

DEPT. OF
ENVIRONMENTAL
CONSERVATION
OVERVIEW

Alaska State Legislature

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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.

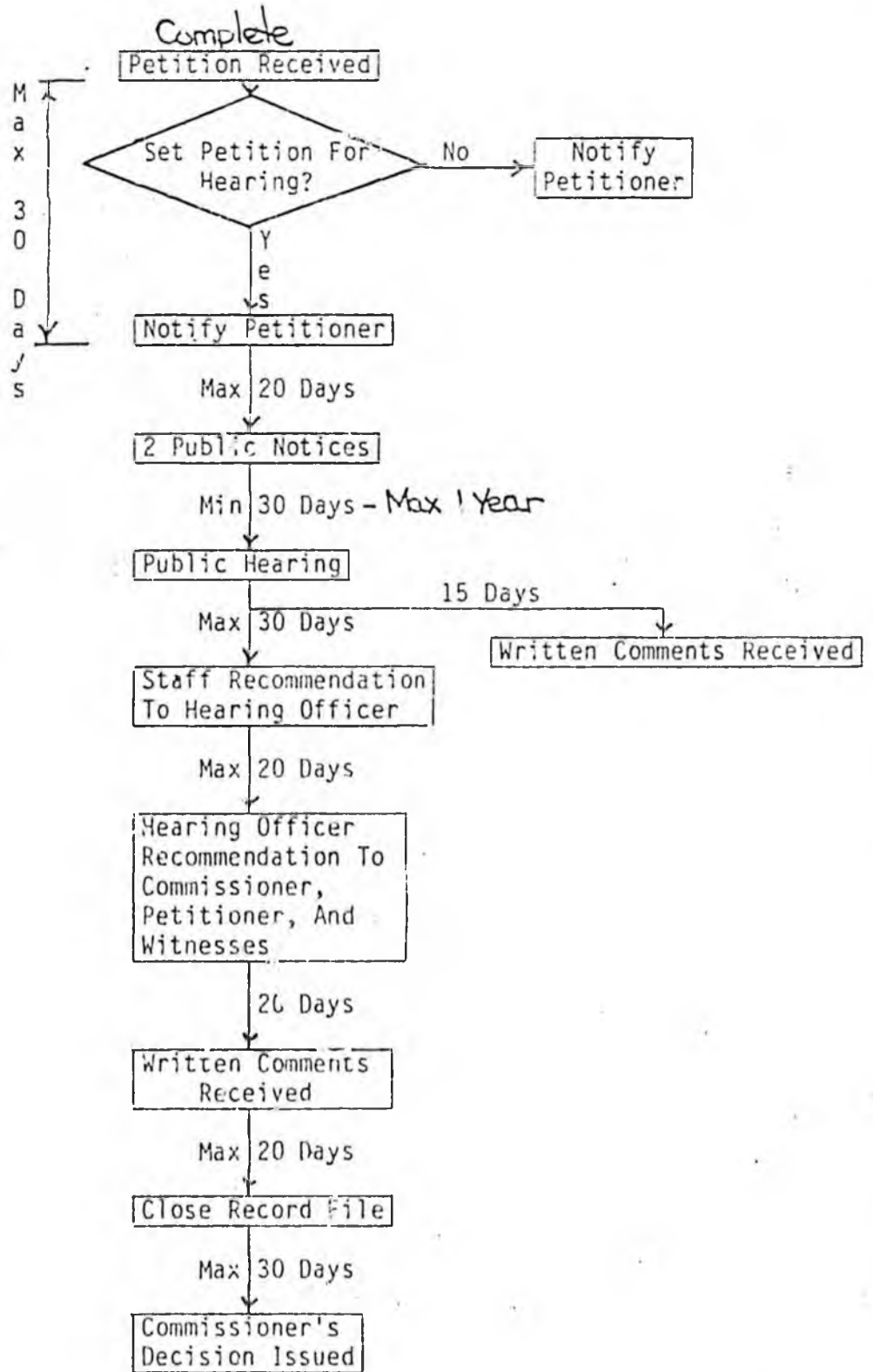
Reclassification procedures are very specifically spelled out in the state's regulations (18 AAC 70.055). The burden of proof is on a petitioner to show that certain protected uses of a waterway for which restrictive standards may apply are not being used or are unnecessary and that less restrictive (or more restrictive) standards are warranted and desirable. 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



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 8.3) 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 rationale 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 rationale 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?

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.

FAIRBANKS

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 heavy-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 Hours

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		ANNUAL COST (\$)	COST/TON
		TONS	% OF TOTAL		
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
CARPPOOLING	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 cost, 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. KFRI 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 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 semblance 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. Synergistic 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. Certainly 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

^aAverage of the 20 percent and 34 percent reduction possibilities.

^bAverage 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 re-submitted 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 Transportation 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 heavily 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 questionnaire.	(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 necessary public input into the development 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 Municipality 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.