional tax revenues. In the tenth year of production, it is estimated that state taxes (corporate income and mineral license taxes) could amount to roughly $20-30 million. The federal government would receive revenues from both corporate and personal income taxes. Local taxes would be derived from local property and sales taxes.

Additional potential benefits may include reductions in the cost of importing and distributing goods, additional mineral exploration and development, preparation of the local work force for future development projects, reductions in seasonal fluctuations in employment and income and jobs which allow employees the needed flexibility for continued participation in local subsistence activities.

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† Note: All employment, expenditure and tax revenue estimates are based on projections for the tenth year and given in 1983 dollars.

TRANSPORTING ALASKA'S NATURAL RESOURCES —

A PROPOSAL TO CREATE

REGIONAL TRANSPORTATION AUTHORITIES

IN ALASKA

TRANSPORTING ALASKA'S NATURAL RESOURCES — A PROPOSAL TO CREATE REGIONAL TRANSPORTATION AUTHORITIES IN ALASKA

TRANSPORTING ALASKA'S NATURAL RESOURCES — A PROPOSAL TO CREATE REGIONAL TRANSPORTATION AUTHORITIES IN ALASKA

SUMMARY

Although relatively little-explored, Alaska contains many richly mineralized areas, and it is likely that mineral development will play an increasingly important role in the state's economy in the future.

Much of this mineral potential lies in rural areas of the state with little or no modern surface transportation system. This not only frustrates resource development, but contributes to the high cost of living and handicaps economic growth generally, including the expansion of job opportunities. The front-end costs of privately constructing a system, perhaps years before full production, can make the project infeasible.

There is no municipal government in much of rural Alaska, so state assistance is often the only alternative. A wider range of options for financing, constructing and operating transportation facilities in rural Alaska is critical if this tremendous resource potential is ever to be realized.

A regional transportation authority with revenue bonding ability would provide the greatest range of options to accomplish this. It would allow the most appropriate mix of public and private investment in each case, while at the same time allowing each region greater responsibility for regional economic development.

As this paper shows in its analysis of the Red Dog Project, the social and economic benefits of mineral development in rural Alaska are considerable: jobs and income, regional economic growth, and tax revenues to state, federal and local governments. But resource development is closely tied to transportation systems, and more flexible and creative approaches are necessary. The option of creating regional transportation authorities seems to best meet the transportation needs of resource development in rural Alaska.

I. ALASKA'S MINERAL POTENTIAL

The mining industry is showing great interest in Alaska as a relatively little-explored area with high mineral potential, and it is likely that mineral development will play an increasingly important role in the state's economy in the future. Many richly mineralized areas have been identified and active exploration efforts are continuing. As more of the state is thoroughly explored, there is a strong likelihood additional high quality deposits will be discovered.

Northwestern Alaska is a good example of a rural region which comprises a number of highly mineralized areas with future development potential. The DeLong Mountain District in particular, located in the western Brooks Range, contains a rich mineralized zone with significant occurrences of zinc, lead, silver, gold, barite, copper, chromite, nickel and other minerals. The Ambler District to the east contains occurrences of jade, copper, cobalt, gold, silver, barite and zinc.

This area has been undergoing exploration for a number of years, and the mining industry is currently showing great interest in its mineral potential. Industry and government efforts have turned up some promising deposits. Some, like the Red Dog zinc/lead deposit, are considered world class and can be counted among the major deposits of their type in the world. Exploratory work continues on a number of other deposits, including the nearby Lik and Su deposits, and it is likely that continuing exploration efforts will identify additional deposits which will be economic in the foreseeable future. The DeLong Mountain District has the advantage of being relatively close to tidewater; the Red Dog, Lik and Su deposits are within 55 miles of the coast.

The DeLong Mountain District is within the bounds of the NANA Region, a sparsely populated area of approximately 38,000 square miles encompassing ten villages and the regional center of Kotzebue, a city of about 2,500. The economy of the region is heavily dependent upon subsistence, but also depends upon an inflow of cash, largely from outside the region, and much of it a result of government spending. Therefore, there is great interest in strengthening and expanding private sector activities and increasing job opportunities within the region.

Resource development is, of course, Alaska's primary source of economic activity. The NANA Region already has small but important fishing and reindeer herding industries, but its mining industry remains largely undeveloped. A developing mining sector could provide jobs and income for local residents, lead to economic growth in the region, lower the costs of goods and services, reduce the region's high dependence on government spending and produce revenues for federal, state and local governments.

II. THE NEED FOR AN IMPROVED TRANSPORTATION SYSTEM

Many rural areas of the state lack even the rudiments of a modern transportation system. This is true in the NANA Region. The absence of transportation can frustrate resource development, make it difficult for residents to obtain goods and supplies at a reasonable price, and generally handicap economic growth, including the expansion of job opportunities.

Lack of transportation can keep a mineral deposit from being developed even when market conditions would otherwise allow development. Bringing a mine into production requires a large amount of capital even when transportation facilities exist. The additional high front-end costs of privately constructing a transportation system for an individual project, perhaps years before full production is achieved, can make the project infeasible. In many parts of the world, including Canada and the U.S., government has often assisted in developing basic transportation facilities where potential social and economic benefits warrant such involvement. In Alaska, where much of the state lies outside the jurisdiction of any local or regional government, state assistance is the only alternative.

Given the competition for limited state funds, the benefits which could be realized from responsible mineral development, and the lack of local or regional government in much of Alaska, additional options for financing, constructing and operating rural regional transportation systems are needed.

Creation of a regional transportation authority would allow the judicious use of both public and private financing and allow flexibility in all phases of developmen and operation of transportation systems in rural Alaska. An authority could be created by

the voters of a region in the unorganized borough. It would be a public entity outside the normal structure of state government operating according to legislated goals and purposes. It would be operated by a locally-elected board with state representation and would have the authority to issue tax-exempt revenue bonds to finance a transportation system within that region for the purpose of resource development.

A transportation authority would provide for an optimum mix between public and private financing and control for each project. Normally, state funding would still be used where a facility, such as a regional port, has a broad public purpose. However, the authority could work with industry to devise an optimum financing package for other facilities needed primarily for resource development. Ultimately, the user would pay for these facilities, since the authority would repay the bonds out of operating revenues. It would also provide a wide range of options with regard to construction, operation and maintenance: an authority in one region might construct and operate all or part of a system; in another region the system might be constructed and/or operated under lease to industry.

Allowing the creation of transportation authorities in rural Alaska would not only lead to the expansion of the state's transportation system and increased resource development, but would provide the flexibility needed to respond to the particular circumstances in each region and ensure that development was responsive to local needs and desires. It would allow the state to make a case-by-case judgment on the amount of assistance necessary and proper. It would provide a centralized regional entity which could plan and develop transportation facilities to promote orderly resource development in the region. An authority would also allow rural Alaskans the opportunity to assume greater responsibility for the region's development. The resource development made feasible by the construction of transportation facilities would in turn build up a tax base which could eventually allow municipal incorporation.

Thus it appears that allowing the creation of a regional transportation authority by local voters would take advantage of the relative strengths of both the public and private sectors, and would produce the most benefits to the particular region, the state and industry at the least social, environmental and financial costs to all involved.

III. POTENTIAL BENEFITS OF MINERAL DEVELOPMENT: A Case Study of the Red Dog Deposit in Northwestern Alaska

The Red Dog Deposit

The Red Dog deposit is located in northwestern Alaska away from existing transportation networks. Since prospects for its development are good, it is a useful case study of the potential benefits of mineral development.

Red Dog is a zinc, lead, silver and barite deposit located approximately 90 miles north of Kotzebue and 55 miles from the Chukchi Sea. It is owned by NANA Regional Corporation and leased to Cominco Alaska, a subsidiary of Cominco Ltd, one of the world's largest producers of zinc and lead. Red Dog ranks among the best and largest known zinc/lead deposits in the world. The reserves are estimated at 85 million tons of mineralization. Grade estimates are 17.1% zinc, 5.0% lead and 2.4 oz/ton silver (Red Dog's barite content is still undetermined). This compares favorably with other zinc/lead mines around the world, including many now in operation.

Red Dog will be an open pit mine developed in phases with production beginning in 1987 and expanding in 1993, when annual production will rise to 2 million tons of ore to produce 580,000 tons of zinc concentrate, 120,000 tons of lead concentrate, 50,000 tons of barite concentrate and 3.3 million ounces of contained silver. Because of the size of the orebody, the mine will operate over a long period - at least 50 years, with an extension if additional ore is found.

The infrastructure requirements for the mine include two major facilities -- the mill, or concentrator, near the mine site and a port on the coast -- plus a method of transport between the two. The alternatives which have been investigated include a road, railroad and slurry pipeline.

In developing the Red Dog deposit, Cominco has agreed to a number of special measures designed to protect environmental and cultural values in the region. Safeguarding subsistence is a top priority. Critical areas will be avoided in the siting of facilities. Strict air and water pollution controls will be instituted. A local advisory committee

has been formed to advise Cominco and NANA on matters relating to subsistence and, if considered necessary, overland traffic by rail or road may be halted during caribou migrations. Similarly, ocean shipping during whaling and sealing seasons may be temporarily suspended if it is deemed a problem.

Cominco will use a rotating workforce accommodated in hotel-type quarters rather than establishing a residential community at the mine. It is not anticipated that the region's population will increase due to the mine operation, since most workers will be local residents (see p. 8). The project will pay the transportation costs to and from the mine and villages within the region, as well as Kotzebue, Anchorage or Fairbanks. This will minimize the social impacts on the region and also minimize impacts on public services and facilities, precluding the need for new schools and health facilities, increased police and fire protection and other services. There will be a small infirmary at the mine site to provide medical care to mine employees.

Potential Benefits of Developing the Red Dog Deposit

A number of benefits can be expected from mineral development in Alaska. In the case of Red Dog, as many benefits as possible are being purposely targeted into the NANA Region.

Overview of the NANA Region Economy. Traditionally, and like most rural areas of Alaska, this region has had higher than statewide average unemployment rates, although it has been improving relative to statewide averages in the past several years, according to official figures. The Kobuk Census Division's (NANA Region) employment continues to lag behind that of the northern region as a whole (Barrow-North Slope, Nome and Kobuk). However, official figures do not necessarily reflect the actual number of people who would like to work if jobs were available, since they include only those persons actively looking for work. In rural Alaska, residents tend to know whether job opportunities exist and are unlikely to be actively looking for work if none exists. While no figures on actual unemployment rates in the NANA Region are available, it is certain they are substantially higher than the official figure of approximately 10% (1980-82 average). In a study in the Lower Yukon-Kuskokwim Region in 1981, it was found that,

while the official estimated unemployment rate for January 1981 was over 13%, the actual figure (still using the standard definition) was almost 25%. If the definition were broadened to include "discouraged" workers who were not actively job hunting but who wished to work, the unemployment rate rose to almost 50%.

In addition, the region's average annual per capita income of $7,225 is well below the state average of $12,635 (1980 dollars), although the cost of living is considerably higher.

In the NANA Region, one-half of the workers are employed by state and local government, compared to an average of one-quarter to one-fifth for all of Alaska. The federal government employs 13-20%, compared to 10-11% statewide. The service, retail, transportation, communications, utilities and construction sectors employ smaller percentages of the area's workers than statewide.

In addition to this concentration of employment opportunities, the regional economy is highly seasonal. Employment peaks during the construction and fishing season and as school starts and reaches a low after school closes in June. Employment is relatively concentrated in Kotzebue, which contains only 42% of the population but 64% of the jobs, so villagers must often come into Kotzebue to find work.

