

Water Quality

Regs Briefing

10-25-93



Alaska State Legislature

HOUSE RESOURCES COMMITTEE

P.O. Box V
State Capitol
Juneau, Alaska 99811
(907) 465-3715

MEMORANDUM

TO: House Resources Committee Members

FROM: Rep. Bill Williams, Chair *Bill*
House Resources Committee

DATE: October 11, 1993

RE: House Resources Committee Meeting October 25, 1993

The House Resources Committee will be meeting at the Ketchikan Legislative Information Office, 352 Front Street, on Monday, October 25, at 1:30 p.m., for a briefing by the Department of Environmental Conservation on proposed changes in both water quality and solid waste regulations. Public comment is invited following the department's briefing, and the meeting will be teleconferenced. Current teleconference sites are Juneau, Anchorage and Fairbanks. The meeting will conclude following the public comment period, no later than 5:00 p.m.

For further information please contact Pete Ecklund of Rep. Williams' staff at 247-4672 in Ketchikan. Thank you.

DRAFT

M E M O R A N D U M

TO: Members of the House Resources Committee
FROM: Rep. Bill Williams, Chairman
DATE: December 6, 1993
RE: Water Quality Regulations

Last week I sent each of you copies of all of the written comments which my office had received since our committee's hearing regarding the water quality regulations being proposed by the Department of Environmental Conservation. After reviewing those comments, I have several questions which I would like to pose to DEC in an effort to get some clarification and elaboration from them about the content and justification for the regulations as they have proposed them.

Attached is a draft list of questions which I plan to send to DEC. I will ask that they respond to them in writing and I will distribute their responses to the members of the Resources Committee. Please look over these questions to see if there are any additional questions you would like to have included in the list. If so, please call my office at 465-3424 or 3715, or fax your additional questions to my office at 465-3793, by December 15. My staff will then compile all of the questions that the committee has suggested, and submit them to DEC.

Thank you.

DRAFT

C:WQ

DRAFT

QUESTIONS TO BE ASKED OF THE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION REGARDING PROPOSED WATER QUALITY REGULATIONS

Questions by Rep. Bill Williams:

How to the cancer risks in your water quality standards compare to other cancer risks faced by Alaskans?

Is it possible to vary risk levels or health criteria by region of the state?

Using the standards proposed in these regulations, how many deaths will result?

Is it possible to incorporate pollution prevention incentives into these regulations?

Why can't Alaska have standards as strict as those mandated by other states?

What are the pros and cons of stronger and weaker standards?

DRAFT

**BRIEFING ON THE REVISION OF WATER QUALITY STANDARDS
for the HOUSE RESOURCES COMMITTEE
of the ALASKA STATE LEGISLATURE**

**Alaska Department of Environmental Conservation
October 25, 1993**

Background. The Department of Environmental Conservation is conducting the Triennial Review and Revision of Water Quality Standards, as required under the federal Clean Water Act. The original focus of revisions in this triennial period was the adoption of water quality criteria for toxic pollutants required by the Clean Water Act, particularly the human health criteria for carcinogens. The human health criteria now have been deferred until 1994. In the current phase, the Department is addressing human health risk level, criteria for certain conventional pollutants (sediment, bacteria, color, and hydrocarbons), and narrative provisions concerning mixing zones, treatment works, site-specific criteria, and whole effluent toxicity.

The Department first proposed revisions and held public review pertaining to these topics in the summer of 1992. The public comment period, with three extensions of time, ran for four and one-half months, July 1 through November 15. Those proposals engendered considerable public controversy, and produced a total of roughly 2,000 written comments.

The Department did not adopt the 1992 proposals into regulation. Valid concerns expressed in written comments and public hearings led the Department to reconsider many of the issues. The Department carefully evaluated public comments and prepared a formal "comment and response summary." At Governor Hickel's direction, the Department formed a Water Quality Standards Citizens' Advisory Group to assist in reexamining and modifying those proposals. Members of the group represent a balance of industry, environmental and public interests. This group met three times in February and March 1993, holding roughly five full days of intensive discussion of the issues. Members of the group then submitted written comments to the Department.

Based on public comments, Advisory Group comments, and discussions with EPA, the Department developed modified regulatory proposals. The final draft prepared by staff of the Water Quality Management Section was distributed to the Advisory Group for final review. The final package then was approved for public review by the Governor's Resource Cabinet, and by the Governor. The second round, 90-day comment period began on August 2, 1993 and will end on November 1. The Department has just completed public information workshops and public hearings in six cities -- Fairbanks, Anchorage, Juneau, Haines, Sitka and Ketchikan -- in addition to a hearing by teleconference linking 19 towns across the state.

Most of the topics in 1993 proposals are similar to the 1992 proposals. They include both technical issues and matters of public policy. The major difference in 1993 is that the Department dropped proposals for human health criteria for dioxin, chloroform and arsenic, and added a proposal to adopt a human health risk level of 1 in 100,000, or

"10⁻⁵," for carcinogenic pollutants. The risk level finally adopted will become the basis for later developing human health criteria for carcinogens. On this important issue, the Department wished to foster public consideration and response as an initial step toward the development of human health criteria.

Public response. Public response at the recently completed public hearings has provided severe criticism of the Department's proposals. From approximately 170 members of the public at large who testified, not one individual supported the department's proposals. Testimony generally was vigorous, articulate, and emotional, and reflected public outrage. Only a few representatives of extractive industries and municipalities delivered testimony in support of the proposals.

Public criticism principally was directed at the proposed human health risk level of 1 in 100,000. The public recognizes cancer as an epidemic disease, and nearly every individual has experienced cancer among family and friends, frequently in more than one case. There is an overwhelming feeling that little or no increased cancer risk is acceptable, and that no mixing zones for carcinogens should be allowed. It was often noted that two-thirds of states, and all western states except Nevada, have selected the 1 in 1,000,000 risk level. These themes were repeated very frequently.

There also was widespread opposition to proposals for mixing zones, treatment works, and natural conditions criteria, and to the perceived lowering of standards for sediment, fecal coliform bacteria, color, and hydrocarbons. There was little opposition to control of whole effluent toxicity, or to the prohibition on mixing zones in anadromous fish spawning areas.

Those testifying made a very strong case for the uniqueness and value of Alaska's clean waters, and the need to keep them as clean as possible as the basis for the continued health of the largest employment sector, the fishing industry, and the fastest growing sector, the tourism industry. For testifiers, clean waters clearly are an important element of quality of life as well as livelihood, and are viewed as a fundamental right. Testifiers pointed to the Governor's proposal to sell Alaska's water to the "lower 48," and to the millions of dollars spent annually to market Alaska's fish. Many spoke to the devastating impact that contamination of waters, real or perceived, will have on fisheries markets.

Those testifying also indicated repeatedly that they do not oppose extractive industries, but that industries must pay the cost for pollution control, and not pass the cost of pollution to other sectors or to the public for cleanup costs or health care. Testifiers noted that stiff regulations apply to oil and sewage discharge from fishing boats, and other regulation of individuals. Testifiers frequently pointed to the experience of the lower 48 in having to pay large costs to clean up past pollution problems.

Testimony frequently expressed a belief that the Department "caves in" to industry. Testifiers frequently stated that the Department of Environmental Conservation should be the guardian of the public trust, and should protect the environment and public health rather than favor industry.

Where do we go from here? The public comment period ends on November 1. The Department already has received around 150 written comments, and anticipates more in the final week. We have not assessed the written comments, but it is clear that they contain both "pro" and "con" positions.

We cannot say at this time what action will be taken on the proposed regulations, either as a whole or on particular items. Clearly, the public response obligates us to carefully review the comments and consider every item. We will do that through a structured and visible process. Our hope would be to proceed to adopt viable elements of the proposals into regulation. We will involve the Citizens' Advisory Group in the analysis, along with the Attorney General's office and, ultimately, the Resource Cabinet and the Governor. We also welcome the continued involvement of the Legislature.

Resolving specific issues will not be a simple matter. While it is easy to raise a cry for "no pollution" and "no cancer risk," we quickly run up against hard reality. For example, implementing a "no increase" limit for Total Suspended Solids would be extremely costly for municipal sewage treatment plants, with little environmental benefit. As another example, a lower cancer risk level of 10^{-6} could, in the case of arsenic, force standards far lower than background levels in marine waters.

Of course, the testimony at public hearings has been disappointing and frustrating to the Department. The testimony is sincere, and raises valid issues. Nonetheless, the Department believes that many of the proposals are misunderstood by the public. We feel that, due to the concern expressed on cancer risk and mistrust of the Department in general, most of the technical proposals are not being fairly examined. We also believe that issues have been persistently misrepresented to the public by activist groups opposing these revisions.

It is important to recognize that, regardless of the immediate outcome, the Department will be expanding and revising the Water Quality Standards on a continuing basis for several years to come. We will return to the human health criteria next year after the current phase is completed. We will be required to address acute aquatic life criteria, antidegradation, sediment criteria, and biological criteria. Further, we have a desperate need to develop a technical procedures document for mixing zones, treatment works, site-specific criteria, whole effluent toxicity, and other aspects of the Water Quality Standards. We have limited resource to apply to these tasks.

Thank you for this opportunity to provide an update on the revision of Water Quality Standards.

BRIEFING ON PROPOSED SOLID WASTE REGULATIONS
HOUSE RESOURCES COMMITTEE
KETCHIKAN OCTOBER 25, 1993

In Subtitle D of the Resource Conservation and Recovery Act (RCRA), Congress banned open dumping of solid waste and directed the Environmental Protection Agency (EPA) to establish national minimum standards for sanitary landfills. On October 9, 1991, in response to that direction, EPA promulgated Solid Waste Disposal Facility Criteria for all municipal solid waste landfills.

EPA expects all states to implement these standards. To ensure that they do, a number of incentives are built into the regulations. These incentives include additional flexibility in states with an approved solid waste program and some protection from third party suits for operators of landfills with a permit from an approved state program.

There are approximately 750 landfills in Alaska. The majority of these sites are considered open dumps under the definition in RCRA. It will be extremely difficult, if not impossible, for many of these facilities to meet the full requirements of the federal regulations. For this reason, the Department of Environmental Conservation (DEC) feels that it is extremely important for Alaska to gain solid waste program approval from EPA to take advantage of every possible area of state flexibility. These proposed solid waste regulations are designed with those goals in mind: stringent enough to allow Alaska to qualify for program approval, but with all the flexibility allowed in the federal regulations.

The federal regulations include two important exclusions from some requirements for small landfills. The first is for small landfills in arid regions (commonly known as the West Texas exclusion), and the other for small landfills in communities cut off from surface transportation at least three months of the year (the Alaska exclusion). DEC's proposed regulations take advantage of both these exclusions in order to set more attainable standards for small landfills.

However, program approval and use of the small landfills exclusions will not go far enough to allow some communities in Alaska to comply with the federal standards. For example, originally small communities were exempted from the groundwater monitoring requirements. On May 7, 1993 the Circuit Court of Appeals in Washington, D.C. ruled that all landfills must monitor groundwater. EPA responded by extending the effective date of the regulations for small landfills. They are also considering a request that alternative approaches to groundwater monitoring for small landfills be considered.

It is important that the Legislature, the Governor's office, and Alaska's Congressional delegation continue to work with EPA and Congress to seek further relief for small landfills in Alaska.

DEC staff will continue to work with national associations of state solid waste officials to gain the support of other states for further Alaska exemptions. Adopting solid waste regulations and seeking state program approval will buy us time to pursue a permanent solution: full exemption from federal solid waste requirements for small and remote communities in Alaska.

DEC will be soliciting comments on the proposed solid waste regulations through November 30. Public hearings on the regulations will be held on the following dates:

October 25	Bethel
October 26	Fairbanks
October 27	Soldotna
October 28	Anchorage
November 1	Juneau

Between November 30 and late January, changes to the proposed regulations will be made based on the comments received, as well as the results of preliminary review by EPA. DEC plans to adopt regulations in early February, with an estimated effective date of July 1, 1994. If the final regulations are acceptable to EPA, Alaska expects to receive state program approval on the effective date of the regulations.

Over the next several months, EPA will be seeking public comments on alternative approaches to groundwater monitoring at small landfills. EPA expects to hold a public hearing on this subject in Alaska in March or April. DEC urges representatives of affected communities to attend this hearing and provide testimony on practical monitoring alternatives for Alaska. For more information on this matter, please contact Glenn Miller or Heather Stockard at 465-5150.

Juneau Empire
Editorial
11/21/93

Don't fool with Alaska's water

Clean-water regs not strict enough

Pure, clean water is as fundamental to the Alaska mystique as glaciers, Mount McKinley, grizzly bears and the northern lights. Clean water is the very basis of life and the source of livelihood for many who live here.

It's no wonder, then, that proposals by the Hickel administration to relax Alaska's water-quality regulations have generated so much rancor. People just don't buy the argument that *minimum* clean-water standards are good enough. Not in Alaska, anyway.

Yet, when it comes right down to it, that's what administration officials are trying to sell.

They're not throwing out clean-water protections, but they are, in some cases, proposing to weaken already existing standards.

They're not proposing to let industrial polluters dump toxics into salmon-spawning streams, but they would allow carcinogens like dioxin and arsenic in saltwater mixing zones frequented by shellfish, salmon and marine mammals.

They're not ignoring guidelines on limiting the cancer risk to humans from industrial discharge, but they have chosen the most lenient practical standard allowed by the federal government. Thirty-six other states, including every western state except Nevada, have opted for tougher human health risk criteria. Even California, where our governor wants to sell Alaska's water, has the higher standard.

Of course, state officials strongly defend their plan and acknowledge that politics is part of the clean-water equation. They say they're trying to strike a balance between environmental protection and the economic gains provided by pulp mills, mines and other industries.

That's certainly a legitimate and admirable goal. Some critics of the state's water-quality proposals probably *would* be happy if resource development companies packed up and left Alaska.

That's not our sentiment. The mines and mills and the loggers belong here just as much as the kayakers, photographers and backpackers.

But just as relaxed water-quality rules would make life easier and less expensive for developers, they also could make it tougher for fishers, tourism companies and lots of other businesses that prosper from the state's pure-as-snow image. How many potential customers will turn away if the perception spreads that Alaska isn't being as tough as it could be about clean water?

No one wants to choose between, say, mining and tourism or logging and fishing – and no one should have to, even if the regulations are adopted exactly as proposed. But if politics has to be part of the water-quality decision, then why not acknowledge that many other states have adopted stricter standards and still have flourishing industries? Why shouldn't Alaska take that same tough-but-manageable approach to its clean-water rules?

It's one thing for environmental groups to find fault with the Hickel administration's proposal. However, they aren't the only critics. Federal agencies including the U.S. Fish and Wildlife Service, the National Marine Fisheries Service and the Environmental Protection Agency all have suggested changes to the state's plan.

Generally, the agencies' comments are similar to those voiced by critics at public hearings around Southeast: Minimum clean-water standards just aren't good enough for Alaska. They are comments that state officials should heed.

Alaska Department of Environmental Conservation

Alaska's Water Quality Standards - Now Under Review -

- Alaska's Water Quality Standards are required by the federal Clean Water Act to be reviewed every three years. This helps assure the standards are made more effective, appropriate, and practical.
- Standards' purpose: protect human and aquatic life - establish how much pollution is allowed for all waters in Alaska - fresh, marine, and ground waters. Establish pollutants to be controlled, the designated uses of waters to be protected, and the criteria -- the actual numeric limit -- for the pollutants.
- DEC made its first proposals for revising the standards in 1992, with a 3 1/2 month review period. Two thousand public comments came in, and the department reconsidered many of the issues. Governor Hickel directed formation of a Water Quality Standards Citizens' Advisory Group to assist in reviewing and modifying the 1992 proposals. The group met three times in February - March, 1993.
- The revised proposals now will undergo a second public review from August through October, 1993. The goal is to adopt new standards by December 1 to ensure protection of human health and aquatic life, based upon sound science, while remaining reasonable and do-able.
- The 1993 proposals contain all the topics in the 1992 proposals except the adoption of "human health criteria" for dioxin, arsenic, and chloroform. More time is required for these controversial and technically difficult issues; human health criteria for over 60 carcinogens will be taken up, with more public review, after current revisions are completed.

Still included in the proposals are revisions to:

- Exempt some constructed waste treatment ponds from water quality standards: Recognizes that a sewage lagoon, sediment settling pond, etc, cannot meet all water quality standards within the treatment works. Yet if this flexibility is given, care must be exercised to assure that water quality standards are met in all adjacent surface waters and groundwaters.
- Update fecal coliform bacteria standard for recreational waters: Old standards set the recreational limit the same as the limit for drinking water (20 fecal coliforms per 100 ml. of water). The recreational limit should be set at the nationally-recognized standard of 200 fecal coliforms per 100 ml. of water. Standards for drinking water use will remain at 20.
- Clarify settleable solids / sediment standard to bring in line with current actual practices for measuring this pollutant. Language of old standard restricts suspended solids to the point that, if actually applied, would shut down most industries and sewage treatment plants.
- Update toxic substances standard by putting in a new method that will let the state develop

"Alaska-specific" standards to protect waters at "no observed effects" levels—pollutant levels at which Alaska organisms can live normal lifespans with no observed effects. Also, add new prohibition of toxic effects in waters or sediments.

- **Raise the aesthetic color limit for drinking water use** from 5 to 15 "color units" to bring it in line with the federally-recommended limit for public water supplies. Also, change the seafood processing use from 5 color units to language stating, "shall not interfere with the use, or make the water unfit or unsafe for the use."
- **Correct the method for measuring the "total hydrocarbons" standard:** The old method for measuring is incorrect; a scientifically-correct method will be substituted. Retain existing criteria for hydrocarbons. Also, remove reference to criteria based upon the EPA "acute toxicity test," and require instead that dischargers show no toxicity in any discharge outside of a "mixing zone".
- **Adopt a human health risk level of 1 in 100,000** as the basis for developing "human health criteria" for carcinogens in 1994. Selecting a human health risk level is a public policy decision, and is not a matter of science. The risk level represents an individual's probability of additional cancer from a lifetime of consuming set amounts of contaminated water and fish. The stated risk applies only to those who consume contaminated water and fish, not the general population. The current cancer rate in the U.S. is 25,000 per 100,000 people. At the proposed human health risk level, if a population of 100,000 people drank and ate the same amounts of contaminated water and fish, cancer cases would be expected to increase to 25,001. Human health criteria set limits on pollutant discharges that will not exceed the selected risk level. The criteria incorporate assumptions for fresh water consumed and fish products consumed, and scientific values for "bioaccumulation" and "cancer potency factor." All of these factors will be addressed in developing human health criteria in 1994.
- **Limit the toxicity of whole effluents** by requiring dischargers to test directly the actual whole effluent. This will guard against possible cumulative effects of toxic substances that are combined in discharges.
- **Modify site-specific criteria** so that, where natural conditions exceed the state's existing criteria, DEC can adopt the naturally-occurring levels as the criteria that apply. That is, the discharger can discharge the same concentrations as occur naturally, but no more.
- **Update and clarify the provisions for mixing zones**, which are prescribed areas of water in which dischargers are allowed to dilute their discharges to meet water quality standards. Standards can be exceeded in a mixing zone, but not outside of it. Changes will clarify mixing zone provisions and add new restrictions to limit bioaccumulation and carcinogens in mixing zones; protect uses of the waterbody as a whole; require treating waste using the most effective and feasible methods; add procedures for existing zones in rivers and streams; and others.
- **Clarify the criteria for groundwater:** Groundwaters currently are protected as fresh waters and also for marine industrial use. This clarification will remove the redundant marine industrial use.

To obtain copies of the proposed regulations or other information, contact:

Dave Sturdevant
Dept. of Environmental Conservation
410 Willoughby Ave.
Juneau, AK 99801
Phone: (907) 465-5060.
Fax: 465-5097

NEWS RELEASE

*Alaska Department of Environmental Conservation
410 Willoughby Ave. Juneau, Alaska 99801-1795
Phone: (907) 465-5009 Fax: 465-5097*

July 28, 1993

Contact: Marti Early

STATE INVITES SECOND ROUND OF PUBLIC REVIEW FOR REVISIONS OF WATER QUALITY STANDARDS

Juneau... After one round of public review last year, with involvement of a Citizens Advisory Group, the state made substantial changes in its proposals for revising water quality standards. The Department of Environmental Conservation (DEC) is inviting another look by the public, from August 2 through November 1.

"Last time we received over 2000 comments across a wide spectrum of opinion, and with many constructive technical and policy suggestions. Our proposals were improved a great deal by this public input, and now it's time to see what Alaskans think about the final package. We're hoping for full participation," said DEC Commissioner John Sandor.

The revisions are part of a "triennial review and revision" of water quality standards required by the federal Clean Water Act. Water quality standards set specific numerical limits for how much pollution, and which types, can be discharged into all fresh and marine waters of the state.

In the first round of public participation, six public hearings were held in Alaska communities in addition to meetings with individual interest groups. The department received roughly 2000 written comments.

The new proposals will be available at local DEC offices during the comment period beginning August 2. Both workshops and hearings will be held in six Alaska cities, followed by a statewide teleconference. During the public comment period DEC staff also will make presentations to local clubs and civic organizations to explain the proposals.

"The extra time to verify scientific information, methods of analysis and details of procedures have improved these proposed water quality standards from the July 1992 version," according the Doug Redburn, chief of DEC's Water Quality Management section. Public comments and meetings of the newly established Water Quality

Standards Advisory Group were instrumental in strengthening the proposals, according to Redburn.