Perhaps even more important is the degree of regional dependence on the public sector as a source of cash in the area. Sixty percent of personal income is directly earned through the government sector (17.5% from federal sources, 42.5% from state and local sources in 1980). In addition, transfer payments (GI benefits, medicare, food stamps, unemployment benefits, etc.) amounted to $7.5 million, more than one-fifth of the total personal income of the region in 1980.

Earnings in the private sector are relatively small; it is estimated that in 1980 less than one-third of the total personal income was derived from that source, versus slightly over half statewide. As reported by the U.S. Department of Commerce, transportation and public utilities accounted for almost 15% of the income earned in the private sector, services 10%, retail trade 7% and construction 6%.

However, like other rural regions of the state, the full dependence of this region on the public sector is estimated to grow much higher when "hidden" subsidies are included. In

a recent study, Darbyshire and Associates found that nearly 90% of all income in the region is directly or indirectly a result of government spending. Such heavy dependence on public expenditures makes the region especially vulnerable to cutbacks in government programs and spending. Given the character of the NANA Region economy, expanding employment within the region in the private sector is critical to the long-term economic health of the region.

Corporate Benefits. Not only will Cominco and NANA Regional Corporation benefit from corporate profits and growth, but Natives and Native corporations throughout the state will benefit from Red Dog profits. Under a provision of the Alaska Native Claims Settlement Act, 70% of a regional corporation's net revenues derived from the development of subsurface resources is shared with all the regional corporations according to the proportion of total shareholders each represents. In turn, one-half of the 70% is distributed to village corporations and at-large shareholders. So benefits from any mineral development on native land in Alaska can have widespread effects going far beyond the corporations directly involved.

Direct Employment.† The Red Dog Project will provide up to 430 new, permanent jobs in the region. In addition, there will be ten people directly employed in Anchorage and 30 seasonal workers in Kotzebue and at the port.

The total annual payroll of the project in year ten is estimated at approximately $13 million. The job categories, number of people employed and rough estimates of salary ranges are listed below.

Job Category	Approx. Number to be Employed	Avg. Annual Salary (000's)*
Professional/Supervisory	50	NA
Technical/Clerical**	50	$22-25
Heavy Equipment Operator	70	27-30
Mill & Powerhouse Operators	40	30-33
Tradesmen***	90	30-33
Catering/Janitorial	40	18-20
Unskilled/Trainees	90	16-25

NA = not available
* = in 1983 dollars
** = includes Anchorage employees
*** = includes mechanics, welders, electricians, pipefitters, carpenters

† Note: All employment, expenditure and revenue estimates provided in this and following sections are based on projections for the tenth year of Red Dog operation and are in 1983 dollars.

Often when a major project is undertaken in Alaska, especially rural Alaska, workers come from outside to fill the newly created jobs. NANA and Cominco are working to ensure that jobs go to current Alaskans and local residents wherever possible. Cominco's hiring policy will give preference to 1) residents of the NANA region, 2) residents of northwest Alaska, and 3) other Alaskans. An extensive training program will qualify residents for Red Dog jobs. Over the first five years of operation, local resident hire (including categories 1 and 2 above) is expected to range from 50-85%. Most of the remainder are expected to be from Anchorage, Fairbanks or other Alaskan communities. The ultimate goal is 100% local hire. Employees will work on a rotating basis — two to three weeks on and two to three weeks off, allowing for continued subsistence activities.

The addition of over 400 permanent, year round, private sector jobs is significant in a region where unemployment is high and employment is highly seasonal, particularly when strong efforts are being made to train and hire local people. Assuming three-quarters of the employees are local residents, the total personal income added to the region could be more than $9.5 million annually.

Indirect Employment & Economic Development. Within the region, and especially in Kotzebue, there will be indirect or spinoff benefits from the project and from the infusion of cash into the region. Anchorage and Fairbanks will realize indirect benefits also, as will any community whose residents are employed by the mine. These benefits will come in the form of direct purchase of goods and services by Cominco and the increased purchases of goods and services by mine employees. These purchases will in turn stimulate the regional economy and cause additional jobs to be created.

Alaska and the NANA Region will see a good proportion of the benefits from Cominco's annual operating expenditures. Assuming 90% of the employees are Alaskans, as much as $11 million of Cominco's $13 million payroll could enter the regional and state economies through the purchase of goods and services (consumer goods, transportation, communication, banking, housing construction, etc.), although some will inevitably leak out of the state through purchases outside Alaska, federal income taxes, etc. A portion of the $24 million allocated for operating supplies will flow into the Alaskan economy. Of $3.5 million in repair supplies, perhaps $1 million would be spent in Anchorage and

a much smaller amount in Kotzebue. It is estimated Cominco's expenditures in Kotzebue, primarily for repair of mobile equipment, emergency supplies, purchase of miscellaneous small equipment (boats, outboards, snowmachines), etc. could amount to $100,000 annually, especially as the service sector expands over time due to regional economic growth.

An additional $7 million will be spent by Cominco in miscellaneous expenditures as follows: approximately $2 million for transporting personnel to and from the mine ($700,000 to local charter services, $1.3 million to commercial airlines serving Kotzebue, Fairbanks and Anchorage); $1 million for insurance; $1 million for the accounting and purchasing office in Anchorage; $1 million for loading the concentrate onto ships at the port (which may be contracted out to a local concern) and $1 million for backhauling supplies.

Federal, State & Local Tax Revenues. Significant tax revenues will accrue to all levels of government from the Red Dog Project. The federal treasury will receive revenues from federal corporate and personal income taxes, the state from the Alaska mining license tax and corporate income tax and local government from local sales taxes and local property taxes. The revenue figures given below are preliminary and should be taken as rough estimates only.

The state mining license tax contains a three and one-half year forgiveness clause for new operations, so no tax would be due until after that period. It is estimated the state would receive approximately $10-15 million in the tenth year of production. The Alaska corporate income tax is also calculated on net income. In the tenth year of production, it is estimated to be roughly $10-15 million.

Local sales taxes are levied by most of the villages in the NANA Region at a rate of 2-3%; the rate is 3% in Kotzebue and 2-5% in Fairbanks. Thus any purchases of goods or services by Cominco directly, by employees with their earnings or by the recirculation of those dollars within the region will net local governments some revenue.

Local property taxes would be levied only where a mine is located within the boundaries of a local municipal government. Local property tax rates vary from year to year and from municipality to municipality. An estimate for Red Dog is not currently available.

Regional Cost of Living. A more indirect benefit to the region of developing Red Dog would be the potential for reducing the costs of goods in the region. The construction of a regional port with the capability of handling larger quantities of goods more cheaply and of storing goods in bulk could directly reduce their costs. Fuel, for instance, could be imported in bulk for the region and the mine at the same time and stored at the port year-round. It could then be transported to a village at the most convenient time of year or when needed. From a regional port, goods could also be shipped directly to the villages, cutting down the current expense of lightering from large ships anchored far offshore into Kotzebue and then shipment to all the villages. In addition, there is the possibility that goods coming into the region could be backhauled on the concentrate carriers along with Cominco's major supplies.

Additional Benefits. Several other benefits to the region and state are likely to result from the proposed project. With a regional port, the beginnings of a transportation system in the region and an institutionalized mechanism through which to expand it as needed, other deposits may become feasible to develop. The existence of a successful "model" in the region may encourage further exploration and development.

In addition to providing new, private sector jobs, the project will help to balance the seasonal fluctuations in employment and income, while allowing employees the needed flexibility for continued participation in local subsistence activities.

Red Dog will operate for at least 50 years, which will maximize many of the benefits to the region and minimize some of the negative impacts, providing greater stability to the region's economy. In addition, Red Dog will prepare local residents, through training and work experience, for participation in other resource development projects which may occur in northwestern Alaska.

IV. CONCLUSIONS

There are substantial benefits to be realized from the development of Alaska's mineral resources. Many regions have good potential for mineral development, but lack the transportation system necessary for such development. The absence of basic transportation not only hinders resource development, but contributes to the high cost of goods and services in rural Alaska.

Currently, most rural economies in Alaska are heavily dependent on state and federal government spending for both jobs and income. This dependence is dangerous in the long run because government expenditures and programs can be cut suddenly and drastically.

This situation is of concern in the NANA Region, and underscores the need for a healthy and expanding private sector and, in particular, the need for increased private sector job opportunities. Development of the Red Dog deposit, for example, will provide a significant number of jobs and bring a new source of cash income into the region. NANA and Cominco are taking steps to ensure the benefits, including jobs, reach those people who already live in the region.

But development of a mining industry in rural Alaska must go hand-in-hand with development of regional transportation systems. This is no small task in Alaska, given the size of the state and the condition of the state's rural transportation network. Currently, large areas of the state lying within the unorganized borough must rely totally on the state for capital improvements, competing with all the other needs for limited public funds. Greater flexibility is needed in the options available for funding and operating the rural transportation facilities needed for resource development.

Creation of a regional transportation authority would allow an unorganized region to take advantage of a much wider range of options. Use of an authority would allow for greater public control, coordination of transportation system development within a region and responsiveness to local needs. It would allow the fiscal burden on the state and industry to be apportioned as appropriate in a particular situation. In short, it would allow the state to expand its limited statewide transportation system into regions with undeveloped resource potential in order to encourage regional economic development and diversification and to expand job opportunities in areas where the need is most critical.

DEPT. OF ENVIRONMENTAL CONSERVATION

OVERVIEW

Alaska State Legislature

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Senate

Committee on Resources

March 3, 1983

Memo

To: Bettye
From: P
Subject: Briefing by DEC, March 4, Beltz Rm. 3:00pm

We have asked Commissioner Neve to brief the Committee on his on-going programs, his priorities, anticipated actions this year. However, we have also specifically asked to him address the following issues of concern to us: 1) water quality standards, particularly turbidity; 2) stream classification and reclassification procedures; 3) auto emissions control plans (carbon monoxide); 4) hazardous waste regulations (drilling muds); and 5) wetlands permitting.

Although we asked other Committee members for input on what they would like to see specifically covered, we have gotten no responses.

Although this is not a hearing in the sense of having other witnesses testify on particular DEC programs and problems, I think it is appropriate to ask very pointed (grilling?) questions on the topics we have alerted them to. The briefing can be used to set the groundwork to pursue any of the topics raised at a future hearing also. For example, this in no way precludes us from having another full-fledged hearing to call in other folks to talk about hazardous waste regulations or stream reclassifications.

I think we do need to acknowledge and publicly thank Dick for his initial efforts to attack water standard and stream classification problems for placer mining at our Fairbanks meeting on March 2; and recognize that some actions and proposals should be coming out of that process in the near future.

WATER QUALITY STANDARDS

Background.

The Clean Water Act of 1972 set in motion a whole variety of federal and state legislative and regulatory actions. Among many things, the Act required the states to adopt water quality standards for receiving waters subject to EPA approval. Adoption of these standards were also necessary for receipt of a variety of pollution abatement and planning monies. No specific standards were legislated in the 1972 Act or later amendments.

In the early 1970's the State passed several brief laws authorizing the DEC to establish water quality standards (AS 46.03.070). By 1979 the Department had formulated and adopted regulations containing the various standards for different classes of waters which were approved by the EPA. These standards were largely based on accumulated national research and the compilation of standards used by other states and accepted by the EPA known generally as the "Red Book". During the 1970's the EPA was very conservative in its review and approval of various pollution standards and there was relatively little leeway afforded states in their standards unless deviation from national standards could be justified on the basis of good research and documentation.

Since the original state standards were approved, no changes have apparently been made. However, several things have changed on the national level, notably the huge reduction of federal EPA grant monies coming the states. We currently are receiving very little assistance. Also, the change of Administration has resulted in a marked reduction in the "aggressiveness" of pollution abatement efforts and the conservative interpretation of clean water standards and requirements.

Questions.

1) Currently the standards governing placer mining operations for turbidity are largely not being met despite use of settling ponds and even recycling efforts. The standards for turbidity appear unreasonably restrictive and based on limited and contradictory research.
Are changes in the current turbidity standards warranted?
What plans does the Department have for changing these or other standards?

2) What research is needed or proposed by the Department with respect to various standards and water quality effects on various water uses?

3) One approach to turbidity problems is for improved technologies in the recovery process. What research or actions is the Department contemplating or proposing to improve use of alternative recovery methods such as recycling?

4) Many miners are currently being asked to report water quality conditions to the Department. Knowing that most operations are out of compliance with the standards, is this information going to be used to possibly prosecute miners despite their efforts to cooperate with the Department?

5) Another approach that has been discussed to helping solve turbidity problems through technological improvements in recovery techniques is through state loan assistance. What are the Department's views on this?

STREAM RECLASSIFICATION

Background. The 1972 or 1977 Clean Water Act does not speak specifically to stream classifications. However, the Legislature enacted AS 46.03.080 in 1971 which briefly authorized the DEC to "establish standards of quality and purity or group the designated waters of the state into classes as to minimum quality and purity, or both. The Department shall classify waters in accordance with considerations of best usage in the interest of the public. The Department may alter and modify classifications after hearing."

As part of the States water quality standards a classification system was formulated and promulgated in regulations in 1979 (18 AAC 70). This system was approved by the EPA. The system is based on uses of waters providing for different standards of water quality for different classes of waters including: (A) Water supply (i) drinking, (ii) agriculture, (iii) aquaculture (iv) industrial; (B) Water recreation (i) contact recreation, (ii) secondary recreation; (C) Growth and propagation of fish. All waters of the state were initially classified for all uses with the most restrictive use standards applying. Only the Chena River has been subsequently reclassified for more specific uses and standards.

Reclassification procedures are very specifically spelled out in the state's regulations (18 AAC 70.055). The burden of proof is on a petitioner to show that certain protected uses of a waterway for which restrictive standards may apply are not being used or are unnecessary and that less restrictive (or more restrictive) standards are warranted and desireable. The process involves formalized public hearings and administrative findings and is estimated to take approximately 170 days. Certain waters are excluded for reclassification consideration including wild and scenic rivers such as Birch Creek or the Fortymile River. The DEC is currently processing requests to reclassify 19 streams in the Tolovana/Livengood Mining District and a stretch of the Hammond River near Wiseman.

The mining community generally favors reclassifying streams from drinking water classification with standards of background plus 5 NTUs for turbidity to industrial having a standard that no detrimental effects on established treatment levels would occur with no specific NTU level.

Questions.

1) How many streams have been reclassified since the regs were adopted?

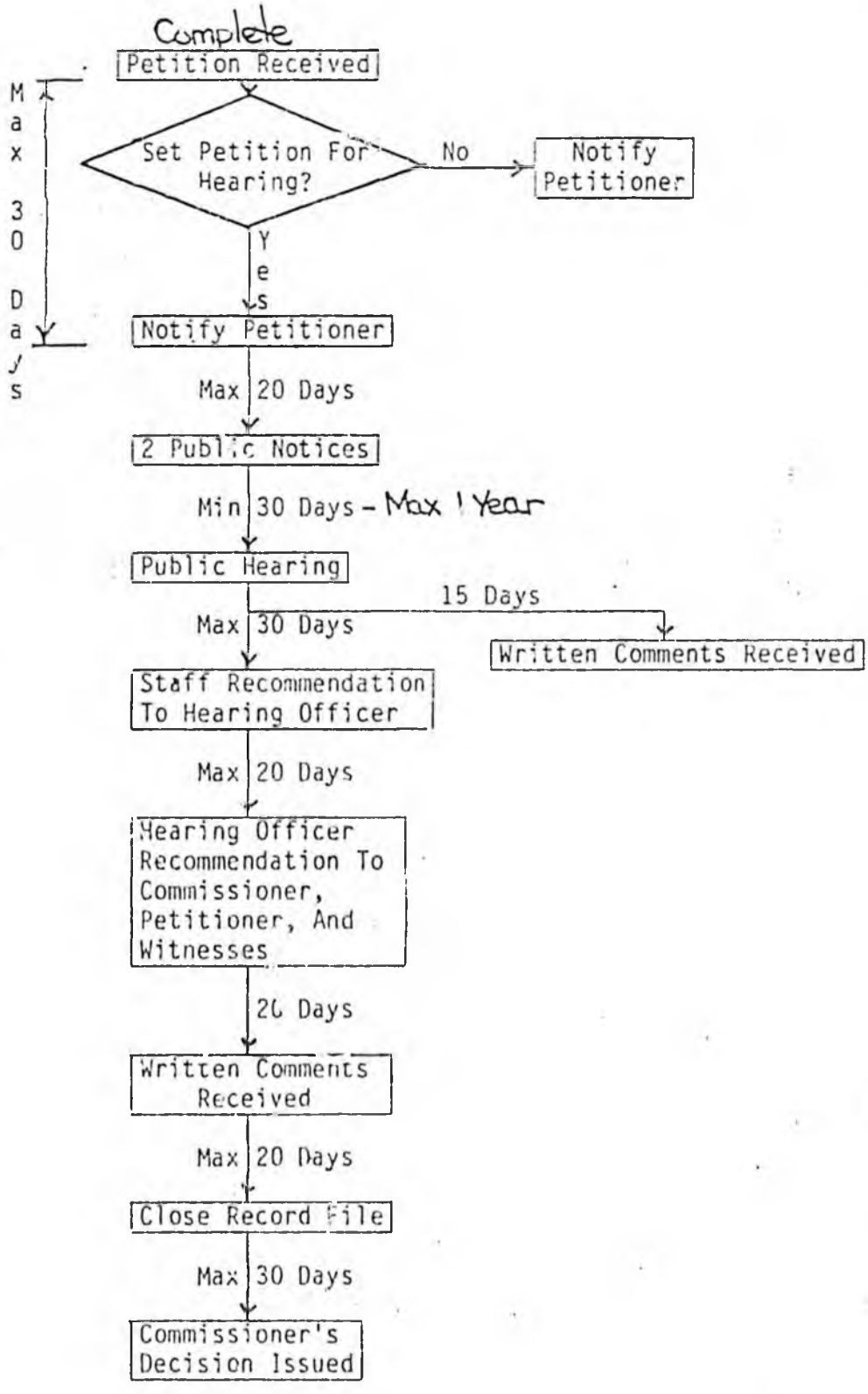
2) Are the current procedures for stream reclassification an impediment to realistic reclassifications? What is the DEC doing to streamline this procedure? When can we expect regulation changes?

3) If a stream on which placer mining is taking place is also used for recreation, what are the realistic chances of reclassifying such a stream for "industrial" uses under the current regulations?

4) Why do the regulations automatically prevent reclassification of wild and scenic rivers such as Birch Creek or the Fortymile River?

5) Will stream reclassification to "industrial" solve the problems of turbidity associated with placer mining in areas like Livengood?

Reclassification Flow Chart



March 3, 1983

AUTO EMISSIONS

Background.

Alaska is currently in compliance with State and Federal Air Quality Standards for all pollutants except carbon monoxide. Since the early 1970's CO levels in Anchorage and Fairbanks have exceeded health standards. Motor vehicles generate 90-95% of the carbon-monoxide in these communities.

Standards must be met by December 31, 1987 or the Environmental Protection Agency (EPA) could impose sanctions, possibly cutting back funds or prohibiting construction of new carbonmonoxide sources (Ex. refinery, power plant). Anchorage needs a 25% reduction in carbonmonoxide to meet the standard, Fairbanks a 19% reduction.

The municipality of Anchorage and the Fairbanks North Star Borough have established local air pollution control agencies that have worked closely with the Department (DEC) to achieve the reductions (car pooling, mass transit, traffic flow improvements, voluntary inspection/maintenance). Both cities have held local hearings and municipal meetings to present the issues for public comment. Neither city has been able to demonstrate attainment of the standard without implementing an inspection/maintenance program.

For Anchorage and Fairbanks, an I/M program would be mandatory and require that all vehicles in the nonattainment area meet standards. Vehicle maintenance would be required if vehicles did not meet the standards. The option used most widely in other states is having the local or state government manage the program using a private contractor who operates the inspection facilities. Cost to the public is expected to be $12-$18 per inspection. This fee covers the cost of implementing the program. (Cars 13-15 years and older will be exempt from the program.) Testing will be done annually, before registration.

The State has publicly stated that the cities should be responsible for operating the program.

Both cities are working on their final plan; this is supposed to be their locally developed implementation plan and is due to EPA by July 1, 1983.

DEC did conduct a survey in both Anchorage and Fairbanks:

FAVOR ACTION TO REDUCE AIR POLLUTION:
Anchorage 86.4% (oppose 8.2) Fairbanks 79.1% (oppose 14.8)

FAVOR IMPLEMENTATION OF AN INSPECTION/MAINTENANCE PROGRAM:
Anchorage 66.8% (oppose 23.6) Fairbanks 54.4% (oppose 37.7)

FAVOR ANNUAL TESTING/FEE/REQUIRED REPAIR:
Anchorage 61.1% (oppose 34) Fairbanks 46.7% (oppose 45.4)

AUTO EMISSIONS, CONT.

Questions.

1) What is the DEC's position on methods of meeting the carbonmonoxide standard?

2) What should be the role of State vis a vis the municipalities?

3) What legislative actions are needed this session or in the near future?

4) Have adequate funds been budgeted for an inspection/maintenance program?

5) Is an I/M program going to be effective in meeting CO standards by 1987? Has such a program been effective in other cities?

6) What happens if we fail to comply with the CO standards?

7) What is the annual cost to the public and/or to vehicle owners expected to be for an I/M program?

RELATED:

8) What are DEC's intentions regarding the woodsmoke problem in the Mendenhall Valley here in Juneau?

MEMORANDUM

TO: Bettye

FROM: Jim

RE: Hazardous Waste Regulations

DATE: March 3, 1983

BASIC ISSUE: Whether or not the Department of Environmental Conservation's regulations on hazardous waste are in accord with the statutes and intent of the Legislature.

BACKGROUND: In 1976, the Resource Conservation and Recovery Act (RCRA) was passed by the United States Congress. It places responsibility for controlling hazardous wastes on the Environmental Protection Agency. Individual states may take over this responsibility if they establish an approved hazardous waste program.

In order for the state to administer this program, the state must establish a hazardous waste program that equals or exceeds requirements established by EPA.

The main purpose of the 1980 legislation passed by the Alaska State Legislature was to allow the State of Alaska to qualify for interim authorization to regulate hazardous wastes.

A specific amendment was proposed and accepted by the Legislature which stated that the State's program shall be consistent with and substantially equivalent to the Federal Conservation and Recovery Act of 1976.

This language was inserted for two reasons: (1) to insure that the State's program would qualify for interim authorization from EPA and (2) to make sure the Department of Environmental Conservation did not go beyond the intent of the federal law.

Federal regulations take the approach of listing various substances. The State has taken the approach of controlling substances by their degree of toxicity, persistence and cancer causing potential. The department's rational for this approach was the mere listing of substances did not apply to the Alaskan situation.