SCHEDULE OF PUBLIC WORKSHOPS AND HEARINGS

A public information workshop will be held one day before each public hearing. The workshops will be to discuss the proposed revisions to the water quality standards, and the public hearings to receive public testimony on the proposed revisions.

<u>City</u>	<u>Workshop</u>	<u>Hearing</u>	<u>Location</u>
Fairbanks	Sept. 27	Sept. 28	Noel Wien Library, 1215 Cowles St.
Anchorage	Sept. 29	Sept. 30	Egan Center, Boardroom, 555 West 5th Ave.
Juneau	Oct. 4	Oct. 5	Centennial Hall, Egan Room, 100 Egan Dr.
Haines	Oct. 6	Oct. 7	Chilkat Center, Tower Rd. and Theater Dr.
Ketchikan	Oct. 11	Oct. 12	Westmark Cape Fox, 800 Venetia Way
Sitka	Oct. 13	Oct. 14	Centennial Bldg, Rousseau Rm., 330 Harbor

Both hearings and workshops will begin at 7:00 pm and end at 10:00 pm.

In addition, a statewide public hearing by teleconference, using Legislature's teleconference system, will be held on October 19, 9:00 am through 7:00 pm. Locations to be announced.

Inquiries regarding the water quality standards or public participation should be directed to:

Dave Sturdevant / WQM
Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Phone: (907) 465-5276
FAX: (907) 465-5274

ATTACHMENT: Fact sheet on proposed Water Quality Standards revisions.

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Alaska Department of Environmental Conservation
Division of Environmental Quality
Water Quality Standards Review
410 Willoughby Ave., Suite 105
Juneau, Alaska 99801

Revisions to Water Quality Standards 1992 and 1993 Proposals; Current Regulations

	1993 Proposal	1992 Proposal	Current Regulation
Treatment Works	Add a new paragraph at .010(c) to exclude Treatment Works from WQS; adopt the statutory definition of "waters;" change restriction that treatment systems be "lined or constructed so that seepage into the ground is not allowed" to meeting criteria "in adjacent surface waters and groundwaters at specified points of compliance."	Modified exclusion of treatment systems in current definition of "water" from those that are "lined or constructed so that seepage into the ground is not allowed" to those that are "approved by the department" or are "constructed and operated in accordance with valid state or federal disposal permits."	The current definition of "waters" exempts waters that are "lined or constructed so that seepage into the ground is not allowed." There are two concerns with this provision: it does not accommodate unlined ponds, and it inappropriately modifies the statutory definition of waters.
Fecal Coliform Bacteria	SAME as 1992	Change the criterion from 20 to 200 Fecal Coliforms per 100 ml for the Contact Recreation designated use.	The current criterion for the Contact Recreation designated use is 20 Fecal Coliforms per 100 ml.
Sediment/Settleable Solids	SAME as 1992	Change name, definition and selected criteria from Sediment to Settleable Solids.	The current standards for Sediment are stated in ambiguous terms. Only a method for measuring Settleable Solids is expressed; no method for measuring suspended solids is stated. However, legal challenge has resulted in a court ruling that the standard must be interpreted to include measurement of Total Suspended Solids.
Toxic Substances	Replace criteria based on 0.01 times LC ₅₀ with discretionary NOEC criteria; make Drinking Water Standards secondary to aquatic life criteria for the Fish and Wildlife use; add prohibition of toxic substances in concentrations that cause toxic effects.	Replace LC ₅₀ with NOEC as in 1993; delete aquatic life criteria from applicability to groundwater (latter dropped in 1993).	Current regulations state that criteria for toxics will be the lowest of 0.01 times LC ₅₀ , EPA Goldbook criteria, or Alaska Drinking Water Standards.
Color	SAME as 1992, plus add to all numeric criteria "or the natural color unit level, whichever is greater."	Change color limit for freshwater Drinking Water use from 5 to 15 color units; change marine Seafood Processing limit from 5 color units to a narrative.	Current color limit for freshwater Drinking Water use and marine Seafood Processing use is 5 color units if water is untreated and 75 color units if water is to be treated.

1993 Proposal

1992 Proposal

Current Regulation

Petroleum Hydrocarbons	Change "Total Hydrocarbons" to "Total Aqueous Hydrocarbons"; retain 15 ppb and 10 ppb criteria; specify correct analytical method; delete requirement for criteria based on 0.01 times LC 50.	Delete "Total Hydrocarbons" criterion (15 ppb); retain "Total Aromatic Hydrocarbons" criterion (10 ppb).	Current criteria are 10 ug/l for Total Aromatic Hydrocarbons and 15 ug/l for Total Hydrocarbons.
Human Health Risk Level	[NEW SECTION .022] Adopt 10^{-5} cancer risk level as basis for later development of human health criteria.	No specific proposal for risk level; adopt human health criteria for dioxin, arsenic and chloroform at 10^{-5} risk level.	No provision for Human Health Risk Level in current regulations.
Whole Effluent Toxicity	[NEW SECTION .023] Prohibit chronic toxicity outside mixing zone as a limit of 1.0 chronic toxic unit; require toxicity testing; may require use of resident test species.	Similar; slightly different wording.	No provision for Whole Effluent Toxicity in current regulations.
Site-specific Criteria	Modify section .025 to state that natural conditions shall be the applicable site-specific criteria where they are of lower quality than existing criteria; ADEC will establish natural conditions criteria in permits; natural conditions will be set at the highest quality natural level; an applicant must provide all information necessary; site-specific criteria other than natural conditions must be established as regulations.	Add a new paragraph at .010(c) to state that ADEC will, in its discretion, approve natural conditions as applicable criteria in permits if they exceed existing criteria.	Current regulations allow for setting site-specific criteria at natural levels, but terms are unclear.
Mixing Zones	Clarify criteria restricting approval of mixing zones (bioaccumulation, carcinogenic effects); prohibit toxic effects outside the mixing zone; require fully protecting existing uses of the waterbody as a whole; require that wastes be treated using most effective and feasible methods; add new paragraph on procedures for mixing zones in flowing fresh waters; state that the applicant is responsible for providing all information reasonably necessary and carries the burden of proof; define "carcinogenic," "fully protect existing uses," "significantly adverse effects," "toxic," and other key terms.	Similar changes but less specific; wording considerably refined in 1993; no prohibition on toxic effects outside the mixing zone; "fully protect existing uses" applied only to fresh waters.	Current language in Mixing Zone section needs clarification and expansion. Contains no procedures for Mixing Zones in flowing fresh waters.
Groundwaters	Remove the marine Industrial designated use from application to groundwaters; retain application of aquatic life criteria.	Remove the marine Industrial designated use from application to groundwaters; remove application of aquatic life criteria.	The marine Industrial designated use applies to groundwaters; aquatic life criteria also apply to groundwaters.

Water Quality Standards

Briefing Package

for

Governor Walter J. Hickel

Alaska Department of Environmental Conservation

July 8, 1993

Water Quality Standards Timetable

1990

January.....Start Triennial Review
February.....Public Hearings
.....Response to public comments

1991

.....Research

1992

MarchPulp mill draft permits
May/Oct/NovLegislative hearings
July 1.....Public review begins
Sept/Oct/Nov3 extensions of public review
Decemberform Citizens' Advisory Group
.....Review public comments

1993

February/March3 Advisory Group meetings
May 14WQM section recommendations
JuneWater Mgt. Council review
June 28Resource Cabinet Meeting
July 8.....Governor's briefing
August-OctoberPublic review & hearings
DecemberDEC final adoption of regs.



Water Quality Standards Revision

Topics Included

- Exclusion of treatment works
- Fecal coliform bacteria
- Settleable solids / Sediment
- Toxic substances
- Color
- Petroleum hydrocarbons
- Human health risk level
- Limiting toxicity of whole effluent
- Site-specific criteria
- Mixing zones
- Groundwater criteria

Topics Dropped

- Fish consumption
- Dioxin
- Arsenic
- Chloroform



Water Quality Standards Revision

Advisory Group

Mining
— placer
— hard rock
Oil and gas
Pulp mills
Seafood processing
Timber
Fisheries
— Southcentral
— Southeast
Environmental
— Interior
— Southeast
Tourism/Recreation
Subsistence
Municipal
— Large
— Small
Academic (vacant)
Alaska Native Health Board
Water and Wastewater
Board
Water Resources Board

Agencies

Alaska Dept. of Fish &
Game
State Attorney General
U.S. Environmental
Protection Agency



Formula for Establishing Human Health Criteria for Carcinogens

Industry Discharge Limit :

Risk Level X Body Weight

[Fish Consumption X Bioaccumulation + Water Consumption] X Cancer Potency Factor

Policy

- Risk Level

Policy & Science

- Fish Consumption
- Water Consumption
- Body Weight

Science

- Bioaccumulation
- Cancer Potency Factor



Water Quality Standards Revision

Interest Groups

- Industry
- Municipalities
- State & Federal agencies
- Native Alaskans
- Environmental groups
- Fisheries groups
- Media

Controversial Issues

- Human health risk level
- Mixing zones
- Sediment
- Exclusion of treatment works
- Color
- Site-specific natural criteria



ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 PROPOSED SOLID WASTE REGULATIONS (18 AAC 60)
 COMPARISON WITH FEDERAL (40 CFR PART 258) AND STATE REQUIREMENTS

FEDERAL MUNICIPAL SOLID WASTE REQUIREMENTS:

STATE CITATION	FEDERAL CITATION	COMMENTS
60.005 Applicability	258.1	State regs propose 3 classes of landfills not specifically tied to the EPA small community exemptions.
60.025 Access Requirements	258.25	Relaxed for Class III landfills
60.030 Surface Water	258.27	Relaxed for Class III landfills
60.050 Procedures to exclude...	258.20	Relaxed for Class III landfills. Waivers may be granted for communities with no hazardous waste generators.
60.300 Purpose, scope,...	258.1	Adds municipal solid waste user fee.
60.305 Airport Safety	258.10	
60.310 Floodplains	258.11	
60.315 Wetlands	258.12	Adds mitigating language to the "no net loss" provision.
60.320 Fault areas, seismic...	258.13, 258.14, 258.15	Modified for Alaskan conditions. State flexibility allows for appropriate demonstrations.
60.325 Mandatory closure	258.16	State flexibility may allow additional time.

60.330 Cover material requirements...	258.21	Allows alternative cover and provides exemption for combustion ash monofills.
60.335 Cover material, working...	258.21	Relaxed standards for Class III landfills.
60.340 Explosive gases control	258.23	Relaxed for Class III landfills and combustion ash monofills.
60.345 Open burning	258.24	Relaxed for Class III landfills.
60.350 Liquids restrictions	258.28	
60.360 Recordkeeping requirements	259.29	State flexibility allows alternative schedules. State may opt to maintain records for small landfills.
60.365 Design criteria	258.40	State flexibility allows alternative designs. Generally does not apply to Class II or Class III landfills.
60.370 Closure criteria	258.60	State flexibility allows alternative final cover. Closure plan not required for Class III landfills.
60.375 Post-closure care requirements	258.61	State flexibility allows longer or shorter periods of care. Relaxed for Class III landfills.
60.380 Financial assurance	258.70-.73	Not required for Class III landfills. Delayed compliance date for Class II landfills.
60.385 Allowable mechanisms	258.74	State may approve alternative mechanisms.
60.820 Groundwater monitoring...	258.50	May be suspended in areas without an aquifer of resource value. Relaxed for Class III landfills. State flexibility allows alternative compliance schedule.

60.825 Groundwater monitor. systems	258.51	Groundwater monitoring wells must be designed and installed according to State recommended practices.
60.830 Groundwater sampling...	258.53	
60.840 Parameters for...	258 Appendices I & II	State expanded the federal list of parameters to include those analyses required in the 1987 State regulations.
60.850 Detection Monitoring Program	258.54	
60.860 Assessment Monitoring...	258.55	
60.870 Assessment of corrective...	258.56	
60.880 Selection of remedy	258.57	
60.890 Implementation of corrective...	258.58	State flexibility allows "no action" alternative.
60.990 Definitions	258.2	Some definitions added.

MUNICIPAL SOLID WASTE REQUIREMENTS NOT SPECIFIED IN FEDERAL 40 CFR PART 258:
SOME PROVISIONS ALSO APPLY TO NON-MUNICIPAL LANDFILLS

STATE CITATION	PREVIOUS CITATION/REQUIREMENT/COMMENTS
60.010 Accumulation and Storage	60.010 -- Some regions have requested a strengthening of this section to address "sham recycling" situations.
60.015 Transport	60.025 --no significant change
60.020 Wellhead and Aquifer Protect.	State Wellhead Protection Policy
60.035 Intermediate Cover	60.045 -- Some Alaskan landfills operate seasonally. This section will help reduce water pollution during temporary landfill closure.
60.040 Disease Vector, Wildlife...	60.035 -- Wildlife control is more of a problem in Alaska than in "Lower 48" states. This is an appropriate Alaskan provision. Relaxed standards apply to Class III landfills. Modified version of requirement in 1987 regulations.
60.065 Permafrost Landfills	Allows operators of permafrost landfills an exemption from some requirements if they monitor to ensure the landfill remains frozen. Alternatively, a permafrost landfill may opt to follow the full requirements of 18 AAC 60.
60.080 Prompt Closure	60.410(a)(1)(A)
60.200 Permit Requirement	60.200 -- Specifies disposal activities which do not require a permit.
60.205 SW Mgt. Planning	New section added based on requirements of AS 46.06.021 and 46.03.100(e). DEC may not issue disposal permits unless planning has been done.
60.210 Permit Application	60.210 -- Changes reflect new Part 258 requirements and state user fees. (NOTE: Federal law requires states to have a permit program to gain approval. This section and those following set up procedures for the permit system.)

60.220 Permit Issuance	60.220 --
60.225 Permit Renewal & Transfer	60.225 --
60.230 General Permit	60.230 --
60.240 Permit Revocation	60.240 --
60.301 Minimum operator...	This provision was requested by the Solid Waste Association of North America and agreed to by all affected Class I landfill operators.
60.355 Controlling impacts...	60.035
60.800 Visual monitoring	60.310
60.810 Surface water monitoring	Appropriate in areas where subsurface conditions force leachate to move laterally rather than down.
60.900 Waivers	60.900 -- Allows state flexibility to grant additional waiver of requirements (except for Class I landfills)

NON-MUNICIPAL SOLID WASTE REQUIREMENTS (NOT COVERED BY FEDERAL REGULATIONS 40 CFR PART 258)

STATE CITATION	PREVIOUS CITATION/REQUIREMENT/COMMENTS
60.045 Hazardous Waste	60.087 -- Simplified and clarified.
60.055 Medical Waste	60.087(g) -- Exemption added for rural villages to treat waste under the supervision of a licensed health official.
60.060 Radioactive Devices	60.087(e) -- Includes standards for disposal.
60.070 Vehicles and Const. Equip.	60.085 -- Some regions feel this is an important provision.
60.075 Snow Dumps	Added to resolve conflicts in Northern and Southcentral regions.
Article 4 Monofills	Replaces Article 5 Drilling Wastes, 60.085(b), and 60.087(c). Adds standards for Wood Waste, Asbestos, Inert Wastes and Sewage Solids. (SEE NOTE BELOW)
Article 5 Landspreading of Biosolids	Replaces 60.085(b)(3) and incorporates new federal requirements in 40 CFR Part 503.

NOTE: Wood waste, drilling waste and inert waste monofill regulations have no parallel in the federal register. The Solid Waste program created these standards for the following reasons:

1. State law requires a site operator to obtain a permit before disposing of these wastes on the land.
2. If no regulations are adopted, regional permit writers will have no criteria by which to approve or deny permit application.
3. Permits will not be uniform between regions of the state causing unfair advantages to industries operating in only one region. Unwarranted pollution may also result.
4. Minimum standards prevent "bad actors" from damaging the image of industries producing these wastes and provide operators with clear information about the requirements they are expected to meet.

**NOTICE OF PROPOSED CHANGES IN THE
REGULATIONS OF THE ALASKA DEPARTMENT OF
ENVIRONMENTAL CONSERVATION**

Notice is given that the Alaska Department of Environmental Conservation, under authority vested by AS 46.03.010, 46.03.020, 46.03.100, 46.03.110, 46.03.810, and AS 46.06.080, proposes to amend Chapter 60, Title 18, of the Alaska Administrative Code dealing with Solid Waste Management (18 AAC 60), to implement AS 46.03.020, 46.03.100, and AS 46.06.080 as follows:

PURPOSE OF PROPOSED CHANGES

18 AAC 60 is proposed to be amended to

1. Incorporate amendments to federal law;
2. Adopt regulations for solid waste management planning as required by AS 46.03.100(e);
3. Modify regulations for disposal of oil industry drilling waste as suggested by the Interstate Oil and Gas Compact Commission;
4. Propose new regulations to clarify department policy regarding the disposal of nonhazardous, nonmunicipal waste such as construction debris, wood waste, and contaminated soil;
5. Include user fees for certain solid waste management activities.

These proposed regulations are designed to improve solid waste management in Alaska. The federal government established the overall direction for solid waste management with the passage of the Resource Conservation and Recovery Act (RCRA) in 1976. The U.S. Environmental Protection Agency (EPA) was directed by the same law to examine state programs and approve only those programs that prohibit open dumps. In 1991 EPA published minimum standards for municipal waste landfills. As an incentive for states to adopt the program, EPA will allow approved states to take a flexible approach to implementing the regulations. In states which do not adopt an effective program, the rigid and more stringent federal standards will be enforced.

NOTICE IS GIVEN that any person interested may present oral or written statements or arguments relevant to the proposed action at public hearings to be held as listed below. **The hearings will be preceded by an informational presentation by department staff, beginning at 7:00 p.m., with testimony taken thereafter.**

Date	Time	City	Location
October 25	7:00 p.m.	Bethel	Log Cabin 326 Akiachak Avenue
October 26	7:00 p.m.	Fairbanks	Alaskaland, Pioneer Hall Lobby, 2300 Airport Way

October 27	7:00 p.m.	Soldotna	Kenai Peninsula Borough Assembly Chambers 144 N. Binkley
October 28	7:00 p.m.	Anchorage	William A. Egan Civic and Convention Center 555 W. Fifth Avenue
November 1	7:00 p.m.	Juneau	Centennial Hall Egan Room, 101 Egan Dr.

The hearing might be extended to accommodate the testimony of any person who is present before 8:00 p.m. and, if necessary, will continue from day to day until all testimony has been taken.

NOTICE IS ALSO GIVEN that any person interested may present written statements or arguments relevant to the proposed action by writing to Mr. Glenn Miller, Alaska Department of Environmental Conservation, 410 Willoughby Avenue, Suite 105, Juneau, AK 99801-1795. **Comments will be included in the record if they are received on or before 4:30 p.m. on November 30, 1993.**

If you are a person with a disability who may need special modification in order to comment on the proposed regulations, please contact Billie Wilson at (907) 465-5061 no later than November 8, 1993, to make any necessary arrangements.

This action is not expected to require an increased appropriation.

Copies of the proposed regulations, including a 15-page summary of the proposed changes, may be picked up at any regional office of the department or by writing to Mr. Miller at the address given above.

Additional information on the proposed amendments to 18 AAC 60 may be obtained by calling Mr. Miller at 465-5153.

The Department of Environmental Conservation, after November 30, 1993, will either adopt these or other proposals dealing with the same subject, without further notice, or decide to take no action on them.

Dated at Juneau, Alaska, this 16 day of September, 1993.


 _____ FOR
 John Sandor, Commissioner
 Department of Environmental Conservation

DRAFT SOLID WASTE REGULATIONS
FACT SUMMARY SEPTEMBER 8, 1993

The solid waste program drafted new regulations for landfills. We are requesting comments from people who are interested in solid waste management. Our goal is to make the regulations easy to understand and fair to landfill operators as well as their site neighbors. The comment period is open now and will close on November 30, 1993. We have arranged public meetings to discuss what the regulations mean, and who will be affected. We will record formal testimony at the meetings. All written comments and oral testimony will be fully considered after the comment period ends.

The state is proposing new solid waste regulations because the federal government has set new minimum standards for municipal solid waste landfills (MSWLF). In this summary and in the regulations you will see references to "RCRA subtitle D," and "Part 258." "RCRA" means the Resource Conservation and Recovery Act passed by Congress in 1976. In RCR/ subtitle D, Congress banned open dumps and ordered the Environmental Protection Agency (EPA) to define the term "open dump" in regulations. The regulations written by EPA are found in Part 258, Title 40 of the Code of Federal Regulations ("Part 258"). They were finalized in October 1991.

The federal regulations are written as national standards. Some regulations do not consider the special conditions found in Alaska. Alaska is attempting to adopt regulations, and gain approval from the Federal EPA to control all of the solid waste management in the State. The EPA will approve Alaska's solid waste program only if Alaska adopts regulations that meet RCRA standards. We must also get landfill operators to comply with our regulations. If the State fails to build an effective program, the Federal regulations, which are more stringent, and less flexible than the State regulations, will go into effect.

Besides the regulatory changes for MSWLFs, new rules are being proposed for handling various other wastes. If these regulations are adopted, landfills will be classified as:

- a. Class I municipal waste (serving more than 10,000 people)
- b. Class II municipal waste (serving less than 10,000 people)
- c. Class III municipal waste (serving small villages with subsistence economies)
- d. Drilling wastes (from the oil industry)
- e. Wood wastes (from the timber industry)
- f. Asbestos
- g. Inert wastes (such as broken pavements, construction debris, coal boiler ash, etc.)
- h. sewage solids and septic tank pumpings

We are also proposing new regulations for the landspreading of biosolids (formerly known as sewage sludge).