In May, 1979, the U.S. Senate's Committee on Environment and Public Works issued a report to accompany legislation amending the Resource Conservation and Recovery Act. The committee report clearly stated that an "extensive regulatory program proposed by the Agency (EPA) could have a significant

economic impact on domestic oil and gas exploration and production activities. Therefore, regulations on these materials should not be promulgated until further information is developed to determine whether a sufficient degree of hazard exists to warrant additional regulations and whether existing State and Federal programs adequately control such hazards."

By trying to include drilling muds and fluids under the scope of the DEC regulations, they are violating the intent of the legislature when they stated that the regulations should be "consistent with and substantially equivalent to the Federal Conservation and Recovery Act of 1976."

Questions:

1. How do you interpret the language in the statute, "the state's program shall be consistent with and substantially equivalent to the Federal Conservation and Recovery Act of 1976?"

2. Are you familiar with the amendments to the Federal Conservation and Recovery Act done by the Senate Environment and Public Works Committee? Will these amendments affect your efforts in writing state regulations on hazardous waste?

3. Has your staff investigated the legislative intent of the Hazardous Waste statutes as enacted in 1981?

4. Would additional legislation clarifying the intent of the legislature be helpful to the Department?

5. What is the rational of the Department in possibly including drilling muds and fluids when the federal law explicitly excludes them until further information is gathered on their properties?

March 3, 1983

WETLANDS PERMITTING

Background.

Section 404 of the Clean Water Act of 1977 regulates dredge and fill activities in navigable waters of the U.S. Through court decisions, this section was made applicable in 1979 to "wetlands". The definition of "wetlands" remains unclear and controversial but could include up to 2/3 of Alaska, including tundra areas on most of the North Slope. This means that any development on these lands (including private property) is subject to regulation and permitting by the Army Corps of Engineers.

In an attempt to reduce the scope of Corps jurisdiction and to expedite the permitting process, in July 1982 the Corps published interim regulations that established 25 Nationwide 404 Permits for various categories of activity, including: 1) remote wetlands not adjacent to stream courses or tidal-influenced areas; and 2) non-tidal rivers, streams and wetlands in headwater areas. DEC has interpreted these permits to mean that individual Army Corps permits would not be required on the North Slope if certain stipulations are met.

DEC is not supportive of the Nationwide 404 Permits, and in fact denied their certification. However, the Army Corps has claimed that DEC did not respond in a timely fashion so the Corps is ignoring the denial.

At this point, the Nationwide Permit regulations are in effect. New regulations are to be issued in draft form this spring, which would involve a 120-day comment period. There is interest in redefining wetlands to exclude arctic tundra. In addition, the North Slope Borough, the National Wildlife Federation and several other organizations have filed suit against the Corps over the Nationwide Permit procedure.

Questions.

1) What is the position of DEC on the Nationwide 404 Permits?

2) What has DEC been doing to help expedite the 404 permitting process?

3) What input or actions has DEC taken to help define "wetlands" to reduce the potential coverage of the permit requirement in Alaska?

FACT SHEET

AIR QUALITY PLANS, ANCHORAGE - FAIRBANKS

- Carbon Monoxide (CO) concentrations in both cities at times exceed federal health standards during the winter. Both cities have been declared nonattainment areas for carbon monoxide.

- Both cities received extensions to meet the health standards. Their deadline for compliance has been extended to December 31, 1987, by EPA. This deadline was fixed by Congress in the Clean Air Act, Part D, Section 172(a)(2).

- Anchorage needs a 25.3% reduction in CO to meet the 1987 deadline; Fairbanks needs 18.7%. The figures may change, probably increase, as design criteria and emission factors are refined this winter.

- Both cities have undertaken local planning to identify local solutions to their individual problems. Their local transportation control strategies have included methods to achieve the reductions in CO needed, such as car pooling, mass transit, traffic flow improvements, and inspection/maintenance.

- The cities have both implemented some of these local plans, such as mass transit and traffic improvements.

- Both cities have held local hearings and municipal meetings to present the issues for public comment.

- Neither city has been able to demonstrate attainment of the CO health standard without implementing an I/M program, even if all their other reasonably available methods were implemented.

- Both cities have been working on their local plans for several years. The last submission to EPA was July 1982.

- Both cities are working on their final plan; this is supposed to be their locally developed implementation plan and is due to EPA by July 1, 1983.

Transportation Control Strategies

The Clean Air Act contains a list of nineteen strategies which nonattainment areas are required to consider for inclusion in their air quality attainment plan. These strategies, along with some additional locally-evolved control measures, were examined for their applicability to the Fairbanks problem. After initial rejection of the grossly unsuitable strategies it was decided to perform an in-depth analysis on the following strategies.

1. Transportation system management plan
2. Transit plan
3. Parking management plan
4. Electric preheater usage at warmer temperatures
5. Automatic starting devices
6. Carpooling program
7. Inspection and maintenance (I/M) program
8. Low temperature automotive emissions standard
9. Idling restrictions
10. Gasohol and other alternative fuels
11. Restricted delivery hours
12. "Do Nothing"

The following strategies were initially rejected.

1. Bus preemptions of traffic signals
2. Traffic flow changes during certain times of day
3. Light rail transit
4. Fringe parking (park and ride)
5. Heavy-duty vehicle restrictions
6. Selective vehicle entry
7. Vapor recovery
8. Bicycle lanes and storage facilities

The urban population of the Fairbanks area is less than 50,000 people. We are dealing with a small city that has a big city problem; i.e. high ambient carbon monoxide concentrations during the winter months. Therefore, some of the big city strategies which were included in the list of possible control strategies just are not practical in Fairbanks and would have very small air quality benefits. Strategies rejected for these reasons included the bus preemption of traffic signals, the traffic flow changes during the day, light rail transit and fringe parking (park and ride). In addition, both the light rail transit and the park and ride strategies would be extremely costly to implement.

Since most of the carbon monoxide problem in Fairbanks is due to cold-start automobile emissions (they account for more than sixty percent of the wintertime CO emissions) strategies which only reduce the warm idle emissions would have very small air quality benefits. The fringe parking strategy would also fall in this category.

Heavy-duty vehicle restrictions were rejected since the truck routes which are presently being used in the Fairbanks area plus the restricted delivery times strategy which will be considered will achieve the same effect as the heave-duty vehicle restrictions would have. Selective vehicle entry will be considered as a component of a vehicle-free zone strategy.

Vapor recovery strategies pertain only to areas with a hydrocarbon pollution problem. Therefore this strategy was rejected for the Fairbanks carbon monoxide attainment plan. Additionally bicycle lanes and storage facilities were rejected as a strategy because the use of bicycles is not feasible during the period of the year when Fairbanks experiences violations of the carbon monoxide standard, i.e. in the wintertime.

Upon completion of the analysis of the individual control measures five strategy packages were developed. These packages contain the following individual control measures, respectively.

Package 1

Transit
Parking Management
Electric Preheaters
Carpools
I/M
Idling Restrictions
Restricted Delivery Hc

Package 2

Transit
Parking Management
Carpools
I/M
Idling Restrictions
Gasohol
Restricted Delivery Hours

Package 3

Transit
Parking Management
Electric Preheaters
Carpools
I/M
Idling Restrictions
Gasohol
Restricted Delivery Hours

Package 4

Electric Preheaters
Gasohol

Package 5

Transit
Parking Management
Electric Preheaters
Gasohol

Although these eight strategies have been individually excluded from the plan some of them may be reconsidered in the in-depth analysis as portions of the various alternative packages which will be developed. The purpose of this initial exclusion was to focus our resources on the strategies that would give the greatest benefits.

The remaining twelve strategies were evaluated in terms of their cost and air quality impacts. Appendix III-7E contains the individual control measures analyses. Table 7 contains emission reduction and costs figures developed for the various strategies.

TABLE 7 : EMISSION REDUCTIONS AND COSTS OF INDIVIDUAL STRATEGIES

STRATEGY	AREAWIDE EMISSIONS[1] (TONS)	EMISSIONS REDUCTION[1] TONS	EMISSIONS REDUCTION[1] % OF TOTAL	ANNUAL COST ($)	COST/TON
TRANSPORTATION SYSTEM MANAGEMENT	5503	NONE	-	NA	—
TRANSIT	5503	8.8	0.16	496,400	56,409
PARKING MANAGEMENT	5503	1.0	0.02	115,256	115,256
ELECTRIC PREHEATERS	5503	283.7	5.16	469,188	1,654
AUTOMATIC STARTERS	5503	187.1	3.40	1,628,430	8,704
CARPOOLING	5503	9.6	0.17	52,300	5,448
I/M PROGRAM					
CENTRALIZED	5503	308.0[2] 1,749.0[3]	5.60 31.78	535,166	1,738 306
DE-CENTRALIZED, YEAR-ROUND	5503	308.0[2] 1,749.0[3]	5.60 31.78	771,500	2,505 441
DE-CENTRALIZED SEASONAL	5503	308.0[2] 1,749.0[3]	5.60 31.78	732,544	2,378 419
LOW TEMPERATURE STANDARD	5503	134-2,075[4]	2.4-37.7	NA	—
IDLING RESTRICTIONS	5503	16.2	0.29	13,890	857
GASOHOL	5503	834[5] 851[6]	15.16 15.46	3,130,153	3,753 3,678
RESTRICTED DELIVERY HOURS	5503	0.23	0.004	NA	—

NA = NOT AVAILABLE

1 For typical winter month since that is when the problem exists

2 Assumes no cold-start emission reduction effectiveness

3 Assumes 35% cold-start emission reduction effectiveness

4 Phased-in impact; 134 ton reduction in 1987 growing to 2,075 ton reduction in 1996

5 Assumes gasohol replacement of unleaded gasoline

6 Assume gasohol replacement of all gasoline

These packages were then analyzed for their overall impact in the areas of cos , transportation, energy usage, air quality, institutional, and socio-economic. These analyses are contained in Appendix III-7F.

Additionally, if data from the State of Alaska's METFac research program testing the effectiveness of an I/M program on cold-start emissions shows that such a program will result in a reduction greater than the target value of 18.9 percent, a package consisting solely of an I/M program would be another option.

Therefore, the selected package consists solely of a mandatory I/M program. Once the effectiveness of such a program has been established, a specific I/M program will be developed and implemented, if found to attain the necessary 18.9 percent reduction.

FAIRBANKS

Citizen Participation Program.

The Clean Air Act Amendments of 1977 require that there be adequate public participation during all stages of plan development. Accordingly, the Fairbanks North Star Borough has sponsored a series of public meetings and hearings in order to keep the public informed about the status of this planning process and to receive appropriate public comment. A listing of the meetings which have been held is shown below.

Wednesday, February 8, 1978; 7:30 PM

This was an initial organizational and informational meeting designed to brief the local elected officials on the Clean Air Act Amendments of 1977 and their impact on the Fairbanks area. Elected officials from the borough and the cities of Fairbanks and North Pole attended as did members of the public and the press.

Tuesday, July 25, 1978; 10:00AM

A small workshop was held for approximately twenty local government officials and staff members. They were briefed by US EPA and US DOT officials on the Clean Air Act Amendments and their implications to Fairbanks.

Tuesday, September 19, 1978; 7:30 PM

Approximately sixty people attended this workshop which was jointly sponsored by the Fairbanks Environmental Center and the Borough. This meeting had a twofold purpose; to inform the public about the entire air quality planning process and to receive any comments that they might have on items to be included in that process. The major concerns voiced consisted of the following:

1. Scenarios should be developed containing various strategies and the public allowed to comment on them.

2. These scenarios should be analyzed for their economic and social impacts as well as their air quality impacts.

3. The "do nothing" alternative should be considered.

Wednesday, January 17, 1979; 7:00PM

About twenty persons attended this meeting. Main items of discussion were the entire attainment planning process and the preliminary results of the 1977 emission inventory. Public comment consisted only of questions regarding the planning process.

Wednesday, February 7, 1979; 12:00PM

This meeting was held to present the MPO with the first draft of the air quality plan. Four members of that group attended. No comments were received at this time.

Thursday, March 1, 1979; 8:00PM

This was the first of a series of three public hearings on the draft plan (see Appendices E-8 and E-9). This hearing was to be held before the MPO. No members of the public attended.

Wednesday, March 14, 1979; 8:00PM

This public hearing was held before the Borough's Pollution Control Commission. Four members of the MPO also attended. Approximately thirty people came to the meeting and a number gave public testimony on the draft plan. Comments ranged from "do nothing" to the view that the fourteen strategies proposed for intensive evaluation weren't strong enough. Most speakers agreed that Fairbanks had an air pollution problem and that something should be done about it. This meeting resulted in a Pollution Control Commission workshop at 12:00PM on March 15 at which time the Commission voted to send a letter to the Borough Assembly in support of the plan.

Thursday, March 22, 1979; 8:00PM

This was a regular Assembly meeting at which a public hearing was held to receive testimony on the Air Quality Plan. A copy of the pertinent minutes of that meeting is contained in Appendix III-7D. No verbal testimony was received. In addition to the letter from the Pollution Control Commission two other letters were received which contained comments on the plan. One letter recommended various strategies to reduce air pollution in the Fairbanks area. The other letter writer felt that as part of an overall air quality plan the Borough should initiate a monitoring program for trace pollutants and legislate maximum allowable tolerances for those pollutants. Neither letter contained any negative comments about our carbon monoxide attainment plan.

Wednesday, June 2, 1982; 2:00PM

This meeting was held to present the FMATS Policy Committee with Volume II of the Fairbanks Air Quality Attainment plan. Four members of that group attended.

Wednesday, June 9, 1982; 8:00PM

This public hearing was held by Borough staff. Approximately thirty people attended the hearing. A brief presentation was made by the staff on the attainment plan and the staff's technical recommendation. the meeting was then opened up for questions and comments from the public.

A summary of the public comments is presented below.

1. No matter what strategies are eventually chosen, the implementation of those measures should be accompanied by a substantial public education program which stresses the benefits, in addition to carbon monoxide reductions, of the various strategies.

2. The preheater strategy is viewed as very wasteful of energy. Additionally, it was felt that a better strategy would be to require the installation of electrical receptacles and the provision of electricity (possibly subsidized by local government) but make the plugging-in a voluntary program which would be promoted by a substantial public education program.

3. It is felt that voluntary programs or mandatory programs which utilize incentives would be more palatable to the public.

4. A centralized inspection and maintenance (I/M) program is greatly preferred over a program where the individual garages are licensed to perform inspections. There is concern that the I/M program might be coupled to a safety inspection program.

5. There are many unknowns involved in the gasohol strategy which need to be investigated prior to adopting that measure.

6. A representative from the Environmental Protection Agency stated that even if the "do nothing" strategy is chosen the Borough still needs to proceed with the attainment planning process and submit a plan to the State of Alaska to be included in the State Implementation Plan submittal to EPA.

Tuesday, June 29, 1982; 9:00AM

This was an FMATS Policy Committee meeting. The committee adopted a resolution selecting an I/M program as the primary attainment strategy, contingent on the ability of such a program to achieve greater than an 18.9 percent reduction in 1987 emissions.

Appendix III-7D contains copies of all public comment received at these meetings along with copies of newspaper advertisements and articles concerning the attainment planning process. A copy of the Policy committee resolution is also included.

Speakers Bureau

A speakers bureau was also arranged to provide talks on the air quality situation and the planning process. Over fifty talks involving air quality issues are given per year to various school classes around the Fairbanks area. These classes range from elementary school on up through the college level. In addition to these talks other presentations on the air quality planning process were given to various civic groups and clubs. Some of these are listed below:

1. Fairbanks Rotary Club
2. Fairbanks Chamber of Commerce's Transportation Committee
3. Fairbanks Chamber of Commerce Board of Directors - 10/9/78
4. Borealis Kiwanis Club - 10/12/78
5. KJNP Radio talk show - 10/7/78
6. KFRU Radio talk show (The Town Crier) - 10/16/78
7. KFAR Television talk show (Tonight/Tonight) 10/10/78
8. Farthest North Press Club - 6/4/82
9. KFAR Problem Corner talk show - 6/9/82

Questionnaire

During October, 1978 a voluntary inspection and maintenance program was conducted by the Fairbanks North Star Borough. As part of this program participants were asked to complete a questionnaire. Questions asked included:

1. Over the next ten years, do you think the the amount of ice fog and other forms of air pollution will:
   a. stay about the same
   b. increase slowly
   c. increase rapidly
   d. increase very rapidly

2. Do you favor a state or local auto emission inspection program?

3. Do you think there is a need for a program like this to reduce CO levels in Fairbanks?

4. Other comments?

This questionnaire, as well as the entire voluntary I/M program, was really a communicative process between the public and the borough air quality staff. Such communication was essential in the preparation of this plan.

Summary of Public Comment

Public Comment received during the preparation of Volume I of the Attainment Plan can be categorized into two major areas; on analytical methodologies for strategy evaluations and on selection of strategies. There was an overwhelming demand to know the total impacts of the strategies; including economic, social and energy impacts as well as air quality effects. Many persons wanted the funding sources for the various strategies to be clearly identified. Additionally the majority felt that specific strategy scenarios should be developed to be evaluated and submitted to the public for their reactions.

The comment on the strategies covered a wide range. The "do nothing" alternative received a large amount of support to at least be evaluated and compared o the other strategies. Some people felt that the list of Priority I strategies didn't contain many strategies of substance; that they were too watered down. Another comment frequently heard from people with a wide diversification of political views, was that this plan shouldn't be just another paper exercise to satisfy another federal regulation. It was felt that if such were the case then we shouldn't even go through the process.
Comments received after preparation of Volume 2 were generally favorable of the I/M program strategy. However, it has been apparent throughout this planning process that there has not been a large amount of public interest in the plan. The next step of this process, the adoption of implementing ordinances for the specific strategies, may encourage greater citizen input.

Chapter 5

A Strategy for the Control of Carbon Monoxide

In accordance with the Clean Air Act, six of the nineteen measures identified in the Act were eliminated in the 1979 Air Quality Plan because they involved pollutants for which Anchorage was in attainment of the National Ambient Air Quality Standards. The remaining thirteen measures were evaluated in terms of their socio-economic, institutional, and environmental impacts. Volume 2 contains the basic reports for each individual strategy.

Upon completion of Volume 2, the Technical Advisory Committee grouped the individual strategies into nine separate packages. These packages contained a mixture of the individual strategies, with four of the nine packages being selected for their socio-economic, institutional, political, and environmental impacts to undergo a final air quality evaluation.

As a result of this evaluation, package 3 was selected by the Citizen Advisory Groups, the Technical Advisory Committee, and the Policy Committee. This package centers around transit and traffic improvements, a carpool/variable work hour program, and the implementation of a mandatory fleet/government Inspection and Maintenance (I/M) program with a voluntary I/M program for private vehicles.

Evaluation conducted since the initial analysis of the package indicates the reduction from two of the measures contained in this package would not reach the earlier estimates (Volume 2 Appendix H). The drop in reduction for carpool and transit is due to the availability of new data that would more accurately reflect the reductions for the proposed programs. The shortfall ranges from 9.4 to 14.1 percent.

Therefore, package 4 has been selected to replace package 3. This package requires a mandatory I/M program to be implemented in place of the basic I/M program in package 3. The estimated emission reduction from this package is between 16.7 and 31.4 percent, taking into account the revised estimates for carpool and transit. The most probable level is believed to be the median or 24.1 percent emission reduction.

SECTION 12

EVALUATION OF FOUR STRATEGY PACKAGES

The mobile control strategies previously analyzed do not operate in a vacuum-other control strategies operating simultaneously will impact their emission reduction potentials. In an atmosphere of many control strategies, the final reductions possible may bear little semblence to the individually identified potentials.

In an attempt to make some assessment of these relationships, four strategy packages have been selected.

- Package 1--Gasohol--All Fuels
  Carpool--Target of 1.35 persons/vehicle
  Transit--As programmed
  Traffic Improvements--As programmed

- Package 2--I/M--All vehicles
  Carpool--Target of 1.35 persons/vehicle
  Transit--As programmed
  Traffic Improvements--As programmed

- Package 3--Variable work hours
  Carpool--Target of 1.35 persons/vehicle
  Transit--As programmed
  Traffic Improvements--As programmed

- Package 4--I/M--All vehicles
  Variable work hours
  Carpool--Target of 1.35 persons/vehicle
  Transit--As programmed
  Traffic Improvements--As programmed

These include most of those strategies identified with the largest reduction potentials, and can be divided generally into two groups--those that reduce emission rates, directly (gasohol, I/M) or indirectly, through speed increases (traffic improvements). These two groups interact somewhat independently (carpool impacting on transit and variable work hours only for example), with the final emissions reduction the product of both. Unfortunately, the interactions between the individual strategies are not known with any precision.

The degree to which carpools draw riders from transit, and the impact of gasohol on emissions rates at each of several different speeds are examples of uncertainties to which this analysis is subjected. As presented, this analysis relies extensively on interactions developed, sometimes implicitly, in the individual strategies. For instance, a carpool program will reduce total auto trips, which will lead to decreased removal of auto trips by transit, even with the same transit ridership (since they rode in fewer cars). As a result, the interaction analyzed here will be largely the result of the effects of combination. Synergystic effects on the other hand cannot be accounted for quantitatively in nearly as much detail, but where these are expected, the magnitude and direction of the effects are discussed in a more qualitative sense.

The packages themselves can also be conveniently divided into two groups, being oriented either towards daily/annual or peak reductions. The key here is the variable work hour strategy, which impacts only peak emissions. Package 4 differs from Package 2 only in its inclusion of variable work hours. Similarly, Package 3 adds this strategy to Package 1, while removing gasohol. Daily/annual emissions will be identical for Packages 2 and 4 as a result, and differ on 1 and 3 only by the gasohol emissions. Peak emissions, on the other hand, should be different for all four strategies.

COMPARISON OF PACKAGES

The total estimated reduction in daily emissions for each strategy package is shown in Table 12-7.

From the table it is seen that Package 1 is the most effective, Package 3 is the least effective, and Packages 2 and 4 are equal. The greatest uncertainty in this effectiveness assessment, of course, is the actual level of VMT reduction that can be achieved by the transit and carpooling programs. Given that the objectives of these two strategies may not be attainable, it is of interest to consider how the other strategies would be affected. First, the I/M program and the gasohol strategy would not be directly affected. The emissions reductions associated with both would remain as a constant function of VMT. On the other hand, traffic flow improvements would become more significant, and, depending on the extent of VMT actually reduced by transit and carpooling, could produce a 4.6 percent reduction by 1987. Further, if transit and carpooling provided no significant reduction in peak hour volumes, variable work hours could result in reducing peak period volumes and increasing peak period speeds. In the aggregate, the total 24 hour volumes would remain essentially unchanged, although some emissions benefit would be expected as a result of improved traffic operations during the peak periods. This would be partially offset by some reduction in speed during the off-peak hours owing to the redistribution of trips by time of day.