If you wish to find out how you will be affected by the regulations, start with the general standards in Article 1 on page 2. Since most of the rules are for landfills, we start by defining various types of landfills. The general standards make it illegal to store or transport waste carelessly, or store for more than one year without a good reason. Some standards that apply to all landfills are included in Article 1 so we do not have to repeat them elsewhere. For example, all landfills are required to prevent water pollution, and to control access to the site by site users and animals. Article 1 also limits the disposal of radioactive materials and other special wastes.

Waste managers who wish to store large quantities of waste, or gain approval for a plan to close out an inactive drilling waste site, must pay a fee of \$1,000 to support the services provided by the Solid Waste Program field operations. A fee of \$2,000 must accompany each application for an industrial waste monofill, while Class I and Class II municipal waste disposal sites must pay an annual fee of \$1 for each ton of waste disposed. DEC feels these fees are a legitimate cost of waste management oversight, and should be passed on to the people who generate the waste. Fees based on waste management will provide a dependable source of funding, to supplement declining state revenues. Without a stable funding source the State program might not obtain program approval from EPA.

The regulations propose a new definition of medical waste, based on a definition written by the Agency for Toxic Substances and Disease Registry. The regulation concerning medical waste remains the same. Medical waste must be disinfected or incinerated before landfilling.

Smoke detectors and other wastes which give off some radiation will be allowed into landfills, provided the operator can certify that workers at the landfill will receive less than a 10 millirem exposure per year, and members of the public will receive less than a 1 millirem exposure per year.

Article 2 includes procedures that the State and all landfill operators must follow to meet the legal requirements for a permit. No person is allowed to operate a landfill without a permit issued by DEC.

The draft regulations allow waste disposal without a permit as part of an approved contaminated site clean up under 18 AAC chapters 75 and 78. This is for tank leaks, spills, or illegal dump sites. The intent is to streamline the procedure of leaving soil with trace contamination in place, where appropriate, and returning purified soil to the site. Another key factor in deciding whether a fill site needs a landfill permit is the definition of "solid waste". The definition has been changed. The new definition is printed at the end of this fact summary sheet.

One of the most controversial sections of the draft regulations is the requirement for landfill permit applicants to prepare a solid waste management plan. This is not a federal requirement but rather a state mandate. In 1990 the legislature passed a law known as the Waste Reduction, Recycling and Planning Act, which sets policy for waste management. The policy of the State is that waste reduction, recycling, and treatment options should be exhausted before disposal of the waste is considered. Landfill permit applicants must show that this is being done before a permit can be issued. The planning requirement is found in 18 AAC 60.205.

Article 3 sets standards for Municipal Solid Waste Landfills (MSWLFs).

1. General Standards

Class I landfills will be required to comply with all of the federal criteria as modified by State flexibility.

The Class II category generally consists of landfills serving communities of approximately 10,000 people or less. These landfills do not necessarily need liners but will normally have to monitor ground water.

The Class III category includes landfills in small (less than 1,000 people), villages that have a primarily subsistence economy.

To qualify as a Class III facility, the landfill must accept no greater than 3 tons per day (based on an Alaskan average of 6 lbs/person/day; this equates to a community of approximately 1,000 people or less). Small villages that take more than 50% of their waste from industrial or government operations will not qualify as Class III.

Alaska proposes a Class III category of landfills that, beyond providing an exemption from the design requirements available to Class II landfills, would allow for a much more flexible set of operating standards. A Class III community would have to agree to sign a permit under the condition that, within a period of ten years from the date of permit signature, or within 15 years of the effective date of the State regulations, whichever is sooner, the landfill must comply with the full set of standards required for a Class II facility. Alaska would prefer to adopt permanent Class III standards. The Federal EPA may not have the statutory authority, however, to approve our solid waste program if the regulations allow permanent Class III landfills. Alaska is working to modify the RCRA law to allow more State flexibility in regulating Class III landfills.

Many rural community landfills currently do not have a permit. While a permit will help legitimize a landfill by allowing it to operate legally, it also will encourage resolution of land ownership issues in many of these communities. Many Class III communities will be reluctant, however, to agree to a permit that requires them to follow landfill operating requirements that are well beyond their economic capabilities, leaving them with no option other than illegal open dumping. DEC issued a Field Directive on November 30, 1990 that allows villages with overwhelming solid waste problems to make incremental improvements under a solid waste management plan without the threat of enforcement.

The next few pages provide a detailed explanation of the municipal solid waste regulations.

a. Airport Safety

Alaska's airport safety provisions are found in 18 AAC 60.305. Municipal landfills may not be located near airport runways unless the landfill owner or operator can show that aircraft will not strike birds attracted to the waste.

b. Floodplains

Alaska will adopt the federal language regarding MSWLF restrictions in floodplains. These restrictions may be found in 18 AAC 60.310. Alaska has had similar restrictions in place since 1983; however, no demonstrations were required of permittees. The new requirements will include the provision for a demonstration that will be done in conjunction with permit issuance.

c. Wetlands

The new regulations adopt the federal language regarding MSWLF restrictions in wetlands to allow the siting of landfills in these locations. These regulations may be found in 18 AAC 60.315. They include a provision for consideration of applicable state wetland laws regarding no net loss of wetlands. The State has added a statement to the federal no net loss language as follows. "The level of mitigation determined to be appropriate and practicable under section 230.10(d) may lead to individual permit decisions which do not fully meet this goal because the mitigation measures necessary to meet this goal are not feasible, not practicable or would accomplish only inconsequential reductions in impacts."

d. Fault Areas, Seismic Impact Zones, and Unstable Areas

Alaska has modified the federal requirements regarding siting an MSWLF in fault areas, seismic impact zones, and unstable areas. These regulations may be found in 18 AAC 60.320. In some areas of the state the fault lines and seismic impact zones are not well understood. Alaska will not require extensive geologic investigations as part of the permit process. Alaska proposes to approve landfill sites located more than 100 feet from faults identified on published maps. The State proposes that any demonstrations be done in conjunction with permit issuance. Alaska believes that the demonstrations will not be extensive for many Class II and III municipal landfills, where few structural components will be needed (e.g., no liner or leachate collection systems will be required at many of these landfills).

e. Closure of Existing Municipal Solid Waste Landfills

Alaska will adopt the federal closure requirement for owners or operators of landfills who cannot make successful demonstrations regarding airport safety, floodplains, or unstable areas. The landfills will be required to close. These requirements can be found in 18 AAC 60.325.

f. Wellhead and Aquifer Protection Program

In addition to the federal location restrictions, Alaska will require owners or operators of any Class of new, existing, or lateral expansion MSWLF to identify and locate existing and possible water supply wells that may potentially be impacted by the MSWLF and take appropriate steps to reduce the level of contamination to the recharge area of the supply well. At a minimum, the owner or operator will be required to ensure that leachate from the landfill does not cause a violation of the State's standards for drinking water quality, set out at 18 AAC 80.020(a) and at 18 AAC 80.050(a), in an aquifer that otherwise would be suitable for use as a drinking water supply. The wellhead and aquifer protection program requirements may be found in 18 AAC 60.020.

Operating Criteria

a. Procedures to Exclude Receipt of Hazardous Waste

As discussed in 18 AAC 60.050, Alaska will require owners or operators of Class I and II municipal landfills to begin an inspection program, or employ other methods (such as prearrangements with collection companies) to ensure that regulated hazardous waste and PCBs are not accepted at the facility. Owners or operators of Class III municipal landfills will be required only to post a sign at the

entrance of the MSWLF notifying users that disposal of regulated hazardous wastes and PCB waste is prohibited.

b. Cover Material Requirements

Alaska is adopting the federal criteria requiring a 6-inch soil cover over the waste at the end of each operating day for Class I and II landfills, including the flexibility to allow:

(1) alternative daily cover as long as it meets the performance standard of 258.21(b); and

(2) temporary waivers due to extreme climatic conditions.

Alaska will not require Class III landfills to cover at the end of each operating day. For most of the Class III communities, the requirement to place cover at the end of each operating day, even if the landfill were open only one day per week, would be difficult to meet. Many of these communities do not: (1) have readily available sources of earthen material for daily cover; (2) have the equipment to apply the material or alternative materials; and/or (3) have the revenue to pay for the labor to apply the daily cover, whether it is earthen material or an alternative material.

c. Explosive Gases Control

Alaska is requiring in 18 AAC 60.340 that owners or operators of Class I and II municipal landfills institute a gas monitoring program to ensure that methane gas concentrations do not exceed the levels in the federal criteria, and take corrective action where the levels are exceeded. The State is allowing owners or operators of Class I and II landfills to monitor less frequently than quarterly if they can show that a less frequent monitoring program would be as protective of human health. The State believes that these demonstrations would be achievable in locations where gas generation and migration would be minimal, such as in areas experiencing continuous permafrost.

Class III MSWLF landfills will be required to comply with the gas control requirements for Class I and II landfills only on an as needed basis to ensure protection of human health. Most of these small landfills have no onsite buildings and are located away from the village living areas so as not to present a potential for endangerment to human health.

d. Air Criteria

Alaska is prohibiting open burning at Class I and II MSWLF landfills, while allowing burning of solid waste at Class III landfills in compliance with the State Implementation Plan under 18 AAC 50.045. Open burning of solid waste at Class III landfills is one of the few methods of controlling scavenging by bears and other forms of wildlife.

e. Surface Water Requirements

The State will require that all landfills be managed to ensure that solid waste is not placed directly in surface water. Additionally, Alaska will require that Class I and II landfills, and to the extent practicable for Class III landfills, do not cause (1) a discharge to waters in violation of the States wastewater discharge requirements under 18 AAC 72, or (2) a discharge of nonpoint sources in violation of the State's nonpoint source pollution control strategy developed under Section 319 of the Clean Water Act and that violate the State's water quality standards set out in 18 AAC 70. Landfill permit applicants will be required to show proof that they have filed a "notice of intent" meeting the storm water discharge requirements of the Clean Water Act.

f. Liquid Restrictions

Alaska is adopting the Federal liquid restriction requirements for all Classes of municipal landfills. Landfill operators may not recirculate leachate into the waste unless the landfill has a composite liner meeting the federal design standard (18 AAC 60.350).

g. Wildlife and Domestic Animal Control

A major concern regarding landfill management in Alaska is the prevention of wildlife and domestic animal access to garbage. Bears, eagles, dogs, fox, and other animals are often attracted to putrescible waste at the landfill, presenting an unhealthy diet for the animals and a danger to users of the facility. Alaska is therefore adopting 18 AAC 60.040(a), requiring owners or operators of Class I and II municipal landfills to operate in a way that prevents access by wildlife and domestic animals to the putrescible waste. Class III landfills will be required to minimize, to the extent practicable, access by these animals.

m. Recordkeeping Requirements

Alaska is requiring that all Classes of MSWLFs maintain the following information, as required, in an operating record:

- o location restriction demonstrations;
- o inspection records, training procedures, and notification procedures;
- o demonstrations for reduction in frequency of gas monitoring, results from monitoring, and remediation plans;
- o ground-water and surface water monitoring demonstrations, certifications, findings, testing, and analytical data;
- o closure and post-closure plans and associated monitoring, testing, and analytical data; and
- o cost estimates and financial assurance documentation.

The State is reserving the right to maintain the aforementioned information for the owner or operator. The State is not requiring the owner or operating to notify the State each time an item has been placed in the operating record; however, the State does reserve the right to request information in the operating record be made available for inspection.

Design Criteria

The State is requiring that the design criteria in 18 AAC 60.360. apply only to new and lateral expansion of Class I municipal landfills. Because Class II and III landfills meet the federal small landfill exemption, these two Classes of landfills will not be required to install a liner system. The State will require a liner in Class II or III landfills if: (1) ground-water contamination resulting from the landfill is discovered, or (2) the State believes that a liner is necessary for protection of human health or the environment. In terms of the liner design requirements, the State will adopt both the design standard and the performance standard as specified in the Federal criteria.

Closure and Post-Closure Standards

The State will require that an owner or operator of any Class of MSWLF close according to the federal criteria:

- o the cover must have a permeability no greater than 10^{-5} cm/sec;
- o at least 18 inches of earthen material; and
- o at least 6 inches of soil to support native growth.

If a landfill has a clay or flexible membrane liner then the final cover design must also include a clay or flexible membrane layer. The State reserves the flexibility to approve

an alternative cover system that meets the objective of the Federal criteria. This will be useful in areas where earthen material for compaction to 10^{-5} is not readily available or in permafrost situations where a "freezeback" design may not be accommodated by the Federal cover design.

The State is requiring that all Classes of MSWLF undergo post-closure care for a 30 year period, unless the State, in its discretion, determines that a shorter or longer period is appropriate. The post-closure care activities are the same as the Federal activities. The State is requiring written post-closure plans from owners or operators of Class I and II landfills.

Financial Assurance Criteria

The State will require financial assurance for closure, post-closure, and known corrective action for owners and operators of Class I and II landfills, except those owners or operators who are Federal or State government entities whose debts and liabilities are those of the United States or of Alaska. The State is requiring that Class I landfills have financial assurance in place by April 9, 1995, while Class II landfills will be given an additional 9 years to demonstrate compliance (i.e., April 9, 2004). The State believes that this additional time is necessary to allow these communities to secure financial assurance. Owners and operators of Class III landfills will not be required to comply with the financial assurance requirements; however, because Class III landfills will be required to comply with Class II requirements within 10 years of signing their permit, the timeframe for Class III owners/operators to secure a financial instrument is, de facto, the same as for Class II owners/operators. The State's financial instruments are the same as the Federal instruments. The state intends to adopt a financial test for local governments and corporations when the rule concerning this new test is published by the EPA. The State is reserving the flexibility to allow an alternative instrument as long as it meets the criteria in 258.74(!).

Article 4 Monofills

Monofills are landfills that are used for disposal of primarily a single type of waste. This article is made up of some regulations from DEC's existing 1987 regulations, and some new standards. The wastes covered under article 4 are not municipal solid waste or hazardous wastes as defined by the federal government. Wastes covered include

1. Drilling wastes (from the oil industry)
2. Wood wastes (from the timber industry)
3. Asbestos
4. Inert wastes (such as broken pavements, construction debris, coal boiler ash, etc.)
5. Sewage solids and septic tank pumpings

The first two sections apply to all monofills. Monofills must be located on stable ground, where they are safe from floods. They must be operated to keep noise, litter, and other nuisance factors under control.

The oil industry drilling waste regulations have the following changes:

- Set a deadline for the close out of inactive waste sites.
- Set a more flexible compliance point for surface water monitoring.
- Expand temporary storage requirements.
- Prohibit less than 2 ft of freeboard in reserve pits.
- Adopt ground water monitoring methods from the municipal waste regulations.
- Prohibit the construction of new barrier berm containment structures.

A new section on wood waste disposal is proposed in 18 AAC 60.425. The wood waste rules are intended to help control water pollution and combustion in wood piles used by the timber industry. A layer of non-combustible material will separate 10 ft layers of wood chip monofills more than 20 feet high. Operators of wood chip monofills more than 20 feet high will be required to monitor the temperature of the waste to detect combustion before fires break out. Large wood waste landfills that might threaten drinking water aquifers will be required to collect leachate, and monitor for ground water contamination.

The asbestos disposal regulations have been updated to reflect changes in the federal regulations. Manifests are now required for waste asbestos shipments. Asbestos landfill operators will be required to inspect incoming loads, sign manifests, and keep records for each shipment. The new regulations have also been relaxed to allow non-friable asbestos disposal in any permitted landfill. The DEC asbestos disposal field directive (2350) will be canceled when the new regulations take effect.

A new regulation is proposed for Inert Waste in 18 AAC 60.435. Inert waste is defined at the end of this summary. The regulation calls for the installation of a ground water monitoring system at inert waste landfills located in areas with good ground water. Liners are not required.

The EPA recently published regulations for the disposal of sewage sludge. The federal regulations (40 CFR Part 503) cover the agricultural landspreading, landfilling, and incineration of sludge. In article 5 of the draft regulations, starting on page 56, DEC proposes to regulate agricultural landspreading of sludges (we call them biosolids) according to the minimum federal standards. The landfilling of wastes like waste water lagoon dredge, and septic tank pumpings has been added to article 4 in 18 AAC 60.440. DEC does not plan to adopt the federal standards for sludge incineration at this time.

We propose to treat ash from municipal waste incinerators the same as other municipal waste with the following exceptions:

- Daily cover and gas monitoring will not be necessary.
- Ash monofills must be graded so that they shed water.

The state will consider issuing a general permit for monofills accepting ash from small incinerators.

Article 8 Monitoring and Corrective Action

Article 8 sets standards that cause landfill operators to detect releases of wastes or contamination from the landfill. Landfill operators will be required to do visual inspections, and may be required to sample surface waters near the landfill, but the most extensive requirements of this article are for ground water monitoring.

The State will require that all Class I landfills comply with the ground-water monitoring and corrective action requirements unless the owner or operator can make a successful no-migration demonstration. Alaska is allowing consideration of the resource value of nearby aquifers when performing a no-migration demonstration. If there are no drinking water aquifers in the watershed where the landfill is located, Alaska will consider suspending ground-water monitoring for that landfill. If monitoring is required at such landfills the system will be designed to evaluate the potential for violations of surface water quality standards.

Because Class II and III municipal landfills meet the federal small landfill exemption, the EPA originally ruled that they would not have to comply with the ground-water monitoring and corrective action requirements. On May 7, 1993 the Circuit Court of Appeals in Washington, D.C. ruled that all landfills must monitor ground water as necessary to detect contamination from the waste. The EPA responded by proposing to extend the effective date of the regulations for class II and III landfills. They are also considering a request that new ground water monitoring standards be set for small landfills. DEC intends to extend the effective date to match the Federal deadline extension after the EPA issues a final ruling. The EPA expects to issue the final rule before October 9, 1993.

The State will require that all new Class I landfills come into compliance with the ground-water monitoring and corrective action requirements before accepting waste. For Class I existing and lateral expansion landfills the State will devise a compliance schedule based on potential risks posed by the landfill to human health and the environment.

DEFINITIONS

Some of the new definitions at the end of the draft regulations are listed below.

(16) "aquifer with resource value" means an aquifer that is being used as a source of drinking water, or that could be developed as a source of potable drinking water, using normal drinking water well construction methods;

(36) "contaminated soil" means soil and residue from a spill of a petroleum product or other chemical that meets the following criteria:

(A) does not exhibit a characteristic of a hazardous waste or contain a listed hazardous waste as defined by 40 CFR 261;

(B) contains less than 1ppm concentration of polychlorinated biphenyls (PCBs);

(C) does not contain free liquids as defined by the EPA Paint Filter Test;

(D) contains petroleum products in concentrations higher than the following limits:

	Limit	Test
Total Petroleum Hydrocarbons	1,000 ppm	418.1
Total BTEX (Benzene, Toluene, Xylene, & Ethylbenzene)	100 ppm	8020
Lead	1,000 ppm	3050/7421

(E) contains waste oil with concentrations higher than the following limits:

	Limit	Test
Total Petroleum Hydrocarbons	1,000 ppm	418.1
Total BTEX (Benzene, Toluene, Xylene, & Ethylbenzene)	100 ppm	8020
Lead	1,000 ppm	3050/7421
Arsenic	400 ppm	7060/7061
Chromium	500 ppm	7190/7191
Total Organic Halogens	100 ppm	8010

(F) contains chemicals other than petroleum products, evaluated on a case-by-case basis and approved by the department;

(70) "inert waste" means solid waste that has a low potential to pollute air or water, and that does not normally attract wildlife, including coal power plant ash, scrap metal, auto fluff, construction and demolition waste, pavement rubble, and purified soil from contaminated sites; "inert waste" does not include asbestos-containing asphalt material;

(91) "medical waste" means laboratory waste consisting of discarded cultures and stocks of infectious agents and associated microbiologicals; pathological wastes consisting of tissues, organs, and body parts removed during surgery, autopsy, or other medical procedure; disposable materials from patients in selected types of isolation with highly communicable diseases such as diseases listed under Classification 4 by the Centers for Disease Control in *Classification of Etiologic Agents on the Basis of Hazard*, 1974; used and unused discarded sharps, including hypodermic needles, syringes, Pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and broken or unbroken glassware in contact with infectious agents, including slides and cover slips; animal waste such as discarded material originating from animals inoculated with infectious agents during research, production of biologicals, or blood, blood products, and other "regulated waste" as defined in AAC 61, Subchapter 17, Blr odborne Pathogens;

(144) "solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved material in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342 (Clean Water Act, section 402) as amended through the effective date of this section, or source, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923); "solid waste" does not include

(A) land clearing and grubbing waste from road construction;

(B) portland cement type concrete;

(C) spoil and overburden from mining operations;

(D) mining waste regulated by the Federal Surface Mining Control and Reclamation Act of 1977 30 U.S.C. 1201 - 1328, as amended through the effective date of this section, and by the Alaska Surface Mining Control and Reclamation Act of 1982 (AS 27.21), as amended through the date the department adopts this section;

(E) crumb rubber used in asphalt paving;

(F) crushed glass or crushed pavement used for construction backfill, road base, or as aggregate in pavement;

(G) domestic sewage and other wastes that are discharged into and pass through a sewer system to a publicly owned treatment works;

(H) industrial or mining wastes that are being collected, stored, or treated in

(i) a wastewater treatment plant before discharge or removal; or

(ii) an industrial processing facility for continual re-use;

(I) industrial discharges that are point sources subject to permits under 33 U.S.C. 1342 (Federal Water Pollution Control Act, sec. 402), as amended through the date the department adopts this section; or

(J) source, special nuclear, or byproduct material as defined by the Nuclear Waste Policy of 1982, as amended through the date the department adopts this section;

(163) "wood waste" means a solid waste that is generated during the transfer or processing of timber, consisting of wood chips, bark, butt ends, stumps, sawdust, and other waste generated in amounts greater than 10 cubic yards per year as a result of a commercial activity or cleanup project.

Tuesday, Sept. 14, 1993

Administration reassesses regulation of dioxin

Paper industry, environmentalists pressure the EPA on potential rules

By RITA BEAMISH
Associated Press Writer

WASHINGTON — The Clinton administration is embroiled in a reassessment of dioxin, one of the most toxic chemicals, as it faces pressure from industry and environmentalists over whether to revamp regulation of the substance.

The Environmental Protection Agency has been taking an overall look at dioxin dangers, while the White House is working on a recycling directive that could affect the way the paper industry bleaches pulp, a process that generates tiny amounts of dioxin.

At issue is an argument over just how dangerous dioxin is to human health. The answer could spark a regulatory upheaval to deal with chemical processes that produce dioxin as a byproduct.

The chemical and paper industries and environmental groups are weighing in heavily.

Environmentalists are pushing the EPA to clamp down on dioxin releases from the paper industry, with a goal of ultimately identifying

and phasing out all dioxin sources. They say evidence strongly links dioxin, which is produced in many chemical processes using chlorine, to cancer and reproductive disorders.

Thus, the Natural Resources Defense Council and more than 50 groups planned to petition the EPA on Tuesday to ban chlorine from the paper production process.

The paper industry, believing itself unfairly targeted among dioxin producers, argues the data is inadequate to conclude the compound is a human carcinogen.

"There are no studies that say dioxin causes cancer in humans," said John Festa, health and environment scientist for the American Forest and Paper Association. The association employed scientists to comment on the EPA's ongoing study of dioxin, and they reached the same conclusion.

After a recent peer review meeting on the EPA study, some EPA officials said that while dioxin causes cancer in animals, data so far is insufficient to conclusively prove the human link.

Still, said EPA environmental toxicology director Linda Birnbaum, "The human data are not inconsistent with the animal data."

William Farland, director of the EPA's office of health and environmental assessment, said that when the agency concludes its study in a year or so, it will be able to update its 1985 analysis of dioxin.

That analysis found that, based on animal studies, dioxin was probably carcinogenic in humans.

"This time we will say there is more data to weigh into that probability but not conclusively," he said.

The term dioxin refers to a family of chemical byproducts produced in many chemical processes using chlorine. They are also released when chlorine-containing substances are burned in incinerators.

Farland called dioxin a "ubiquitous pollutant" that is extremely persistent and accumulates in fatty tissues. Human exposure is mostly through contaminated fish, beef and dairy products.

Among the new data being evaluated, researchers found higher than normal rates of cancer in people exposed to a dioxin cloud after a chemical plant explosion in Italy 17 years ago.

The administration is dealing with dioxin on three fronts:

"There are no studies that say dioxin causes cancer in humans."

— John Festa, American Forest and Paper Association scientist

— EPA's overall scientific reassessment, begun two years ago, on the human health risks as well as environmental affects of dioxin and related substances.

— A new rule on paper mill discharge of dioxin and other chlorinated organics. EPA's proposal, expected in several weeks, would not bar chlorine outright but would greatly reduce the dioxin produced and discharged, according to an EPA official.

— A White House executive order on recycling that, among other things, would encourage purchase of recycled paper by the government.

In draft form earlier this summer, the executive order contained a provision that would move toward purchase of paper produced without chlorine.

The American Forest and Paper Association

vigorously lobbied the White House against the chlorine-free provision, enlisting former top Clinton aide Betsey Wright to secure a second meeting this summer after an initial hearing with White House officials.

The final decision on a chlorine-free mandate has not been made, said Catherine Zoi, chief of staff for the White House Office on Environmental Policy.

But in testament to the high-stakes on dioxin questions, she said the pending executive order has generated a barrage of calls from groups on all sides of the issue.

AFPA spokesman Barry Polsky said converting to chlorine-free technology would cost the industry \$13 billion over the next five years. Mills already have greatly reduced dioxin discharges, to a total of four ounces per year industry-wide, he said.

Alaska briefs

Judge dismisses apple growers' Alar lawsuit

Soldier dies in crash

FAIRBANKS (AP) — A Fort Wainwright soldier crashed and died at the Fairbanks International Airport while practicing landings and takeoffs on his own time in a small private plane, officials said.

His name was not immediately re-

By MARK JEWELL
Associated Press Writer

SPOKANE, Wash. — A federal judge dismissed a \$250 million lawsuit Monday that Washington's apple growers had filed against CBS Inc. after "60 Minutes" broadcast a report linking the chemical Alar to cancer.

Nielsen ruled the apple growers hadn't proved their case.

First Amendment law requires plaintiffs bringing such suits to prove media reports were false. Nielsen said in a seven-page ruling that the growers failed to do so.

"Even if CBS' statements are false,

"We are delighted with the judge's ruling, we always believed that the story would withstand scrutiny, and that the First Amendment would vindicate our rights," Doug Jacobs, associate general counsel for CBS Inc., said in a statement.

Lawyers representing the growers

cast triggered a nationwide panic among consumers.

Washington state, which grows nearly half of the nation's apple crop, was not mentioned in the broadcast. But the growers contended their livelihoods were harmed because people stopped buying apples.

casts used on food.

Shortly before the program aired, the EPA announced that daminazide sprayed on apples was a probable human cancer risk, but failed to take the steps necessary to remove the chemical from the market, CBS attorneys contended.

MEMORANDUM

STATE OF ALASKA

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Quality

TO: Mike Menge, Director
DATE: December 14, 1993

THRU: Doug Redburn, Chief *DR*
Water Quality Management Section
PHONE: 465-5276

FROM: Dave Sturdevant *DS*
Water Quality Standards
SUBJECT: Tally of 1993 Public
Comments on Proposed
Revisions to Water Quality
Standards

The public comment period on the 1993 proposed revisions to Water Quality Standards ran from August 2 through November 15, 1993. The Department received roughly 173 oral comments at seven public hearings, and approximately 2,042 written comments (including petition signatures and form letters).

Of the public hearing comments, 158 of 173 generally opposed the proposed revisions; nearly all of these were speaking as individuals. Ten comments generally supported the proposed revisions; all but one of these represented municipalities, businesses or industry associations. Public concern in hearing testimony focused on carcinogens and human health risk level, but also addressed mixing zones, treatment works, sediment, hydrocarbons, and other issues. Summaries of the public hearing testimony have been separately prepared and distributed by the hearing officers.

The tally of 1993 written public comments is attached. The tally indicates the numbers of written comments that generally **SUPPORT** and generally **OPPOSE** the WQS proposals, the totals being **1085** and **855**, respectively.

These totals include all written comments from four subgroups:

Individuals -- not associated with any formal group; subtotals broken out by location.

Entities -- associations, businesses, companies, interest groups, etc., with subtotals broken out by groups such as "cities," "mining companies" or "environmental groups."

Petition Signatures

Postcards -- a set of "form letter" postcards stating an individual's annual fish consumption and supporting the 10^{-6} risk level)

Whatever the source, each identifiable signature is counted in the tally total.

The primary basis for determining SUPPORT or OPPOSE in the tally was the position expressed on human health risk level -- the proposed risk level of 10^{-5} or a lower risk level such as 10^{-6} or 10^{-7} . In most cases, but not always, the expressed position of SUPPORT or OPPOSE also applied to other key proposals, such as Mixing Zones and Treatment Works.

The tally exercise can reflect only a cursory review of each comment, and incorporates considerable judgement. It should not be regarded as an exercise that achieves 100 percent accuracy. Comments vary greatly in the points addressed, and in scope and detail. Comments often support certain items but oppose others. Few letters addressed all of the eleven topics in the WQS proposals. In most cases, however, the tenor of the comments was reasonably clear.

Just under half of the individual comments received were "form letters," including handwritten letters based on form letters. Identifying the latter frequently is a matter of judgement. Petitions and Postcards also are form responses. Individual comments that are not form letters vary greatly in their content, ranging from a single short sentence to several pages. The tally necessarily lumps each letter into either the SUPPORT or the OPPOSE category.

Comments from Entities also varied greatly in content. Some of these comments included technical appendices, copied literature and other material submitted as backup. Most Entities comments were one or two pages, with 13 comments at 10 or more pages. A listing is attached of all Entities comments received, totalling 133, and number of pages in each.

Here are the results of the tally:

	<u>SUPPORT</u>	<u>OPPOSE</u>
<u>Individuals</u>	490	491
<u>Entities</u>	61	72
<u>Petition Signatures</u>	535	161
<u>Postcards</u>	---	131
	1086	855

Certain comments received either did not specifically address the proposed WQS revisions, or were difficult to interpret as either SUPPORT or OPPOSE. These comments, numbering 29, are termed MIXED, are not included in the tally. Also not included are comments by State and Federal agencies and comments received after November 15. We regard comments by State and Federal agencies as distinct from the general public because they may be based on legal mandates; those comments will be carefully reviewed in the substantive analysis.

For reference, the tally of Individual written public comments from 1992 (last year) indicated 925 in support and 630 opposed, for a total of 1555, greater by 58 percent than the number of Individual comments (981) received in 1993.

The detailed analysis of comments is now underway, with a target for completion of mid to late January.

Attachments

CC: Commissioner Sandor

TALLY – 1993 WQS WRITTEN PUBLIC COMMENTS

	<u>SUPPORT</u>	<u>OPPOSE</u>
<u>Individuals</u>		
Anchorage	61	46
Fairbanks	51	51
Haines	2	43
Juneau	86	148
Ketchikan	114	20
Petersburg	7	1
Sitka	69	73
Ward Cove	69	3
Wrangell	7	5
Small Towns	14	67
Out-of-state Comments	6	14
No Address	4	20
	<u>490</u>	<u>491</u>
<u>Postcards (Fish/Risk)</u>	--	131
<u>Petition Signatures</u>	535	161
<u>Entities</u>		
Statewide Associations, etc.	11	5
Businesses	13	19
Cities	7	3
Environmental Groups	--	16
Fishing Groups	--	16
Forestry Companies	8	--
Legislators	4	--
Mining Companies	11	--
Native Groups	--	8
Oil & Gas Companies	7	--
Tourism & Rec Companies	--	5
	<u>61</u>	<u>72</u>
TOTAL	1080	855

No Tally

Federal Agencies	3
State Agencies	2
Mixed Comments	29
Late Comments	<u>68</u>
	102

Percent of Individual Responses as FORM LETTERS:**

<u>Individuals</u>	<u>SUPPORT</u>		<u>OPPOSE</u>	
		<u>%</u>		<u>%</u>
Anchorage	39/61 =	64	6/46 =	13
Fairbanks	28/51 =	55	18/51 =	35
Haines	2/2 =	100	1/43 =	02
Juneau	63/86 =	73	31/148 =	21
Ketchikan	91/114 =	80	3/20 =	15
Petersburg	1/7 =	14	1/1 =	100
Sitka	62/69 =	90	19/73 =	26
Ward Cove	66/69 =	96	0/3 =	0
Wrangell	7/7 =	100	1/5 =	20
Small Towns	9/14 =	64	12/67 =	18
Out-of-state	5/6 =	83	10/14 =	71
No Address	3/4 =	75	3/20 =	15
Total	376/490 =	77. %	105/491 =	21. %

** FORM LETTERS include typical "form letters" that were printed in multiple copies but individually signed; handwritten comments that were mostly replicates of printed form letters; and handwritten comments that appeared to be based directly on the substantive information in printed form letters. Identifying handwritten letters that are based on printed form letters is a matter of reviewer's judgement; thus, the count of total FORM LETTERS should be regarded as an estimate. Approximately 30 different printed form letters were identified.

1993 WQS WRITTEN PUBLIC COMMENTS

List of Entities commenting and approximate number of pages

OPPOSE

SUPPORT

	# pages		# pages
<u>Associations, Statewide</u>			
1. American Fisheries Society	2	6. Alaska Air Carriers Assoc.	2
2. Anchorage League of Women Voters	2	7. Alaska Forest Assoc.	6
3. Common Ground -- Alaska	1	8. Alaska Miners Assoc.	9
4. Lower Kuskokwim Econ Dvp Council	1	9. Alaska Municipal League	2
5. PWS Regional Citizens Advisory Council	7	10. Alaska Oil & Gas Assoc.	~100
		11. American Water Works Assoc.	6
		12. Assoc. General Contractors AK	1
		13. Copper Valley Econ. Dvp. Council	1
		14. Highway Users Federation of AK	1
		15. Resource Develop. Council	4
		16. Southeast Conference	4
<u>Businesses</u>			
17. Alaska Applied Sciences	14	26. Advanced Technical Svcs.	3
18. Alaska Survival	2	27. Automatic Welding & Supply	1
19. Cottotl-Goldberg Art Studio	1	28. Ben A. Thomas, Inc.	1
20. First Strike Fishing Charters	2	29. Chugach Rock Corp.	1
21. Gustavus Inn	1	30. Construction & Rigging, Inc.	1
22. Greentop Charters	1	31. Envir. Services, Ltd.	2
23. Haines Financial Services	2	32. John Gould & Sons	1
24. Paul Peyton Consulting	2	33. McGraw's Gravel Sales	1
25. Valdez Businesses (11)	2	34. McPhee Publications	1
		35. Northrim Bank	1
		36. Pen Air	1
		37. Ty-Matt	1
		38. Resource Consulting Group	1
<u>Chambers of Commerce (Mixed)</u>			
39. Juneau	2		
40. Sitka	1		
41. Kodiak	2		
<u>Cities</u>			
42. Bethel	1	46. Anchorage	38
43. Kupreanof	1	47. Fairbanks MUS	1
44. Petersburg	2	48. Juneau (> Nov. 15)	4
		49. Marshal	2
45. Soldotna (Mixed)	2	50. Sitka	3
		51. Stebbins	1
		52. Unalaska	2

OPPOSE**SUPPORT**

	# pages		# pages
<u>Environmental Groups</u>			
53. Alaska Clean Water Alliance	10		
54. Alaskans for Juneau	16		
55. Alaska Marine Conserv. Council	1		
56. Anchorage Audubon Society	1		
57. Juneau Audubon Society	5		
58. Lynn Canal Conservation	~100		
59. Narrows Conserv. Council	3		
60. Nat. Audubon Society	2		
61. FWS Conserv. Alliance	2		
62. SEACC	3		
63. Sierra Club	2		
64. Sierra Club Legal Defense Fund	27		
65. Sitka Conserv. Society	3		
66. Taku Conserv. Society	1		
67. Thane Neighborhood Association	7		
68. Trout Unlimited	2		
<u>Federal Agencies (Mixed)</u>			
69. US EPA	28		
70. US FWS	4		
71. US NOAA/NMFS	3		
<u>Fishing Groups</u>			
72. Alaska Shell Fish Growers Assoc.	3		
73. Alaska Trollers Assoc.	3		
74. Area K Seiners Assoc.	1		
75. Blue Heron Sea Farms	2		
76. Cook Inlet Seiners Assoc.	2		
77. Cordova District Fishermen United	2		
78. Eagle Rock Sea Farms	3		
79. Kodiak Regional Aquaculture Assoc.	1		
80. North Pacific Fisheries Assoc.	2		
81. N SE Regional Aquaculture Assoc.	1		
82. Pacific Seafood Processors Assoc.	1		
83. Point Adolphus Seafoods	1		
84. Seafood Producers Cooperative	1		
85. SE Alaska Seiners	6		
86. United Fishermen of Alaska	20		
87. United SE Alaska Gillnetters	3		

OPPOSE**SUPPORT**

	# pages		# pages
<u>Forestry Companies</u>		88. Alaska Forest Assoc.	1
		89. Alaska Pulp Corp.	1
		90. Ketchikan Pulp Co.	13
		91. Klukwan Forest Products	1
		92. Koncor Forest Products	3
		93. Sealaska	2
		94. Whitestone SE Logging Co.	11
		95. Wasser & Winters	1
<u>Alaska Legislators</u>		96. Senator Steve Frank	1
		97. Senator Robin Taylor	2
		98. Rep. Jeanette James	3
		99. Rep. Cynthia Toohey	1
<u>Mining Companies</u>		100. Alaska Gold Co.	1
		101. Alminco	1
		102. G. Andrews	5
		103. Cominco Alaska	1
		104. Fairbanks Gold Mining	2
		105. Karl Hanneman	4
		106. Kennecott/Greens Creek	2
		107. North Pacific Mining Corp.	2
		108. Placer Dome US, Inc.	1
		109. Ryan Lode Mines	2
		110. Talga Mining Co.	
<u>Native Groups</u>			
111. Tanana Chiefs Conf.	8		
112. ANB/ANS	1		
113. Allakaket Village Council	1		
114. Beaver Tribal Council	1		
115. Dinyee Corp. (Stevens Village)	1		
116. Alatna Village Council	1		
117. Eyak Elders Council	3		
118. Huslia Village Council	1		
<u>Oil & Gas Companies</u>		119. Alyeska	21
		120. Unocal	4
		121. Marathon	7
		122. Mapco	1
		123. Cook Inlet Pipeline Co.	1
		124. BP Exploration	10
		125. Arco	9

OPPOSE**SUPPORT**

	# pages		# pages
<u>State Agencies (Mixed)</u>			
126. Fish & Game	4		
127. Commerce & Economic Develop.	2		
<u>Tourism & Recreation Companies</u>			
128. Alaska Discovery	1		
129. Alaska Waveriders	5		
130. Alaska Wilderness Rec. & Tourism	2		
131. Delshu Expeditions	1		
132. Deshka River Lodge	4		

WQM/DCS, 12-10-93

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MEMORANDUM

State of Alaska

Department of Environmental Conservation

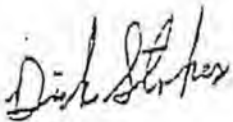
TO: John Sandor, Commissioner
Mike Menge, Director

DATE: October 8, 1993

FILE NO:

THRU:

TELEPHONE NO: (907) 465-5050 Fax: 465-5274



FROM: Dick Stokes, Hearing Officer

SUBJECT: Public Hearing in Haines on DEC
Proposed Revisions of Water
Quality Standards. Chilkat
Center, 7-10 pm on October 7,
1993

The purpose of this memo is to transfer the general message that I heard in Haines. It is not designed to substitute for more detailed analyses that you will eventually receive from the Water Quality Management staff. My interpretations of a general message are subjective, but I have made an honest attempt. I have tried to convey a mood as well as the words. I intend to send a copy of this memo to those in attendance so they can respond for the record if they think I have transferred the message inaccurately or unfairly. People were insistent on their message being transferred up the chain to the Commissioner and the Governor. I realized that this summary is dangerously long, and needs to be reduced further if it is to be widely read.

Forty one different people testified in Haines. Forty of these clearly oppose our proposals. A total of 56 signed the attendance sheets. While several were clearly concerned about the Kensington development and its discharge, the message was more basic and comprehensive than concern and/or opposition to Kensington. Suppressed anger and lots of emotion were common ingredients of the testifiers, but the testimony was in large part rational, focused and sophisticated. As out of state experts have noted again and again, the Alaska public is unusually sophisticated about complex scientific public policy issues!

People want clean water. They call it the essential of life, a priceless ingredient of Alaska life, an Alaskan product, a commodity of value to the tourism and seafood industry — a right. Testifiers noted a personal investment in clean water and a hope for the future. It is easy to hear this message without really hearing it. As one guy said to me after the close of the formal hearing, how can anyone be against the concept of clean water. What you should hear here is a gut level appreciation of clean water, a gut level appreciation of the main reason DEC was created, an endorsement of one of the main tenets of DEC regulations — protection of water quality.

As with water, people want clean fish. They want to protect what they perceive as their right to catch fish that they can eat without worry. They see subsistence fishing as a prime right of Alaskan life. They don't want this compromised. They testified that a clean environment is a gift. Most testifiers said they ate much more fish than the national average of 5 lbs per person per year. They noted that catching and eating fish is a way of life; that fish sustain Alaskan life!

People are afraid of cancer. Everyone has had family or friends who have or have had cancer. They may or may not realize that the chance of everyone contracting some form of cancer in their lifetime is about one in three. They don't digest the idea of 1 in 100,000 as being an additional risk above the 1 in 3 level. Without going off on a tangent here the main point is that people are worried about any increased risk. They are fearful of cancer and they are fearful of any increased risk. The idea of anyone putting or allowing carcinogens in their water and their fish is abhorrent to them.

People are incredulous that DEC is proposing to relax some standards; that DEC is proposing the highest level of risk (10-5) acceptable to EPA. They see DEC as the State's guardian of high standards and they don't understand why we are proposing a higher risk. They either don't understand or accept the notion that DEC is trying to find a balance where a healthy economy can exist in a healthy environment. Likewise, they either don't understand or accept the notion that the State, by proposing 10-5 as a risk level, is striving for state discretion to choose 10-5 or something more stringent. People in Haines consistently testified that a risk level of 10-5 was not acceptable. Some suggested that 10-6 might be OK, but most asked for 10-7 or no risk at all.