Overall, it appears that the selection of a final strategy package should perhaps reflect issues besides the potential effectiveness. Certaintly the political and institutional as well as economic implications must be considered. In any case, it appears that whatever package is selected, it should contain either (or both) I/M or gasohol since the probability of these two measures yielding a significant emissions reduction is far greater than those of the other strategies. On the other hand, any strategy based on gasohol presents institutional problems for the Municipality. Supplies of gasohol must almost certainly be provided by private industry, and it is unclear whether sufficient quantities will be available as a result to allow the potential reductions.

TABLE 12-7. ESTIMATED REDUCTION IN DAILY EMISSIONS FOR EACH STRATEGY PACKAGE

Year	Baseline emissions	Package 1		Package 2		Package 3		Package 4	
		Total daily emissions	Percent reduction	Total daily emissions	Percent reduction	Total daily emissions	Percent reduction	Total daily emissions	Percent reduction
1980	168.19	147.84	N/A	147.84	N/A	147.84	N/A	147.84	N/A
1982	155.99	108.41[a]	30.5	133.68	14.3	133.68	14.3	133.68	14.3
1987	123.66	78.43[a]	36.6	82.55[b]	33.2	97.94	20.8	82.55[b]	33.2

[a]Average of the 20 percent and 34 percent reduction possibilities.

[b]Average of the reductions possible with the four I/M program scenarios considered.

Chapter 3

Description of the Air Quality Planning Process

The Clean Air Act Amendments of 1977

The 1977 Amendments to the Clean Air Act of 1970 provides for some significant changes in air quality planning. The 1970 act was amended in order to meet some of the apparent shortcomings in the development of Transportation Control Plans.

In those areas which have been designated as nonattainment for the National Primary and Secondary Air Quality Standards, the Clean Air Act Amendments of 1977 requires revisions to the State Implementation Plans (SIP). The Clean Air Act Amendments of 1977 encourages local governments and organizations or local elected officials to assume additional responsibilities in the development, implementation, and enforcement of these plans to attain the National Ambient Air Quality Standards (NAAQS). By assuming a larger role in preparing these plans, the local governments and elected officials would also assume more responsibility for the successful implementation of these plans.

The Clean Air Act Amendments of 1977 requires that the State Implementation Plans (SIP) shall provide for the attainment of the National Ambient Air Quality Standards (NAAQS) in none attainment areas. Section 172 of the Clean Air Act specifically requires the SIP submittal to contain the following provisions:

1. be adopted by the State after reasonable public hearing;

2. provide for the implementation of all reasonably available control measures as expeditiously as practicable;

3. require, in the interim, Reasonable Further Progress, defined as annual incremental reductions in emissions, sufficient to provide for attainment by the required date;

4. include a comprehensive, accurate inventory of actual emissions from all sources, to be revised and resubmitted as necessary to assure that reasonable further progress is being made;

5. expressly identify and quantify the emissions, if any, of any such pollutant which will be allowed to result from the construction and operation of major new or modified stationary sources;

6. require permits for the construction and operation of new or modified major stationary sources;

7. identify and commit the financial and manpower resources necessary to carry out the plan provisions;

8. contain emission limitations, schedules of compliance and such other measures as may be necessary to meet the requirements;

9. evidence public, local government, and state legislative involvement and consultation and include (a) an identification and analysis of the air quality, health welfare, economic, energy, and social effects of the plan provisions and of the alternatives considered by the State, and (b) a summary of the public comment on such analysis;

10. include written evidence that the State and general purpose local government have adopted by statute, regulation, ordinance, or other legally enforceable documents; the necessary requirements, schedules, and timetables for compliance; and are committed to implement and enforce the appropriate elements of the plan;

11. in the case of areas where an extension is granted to December 31, 1987, (a) a program is required which would include an analysis of alternative sites, sizes, production processes, and environmental control techniques which would demonstrate the benefits of the proposed costs, (b) a specific schedule for implementation of a vehicle emission control inspection and maintenance program shall be established, and (c) other measures necessary to provide for attainment of the National Ambient Air Quality Standards (NAAQS) must be identified.

Section 172 further provides that in the event it is shown that an extension to December 31, 1987 is required and subsequently granted, the SIP revisions (required by the Clean Air Act Amendments of 1977) are to be submitted before July 1, 1982. This plan shall contain enforceable measures to assure attainment of the standards not later than December 31, 1987.

Anchorage has received an extension to December 31, 1987 and must submit an implementation plan which considers each of the elements required by Section 172 to EPA (through the State of Alaska) by July 1, 1982. In the event that such a

plan has not been submitted, Section 176 states that evidence of reasonable efforts toward submission of such an implementation plan must be shown. If either of these provisions are not met, Section 176 provides that EPA and the Secretary of Transportation shall not approve any projects or award any grants other than for safety, mass transit or transportation improvement projects related to air quality improvements.

The Clean Air Act Amendments of 1977 also provide for the Environmental Protection Agency to issue guidelines to aid in the development of the revisions to the State Implementation Plan. The Environmental Protection Agency issued its Transportation Planning Guidelines in June 1978.

These guidelines provide for the close integration of air quality and transportation planning. The guidelines emphasize the establishment of an air quality-transportation planning process. The features of this process are: transportation control measures based on locally developed plans, extensive interaction by all governmental levels, significant involvement of local elected officials, effective public education and participation, and integration with other planning processes.

The guidelines call for a commitment to conduct a comprehensive analysis of those transportation control measures that could effectively be implemented. The guidelines require that schedules for this comprehensive analysis and for adoption and implementation of these measures be part of the SIP.

Designation of the Lead Agency

The Clean Air Act Amendments of 1977 require that, where feasible, the organization designated and certified to prepare the SIP revisions shall be the Metropolitan Planning Organization (MPO) responsible for the Continuing, Cooperative, and Comprehensive (3C) transportation planning process for the affected area. The Anchorage Home Rule Charter, Section 12.01 and 12.02, and Alaska Statutes establish the authority for the Municipality of Anchorage to conduct planning activities including land use and transportation planning.

On April 8, 1976, the Governor of Alaska designated the Municipality of Anchorage as the MPO for the Anchorage urbanized area. Consequently the 3C transportation planning process required by the U.S. Department of Transportation is conducted by the Municipality in cooperation with the State of Alaska through the Anchorage Metropolitan Area Transportation Study (AMATS).

The Municipality of Anchorage, as the MPO, was designated the lead Air Quality Planning Agency by the Governor on March 22, 1978. Subsequently, interagency agreements have been signed and a formal Air Quality Planning Process has been established. The Municipality of Anchorage and the Alaska Department of Environmental Conservation executed an Air Quality Planning Memorandum of Understanding in September 1978. The Municipality entered into an Air Quality Planning Agreement with the former Cook Inlet Air Resources Management District, now the Anchorage Air Pollution Control Agency, in August 1978.

Interagency Coordination

The Municipality, in cooperation with the Alaska Department of Environmental Conservation, Department of Transportation and Public Facilities, and the former Cook Inlet Air Resources Management District (now the Anchorage Air Pollution Control Agency), initiated a planning process to prepare a plan to attain the National Ambient Air Quality Standards. The planning process has been closely integrated and coordinated with the Anchorage Metropolitan Area Transportation Study (AMATS) because of the high ratio of automobile emissions to the total carbon monoxide emissions.

The Air Quality Planning Process which was established by these agreements provided for the creation of an Air Quality Planning Policy Committee, an Air Quality Planning Technical Advisory Committee and an Air Quality Citizens Advisory Committee. The Air Quality Policy Committee consists of the members of the AMATS Policy Committee (the Commissioner for the Alaska Department of Tansportation and Public Facilities, the Mayor of Anchorage, and one Assembly-person from the Municipality of Anchorage). In addition, one of the Municipal Assembly-persons who is currently serving as a member of the local Air Pollution Control Commission, and the Commissioner for the Alaska State Department of Environmental Conservation serve on the Air Quality Policy Committee. The Air Quality Policy Committee shall have overall responsibility for the development, adoption, and submission of an air quality plan to the Municipality and State.

The Air Quality Planning Technical Advisory Committee consists of six members selected by the Policy Committee including one representative from the Municipal Health Department, one representative from the Municipal Planning Department, one representative from the Municipal Transportation Department, one representative from the State Department of Environmental Conservation, one representative

from the State Department of Transportation and Public Facilities, and one representative from the Citizen Advisory Committee. The Technical Advisory Committee shall coordinate with the Air Quality Planning Staff to develop an Air Quality Plan. They shall advise and submit recommendations to the Policy Committee.

The Air Quality Citizens Advisory Committee was established to provide immediate and ongoing input to the development of the Air Quality Plan from private citizens. This committee consists of members from the Environmental Health Advisory Committee to the Municipal Health Commission. To supplement this committee, the AMATS Citizens Advisory Committee was used to provide as broad a spectrum as possible for citizen impact.

Citizen Participation Program

The Clean Air Act Amendments of 1977 require that evidence of public involvement and consultation be shown. The air quality citizen participation program relies heaviliy on the public involvement program established by AMATS. The present AMATS Public Involvement Program consists of four basic elements. They are:

1. Public Hearings
2. Workshops and Seminars
3. AMATS Annual Report
4. Staff Presentations to Various Groups and Committees.

These elements have been adapted to the Air Quality Planning Program. Air Quality items have been included for review and comment in all of the basic elements. These elements should provide a thorough, balanced public involvement program including: formal and informal review with final dissemination of information. Table 1 identifies each element and outlines the purposes, descriptions, and frequencies of occurrence for each element.

The operation of this public involvement program requires effort from several groups. These consist of elected officials, a Municipal Commission, selected citizens, and professional staff. Elected and appointed officials comprise the Air Quality Planning Policy Committee, Municipal Assembly, and Municipal Planning and Zoning Commission. The two citizen advisory groups consist of interested and involved citizens from a broad spectrum of career and professional occupations. Professional staff comprise the Air Quality planning Technical Advisory Committee.

Table 1 AMATS Public Involvement Program

ELEMENT	PURPOSE	DESCRIPTION	OCCURRENCE FREQUENCY
1. Public Hearings	Obtain formal public response.	Hearings to receive formal public testimony on the local portion of the State Implementation Plan	at least 2
2. Public Workshop	Provide interaction between citizens, and advisory groups and staff.	Provide a public forum to discuss the Air Quality Problems and possible solutions to attain the standards.	at least 1
3. Annual Report	Convey pertinent information on transportation to the public at large and obtain responses.	The Annual Report summarizes the progress of the transportation planning process for the year. Through publication in local newspapers most residents have an opportunity to read it and respond with a coupon questionaire.	(annually)
4. Staff Presentations	Dispense material on transportation and receive responses of various special interest groups.	At the request of various groups, staff will share material relating to the transportation planning efforts and provide the groups an opportunity to comment on the planning efforts.	As invited

Air Quality Citizens Advisory Committee

The Citizens Advisory Committee for the Air Quality Planning process consists of the Environmental Health Advisory Committee of the Municipal Health Commission. This Committee is comprised of interested citizens living in the Municipality. The committee functions to provide review and comment on the elements of the Air Quality Plan as it is developed and on the final draft to be submitted as the local revision to the SIP. This is to insure that the elements of the plan remain consistent with the plans, programs, and activities of the Municipality as they relate to the health and well-being of the citizens of the Municipality, and to provide the necesary public input into the developent of the transportation control strategies. The involvement of the Air Quality Citizens Advisory Committee as it relates to the Air Quality Plan is:

1. to provide review of and comment on the draft air quality plan;

2. to report the progress and commentary of the committee to the Municipal Health Commission for their recommendations;

3. to forward these comments to the Air Quality Planning Policy Committee;

4. to assist the Air Quality Planning Policy Committee in conducting a public hearing on the Air Quality Plan;

5. to forward the comments from the public hearing to the Municipal Assembly for their final review;

6. to continue to function in the review and comment role on the updating and completion of the Air Quality Plan.

Citizen Involvement Activities

An Air Quality conference was held on February 7, 1981, for the purpose of informing the public about air quality in Anchorage. The objective of the conference was to encourage greater public information and involvement in transportation and air quality decisions that would lead to the attainment of the National Ambient Air Quality Standards.

This conference was sponsored by the Alaska Lung Association with joint funding from the U.S. Environmental Protection Agency Office of Public Awareness, and the Muncipality of Anchorage through the Air Pollution Control Agency.

The main objective of the conference was public education of the conditions resulting in high carbon monoxide concentrations. Speakers were chosen to present the views and projected goals from all three levels of government -- Federal, State, and Municipal.

Various transportation control measures were presented and discussed in a free forum with the participants. It was made clear that extensive public education will be needed to raise the level of awareness among users of automobiles before voluntary compliance would be accepted.

In addition to the conference activities, numerous articles have appeared in the local papers discussing the air quality problems Anchorage faces during the winter months. These articles have appeared as special news stories and as editorial commentaries.

Alaska State Legislature

Senate

Resources Committee

Official Business

Senator Bettye Fahrenkamp
Chairman

Pouch V
State Capitol
Juneau, Alaska 99811

March 4, 1983
3:10 p.m.

Beltz Room 211

MEMBERS PRESENT

Senator Fahrenkamp
Senator Ziegler
Senator Eliason
Senator Paul Fischer
Senator Vic Vischer
Senator Mulcahy
Senator Sturgulewski

DEC briefing on water quality standards; stream classification and reclassification procedures; auto emissions control plans; hazardous waste regulations (drilling muds); and wetlands permitting.

Commissioner Dick Neve, DEC, briefed the committee on the present status of the following subjects:

In regard to auto emissions control, he stated that there is money in the Governor's FY 84 budget for inspection maintenance stations. The capital request is for 2.5 million dollars for Anchorage and 1.5 million dollars for the Fairbanks program.

Both Fairbanks and Anchorage have exceeded the health standards of 9 ppm of carbon monoxide. Different strategies as to ways of controlling the carbon monoxide were discussed; i.e., car pools, busses, devices for cars, etc. Other items touched on were Federal sanctions if the program were not finished and woodsmoke pollution.

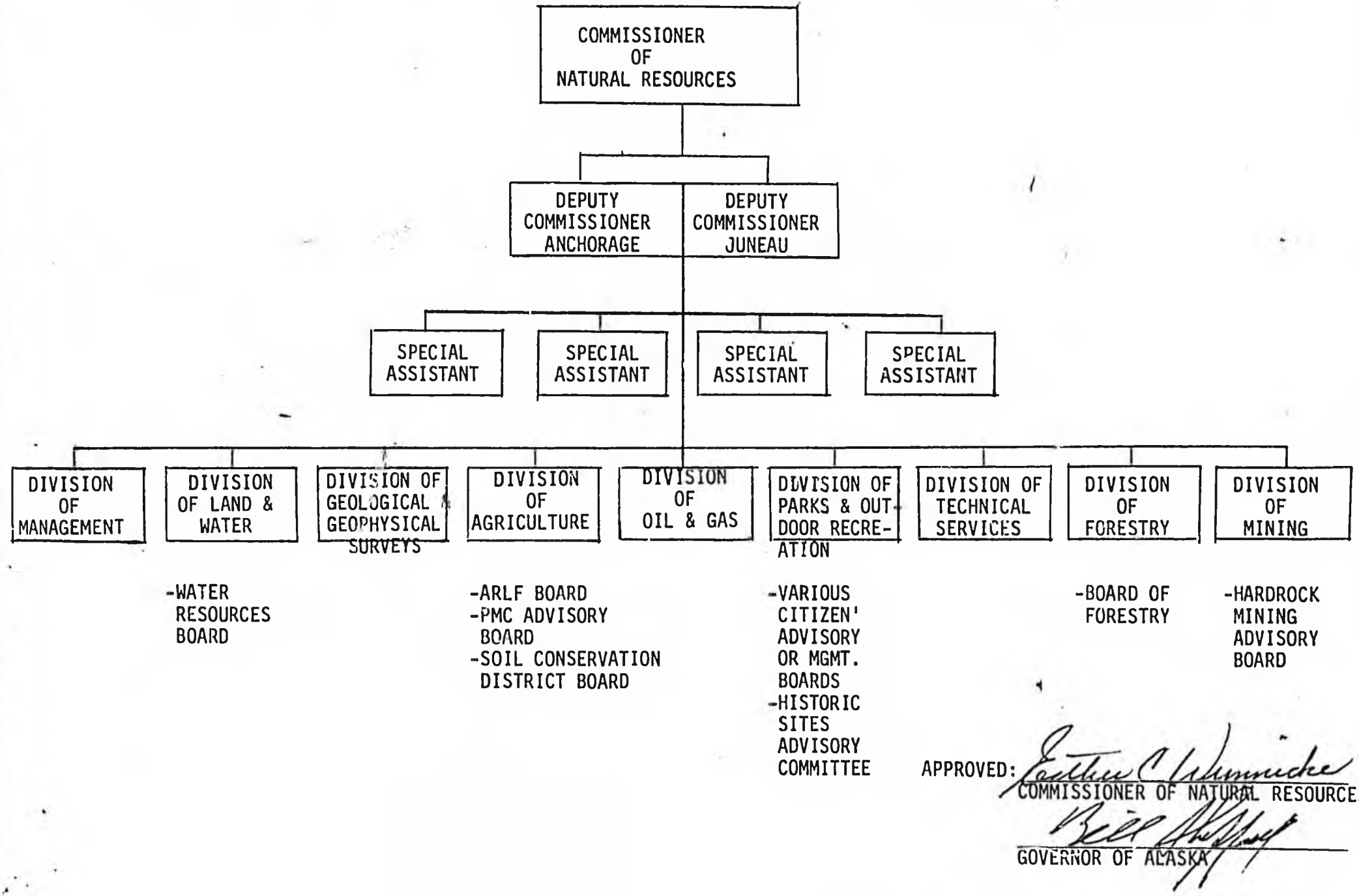
Hazardous waste regulations: The Commissioner stated that his department is presently drafting hazardous waste regs. There was further discussion on whether or not drilling muds are toxic, Federal law concerning drilling muds and the Attorney General's opinion regarding drilling muds. The Commissioner also stated that St. George Basin is an area where fish resources could be adversely impacted if drilling muds were not handled properly.

Turbidity standards and stream reclassification: A task force has been set up to report to the Commissioner within three weeks on various approaches. This group represents miners, regulatory agencies, Fish and Game Department, DEC, DNR and the Department of Commerce.

Meeting adjourned 4:15 p.m.

DEPT. OF NATURAL RESOURCES

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
UNIT ORGANIZATION CHART



APPROVED: _____
COMMISSIONER OF NATURAL RESOURCES

_____
GOVERNOR OF ALASKA

EFFECTIVE DATE: February 1, 1984

DEPARTMENT OF NATURAL RESOURCES

Overview - January, 1984

Esther C. Wunnicke, Commissioner

Robert D. Arnold, Deputy Commissioner

James K. Barnett, Deputy Commissioner

Thomas J. Hawkins, Director, Division of Land and Water Management

Bill Heim, Director, Division of Agriculture

John Sturgeon, Director, Division of Forestry

Neil Johannsen, Director, Division of Parks and Outdoor Recreation

Kay Brown, Director, Division of Minerals and Energy Management

Ross Schaff, Director, Division of Geological and and Geophysical Surveys

James Anderson, Director, Division of Technical Services

Mary Halloran, Director, Division of Management

DEPARTMENT OF NATURAL RESOURCES

Esther C. Wunnicke, Commissioner

BASIS OF RESPONSIBILITIES

Alaska Constitution

- encourage settlement
- encourage development of resources -- consistent with public interest

AS 44.37.020

- administer program for conservation and development of natural resources

THE STATE'S ESTATE

- 77 million acres of land
- 33 million acres of tidelands
- 10 million acres of water

GOALS

- to meet fundamental obligations of land and water ownership
- to prepare for decision-making
- to help assure economic vitality and quality of life

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ORGANIZATION/OPERATIONS — Jim Barnett, Deputy Commissioner, Anchorage

POLICY AND LEGISLATION — Bob Arnold, Deputy Commissioner, Juneau

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The Department employs 879 permanent full-time persons and 251 part-time persons at 35 locations in the State.

THE DIVISION OF LAND AND WATER MANAGEMENT

Tom Hawkins, Director

The division currently has management responsibility for:

° 77,000,000 acres of land
° tidelands along the State's 33,000 mile coastline
° the waters of 164,000 river miles
° 7,000 lakes
° over 175 dams

Major Responsibilities

° Fulfilling selecting and acquiring the State's remaining entitlement of 27,000,000 acres by 1994.

° Carrying out an integrated statewide land planning program.

° Resolving unauthorized use and occupancy of State land and resources.

° Negotiating and executing land exchanges.

° Determining if and when lands and surface resources should be sold or leased and the most beneficial use of lands not sold or leased.

° Determining the terms and stipulations for sale or lease of lands and surface resources.

° Adjudicating requests for easements and permits.

° Assisting in major project development, such as: Red Dog, Quartz Hill, Su-Hydro, gas pipeline.

Report - FY 84

° Worked closely with legislators on homestead program implementation.

° Completed departmental review of the land disposal program.

° Brought Bristol Bay, Tanana, Susitna Valley plan, Southeast Tideland, plans and associated resources studies near completion.

° Effectively increased the State's acreage entitlement by persuading then Interior Secretary Watt to discontinue the practice of charging the State for lands underlying large rivers and lakes.

° Promulgated overdue regulations for allocation of instream flow water rights, classification of State lands, municipal disposal grants, remote cabin permits, and general land disposals.

° Implemented trespass abatement policy.

° Increased effort on Native allotment adjudication which resulted in a reduction of protests from 1,300 to 900.

° During FY 83 sold or leased approximately 31,000 acres for settlement purposes, conveyed 20,000 acres to municipalities, and sold more than 32 million cubic yards of material primarily associated with North Slope development.

° Participated in the valuation process for the Alaska Railroad lands and discussion to resolve the transfer to the State.

° Reviewed department user fees (filing fees, etc.) and proposed major fee increase.

Emphasis - FY 85

° To actively implement the trespass abatement program.

° To effect permit reform.

° To implement the homestead program.

° To restructure the shore fishery lease program.

° To update inventory of hazardous dams and initiate inspection program.

° To actively participate in major resource development projects, i.e., Red Dog, Quartz Hill, Prudhoe Bay area development, Su Hydro, and Northwest Pipeline.

The Division of Land and Water Management employs 180 persons and maintains three land and water management regional offices. The Northcentral District is north of the Alaska Range and generally north of an east-west line from Norton Sound to the Alaska Range with an office in Fairbanks. The Southcentral District is located south of this line and west of Yakutat Bay with an office in Anchorage. East of Yakutat Bay is the Southeast District with the office in Juneau.

THE DIVISION OF AGRICULTURE

Bill Heim, Director

° 25,000 acres of agriculture land are currently in production.

° Number of farms has increased from 290 in 1978 to 410 in 1982.

° In 1982 cost receipts from farm commodities were up 15% over 1981 and up 40% over 1980.

° The ARLF has 699 outstanding loans and is currently capitalized at $63,000,000

Major Responsibilities

° Managing the Agricultural Revolving Loan Fund.