The sad truth is that most of those testifying in Haines didn't trust DEC. While some obviously didn't trust even the technical staff, most noted an underlying distrust of John Sandor, Commissioner, and the Hickel Administration in general. They suspect DEC and the State of protecting industry too much and of "caving in" to industry lobbying. One guy said the process was "bullshit," that people were put into the degrading position of pleading for their rights of clean water and clean fish. The fact that DEC embraced the 10-5 risk level for the National Toxics Rule without a public process was seen as a breach of faith. They suspect that the current process is to formalize a decision already made. They either don't understand or accept the notion that DEC's prior decision was to allow the option of 10-5, that DEC is free to formalize a more stringent number by the present process. People clearly want a voice in setting the level of acceptable risk. Many of the testifiers in Haines suggested a vote. People appeared to trust EPA more than they do DEC. Several testifiers recommended that everyone send their comments to Chuck Findley of EPA. This is another symptom of people fearing that they aren't being heard, of people trying to get their comments to someone else.

Many testifiers weren't sure that DEC is listening, perhaps most doubted that we are. Some recognize that the reason behind this second round of public review is the public outrage against the first round. Others overlook the changes made and simply see DEC as coming back to propose again what they think they have clearly spoken against. One of the testifiers produced an internal memo of the State of Idaho which

suggests that the State of Idaho decided against proposing a 10-5 risk level because of the intense Alaska opposition: His point was that the state of Idaho was more responsive to Alaskan public sentiment than was the State of Alaska.

The idea that DEC might set a standard based on the national fish consumption rate of 5 pounds per person per year has created a serious credibility problem. Testifiers have consistently overlooked the fact that the formula to estimate risk, and the fish consumption rate it contains, has been deferred to a later public review. In the midst of the jumble of conflicting technical messages, this is a number that they can relate to and one that they clearly believe is wrong.

Several testifiers raised the issue of conflicting economics. They pointed out that what is good for mining may be bad for tourism; what is good for timber may be bad for the fishing industry. Several pointed out the importance of fishing as a sustainable industry. They question how DEC could endanger it -- a known economic force -- to foster mining, a more short term and less sustainable industry. People pointed out that eating all the fish they wanted was an economic issue to them. Others pleaded that DEC take jobs in the tourism industry seriously.

People testified that the State should protect those at greatest risk. They pointed out that they were subsistence fishers and hunters. They pointed out that some Alaskan not only eat large amounts of fish, but also animals that eat fish, even the livers which tend to concentrate pollutants. One or two testifiers raised the issue of the "equal protection clause" of the constitution. There was considerable fear expressed about the perception of seafood quality. They fear that the image of Alaska seafood from pristine waters will suffer from a 10-5 risk level, from mixing zones and from discharges of toxic substances in general. Many testifiers talked about pulp mill discharges into Silver Bay in Sitka. Although there appeared to be gross misunderstanding of what we actually told seafood processors in Sitka, their point was still valid. Pollution in the fishing grounds can lead to perceptions that are damaging to the industry.

People were also worried (an understatement) about the proposed Kensington Mixing Zone near Point Sherman in Lynn Canal. As you know, the proposed mixing zone is in an area of exceedingly high sensitivity to the fishing industry. They are worried about possible impacts of the zone on fishing stocks, the perception of tainting of products and the physical interference with fishing by the Kensington Project.

Most testifiers oppose mixing zones. They don't trust mixing zones. This is another area where I fear the public doesn't understand enough of the technical issues. I don't think they understand that people setting end-of-pipe effluent limitations assumed some "mixing zone" for most discharges. They don't understand that a prohibition of mixing zones would probably lead to less restrictive effluent limitations. Certainly the testifiers showed no inclination to agree with my personal notion that a mixing zone is a form of public disclosure, that it is a matter best left to the process of permitting specific discharges. But I have intruded with my own editorial. What you need to hear is that people oppose mixing zones.

At least one testifier questioned the proposed language in the mixing zone section. He pointed out that the proposed wording would make it very difficult for DEC to deny a mixing zone. Again I will intrude; this is a very important point. I think the Department needs the discretion to grant mixing zones when the stringent requirements are met.

The problem is that the testifiers don't trust us to use discretion properly. He also pointed out that the burden of proof for granting mixing zones should be on the applicant; that the public cannot be expected to generate the data to oppose zones. So there is a twin message here; the testifiers don't trust mixing zones and they don't us.

Most testifiers opposed changes in the standards for color, petroleum hydrocarbon and suspended sediments. Most opposed the notion of treatment works being exempt from meeting Water Quality Standards.

One person in Haines had a precautionary statement against overly stringent regulations. He pointed out that regulators don't always know the answer — he pointed out the reversal of policies of allowing large woody debris in salmon streams. He suggested that regulations can drive industry to other countries which have lesser standards, and that this may be more destructive. He stated that he stood for environmentally sound development. It would not be fair to say this person favored the proposed revision, but he was the only person at either the Juneau or Haines hearings that didn't clearly oppose them.

cc: Doug Redburn, Chief, Water Quality Management
Dave Sturdevant, Water Quality Management
Earl Hubbard, Water Quality Management
Attendees at Haines Hearing

1

MEMORANDUM STATE OF ALASKA

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

TO: Commissioner John Sandor
Mike Menge, Director of
Environmental Quality

DATE: October 12, 1993

THRU:

FILE #:

PHONE #:

FROM: Dick Stokes *Dick Stokes*
S.E. Regional Administrator

SUBJECT: Juneau Public Hearing on
proposed revisions to Alaska's
Water Quality Stds., Juneau
Centennial Hall. 7-11 PM, 10/5/93

Below are my general observations from the public hearing. I caution that my memo is far from a complete listing of all comments made. Such a listing would need to come from a thorough review of the tapes. I do, however, think my observations will give you a reasonable "flavor" of the Juneau Hearing. If anything, I have failed to capture the anger and frustration present. There were lots of both. 27 people testified.

Testifiers clearly and strongly opposed the risk level of 10^{-5} . They pointed out that 36 other States had selected 10^{-6} as a risk level, that Nevada was the only Western State that had selected 10^{-5} . Several asked DEC to use the most protective standard available. Some urged a "no risk" alternative. One claimed that the public was willing to pay the price of higher protection. At least one testifier suggested a vote on the risk level. People saw or claimed they saw the proposal as increasing their risk to cancer by ten-fold. One testified that she favored decreasing involuntary risk.

The majority of those testifying expressed a lack of trust and confidence in DEC. Several people said DEC was not listening. One said the "hundreds" of comments had been ignored. They recommended that people send comments to EPA in addition to DEC. At least one person indicated EPA's dissatisfaction with DEC's proposals. Several said the proposals were based on bad science, that DEC was accommodating industry. One said that DEC was more interested in protecting industrial profits than protecting the environment; she said that DEC should be the expert proponents of health, that the public shouldn't have to carry the fight. Someone suggested that industry found it cheaper to lobby than to fix problems. Another pointed out the lack of "developmental" testimony, claiming that they didn't have to, that DEC was representing them.

People focused on the fish consumption factor of risk formula. Most testified that 5 lbs. per person per year was unreasonably low. At least one said DEC should protect most vulnerable and defined them as subsistence fishers.

Testifiers were obviously afraid of cancer. Many recounted personal encounters. Many talked of proposals bringing 10 times more risk.

Most testifiers opposed changing standards for suspended solids, petroleum hydrocarbons and color. No one supported the proposed changes. Everyone who mentioned mixing zones opposed them. Most said that treatment works should not be exempt from meeting water quality standards. Testifiers clearly object to the notion of converting the Sheep Creek Valley into a treatment impoundment. I personally think this specific issue overwhelms the more general one.

Several people were angered by what they perceived as minimal changes since the first round of public hearings. More than one complained about the difficulty of telling what changes were made between drafts.

Several testifiers, including the spokesperson for The League of Women Voters pointed out the importance of subsistence fishing, and that seafood quality, both in reality and perception, depends on clean water.

Testifiers noted the importance of tourism to Juneau and Alaska and the dependance of tourism on a clean environment.

I am sending a copy of this memo to those attending the Juneau Hearing. If they consider any of my observations as unfair or misleading, I urge them to comment appropriately, "for the record."

cc: Doug Redburn
Dave Sturdevant
Earl Hubbard
Attendees at Juneau Hearing

MEMORANDUM

State of Alaska

Department of Environmental Conservation

TO: John Sandor, Commissioner
Mike Menge, Director

DATE: October 8, 1993

FILE NO:

THRU:

TELEPHONE NO: (907) 465-5050 Fax: 465-5274

FROM: Dick Stokes, Hearing Officer

SUBJECT: Public Hearing in Haines on DEC
Proposed Revisions of Water
Quality Standards, Chilkat
Center, 7-10 pm on October 7,
1993

The purpose of this memo is to transfer the general message that I heard in Haines. It is not designed to substitute for more detailed analyses that you will eventually receive from the Water Quality Management staff. My interpretations of a general message are subjective, but I have made an honest attempt. I have tried to convey a mood as well as the words. I intend to send a copy of this memo to those in attendance so they can respond for the record if they think I have transferred the message inaccurately or unfairly. People were insistent on their message being transferred up the chain to the Commissioner and the Governor. I realized that this summary is dangerously long, and needs to be reduced further if it is to be widely read.

Forty one different people testified in Haines. Forty of these clearly oppose our proposals. A total of 56 signed the attendance sheets. While several were clearly concerned about the Kensington development and its discharge, the message was more basic and comprehensive than concern and/or opposition to Kensington. Suppressed anger and lots of emotion were common ingredients of the testifiers, but the testimony was in large part rational, focused and sophisticated. As out of state experts have noted again and again, the Alaska public is unusually sophisticated about complex scientific public policy issues!

People want clean water. They call it the essential of life, a priceless ingredient of Alaska life, an Alaskan product, a commodity of value to the tourism and seafood industry — a right. Testifiers noted a personal investment in clean water and a hope for the future. It is easy to hear this message without really hearing it. As one guy said to me after the close of the formal hearing, how can anyone be against the concept of clean water. What you should hear here is a gut level appreciation of clean water, a gut level appreciation of the main reason DEC was created, an endorsement of one of the main tenets of DEC regulations — protection of water quality.

As with water, people want clean fish. They want to protect what they perceive as their right to catch fish that they can eat without worry. They see subsistence fishing as a prime right of Alaskan life. They don't want this compromised. They testified that a clean environment is a gift. Most testifiers said they ate much more fish than the national average of 5 lbs per person per year. They noted that catching and eating fish is a way of life; that fish sustain Alaskan life!

People are afraid of cancer. Everyone has had family or friends who have or have had cancer. They may or may not realize that the chance of everyone contracting some form of cancer in their lifetime is about one in three. They don't digest the idea of 1 in 100,000 as being an additional risk above the 1 in 3 level. Without going off on a tangent here the main point is that people are worried about any increased risk. They are fearful of cancer and they are fearful of any increased risk. The idea of anyone putting or allowing carcinogens in their water and their fish is abhorrent to them.

People are incredulous that DEC is proposing to relax some standards; that DEC is proposing the highest level of risk (10-5) acceptable to EPA. They see DEC as the State's guardian of high standards and they don't understand why we are proposing a higher risk. They either don't understand or accept the notion that DEC is trying to find a balance where a healthy economy can exist in a healthy environment. Likewise, they either don't understand or accept the notion that the State, by proposing 10-5 as a risk level, is striving for state discretion to choose 10-5 or something more stringent. People in Haines consistently testified that a risk level of 10-5 was not acceptable. Some suggested that 10-6 might be OK, but most asked for 10-7 or no risk at all.

The sad truth is that most of those testifying in Haines didn't trust DEC. While some obviously didn't trust even the technical staff, most noted an underlying distrust of John Sandor, Commissioner, and the Hickel Administration in general. They suspect DEC and the State of protecting industry too much and of "caving in" to industry lobbying. One guy said the process was "bullshit," that people were put into the degrading position of pleading for their rights of clean water and clean fish. The fact that DEC embraced the 10-5 risk level for the National Toxics Rule without a public process was seen as a breach of faith. They suspect that the current process is to formalize a decision already made. They either don't understand or accept the notion that DEC's prior decision was to allow the option of 10-5, that DEC is free to formalize a more stringent number by the present process. People clearly want a voice in setting the level of acceptable risk. Many of the testifiers in Haines suggested a vote. People appeared to trust EPA more than they do DEC. Several testifiers recommended that everyone send their comments to Chuck Findley of EPA. This is another symptom of people fearing that they aren't being heard, of people trying to get their comments to someone else.

Many testifiers weren't sure that DEC is listening, perhaps most doubted that we are. Some recognize that the reason behind this second round of public review is the public outrage against the first round. Others overlook the changes made and simply see DEC as coming back to propose again what they think they have clearly spoken against. One of the testifiers produced an internal memo of the State of Idaho which

suggests that the State of Idaho decided against proposing a 10-5 risk level because of the intense Alaska opposition. His point was that the state of Idaho was more responsive to Alaskan public sentiment that was the State of Alaska.

The idea that DEC might set a standard based on the national fish consumption rate of 5 pounds per person per year has created a serious credibility problem. Testifiers have consistently overlooked the fact that the formula to estimate risk, and the fish consumption rate it contains, has been deferred to a later public review. In the midst of the jumble of conflicting technical messages, this is a number that they can relate to and one that they clearly believe is wrong.

Several testifiers raised the issue of conflicting economics. They pointed out that what is good for mining may be bad for tourism; what is good for timber may be bad for the fishing industry. Several pointed out the importance of fishing as a sustainable industry. They question how DEC could endanger it — a known economic force — to foster mining, a more short term and less sustainable industry. People pointed out that eating all the fish they wanted was an economic issue to them. Others pleaded that DEC take jobs in the tourism industry seriously.

People testified that the State should protect those at greatest risk. They pointed out that they were subsistence fishers and hunters. They pointed out that some Alaskan not only eat large amounts of fish, but also animals that eat fish, even the livers which tend to concentrate pollutants. One or two testifiers raised the issue of the "equal protection clause" of the constitution. There were considerable fear expressed about the perception of seafood quality. They fear that the image of Alaska seafood from pristine waters will suffer from a 10-5 risk level, from mixing zones and from discharged of toxic substances in general. Many testifiers talked about pulp mill discharges into Silver Bay in Sitka. Although there appeared to be gross misunderstanding of what we actually told seafood processors in Sitka, their point was still valid. Pollution in the fishing grounds can lead to perceptions that are damaging to the industry.

People were also worried (an understatement) about the proposed Kensington Mixing Zone near Point Sherman in Lynn Canal. As you know, the proposed mixing zone is in an area of exceedingly high sensitivity to the fishing industry. They are worried about possible impacts of the zone on fishing stocks, the perception of tainting of products and the physical interference with fishing by the Kensington Project.

Most testifiers oppose mixing zones. They don't trust mixing zones. This is another area where I fear the public doesn't understand enough of the technical issues. I don't think they understand that people setting end-of-pipe effluent limitations assumed some "mixing zone" for most discharges. They don't understand that a prohibition of mixing zones would probably lead to less restrictive effluent limitations. Certainly the testifiers showed no inclination to agree with my personal notion that a mixing zone is a form of public disclosure, that it is a matter best left to the process of permitting specific discharges. But I have intruded with my own editorial. What you need to hear is that people oppose mixing zones.

At least one testifier questioned the proposed language in the mixing zone section. He pointed out that the proposed wording would make it very difficult for DEC to deny a mixing zone. Again I will intrude; this is a very important point. I think the Department needs the discretion to grant mixing zones when the stringent requirements are met.

The problem is that the testifiers don't trust us to use discretion properly. He also pointed out that the burden of proof for granting mixing zones should be on the applicant; that the public cannot be expected to generate the data to oppose zones. So there is a twin message here; the testifiers don't trust mixing zones and they don't us.

Most testifiers opposed changes in the standards for color, petroleum hydrocarbon and suspended sediments. Most opposed the notion of treatment works being exempt from meeting Water Quality Standards.

One person in Haines had a precautionary statement against overly stringent regulations. He pointed out that regulators don't always know the answer — he pointed out the reversal of policies of allowing large woody debris in salmon streams. He suggested that regulations can drive industry to other countries which have lesser standards, and that this may be more destructive. He stated that he stood for environmentally sound development. It would not be fair to say this person favored the proposed revision, but he was the only person at either the Juneau or Haines hearings that didn't clearly oppose them.

cc: Doug Redburn, Chief, Water Quality Management
Dave Sturdevant, Water Quality Management
Earl Hubbard, Water Quality Management
Attendees at Haines Hearing

MEMORANDUM STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

TO: Commissioner John Sandor
Mike Menge, Director of
Environmental Quality

DATE: October 13, 1993

THRU:

FILE #:

PHONE #:

FROM: Dick Stokes *Dick Stokes*
S.E. Regional Administrator

SUBJECT: Public Hearing on proposed
revisions to Alaska's Water
Quality Stds., Ketchikan's
Westmark Cape Fox, 7-8:30 PM,
10/12/93

Twelve people in Ketchikan testified. The testifiers cautioned DEC not to relax standards. Many specifically said not to change existing standards for color, suspended solids and petroleum hydrocarbons. At least one asked that the standards for fecals be retained. Everyone who mentioned the cancer risk level asked for greater protection than 10^{-3} . There was a strong emphasis of testimony to adopt a very protective risk level. Most mentioned that Alaska should not adopt a risk level less than the 36 States who have chosen 10^{-6} . Many asked that treatment works not be exempt from standards.

The "flavor" of the Ketchikan Hearing was quite different from that in Juneau and Haines. While the opposition to the proposed revisions was solid, the testifiers, in general, didn't appear to carry the same level of anger and distrust seen in Juneau and Haines. At least one testifier said he could accept industry, that he was not "blindly" against mixing zones. Another thanked DEC for conducting the workshops and hearings. At least one acknowledged that the issues were complex.

Most of the themes of testimony were familiar. They included the following:

People love the State and appreciate a clean environment.

People are surprised and angered that DEC is proposing to relax any standard. They see us as an advocate for the environment, not a balancer.

People fear cancer. Everyone has a bad memory.

Alaskans eat much more than 5 lbs. of fish per person per year.

People want DEC to protect the most vulnerable populations and those are seen as subsistence fishers.

People want a clean environment for health, recreation, fishing and tourism.

People want industry to pay as they go.

People oppose mixing zones for carcinogens.

As in Haines, one testifier suggested that, it was degrading, that it was a "tragic circumstance" that she had to plead for better protection. One asked that we give greater weight to oral testimony than to written comments. More than one testifier pointed out the gambles taken when we allow discharges. One noted the pain of confrontation and litigation when things went wrong.

As with my memos on the other hearings I chaired in Juneau and Haines, I have made no attempt to detail all comments. I have again tried to capture the main themes and pass them along to your attention. I will send copies of this memo to those attending the Ketchikan Hearing and ask them to respond for the record if they consider this memo as misleading.

cc: Doug Redburn
Dave Sturdevant
Earl Hubbard
Attendees at Ketchikan Hearing

TO: COMMISSIONER JOHN SANDOR
AND
MIKE MENGE, DIRECTOR OF
ENVIRONMENTAL QUALITY

DATE: OCTOBER 19, 1993
FILE NO:
TELEPHONE NO:

THRU: SUBJECT: SITKA PUBLIC HEARING ON
PROPOSED REVISIONS TO
WATER QUALITY STANDARDS.
OCTOBER 14, 1993 IN SITKA

FROM: DICK STOKES
HEARING OFFICER *Dick Stokes*
10/19/93

I admitted to the people at the Sitka Hearing that I felt inadequate in transmitting the depth and intensity of their opposition to our proposals. The word "opposition" is an understatement and imprecise at the same time. Certainly the 45 people who testified opposed the proposals. But many expressed a real fear, a deep concern for what our proposals would bring. The personal insults in Sitka were sharp and unrelenting. They were directed at DEC in general, at you, the Commissioner, and at the Rickel Administration. But there was also a pleading quality to some of the testimony. I think the message we got in Sitka, as well as that from the other southeastern communities, is much bigger than the numbers involved. I had never seen many of the people who testified in Sitka on the 14th. That is an important observation because I have chaired a number of highly polarized and controversial hearings in Sitka over the years. Yes, the usual protesters were there, but they were simply voices in a chorus. Our proposals have struck a fundamental nerve. They have angered, disappointed and frightened a number of people.

As in the other hearings, the fear of cancer was significant. Testifiers strongly ~~opposed~~ the 1 in 100,000 proposal. Many connected it with the five pounds of fish consumption factor which isn't a real part of the present proposals. People are very upset about the five pound number. Most pointed out that 36 other states have adopted the more protective 1 in 1,000,000 risk factor. Most testifiers however, wanted more. They asked for 1 in 10,000,000 or no risk at all. The literal impossibility of "no risk" shouldn't obscure what people are asking for. They want no risk and they are asking for as little risk as is possible. One person said that increasing the cancer risk "was unpardonable." Most, if not all, of those present agreed with this sentiment. Many testifiers told personal anecdotes about the impact of cancer to their lives.

10

Again there was the strong appreciation of a clean environment and the role of fishing in Alaska. The testimony was influenced by the existing problems in Silver Bay. Several testifiers noted DEC's recommendations that processors ask for fish to be delivered in the whole, not gutted and rinsed at the fishing grounds. People misunderstand that the proposals would not allow the existing situation in Silver Bay to get worse. People don't understand that a mixing zone with a new permit would in all likelihood would be much smaller than the area which now exceeds standards. As in other hearings, people said that they had come to Alaska to escape bad environments. They did not want the agency to repeat mistakes made down south.

A number of testifiers emphasized the importance of fishing. They talked about the perception of clean fish, of the importance to marketing of Alaskan fish being considered to come from clean waters. The economics of the fishing industry were important to many.