° Producing the only in-state supply of foundation seed for Alaska's commercial seed growers.

° Propagating and evaluating new plant materials for Alaska's horticultural industry and for soil erosion control projects.

° Providing accurate farm market information to Alaska's producers on a weekly basis.

° Monitoring new farm development.

° Assisting in the selection and design of agricultural land disposals.

° Inspecting certain agricultural products and facilities.

Report - FY 84

° Implemented the grain reserve program.

° Assisted in the reorganization of the Soil and Water Conservation Districts.

° Essentially completed new regulations for the ARLF.

° Initiated the potato disease project in cooperation with the Agricultural Experiment Station. Will distribute over 4,000 lbs. of disease-free potato seed for crop year 1984.

Emphasis - FY 85

° To bring more acres now in private ownership into production.

° To strengthen the division's marketing activities.

The Division of Agriculture employs 43 persons including seasonal positions. The director is located in Wasilla with other offices in Palmer, Anchorage, Delta Junction and Fairbanks.

THE DIVISION OF FORESTRY

John L. Sturgeon, State Forester, Director

° The division manages 1.8 million acres of State land in two State Forests designated by the Alaska Legislature.

° Almost 3.5 million acres of State land are classified for forestry.

° The State's fire protection responsibilities have grown to 78 million acres, and are rapidly increasing.

Major Responsibilities

° Suppressing fires on State, federal and private lands.

° Managing timber on State lands.

° Providing forestry assistance to the public.

Report - FY 84

° Implemented Tanana Valley State Forest legislation.

° Realized a savings of approximately $1 million on the Munson Creek fire northeast of Fairbanks through implementation of new fire plans.

° Sold the 49 MMBF Icy Bay II timber for $6 million.

° Completed State's first permanent tree nursery capable of producing 600,000 seedlings a year.

° Assumed fire suppression responsibility in Tok and Nenana on an additional 9.5 million acres.

Emphasis - FY 85

° To complete a report on the potential of the forest products industry in Alaska and based on the findings of the report, to make recommendations for achieving that potential.

° To assume fire protection responsibility of 70 million acres in McGrath area.

° To introduce legislation to clarify the State's fire suppression responsibility to state that protection will be commensurate with values at risk.

° To complete fire plans statewide which should reduce overall suppression cost to the State.

The Division of Foresty has 230 employees at 14 locations from Ketchikan to Fairbanks.

THE DIVISION OF PARKS AND OUTDOOR RECREATION

Neil Johannsen, Director

° The park system includes over 3.0 - 3.5 million acres in 100 units.

° The State parks had 4 million visitors in 1983.

Major Responsibilities

° Managing the Alaska State Park System.

° Administering recreation and historic preservation grants to local governments.

° Administering the Alaska Conservation Corps (youth employment).

Report - FY 84

° Implemented legislation which established 13 marine parks.

° Completed 152 new campsites, 72 picnic sites, 8 miles of road and 357 parking spaces.

° Established the Alaska Conservation Corps and Volunteers-in-Parks program.

° Initiated a marketing program to redistribute visitors from heavily used units to lesser used units.

° Developed Mission 66, a policy document for the division.

Emphasis - FY 85

° To rehabilitate worn out facilities.

° To develop greater economic efficiencies in operation

° To initiate revenues through concessions and reasonable fees.

° To institute the Kenai River management project.

The Division of Parks employs about 135 persons, including seasonal, in 19 locations statewide.

DIVISION OF MINERALS AND ENERGY MANAGEMENT

Kay Brown, Director

° Overall, State oil and gas leases generated approximately 85% of State revenues in FY 83:

  ° $ 48,371,542 in bonus payments
  4,615,479 in lease rentals
  1,506,491,616 in royalty revenue
  1,882,500,000 in production taxes

° 4,205,219 acres of State land currently under lease for oil and gas exploration and production, including 1,277,937 acres in net profit share leases.

° 54 coal leases on State land totalling 103,938 acres. $72,792 in rentals and $71,973 in royalty payments collected in 1983.

° Annual production of approximately 800,000 tons of coal -- used 100% in State.

° Approximately 50,000 active mining claims and leasehold locations on State land.

° Approximately 150 placer mines in production on State land.

Major Responsibilities

° Evaluating approximately 14 million acres of State land proposed for leasing through FY 89 for oil and gas potential.

° Preparing for and conducting three or more oil and gas lease sales a year.

° Assuring lessee compliance with terms and conditions of oil and gas leases and unit agreement contracts.

° Assuring timely and correct receipt of payments due the State from the sale of its royalty in-value oil and gas and its share of federal receipts from production on federal leases, and from net profit share leases.

° Conducting the State's coal prospecting permit and leasing program.

° Administering 50,000 active mining claims and leasehold locations on State land.

° Administering the State's offshore prospecting permit and leasing system for deposits of locatable minerals on offshore tide and submerged lands.

° Providing assistance to miners in permitting and permit compliance through the Department's participation in the State's Tri-Agency Placer Mining Program.

° Administering the State's geothermal drilling safety and conservation law.

Report - FY 84

° One lease sale was conducted in September 1983 in Cook Inlet (Sale 40), resulting in high bonus bids of $3,177,128.26 and the leasing of an additional 440,354.88 acres of State land for oil and gas development.

° Two North Slope sales are scheduled for May 1984 (Sales 43 and 43A). Both are comprised primarily of Beaufort Sea acreage. A Minchumina Basin Sale (Sale 42) originally scheduled for January 1984 may be held at the same time if sufficient industry interest in this sale is indicated.

° Procedures to hold a competitive coal lease sale in the Matanuska Valley in the fall of 1984 have been initiated.

° The process leading to issuance of the State's first surface mining permit for the Usibelli Mine at Healy is proceeding.

° The first issuance of offshore prospecting permits since 1975 in a noncompetitive disposal of acreage in Cook Inlet is scheduled for late FY 84.

Emphasis - FY 85

° To increase monitoring and enforcement of lease stipulations and terms through the establishment of a petroleum engineer position in the Fairbanks office.

° To fully implement permit reform.

° To conduct competitive royalty oil sale.

° To effect full autonomy for the new Division of Mining.

° To administer reclamation of four to six abandoned coal mined sites.

° The division employs 78 persons--one in Juneau, two in Fairbanks and 75 in Anchorage.

THE DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

Ross G. Schaff, Director

The division

° Prepares geological and geophysical analyses for 4 oil/gas lease sales/year.
° Processes 25,000 mining claim documents/year.
° Performs 500 public assays/year.
° Determines 60,000 chemical analyses/year.
° Distributes 40-50,000 publications/year.
° Maintains statewide inventory of all water-well logs.

Major Responsibilities

° Collecting resource data for use by DNR and other agencies.

° Interpreting and analyzing resource data.

° Preparing and disseminating resource information for professional use and public consumption.

Report - FY 84

° Produced first oil/gas basins map of Alaska at 1:1,250,000 scale.

° Produced first geothermal potential map of Alaska at 1:1,250,000 scale.

° Added a computer system for geochemical modeling to existing computer systems for geoprocessing and seismic data interpretation.

° Completed Alaska NW coal exploration program, will complete Susitna Coal Field Atlas; completed coal field investigations of St. Lawrence Island; initiated study of Matanuska coal field; completed drilling program at Chicago Creek and Cape Beaufort areas.

° Accomplished timber surveys at Haines, Tanana, Yakataga, and soil surveys at Yentna, Fox River, Mulchitna, Nenana, Healy, Tok, Copper River Basin (with SCS).

° Seismic data interpretation and subsurface geology completed for oil/gas lease sales 41, 42, 46.

° Revised 5-year water data collection plan in cooperation with USGS.

° Completed resource appraisals for Kantishna Hills, Dunkel Mines, Bristol Bay Basin and Cook Inlet.

Emphasis - FY 85

° To bring into operation a core-storage facility at Eagle River.

° To produce at 1:1,250,000 summary resource maps for coal and minerals.

° To complete modeling of all Alaska stream flow data.

° To compile and digitize 11 additional data sets at 1:250,000 for geoprocessing.

° To complete geological and geophysical evaluations for lease sales 45, 46, 47, 48.

° To continue improving the status of geologic mapping in Alaska.

The division employs 110 personnel and 40 student interns at 5 locations in the State.

THE DIVISION OF TECHNICAL SERVICES

Jim Anderson, Director

° There are approximately 8,500 (7,439 active) title/acquisition case files held by the division.

° Title transactions, recorded by DTS, have increased by at least 50% since 1975, with 14 Recording Offices and 34 Recording Districts.

° The division files approximately 500 plats per year, including State land disposals, and holds about 3,000 survey plats and 10,000 status plats.

Major Responsibilities

° Processing and recording all real and personal property transactions in Alaska.

° Providing accurate, up-to-date land records information for all State-owned lands and waters.

° Surveying and engineering for State lands.

° Defending State title against federal surface claims.

° Designating offshore boundaries which defines State coastal ownership.

Report - FY 84

° Automated lands recordkeeping for much of the Department, and entered large amounts of historical data.

° Managed approximately 25% more title documents than in FY 83.

° Updated 30-year-old nautical charts of the Beaufort Sea coastline.

° Supported Alaska Railroad Transfer Team with cadastral survey and land title services.

° Developed long-range resource information management plan for the Department.

° Transferred leased lands to the University per agreement.

Emphasis - FY 85

° To augment the State's automated land records system for both land administration and land status mapping.

° To improve efficiencies of State Recorders' Offices and provide the public with current and accurate title information.

The Division of Technical Services has 187 employees, and its headquarters are in the Frontier Building, Anchorage.

DIVISION OF MANAGEMENT

Mary Halloran, Director

The Division of Management

° Monitors 270 operating accounts, 140 special project accounts, and 285 capital accounts with current authorization of more than $129 million.

° Is responsible for collection of $1.6 billion in unrestricted receipts from oil, land, gravel and other sales.

° Handles individualized account, billing and auditing procedures for 7 special State funds, general fund, about 30 different interagency and program receipt sources, and 26 different federal fund sources.

° Handles more than 15,000 land disposal and other sales contracts.

Major Responsibilities

° Cost-effective direction, administration & coordination of DNR's fiscal, personnel and accounting network.

° Budget preparation and implementation.

° Fiscal management and oversight.

° Revenue accounting and billing for all contracts for natural resource use/ownership.

° Personnel and payroll for entire Department.

° Administrative activities (mail, switchboard, supply, equipment, space leases).

Report - FY 84

° Simplified the budget structure within the confines of the project budgeting system.

° Established regular deputy director meetings to coordinate Department budget, fiscal, administrative and personnel work.

° Reduced vendor payment period to less than 30 days.

° Established layoff procedures and instituted hiring "freeze."

° Substituted more cost efficient mail delivery between Anchorage and Fairbanks.

° Established guidelines for receipt and administration of designated grants.

° Offered first training session for Department staff in nonpersonnel areas.

° With OMB, successfully streamlined revised program procedures.

° Successfully negotiated a lower risk management assessment associated with surveying contracts.

° Resolved many long pending labor grievances.

° Initiated a contract to reduce long distance telephone costs.

Emphasis - FY 85

° To develop revenue and billing computer system.

° To examine the Highway Working Capital Fund costs.

° To consolidate DNR offices in Anchorage and in Fairbanks.

° To continue to monitor fiscal and personnel actions for compliance with statutory and procedural requirements.

° To participate in State classification study led by Department of Administration.

° To adopt formal training policy and appropriate allocation of funds for implementation.

° To clarify overtime payment standards for firefighters.

The Division of Management employs 47 people in two locations, Anchorage and Juneau.