One particularly eloquent speaker talked of the destruction of the Great Lakes---that they weren't great anymore. He talked of Alaskan proposals to sell clean water to the lower 48, that this was a clear indication of value. He said we have inherited clean water and it was a great responsibility for us to keep it. He said our proposals were shameful, even criminal. He urged us to adopt the highest standards possible.

Again, there was strong anger against the agency. We were called pawns of industry and premeditated murderers. We were accused of bowing to short term interests. More than one indicated that the hearings were a sham, that the proposals "were a done deal." One said DEC should not be able to sacrifice lives to subsidize industry. He said that you, the Commissioner, had violated your oath of office. The agency was accused of pandering to industry. More than one speaker said DEC should be ashamed of its proposals. Toward the end of the hearing I was asked to get a message to Governor Hickel, asking him to overrule you and declare void the risk level of 1 in 100,000. ~~But~~ I promised to inform you of this request, but stated that my memo would go only to you two.

One guy expressed a sense of unreality about the process at hand. He said bureaucrats don't have a personal stake, that they don't take responsibility. He was angry about our recommendations in Silver Bay. He noted that putting a fish run at risk was an allocation decision, that we were rewarding bad management, that pollution was bad management, that our proposals were "deranged."

The agency was accused of incorporating bad science in the new proposals. The five pound fish consumption factor came up time and again. People said we ignored synergistic effects of pollutants.

People consistently opposed the concept of mixing zones for carcinogens. Many simply opposed mixing zones. Unfortunately many equate mixing zones with the present

situation in Silver Bay. Although most speakers didn't detail their opposition to changes standards of color, petroleum hydrocarbons and suspended solids, those that did opposed the changes. One argued that color was not an aesthetic issue, that it was an issue of primary productivity. Likewise, all speakers would mentioned changes for "treatment works," opposed the changes.

One person said that democracy would be failing if DEC didn't listen to the night's testimony. Another asked how we could possibly weigh the intensity of the night's testimony. A member from the Citizen's Advisory Group questioned the process in which he participated. He expressed doubt that the agency was really listening. He said he felt like the cancer risk level wasn't really "on the table" for discussion. He noted that all fishing organizations endorsed highest standards. He considered the language of mixing zones to make mixing zones the rule rather than the exception. He called the advisory process a very frustrating one.

As in my other memos, I have made no attempt to include all comments. I have aimed for "flavor." As before, I will send copies of this memo to the attendees for whom we have addresses. I encourage them to write if they think this account is misleading. I think they understand that the Water Quality Management staff will review all comments, not only the ones I have highlighted or summarized in this memo.

CC: Doug Redburn
Dave Sturdevant
Earl Hubbard
Attendees at the Sitka Hearing

MEMORANDUM STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

TO: Commissioner John Sandor
Mike Menge, Director of
Environmental Quality

DATE: October 13, 1993

THRU:

FILE #:

PHONE #:

FROM: Dick Stokes *Dick Stokes*
S.E. Regional Administrator

SUBJECT: Public Hearing on proposed
revisions to Alaska's Water
Quality Stds., Ketchikan's
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10/12/93

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The "flavor" of the Ketchikan Hearing was quite different from that in Juneau and Haines. While the opposition to the proposed revisions was solid, the testifiers, in general, didn't appear to carry the same level of anger and distrust seen in Juneau and Haines. At least one testifier said he could accept industry, that he was not "blindly" against mixing zones. Another thanked DEC for conducting the workshops and hearings. At least one acknowledged that the issues were complex.

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CC: Doug Radburn
Dave Sturdevant
Earl Hubbard
Attendees at the Sitka Hearing

MILVORANUOIVI

State of Alaska

TO: COMMISSIONER JOHN SANDOR
AND
MIKE MENGE, DIRECTOR OF
ENVIRONMENTAL QUALITY

DATE: OCTOBER 19, 1993

FILE NO.

TELEPHONE NO.

THRU:

SUBJECT: SITKA PUBLIC HEARING ON
PROPOSED REVISIONS TO
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OCTOBER 14, 1993 IN SITKA

FROM:

DICK STOKES
HEARING OFFICER

Dick Stokes
10/19/93

I admitted to the people at the Sitka Hearing that I felt inadequate in transmitting the depth and intensity of their opposition to our proposals. The word "opposition" is an understatement and imprecise at the same time. Certainly the 45 people who testified opposed the proposals. But many expressed a real fear, a deep concern for what our proposals would bring. The personal insults in Sitka were sharp and unrelenting. They were directed at DEC in general, at you, the Commissioner, and at the Rickel Administration. But there was also a pleading quality to some of the testimony. I think the message we got in Sitka, as well as that from the other southeastern communities, is much bigger than the numbers involved. I had never seen many of the people who testified in Sitka on the 14th. That is an important observation because I have chaired a number of highly polarized and controversial hearings in Sitka over the years. Yes, the usual protesters were there, but they were simply voices in a chorus. Our proposals have struck a fundamental nerve. They have angered, disappointed and frightened a number of people.

As in the other hearings, the fear of cancer was significant. Testifiers strongly proposed the 1 in 100,000 proposal. Many connected it with the five pounds of fish consumption factor which isn't a real part of the present proposals. People are very upset about the five pound number. Most pointed out that 36 other states have adopted the more protective 1 in 1,000,000 risk factor. Most testifiers however, wanted more. They asked for 1 in 10,000,000 or no risk at all. The literal impossibility of "no risk" shouldn't obscure what people are asking for. They want no risk and they are asking for as little risk as is possible. One person said that increasing the cancer risk "was unpardonable." Most, if not all, of those present agreed with this sentiment. Many testifiers told personal anecdotes about the impact of cancer to their lives.

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Again there was the strong appreciation of a clean environment and the role of fishing in Alaska. The testimony was influenced by the existing problems in Silver Bay. Several testifiers noted DEC's recommendations that processors ask for fish to be delivered in the whole, not gutted and rinsed at the fishing grounds. People misunderstand that the proposals would not allow the existing situation in Silver Bay to get worse. People don't understand that a mixing zone with a new permit would in all likelihood be much smaller than the area which now exceeds standards. As in other hearings, people said that they had come to Alaska to escape bad environments. They did not want the agency to repeat mistakes made down south.

A number of testifiers emphasized the importance of fishing. They talked about the perception of clean fish, of the importance to marketing of Alaskan fish being considered to come from clean waters. The economics of the fishing industry were important to many.

One particularly eloquent speaker talked of the destruction of the Great Lakes---that they weren't great anymore. He talked of Alaskan proposals to sell clean water to the lower 48, that this was a clear indication of value. He said we have inherited clean water and it was a great responsibility for us to keep it. He said our proposals were shameful, even criminal. He urged us to adopt the highest standards possible.

Again, there was strong anger against the agency. We were called pawns of industry and premeditated murderers. We were accused of bowing to short term interests. More than one indicated that the hearings were a sham, that the proposals "were a done deal." One said DEC should not be able to sacrifice lives to subsidize industry. He said that you, the Commissioner, had violated your oath of office. The agency was accused of pandering to industry. More than one speaker said DEC should be ashamed of its proposals. Toward the end of the hearing I was asked to get a message to Governor Hickel, asking him to overrule you and declare void the risk level of 1 in 100,000. I promised to inform you of this request, but stated that my memo would go only to you two.

One guy expressed a sense of unreality about the process at hand. He said bureaucrats don't have a personal stake, that they don't take responsibility. He was angry about our recommendations in Silver Bay. He noted that putting a fish run at risk was an allocation decision, that we were rewarding bad management, that pollution was bad management, that our proposals were "deranged."

The agency was accused of incorporating bad science in the new proposals. The five pound fish consumption factor came up time and again. People said we ignored synergistic effects of pollutants.

People consistently opposed the concept of mixing zones for carcinogens. Many simply opposed mixing zones. Unfortunately many equate mixing zones with the present

situation in Silver Bay. Although most speakers didn't detail their opposition to changes standards of color, petroleum hydrocarbons and suspended solids, those that did opposed the changes. One argued that color was not an aesthetic issue, that it was an issue of primary productivity. Likewise, all speakers would mentioned changes for "treatment works," opposed the changes.

One person said that democracy would be failing if DEC didn't listen to the night's testimony. Another asked how we could possibly weigh the intensity of the night's testimony. A member from the Citizen's Advisory Group questioned the process in which he participated. He expressed doubt that the agency was really listening. He said he felt like the cancer risk level wasn't really "on the table" for discussion. He noted that all fishing organizations endorsed highest standards. He considered the language of mixing zones to make mixing zones the rule rather than the exception. He called the advisory process a very frustrating one.

As in my other memos, I have made no attempt to include all comments. I have aimed for "flavor." As before, I will send copies of this memo to the attendees for whom we have addresses. I encourage them to write if they think this account is misleading. I think they understand that the Water Quality Management staff will review all comments, not only the ones I have highlighted or summarized in this memo.

CC: Doug Redburn
Dave Sturdevant
Earl Hubbard
Attendees at the Sitka Hearing



ALASKA CLEAN WATER ALLIANCE

D.E.C. MYTHS ?

MYTH #1: ADEC is not lowering water quality standards. (Governor Hickel)

ANSWER: This is merely political rhetoric by the Hickel Administration. The proposals will significantly reduce Alaska's Water Quality Standards and in some cases eliminate existing standards.

MYTH #2: These proposals are being driven by science. (Governor Hickel and ADEC staff).

ANSWER: Nothing could be further from the truth. Notes from DEC/EPA meetings in April 92 clearly state that these proposals were introduced because of political pressure from the pulp mills and proposed mines in order to help them get less restrictive NPDES water pollution discharge permits from the EPA. Extensive documentation is available from ACWA that exposes the political underpinnings of this entire proposal packet.

MYTH #3: Alaskans eat five pounds of fish per year. (ADEC -Dave Sturdevant-July 1992)

ANSWER: ADF&G sent ADEC a letter on May 20, 1992 specifying exact subsistence figures for every community in Alaska. Per capita fish consumption varies between 50-700 pounds per year. ADF&G further cautioned ADEC that certain segments of the population eat substantially greater amounts of fish than the average figures and if ADEC is going to use these numbers in risk estimates, they would significantly underestimate actual risk to these populations.

MYTH #4: ADEC believes there are virtually no individuals who will actually face this cancer risk level of 1 in 100,000. (ADEC Issue Paper on Risk Level)

ANSWER: This is a lie. ADEC is trying to fool the public by interchanging "risk level" with actual "risk". These are two entirely different concepts. "Risk level" is a socio-economic decision that determines the concentrations we will allow in our waters for 126 toxic pollutants. "Risk" is a measure of the actual exposure we have to each of one of these toxics in the fish we eat and the water we drink. All "risks" to each chemical are added together to determine our overall risk from industrial wastes.

In calculating "risk" for just dioxin , Dr. Pam Shubat (Minn. Dept. of Health) using standard risk assessment methods calculated that given Alaska's high fish consumption rates and the high % of lipids (fats) in Alaska's salmon, and using EPA's cancer potency factor, calculated that if dioxin levels in the water reached the 0.12 ppq criteria presently allowed by ADEC that it could result in as many as 3 extra cancer cases per 1000 people. This "risk" from only one chemical, dioxin, must be added to "risks" from 125 other toxic chemicals at each industrial discharge site to compare overall risk.

MYTH #5: RELATIVE RISK: The proposed risk level of 1 in 100,000 fits in with other risks that people face on a daily basis. (ADEC Issue Paper on Risk Level)

ANSWER: ADEC is intentionally trying to confuse the public by comparing voluntary risks (like smoking or choosing to drive a car) with involuntary risks (like getting cancer from unknowingly eating fish that was contaminated by the toxic pollutants from a mill). It is like comparing apples to oranges. They are just not comparable. Toxic industrial pollutants are something we can and should control because industrial pollution unnecessarily causes innocent people to suffer and die. This is an unacceptable public policy. ADEC should adopt the most protective cancer risk level possible.

MYTH #6: Governor Hickel and Commissioner Sandor have the right to select a risk level of 10-5 for Alaskans.

ANSWER: EPA Memorandum Jan. 5, 1990 states: "First the record must include documentation that the decisionmaker, (Hickel or Sandor), considered the public interest of the state in selecting the risk level, including documentation of public participation in the decision making process....Second, the record must include an analysis showing that the risk level selected, when combined with other risk assessment variables(i.e. fish consumption rates, % fat in fish, cancer potency of toxic), is a balanced and reasonable estimate of actual risk posed, based on the best and most representative information available."

1993 ADEC Issue Paper on Risk Level states "Selecting a human health risk level is a social and economic public policy decision." ADEC has never had a public process to determine cancer risk level. In November 1992, ADEC Commissioner Sandor arbitrarily chose the least protective risk level allowed by the EPA of 1 in 100,000 without any public process. This is our present risk level today. ADEC did not even introduce the subject of risk level to its own Citizens Advisory Group on Water Quality Standards. The 1 in 100,000 proposal has never had any public input.

MYTH #7: ADEC believes the economic cost to the people of Alaska for a more protective risk level of 1 in one million is not warranted. (ADEC issue paper of Risk Level)

ANSWER: ADEC offers no substantial evidence to justify their claim. 36 other states have already adopted a more protective risk level of 1 in one million. These states have industries and economies much larger than Alaska, yet they are able to protect their citizens at a level that is 10 times more protective than the Hickel Administration says that Alaska can afford. These 36 other states have found that the costs to individuals and society of medical treatments, litigation, and environmental restoration far outweigh any short term economic gains to a few industries.

MYTH #8: These new EPA regulations are too expensive for industry to meet.

ANSWER: All other pulp mills in the Northwest have agreed to invest the millions of dollars necessary to comply with the Clean Water Act of 1987.

ADEC has failed to produce any economic study that would determine the real costs to Alaska's fisheries, tourism, subsistence resources, wildlife, and human health of these proposed higher pollution levels.

In February, 1993 a class-action lawsuit was filed by 241 residents of Cosmopolis, Wash. against Weyerhaeuser for the "sickness, death, and property damage" caused by the pulp mill since the 1950's.

MYTH #9: Technology does not exist to reduce carcinogens from these rayon producing pulp mills.

ANSWER: A similar rayon mill in Cosmopolis, Washington substantially reduced its dioxin emissions by replacing free chlorine with chlorine dioxide in the bleaching process. This same mill recently completed a successful pilot project using peroxide as a bleaching chemical which completely eliminated dioxins from its effluent.

Similar dioxin-free technology has been successfully used for years in South Africa, Sweden, Norway, and Italy.

MYTH #10: There is absolutely no health problem related to salmon based on what is known at this time". (John Middaugh, Chief of Epidemiology-state public health) -July, 1991

ANSWER: This is no longer true. Most recent EPA research indicates that even the most dilute concentrations of dioxins show observable effects on reproductive, immune, and nervous systems. DEC has measured dioxins levels of 0.4-1.8ppt in salmon near Ward Cove.

In August of 93, DEC issued a secret fish advisory to processors warning them not to buy fish that had been gutted and cleaned in Silver Bay, because of concerns about the quality of the "tea colored" water and that it might affect fish quality.

MYTH #11: At present ADEC is aware of no evidence that fish and shellfish in Alaska's waters show any significant contamination by toxic or carcinogenic pollutants. (ADEC Issue Paper on Risk Level)

ANSWER: ADEC Memo 6-17-91 Amy Kruse to Meade Treadwell---"We were not expecting to find measurable levels in pelagic migratory fish (salmon) ...We found some in the fish, which was unexpected. SERO recognizes the importance of this issue. ...We should be also be concerned about other species like crabs."

There have been a number of fish kills in Silver Bay and Ward Cove caused by the mills discharges. ADEC study in July 1990 showed all salmon sampled in Ward Cove had 0.4-1.8 ppt of dioxin in tissue. Crab tissues had dioxin levels of 10.2 ppt. Public health advisories are sometimes issued if dioxin levels exceed 7ppt. EPA study in Silver Bay showed measurable dioxin levels in fish tissues. An ADEC official stated at a public meeting that he would not eat a fish from Silver Bay.

MYTH #12: Alaskans do not harvest fish from Silver Bay and Ward Cove.

ANSWER: ADF&G subsistence studies show that 1%-10% of the Sitka and Ketchikan populations harvest food from these two bodies of water. NNSRA, an aquaculture corporation, uses waters adjacent to Silver Bay to rear its salmon. FRED division of ADF&G uses Ward Creek as a salmon enhancement site.

MYTH #13: Dioxin is less harmful than previously thought. (ADEC dioxin papers)

ANSWER: Most recent scientific research confirms that: 1) dioxins definitely cause cancers in humans. 2) Dioxins cause reproductive, immunological, and nervous disorders even at concentrations that are too small to detect.

MYTH #14: Mixing zones are legal for carcinogens under Alaska statutes.

ANSWER: EPA attorney, Adrian Alan, said in April 1992 EPA meeting notes that her reading of Alaska statutes does not allow mixing zones for carcinogens.

MYTH #15: Toxic mixing zones pose no threat to migratory fish (salmon) who just swim through the mixing zones briefly.

ANSWER: National Marine Fisheries Service - Quarterly Report-Oct. 1991 showed that: 1) contaminant exposure can be measured in water-column inhabitants (salmon smolt) that reside only briefly in contaminated areas. 2) that such exposure elicits significant responses, such as changes in enzyme levels and DNA damage.



ALASKA CLEAN WATER ALLIANCE

October 5, 1993

ANALYSIS OF WATER QUALITY STANDARDS 18AAC 70

RE-REVISIONS PROPOSED BY ADEC IN AUGUST 1993

(A.C.W.A. would like to thank Riki Ott of United Fishermen of Alaska for providing the initial draft of this document)

GIANT LOOPHOLES FOR ALL POLLUTANTS

70.010 GENERAL: TREATMENT WORKS: ADEC proposes to add a narrative provision stating that water quality standards do not apply to "treatment works" (water in a facility constructed to treat waste water). This proposal would allow a project like the A-J mine near Juneau to dam Sheep Creek (a waterbody of the U.S.) and create an unlined and uncovered tailings lake that would be exempt from Alaska Water Quality Standards. This toxic lake would cause ground and surface water contamination and be a threat to birds, wildlife, and humans. The current requirement that a "treatment works" be lined or constructed to prevent seepage, would be deleted. ADEC's new proposal must :

Prohibit the conversion of a waterbody of the U.S. or Alaska into a "treatment works". A tailings impoundment created by damming a stream or river should not be exempt from Alaska Water Quality Standards. Projects such as: 1) the A-J mine or 2) converting a pond into a sewage treatment facility in rural Alaska, should go through a site-specific review process.

Absolutely prohibited any "treatment works" from leaking into any other body of water including groundwater.

Prohibit unlined, uncovered "treatment works" unless they meet Alaska Water Quality Standards.

Include a regulation to address the maintenance and rehabilitation of the "treatment works" after the project is completed.

70.025 SITE-SPECIFIC CRITERIA: NATURAL CONDITIONS ADEC proposes to allow the state's water quality standards to be ignored in situations where the water "naturally" contains high levels of contaminants. ADEC's argues that if water contains "naturally high" levels of arsenic, for example, then an industry that uses that water should not be required to return it cleaner than they found it. However, ADEC fails to address the following conditions:

Temporary or Seasonal Variations in Water Quality: A number of waterbodies in the state exceed water quality standards at some time during the year however, as noted by ADF&G, "natural background water quality may only exceed the numeric criteria on a temporary or seasonal basis. During the remainder of the time, the base water quality

is within the established criteria. Fish and wildlife populations often have adapted to these short-term fluctuations, but may not survive more prolonged exposures if the applicable criteria are raised".

Waterbodies Where Natural Conditions Always Exceed Water Quality Standards: A "natural conditions" regulation should not be implemented for any pollutants until the ADEC writes, and the public approves, a "Technical Support Document" that provides the applicant and ADEC with the information necessary to decide if the "natural conditions" should be used, how they should be determined, and what safety margins should be included. Although, ADEC is promising to write this document "in the future", "natural conditions" exemptions should not be allowed without a Technical Support Document already in place.

In All Cases: ADEC should NOT be allowed to reduce the state's water quality standards "on its own motion" as proposed. ADEC does not have the resources, especially after the latest budget cuts, to determine on a case-by-case basis if and when to reduce water quality standards. Requests for "natural conditions" exemptions should be initiated by the applicant and supporting data should be provided at the applicant's expense.

Any toxic substances in toxic amounts are dangerous, whether they occur "naturally" or are human-caused.

The term "waterbody as a whole" is undefined and could allow for gross misapplication of this regulation. EPA's definition of this term describes "effects that shouldn't happen in the whole waterbody", whereas ADEC is interpreting this to mean that "as long as something isn't happening everywhere in a body of water, then it's acceptable". This loophole clearly needs to be resolved in a regulatory definition.

70.032 MIXING ZONES (legalized zones of pollution for purposes of dilution of industrial waste water): The good news is that ADEC is proposing to prohibit mixing zones in the areas of fish spawning redds and to limit the downstream length of mixing zones in rivers. The bad news is that ADEC's proposed changes will allow a proliferation of mixing zones because:

The language fails to reflect the fact that granting a mixing zone is the "exception" and not the "rule". The mixing zone applicant must be held responsible for proving that there will be no negative affects because of their prooosed mixing zone. ADEC's proposal would allow a mixing zone **unless the public can prove** that the mixing zone would have adverse effects. This places an unfair and unnecessary burden of proof on the public.

The phrase "unless available evidence reasonably demonstrates" creates a loophole. "Available evidence" could be interpreted to mean whatever evidence the applicant chooses to provide to the ADEC. The phrase should be changed to "sufficient evidence" or "nessary evidence".

Existing law prchibits mixing zones for both potential and proven carcinogens, mutagens, and tetragens for both humans and biota. ADEC is proposing to allow the discharge of potential carcinogens unless the compound has been **PROVEN** to cause carcinogenic, mutagenic, or teratrogenic effects on biota (fish, shellfish, prey organisms, etc.) or human health . This proof is virtually impossible to achieve.

ADEC is also proposing to allow mixing zones unless they cause "permanent or

irreparable displacement" of biota or "reductions in fish population levels in the waterbody as a whole". This proposal presumes that we have comprehensive baseline data on existing fish populations and that we know how many members of a biotic community or fish population are expendable before "irreparable damage" is done to the overall population. NEITHER presumption is true. Instead, ADEC should continue to prohibit the discharge of toxic substances in toxic amounts in state waters.

ADEC needs to define "significantly adverse levels" and "waterbody as a whole". The term "waterbody as a whole" is undefined and could allow for gross misapplications of this regulation. For example, Sawmill Cove, the site of Alaska Pulp Corporation, has toxic pollutants that have caused numerous fish kills. It could be argued that the "waterbody as a whole" applies to all of Silver Bay or all of Eastern Channel or all of Sitka Sound or all of the Gulf of Alaska and therefore some "waterbody as a whole" is protected. However, if the "waterbody as a whole" is defined as Sawmill Cove, then the waterbody is not protected. Without these definitions, the ADEC has created loopholes that could be abused by industry.

ADEC should prohibit mixing zones in "index streams" used by ADF&G for fisheries management, and other identified special resource or critical freshwater areas, including state and federally designated critical habitats, refuges, parks, wildlife sanctuaries, and recreational or wild and scenic rivers.

Existing state standards do not allow pollutants to concentrate or persist in the environment. ADEC is proposing to allow accumulation of pollutants in the sediments under a mixing zone which could eventually cause **dead zones** (i.e. underwater areas void of aquatic life). Sediments act as a sink and source for pollutants to accumulate. Both pulp mills have large underwater "dead zones" containing dangerous dioxins and heavy metals. Recent upwelling of these toxic sediments in Silver Bay forced ADEC to issue a fish advisory to some processors around Sitka, alerting them NOT to buy fish that had been gutted or cleaned by fishermen using "tea colored water" in nearby Deep Inlet. ADEC was concerned that fish processed in these polluted waters could be a health hazard.

For mixing zones in streams, the upstream flow should be calculated using the 2-year, 7-day low flow, rather than the 2-year, 3-day SUMMER low flow as proposed by ADEC. The time of lowest flow may not necessarily be in the summer for every stream. (e.g. Red Dog mine has low flow in the winter when it freezes.)

REDUCED STANDARDS FOR SPECIFIC POLLUTANTS 70.020

TOTAL SUSPENDED SOLIDS: ADEC is proposing to eliminate the standard for "Total Suspended Solids" (TSS) by arguing that the standards for "turbidity" and "color" will adequately protect aquatic life, however:

ADF&G states that it is "essential" that TSS remain in the water quality standards. ADF&G maintains that while turbidity may work for TSS in fresh water systems, in marine waters it does not because of interference from particulates. TSS is a better indicator for heavy metals and other pollutants in sediments. The EPA and a recent court ruling state that we need to retain the TSS standard.

COLOR: ADEC is proposing to replace the numeric standard for COLOR (organics) in seafood processing with a narrative standard that is virtually impossible to enforce.

ADF&G states that "flesh discoloration of marine shellfish and bivalves may occur at color concentrations of 5 to 15 color units. DISCOLORATION has resulted in unmarketable crabs". ADF&G recommends retention of a "color" standard that will avoid tainting marketable fish and shellfish. (ADEC issued a recent "fish advisory" for the Sitka area because commercial fishermen were processing their salmon in "tea colored water" coming from the pulp mill). We need to retain existing "protective" color standards.

Color is not just an "aesthetic" consideration. The presence of any color inhibits the process of photosynthesis which is the basis of all marine life.

HYDROCARBONS: ADEC is still proposing to eliminate "particulate hydrocarbons (oily sludges)" from the standards.

Dropping this standard would allow discharges of unlimited amounts of "particulate hydrocarbons" which are readily picked up by filter feeders, such as zoo plankton, clams, mussels, and some species of salmon, and then passed on up through the food chain eventually to humans. This regulation would create a loophole for facilities like the Ballast Water Treatment Facility for Alyeska in Valdez. Ballast water is pumped through a filter system at a rate that is three times greater than the filters can process. This results in dangerous levels of "particulate hydrocarbons" being dumped into the ocean. We need to keep this important standard for Total Hydrocarbons.

FECAL COLIFORM: ADEC's proposed standard is 20 years out of date. ADEC should change all the criteria to the new and widely accepted enterococci standard that is a more accurate indicator. Allowing increased fecal coliform to levels ten times more dangerous than our existing standard, is a public health danger. ADEC proposed level could cause 19 cases of disease per 1000 swimmers. Although Alaskan waters are cold, many Alaskans still swim in these waters and need to be protected from diseases.

REDUCED PROTECTION: ADEC is proposing to remove protection for both "drinking water" and "aquatic life" by deleting language which specifies the state standard at "whichever concentration is less".

ADEC should retain the language "whichever concentration is less". The more stringent "drinking water" standards are necessary to protect consumers of raw seafood in cases where the "aquatic life" standards are less stringent than the "drinking water" standards. Conversely, the more stringent "aquatic life" standards are necessary to maintain aquatic life in cases where the "drinking water" standards are less stringent than the "aquatic life" standards.

INADEQUATE TESTING FOR TOXIC SUBSTANCES 70.023

CHRONIC TOXICITY TESTING: ADEC is proposing to revise chronic toxicity testing for both individual pollutants and whole effluent. The proposed tests ("NOEC or "IC25") are acceptable, however:

The chronic tests should be mandatory, and they should encompass a safety margin of at least 10% of the value found to have no observable effect (NOEC). ADEC should not change "the most sensitive species" requirement to "a sensitive species". Who will determine which species is sensitive?

ACUTE TOXICITY TESTING: Existing Alaska law prohibits toxic compounds in toxic amounts. ADEC is proposing to allow mixing zones that will certainly have acutely toxic areas, yet ADEC has no regulation to address this problem.

ADEC should require mandatory acute toxicity testing. Without acute toxicity tests, an industry could legally pump out slugs of toxic material which could be diluted enough to meet chronic toxicity tests, yet could still kill fish and other aquatic life before the pollutants are diluted.

INCREASED INDIVIDUAL AND PUBLIC HEALTH RISKS 70.022

ADEC is proposing to adopt the least protective "cancer risk level" allowed by the EPA, 1 in 100,000 (10⁻⁵). ADEC fails to adequately discuss all the options available. Choosing a "cancer risk level" is a socio-economic decision. It is the public's right to determine their own cancer risk level because it is the public who is bearing the burden of the risk. Alaskans can adopt a more protective cancer risk level of: one in a million (10⁻⁶), one in ten million (10⁻⁷), or the "no risk" at all option. **LET THE PUBLIC DECIDE.**

ADEC'S "ONE IN ONE HUNDRED THOUSAND" PROPOSAL: This is the least protective option. ADEC claims that its proposed cancer risk level of 1 in 100,000 would increase each person's risk by only 1 in 100,000. This is a deliberate lie. ADEC is hoping to confuse the public by interchanging "risk level" with "risk". The "1 in 100,000" risk level applies to each of the 126 toxic pollutants released at every site. Our actual "risk" is much greater because each risk for each toxic pollutant must be added together to determine our actual risk. Most toxic effluents contain hundreds of different chemicals that are not only toxic individually, but often act in combination to create even higher rates of cancer and disease. Many reproductive, immune, and neurological diseases are caused by concentrations of chemicals much lower than that necessary to cause cancer. ADEC fails to provide any cost-benefit comparisons of the other risk level choices.

"ONE IN ONE MILLION " ALTERNATIVE: We can receive greater protection from cancer caused by water pollution if we adopt a "1 in one million" risk level. 36 other states have chosen a "1 in one million" (10⁻⁶) cancer risk level, including all states in EPA Region 10 except Alaska. These states have much larger timber, mineral, and manufacturing industries, yet are willing to protect their citizens at a risk level that is **10 TIMES more protective** than ADEC's proposal. ADEC claims that the "economic costs" associated with the more stringent risk level of "1 in one million" are not warranted. Thirty-six other states disagree, finding instead that the costs to individuals and the society of medical treatments, litigation, and environmental restoration, far outweigh any short-term economic gains to a few polluting industries.

ADEC fails to recognize the impacts that increased pollution levels would have on existing stable industries like fishing and tourism. Fishing is Alaska's largest employer. Alaska supplies over 90% of all fish in U.S. markets. It is essential that we protect not only our valuable fisheries, but also our reputation for uncontaminated fish. Alaska's tourism industry is similarly dependent on pristine waters with abundant fish and wildlife populations.

"ONE IN TEN MILLION" ALTERNATIVE: We can receive the greatest protection by adopting a cancer risk level of (10^{-7}) . All risk levels are based on the national average for fish consumption of 5 pounds per person per year. Many Alaskans eat 10 to 100 times more fish than the 5 pound national average and we are therefore at much greater risk. Most Americans are protected by a cancer risk level of (10^{-6}) , so for Alaskans to achieve an equal level of protection, we need to adopt a cancer risk level of (10^{-7}) .

"NO RISK" ALTERNATIVE: Finally there is the argument for "no risk" whatsoever. It is certainly reasonable to conclude that, given the option, people would likely choose NO increased cancer risk. The original intent of the Clean Water Act of 1987 was **NO discharge of toxic pollutants** into our waters. The constitutions of the U.S. and of Alaska guarantee equal protection under the law for every individual. A state must determine that no person should suffer an increased "risk of cancer" for the "economic benefit" of another person, group, or industry. This would fully protect Natives and subsistence users in Alaska. Under this alternative all industrial water users would be required to install the best pollution technology available and end this deadly practice of dumping toxic pollutants into our waters.



ALASKA CLEAN WATER ALLIANCE

CANCER RISK LEVEL ALTERNATIVES:

Let the public decide

ADEC is proposing to adopt the least protective "cancer risk level" "allowed by the EPA, 1 in 100,000 (10⁻⁵). ADEC fails to adequately discuss all the options available. Choosing a "cancer risk level" is a socio-economic decision. It is the public's right to determine their own cancer risk level because it is the public who is bearing the burden of the risk. Alaskans can adopt a more protective cancer risk level of: one in a million (10⁻⁶), one in ten million (10⁻⁷), or the "no risk" at all option.

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ADEC fails to recognize the impacts that increased pollution levels would have on existing stable industries like fishing and tourism. Fishing is Alaska's largest employer. Alaska supplies over 90% of all fish in U.S. markets. It is essential that we protect not only our valuable fisheries, but also our reputation for uncontaminated fish. Alaska's tourism industry is similarly dependent on pristine waters with abundant fish and wildlife populations.

"ONE IN TEN MILLION" ALTERNATIVE: We can receive the greatest protection by adopting a cancer risk level of (10⁻⁷). All risk levels are based on the national average for fish consumption of 5 pounds per person per year. Many Alaskans eat TEN to ONE HUNDRED TIMES more fish than the 5 pound national average and we are therefore at much greater risk. Most Americans are protected by a cancer risk level of (10⁻⁶), so for Alaskans to achieve an equal level of protection, we need to adopt a cancer risk level of (10⁻⁷).

"NO RISK" ALTERNATIVE: Finally there is the argument for "no risk" whatsoever. It is certainly plausible that, given the option, people would choose NO increased cancer risk. The original intent of the Clean Water Act of 1987 was **NO discharge of toxic pollutants into our waters.** The constitutions of the U.S. and of Alaska guarantee equal protection under the law for every individual. A state must determine that not any person (Native or subsistence user) should suffer an increased "risk of cancer" for the "economic benefit" of another person, group, or industry. Under this alternative all industrial water users would be required to install the best pollution technology available and end this deadly practice of dumping toxic pollutants into our waters.



ALASKA CLEAN WATER ALLIANCE

CANCER RISK LEVEL EDITORIAL

(by Tim June)

This month, on behalf of you and every Alaskan, the Hickel Administration is making an extremely important "public policy" decision that will affect every Alaskan's future. Governor Hickel has decided that you want the least protective cancer risk level allowed by the federal government for 126 of the most dangerous water pollutants. Governor Hickel has decided that you are willing to suffer ten times more cancer and diseases than allowed by most other states so that a few politically powerful industries can dump ten times more toxic pollutants into Alaska's rivers, lakes, groundwater, and oceans.

If the governor can convince you to accept his decision for the least protective cancer risk level of 1 in 100,000, then his pet industries (pulp mills, mines, and oil companies) would stand to save millions of dollars, while Alaskans would be left with some of the worst water quality standards in the country. This short-term saving to industry would be paid with Alaskan lives, increased personal health care costs, more polluted waters, and more contaminated fish stocks. Our now healthy fishing and tourism industries would be burdened with marketing tainted fish from a less-than-pristine Alaska.

The debate on cancer risk level attempts to weigh the protection of our public's health against reasonable regulation of industry. The Hickel Administration promises us some broad, yet unsubstantiated "economic benefits" to industry if we accept the least protective cancer risk level. Unfortunately, the people who get cancer from water pollution are not the same people who profit from industry deregulation. Governor Hickel claims that the "economic costs" associated with a more protective cancer risk level are not warranted. However, thirty-six other states disagree and have adopted a cancer risk level of 1 in one million which is ten times more protective than our governor's proposal. Those states decided that the costs to individuals and the whole society for medical treatments, litigation, and environmental restoration, far outweigh any short-term economic gains to a few polluting industries. In debating the "economic benefits" of cancer risk levels, one of Hickel's own cabinet members asked this obvious and crucial question: If Washington, Oregon, and Idaho can afford protect their citizens at a risk level of 1 in one million and they, like Alaska, have similar resource based economies, then why can't Alaska afford this same protection for our citizens?

(over)

The DEC claims that Hickel's proposed cancer "risk level" would increase each person's "risk" by only 1 in 100,000. This is a deliberate lie. The DEC is hoping to confuse the public by interchanging "risk level" with "risk". " Our real "risk" is much greater because all risks are additive and our real risk applies to each one of the 126 toxic chemicals released at each industrial site around the state. Industrial wastes contain hundreds of different toxic chemicals that often act in combination to create even higher rates of cancer and serious reproductive, immune, and nervous system diseases.

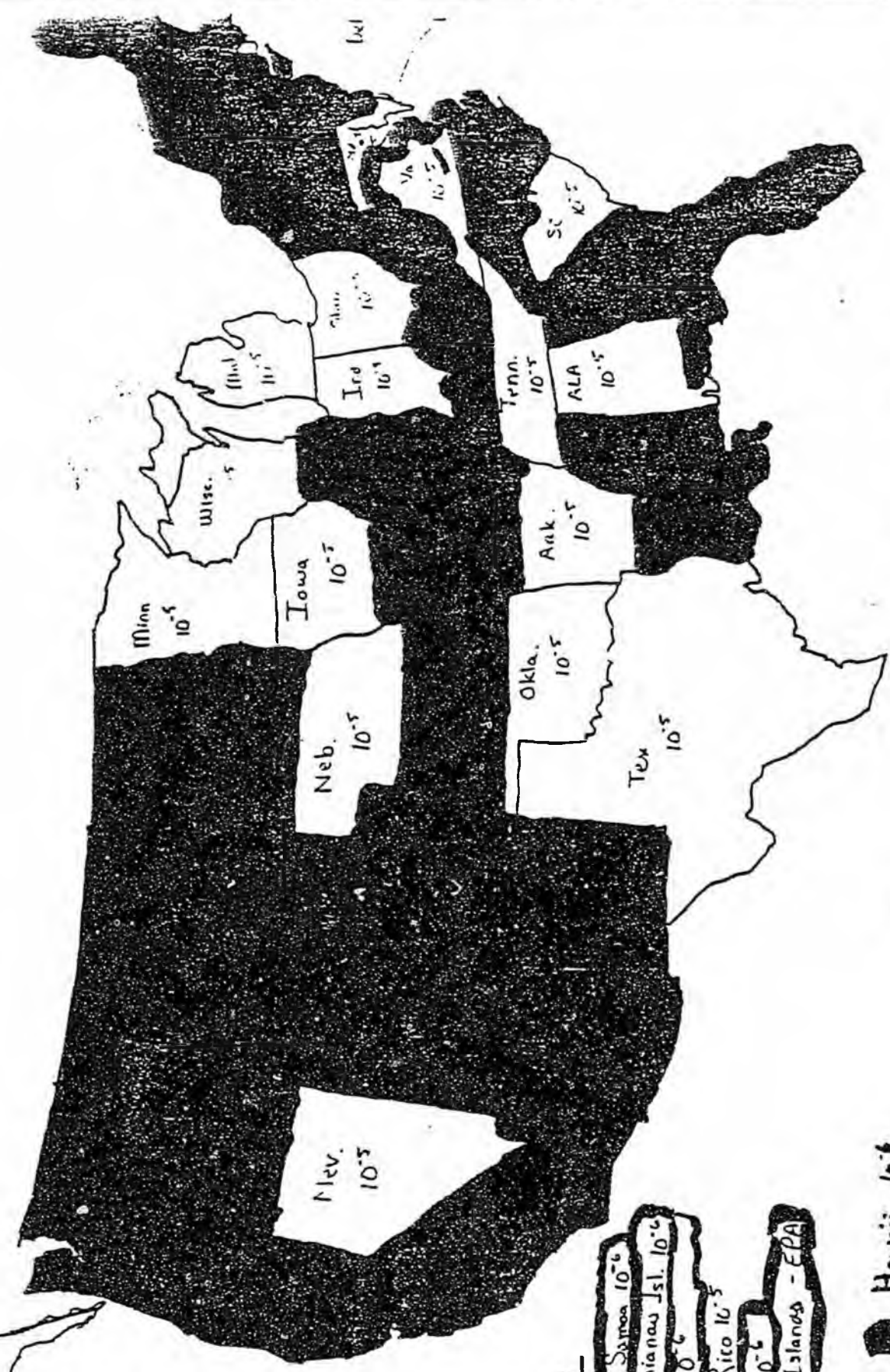
Fish-hungry Alaskans are at much greater risk of cancer from water pollution than most other Americans because many toxic pollutants collect in fish. If we allow our waters to become more polluted, then we have made our fish more dangerous to eat. Federal water quality standards are only designed to protect people who eat 5 pounds of fish per year. Alaskans eat 50 to 500 pounds per year so Alaska needs water quality standards and a risk level that is at least ten times more protective than Hickel's choice. In order to achieve an equal level of protection with most other Americans, Alaska needs to adopt the most protective risk level available.

Governor Hickel and the ADEC have a legal and moral obligation to each citizen of this state to protect your life, liberty, and pursuit of happiness. Our Constitution guarantees equal protection under the law for every individual. This precludes a state from determining that any person should suffer an increased "risk of cancer" for the economic benefit of another person or industry. Intentionally choosing to increase cancer, death, and disease rates is a blatant and reckless abuse of governmental power, if not pre-meditated murder. Alaskans do not want more cancer. Alaskans want the most protective water quality standards and the purest fish possible. Keeping Alaska's waters clean is achievable by demanding that industries use the best pollution technology available. We need to stop this deadly game of Russian roulette by prohibiting all cancer-causing pollutants from being dumped into our waters. It is time for Alaskans to speak out again. It is time for Governor Hickel to finally listen.

Tim June is co-founder of Alaska Clean Water Alliance, an organization dedicated to protecting Alaska's clean water and fish.

10^{-3} → White STATES have the least protective RISK LEVEL - 1 in 100
 10^{-6} → Black STATES have a more protective RISK LEVEL of 1 in 1 mill.

Alaska
 10^{-5}
 ↗
 not to scale



Territories

- American Samoa 10^{-6}
- No. Marianas Isl. 10^{-6}
- Guam 10^{-6}
- Puerto Rico 10^{-5}
- Palau 10^{-6}
- VIRGIN ISLANDS - EPA

Hawaii 10^{-6}

Cancer Risk Level by States

Firm puts \$400 million into pulp mill

THE ASSOCIATED PRESS

LONGVIEW, Wash. — The Weyerhaeuser Co. says it will move ahead with a \$400 million modernization of its Longview, Wash., pulp mill, a decision that is expected to provide a boost to the area's sagging economy.

The project received the approval of the timber company's board of directors Friday.

"This project is the largest dollar expenditure and modernization in Weyerhaeuser-Longview's 63-year history," said Gary Healea, vice president and Longview mill manager. "There have been few events which rival the significance of this action for the future of this mill to the community and this region."

The company had considered shutting down the mill if the modernization was not approved by the board.

The mill employed 1,400 workers at its peak last year. Employment has been gradually reduced to about 1,300 as of last month, and 1,000 workers are expected to be needed to operate the modernized mill.

The project will also create about 1,000 temporary construction jobs.

News of the decision was a relief to business leaders and mill workers alike.

"We know that if this would have been a 'no,' Longview would have been suffering for years," said Marvin Cole, president of the Longview Chamber of Commerce.

"It's a relief. I've got a long time to work yet and the new kraft mill makes my job more secure for the long haul," said millwright

Steve Harrison, 40. "I won't have to put things off any more."

Weyerhaeuser has already obtained a preliminary air pollution permit from the state and has started ordering equipment. Construction is expected to be completed in spring of 1995.

Weyerhaeuser uses pulp made at the mill to make paperboard, writing paper and containerboard. Without a new mill, it would not be economical to continue papermaking operations at Longview, company officials have said.

But some people and agencies have raised environmental concerns about the project.

In letters to state Department of Ecology officials, the U.S. Forest Service and National Park Service express concern that the plant will emit large amounts of sulfur

dioxide, nitrogen oxide and carbon monoxide. Those gases cause acid rain, acid fog and smog. Alpine lakes, soils and lichens are already being affected by these pollutants, the Forest Service said.

But the state says the plant renovation would not cause significant deterioration of air quality.

The project will replace existing pulping and bleaching systems with state-of-the-art technology, the company said. Chlorine will be eliminated from the pulp-making process. And new systems will significantly reduce air and water pollution, the company said.

The Longview mill complex is one of the company's largest facilities. The plant dates back to 1929.

Weyerhaeuser said the existing mill will continue operating while a new one is built.

L-P Mill to Go Chlorine-Free

Via EcoNet — Louisiana-Pacific has taken a first step in the public-review process to transform its Samoa, California pulp papermill from one of the worst water polluters in the country to a model of chlorine-free production. The project would allow the mill to produce bleached pulp that is absolutely chlorine-free, a change that will permit the recycling of highly toxic effluents that are now released into the ocean. L-P also plans to "steam-strip" the effluent process similar to distillation to reduce the color and coloration of the mill's liquid discharges. L-P also will extend its outfall pipes 1.5 miles offshore to reduce effluent levels in the zone.

Members from the Clean Air Network, however, expressed concerns that elements of the project were being overlooked and have questioned how closely the local air quality district scrutinize the impacts of the project.

— Andy Araneo, ECONEWS, Newsletter of Northcoast Environmental Center, 879 9th Arcata, CA 95521 (write for a free copy).

Chlorine-Free BC?

Vancouver — British Columbia will set a precedent in North America if it succeeds in eliminating chlorine from the pulp bleaching process in the paper industry, reports *Alternatives* magazine. BC is Canada's largest pulp manufacturer and a leader in worldwide paper production. The BC government has directed pulp producers to reduce levels of toxic pollutants generated by using chlorine in the papermaking process to 1.5 kilograms (3.3 pounds) per ton of pulp by 1995. By the year 2000, BC's paper industry will have to eliminate all chlorine pollutants, a step that will require new manufacturing technology and bleaching processes. The BC pulp industry has already achieved a reduction to 2.5 kgs (5.5 lbs.) of pollutants per ton of pulp.

Gary Essex

APC 40:1 (10% MZ)

KPC 14:1 (10% MZ)

Maximize MZ = 100% MZ All of estuary

POTENTIAL COMPLIANCE REMEDIES FOR APC/KPC PRELIMINARY DRAFT PERMITS
EPA/ADEC - April 16-17, 1992

POTENTIAL REMEDIES
BY POLLUTANT

APC

KPC

DIOXIN

- | | | |
|--------------------------|--|---|
| 1) Maximize Mixing Zone | 200:1 dilution = 40 % of need
PLUS | 40:1 dilution = 4 % of need
PLUS |
| 2) AWQS revision | Adopt 10 ⁻⁵ risk level =
100 % of need | Adopt 10 ⁻⁵ risk level
= 40 % of need
PLUS |
| 3) Facility modification | N/A | Facility modification =
100 % of need |

COLOR

End... 2000 cu. 40/1 = 75%

- | | | |
|--------------------------|---|--|
| 1) Maximize Mixing Zone | 200:1 dilution = 80 % of need
PLUS | 40:1 dilution = 30 % of need
PLUS |
| 2) AWQS revision | Adopt 15 color units =
100 % of need | Adopt 15 color units =
90 % of need
PLUS |
| 3) Facility modification | N/A | Facility modification =
100 % of need |

BOD

- | | | |
|--|-------------------------|--|
| 1) Maximize Mixing Zone | Reopener (Monitoring) | N/A - entire Mixing Zone
already utilized ← what MZ |
| 2) AWQS revision | N/A - no AWQS criterion | N/A - no AWQS criterion |
| 3) Review Mixing Zone model
in light of benthic BOD | N/A | Revisit appropriate limits and
remedies |

SULFIDE

- | | | |
|-------------------------|------------------------------|-------------------------------|
| 1) Maximize Mixing Zone | 200:1 dilution = 20% of need | 40:1 dilution = 6-7 % of need |
| 2) AWQS revision | Gold Book criterion | Gold Book criterion |

TOTAL HYDROCARBONS

- | | | |
|-------------------------|--------------------------------------|--------------------------------------|
| 1) Maximize Mixing Zone | 200:1 dilution = 100 % of need
OR | 40:1 dilution = 25 % of need
PLUS |
| 2) AWQS revision | Change standards =
100 % of need | Change standards =
100 % of need |

CHLOROFORM

- | | | |
|-------------------------|--|--|
| 1) Maximize Mixing Zone | 200:1 dilution = 100 % of need
OR | 40:1 dilution = 90 % of need
PLUS |
| 2) AWQS revision | Adopt 10 ⁻⁵ risk level =
100 % of need | Adopt 10 ⁻⁵ risk level =
100 % of need |

PUBLIC COMMENT

WATER QUALITY AND SOLID WASTE REGULATIONS

DEC received thousands
of comments - These
are only the comments
received by the committee.

X



UNITED FISHERMEN OF ALASKA

211 Fourth Street, Suite 112
Juneau, Alaska 99801
907/586-2820
Fax: 907/463-2545

November 1, 1993

FAX: 907/465-5274

*Organizations,
Cooperatives
Communities*

Mr. Dave Sturdevant
Water Quality Management Division
Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Dear Mr. Sturdevant:

United Fishermen of Alaska (UFA) is both extremely concerned by and disappointed with the August 1993 revisions to the state's water quality standards, proposed by the Alaska Department of Environmental Conservation (ADEC). UFA is concerned that proposed revisions will lead to degradation of fish habitat, reductions in fish populations, erosion of consumer confidence in Alaska's seafood quality and, in sum, poorer water quality statewide. Further, UFA is concerned that the proposed revisions will have tremendous negative economic impacts, both short- and long-term, which will be felt statewide throughout the entire seafood industry. These concerns are virtually identical to those expressed over a year ago in regard to the 1992 proposed revisions. Appallingly, little has changed.

ADEC, as the "trustee of the environment for the present and future generations (46.03.010(b)), has abrogated its responsibility. Governor Walter J. Hickel's news release of October 29, 1992 (No. 923-229) pledged to Alaskan fishermen to maintain strict water quality standards and the toughest and most complete health and water standards that Alaska has ever had. The proposed regulations fall short of the public's trust and the Governor's pledge.

Clean water is central to the success of the seafood industry, and UFA has committed a great deal of time during the last 13 months towards developing revisions that would adequately protect our interests (fish habitat, aquaculture, seafood processing, markets, and consumer health) and the waters of the state. Three UFA delegates, in good faith, attended meetings of the Water Quality Standard Advisory Group (WQSAG), formed by the Governor to "advise" ADEC on development of revisions. Yet, despite our best efforts, UFA finds that most of our concerns have been ignored in the August 1993 revisions.

MEMBER ORGANIZATIONS

Alaska Crab Coalition • Alaska Longline Fisherman's Association • Alaska Trollers Association • Area K Seiners Association
Bering Sea Fishermen's Association • Bristol Bay Driftnetters Association • Concerned Area "M" Fishermen
Cook Inlet Aquaculture Association • Cordova District Fishermen United • Kenai Peninsula Fishermen's Association
North Pacific Fisheries Association • Northern Southeast Regional Aquaculture Association • Peninsula Marketing Association
Petersburg Vessel Owners Association • Prince William Sound Aquaculture Corporation • Seafood Producers Cooperative
Southeast Alaska Seiners Association • Southern Southeast Regional Aquaculture Association
United Cook Inlet Drift Association • Western Alaska Cooperative Marketing Association

Mr. Dave Sturdevant
November 1, 1993
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In particular, UFA is deeply concerned that ADEC's failure to adopt an anti-degradation policy for outstanding water resources, and ADEC's arbitrary authorization of "treatment works" in any waterbody (and resulting exemption of state water quality standards), will result in widespread abuse of the state's water quality standards. UFA strongly recommends that the Attorney General review these matters before ADEC proceeds any further with its proposed revisions.

A situation that exemplifies ADEC's disregard for good science and public process occurred this past summer. Last August, ADEC issued an advisory to Sitka processors not to buy fish cleaned in the brown water from Silver Bay and parts of Eastern Channel, based on concerns about water quality; specifically, "color." Commercial fishermen were not notified (some had to dump their catch) nor were sports fishermen, subsistence harvesters, or the public. Water samples were not taken; presumably, so there would not have to be any enforcement action taken on the Sitka mill which has a history of violating the state's water quality standards. This demonstrates ADEC's underlying intention to overlook existing standards and allow polluters to pollute.

UFA has requested an Ombudsman's investigation into the Sitka health advisory. The defacto policy as enforced by ADEC protects polluters at the public's expense. The seafood industry cannot afford to subsidize another industry's problems. In light of ADEC's Sitka health advisory, it is unconscionable for ADEC to recommend further reducing the state's "color" standard to accommodate the pulp industry.

Other actions taken by the State further demonstrate an unwillingness by ADEC to accept a democratic public process. The state unilaterally adopted a one in 100,000 cancer risk despite overwhelming public support, then and now, for a more stringent standard. ADEC did not work well with the Water Quality Standard Advisory Group, choosing instead to adopt its own policies virtually unmodified by group discussion. The process was used as a sideshow to obfuscate ADEC's intended end.

In summary, UFA finds that, overall, the 1993 revisions are even less acceptable than the 1992 revisions. In both cases, the proposed revisions weaken existing state water quality standards. Immediate steps should be taken by the state to demonstrate its intent to protect its waters and public health and to allow due public process.

1. The State should rescind the cancer risk of one in 100,000 and adopt the more stringent one in 1,000,000 as requested by the overwhelming majority of people.
2. The State should internally verify the legality of its proposed actions, *before proceeding any further*, by obtaining the Attorney General's opinion on waters of the U.S./Alaska versus "treatment works," and the absence of an anti-degradation policy for outstanding water resources.

Mr. Dave Sturdevant
November 1, 1993
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3. The State should continue with the Advisory Group process, but make it work effectively by adopting a dispute resolution format to set pollution criteria, and by hiring an objective moderator as chair, as originally suggested by UFA in 1992.

The enclosed technical comments were written by the three UFA delegates to the Advisory Group: Dr. Riki Ott, Stosh Anderson, and Steve Reifenstuhl.

Sincerely,


Jerry McCune, President
United Fishermen of Alaska

JM:RO:phl

Enclosure

cc: The Honorable Walter J. Hickel
Governor, State of Alaska
Interior Secretary Bruce Babbitt
U.S. Department of the Interior
✓The Honorable Bill Williams, Chair
Alaska House of Representatives Resources Committee
The Honorable Suzanne Little,
Alaska State Senate
Charles Findley, Director
Waters Division, EPA Region X
Charles E. Cole, Attorney General, State of Alaska
Carl L. Rosier, Commissioner, ADF&G
John A. Sandor, Commissioner, ADEC
Harry Noah, Commissioner, ADNR
Kim Elton, Executive Director, ASMI
Duncan Fowler, Ombudsman
Prince William Sound Aquaculture Corporation
UFA Board of Directors

November 1, 1993

SPECIFIC COMMENTS OF UNITED FISHERMEN OF ALASKA
ON THE REVISIONS TO THE ALASKA WATER QUALITY STANDARDS
PROPOSED BY ADEC IN AUGUST 1993

18 AAC 70.010. GENERAL.

Under subsection (c), UFA recommends that:

- * the Attorney General's opinion should be obtained for the entire subsection (c) as UFA questions whether ADEC can arbitrarily discriminate between waters of the state and the United States, and further, whether ADEC can arbitrarily assign entire waters as "treatment works";
- * the entire section dealing with "treatment works" should be moved from 70.010 to 70.025 (site specific criteria);
- * the definition of "treatment works" should preclude the conversion of a water body of the U.S. or Alaska into a "treatment works";
- * "treatment works" should not be permitted if they present a significant potential for adverse effects to fish, wildlife or public health; and
- * a statement should be added to address the maintenance and rehabilitation of the "treatment works" after a project is completed.

Justification: ADEC has used the standard practice in rural Alaska of converting natural ponds into sewage "treatment works" as the excuse to modify the WQS language to allow any special project to also convert any of Alaska's waterbodies into a "treatment works." This is simply not acceptable, and it is also probably not legal.

The state is bound by the Clean Water Act to prevent degradation of its waterbodies. While the state's statutory definition of "waters" is comprehensive, ADEC undermines this definition in subsection (c) by declaring that the WQS do not apply to, essentially, any waterbody authorized by the department to be a "treatment works."

Meanwhile, the statutory definition of "treatment works" (AS 46.03.900 (21)) leaves the decision up to ADEC as to what qualifies as a "treatment works," because of the open wording "or other works...". Taken to the extreme, it would be legal under

the proposed revisions for ADEC to authorize, for example, conversion of an entire waterbody into a "treatment works" for potentially hazardous waste. UFA believes that this entire section, including the definitions, should be reviewed by the Attorney General before ADEC proceeds any further with its proposed revisions.

ADEC must not be allowed to "solve" one problem by creating another. Converting ponds in rural Alaska for sewage treatment should not be equated with special projects such as damming a river for a mine tailings pond. Use of natural ponds for sewage treatment should be either treated as "publicly-owned treatment works" for domestic sewage, which are granted special exemptions under the Clean Water Act, or as potential site-specific projects. Special projects should not be granted blanket approval in the state standards, rather, they should go through a site-specific review process with public hearings.

Under subsection (e), UFA recommends that:

- * the state should immediately adopt an antidegradation policy for protecting outstanding water resources as mandated by the Clean Water Act; and
- * the antidegradation policy must include "full satisfaction of the intergovernmental coordination and public participation provisions of the State's planning process..." (40 CFR 131.12) before the state may allow degradation of a waterbody to meet the minimum levels necessary to support existing uses.

Justification: UFA believes that the state is out of compliance with federal law by not having in regulation an antidegradation policy for outstanding water resources. If this policy was in existing regulations, many of ADEC's controversial proposed revisions, such as discretionary authorization of "treatment works" in any waterbody, or discretionary approval of "natural conditions" as site-specific water quality criteria, would become moot issues. As it stands now, ADEC is lacking one of the key tools for protecting Alaska's waters--and UFA believes the state is out of compliance with federal law in doing so.

Further, UFA concurs with ADF&G's concern about the intergovernmental review process expressed in their 1990 comments. "We question whether the public participation and intergovernmental coordination procedures on 18 AAC 15.020 fully meet the spirit and intent of 40 CFR 131.12 since no explicit provision for interagency review or requirement for public hearings are contained in 18 AAC 15.020. The existing regulations could be strengthened by including a provision for formal interagency review and possible public hearings when an ADEC action would degrade high quality state waters under the provisions of 18 AAC 70.101(c) (or (e) as proposed).

UFA

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18 AAC 70.020. PROTECTED WATER USE CLASSES & CRITERIA.

Fecal Coliform Bacteria Standards

UFA recommends that ADEC change all the criteria to the new enterococci standard, not a standard that is 7 years out-of-date (and less stringent than the existing standard).

Justification: It is doubtful EPA will approve a standard which EPA itself replaced in 1986.

Sediment (Settleable Solids)

To reiterate our November 1992 comments, UFA strongly recommends that ADEC maintain the standard for "Total Suspended Solids" (TSS).

Justification: The standards for "turbidity" and "color" do not adequately protect aquatic life, as maintained by ADEC. According to ADF&G, while turbidity may work for TSS in fresh water systems, in marine waters it does not, because of interference from particulates (ADF&G 1992). Also, TSS is a better indicator for heavy metals and other pollutants in sediments. ADF&G has stated, and UFA concurs, that it is "essential" that TSS remain in the WQS.

Further, ADF&G recommended during the 1990 review process that the turbidity standard for growth and propagation of fish, shellfish, other aquatic life, and wildlife should be revised. ADF&G found that among 26 states and provinces with cold-water systems, 74% had a turbidity criterion more protective than Alaska's (ADF&G 1990, pg. A1-3): "To the extent that turbidity is an indirect measure of suspended solids, the revision of the turbidity criterion... would also generally reduce suspended solids, which are detrimental to fish and wildlife resources, an important made by Lloyd (1985, 1987) and Lloyd et al. (1987)."

It is misleading of ADEC to recommend deleting the TSS standard, while assuring that the turbidity standard is adequate to protect state waters, in light of ADF&G's concerns.

Toxic & Other Deleterious Organic & Inorganic Substances

To reiterate our September 1992 comments, UFA recommends that:

- * the existing mandatory acute toxicity tests (96 hour LC₅₀) be retained, (not dropped as recommended by ADEC);
- * the existing standard of "0.01 times the 96 hour LC₅₀" be replaced by a mandatory chronic toxicity test (either "No Observable Effects Concentration"--NOEC--or "25 Percent Inhibition Concentration"--IC₂₅), (not discretionary tests as recommended by ADEC); and

- * the new mandatory chronic toxicity test use methods and species approved by EPA, (not "alternative methods and species approved by the department" as recommended by ADEC).

Further, UFA recommends that:

- * the language "whichever concentration is less" should be retained, (not dropped as recommended by ADEC); and
- * the new sentence "There shall be no concentrations of toxic substances in water or in shoreline or bottom sediments that cause toxic effects on aquatic life, except as authorized in this chapter." should NOT be adopted.

Justification: See pg. 25 of UFA's 1992 comments. In addition, regarding the language "whichever concentration is less," more stringent "drinking water" standards are necessary to protect consumers of raw seafood in cases where the "aquatic life" standards are less stringent than the "drinking water" standards. Conversely, more stringent "aquatic life" standards are necessary to maintain aquatic life in cases where the "drinking water" standards are less stringent than the "aquatic life" standards.

The state's WQS CANNOT authorize concentrations of toxic substances in sediments that cause toxic effects on aquatic life. This violates the antidegradation clause of the Clean Water Act. The whole point of the WQS is to prevent discharge of toxic substances, either individually or in concentrations, that will persist in the environment. Sediments act as a sink. If toxic compounds are allowed to accumulate in sediments to levels that cause toxic effects to aquatic life, the state's WQS are useless as a tool to protect the environment and in violation of federal law.

While technically the state could allow concentrations of toxic substances in water that cause toxic effects on aquatic life (as in mixing zones), UFA strongly supports a "no toxics" clause in which permittees would be required to meet the WQS at the end of the discharge pipe (see pg. 1 of UFA's 1992 comments).

Color

UFA recommends that:

- * the numeric standard for "color" (organics) in seafood processing should NOT be replaced with a narrative standard; and
- * the phrase "or the natural color unit level, whichever is greater" should NOT be added to the standards as proposed by ADEC.

Justification: In August 1993, ADEC advised Sitka seafood processors not to accept fish cleaned in water from Silver Bay

and parts of Eastern Channel based on concern about the water quality, specifically the dark brown color of the water (Pohl 1993). ADEC apparently issued this advisory as a "precaution," although no water quality tests were conducted (MacLean 1993). Processors were reported as being concerned that publicity about the advisory could create a marketing scare.

How can ADEC justify issuing what amounts to a health advisory to seafood processors on one hand because of excessive "color," yet seek to further weaken the state's "color" standards on the other hand? How can ADEC justify notifying only seafood processors and not other seafood consumers (commercial and sport fishermen, and subsistence users) about specific concerns with water quality? How can ADEC justify issuing an advisory, then not following up with water quality tests? How can ADEC justify retaining a numeric standard for all other uses except seafood processing? A narrative standard would be virtually meaningless to enforce.

ADF&G states that "flesh discoloration of marine shellfish and bivalves may occur at color concentrations of 5 to 15 color units. (D)iscoloration has resulted in unmarketable crabs." The existing numeric "color" standard protects this existing use, but only when it is enforced.

For justification on the recommendation to NOT adopt ADEC's wording on "up to natural conditions," refer to the section on 70.025 (site specific criteria).

Petroleum Hydrocarbons, Oil & Grease

To reiterate our September 1992 comments, UFA recommends that:

- * the "total hydrocarbon" standard should retain methodology for measuring and monitoring particulate, as well as dissolved, hydrocarbons.

Further, UFA recommends that:

- * mandatory acute and chronic toxicity testing should be conducted for total hydrocarbons, total aromatic hydrocarbons and individual hydrocarbons; and
- * the proposed addition under Note 8 "Samples will be collected in marine and fresh waters below the surface and away from any observable surface sheen" be rejected.

Justification: The method used to determine "total aqueous hydrocarbons" employs a two-hour gravity separation step prior to siphoning off a water sample. This step would allow particulate hydrocarbons to settle out of the water column, either into an oil film on the surface, or oily sludge on the bottom. The subsequent water sample would not accurately reflect, quantitatively or qualitatively, the particulates in the sample. This is

UFA

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not acceptable for reasons discussed at length in our September 1992 comments (pg. 27-30).

Besides inappropriate methodology, ADEC is also proposing inappropriate sampling techniques. Presence of oil pollution is detected (at high enough concentrations) as a surface sheen. Yet ADEC is proposing to sample "away" from an observable sheen. Sampling "away" from the problem will obviously result in samples that do not contain any hydrocarbons. How far "away"? How far "below the surface"? This proposal makes no sense in terms of environmental monitoring and should be rejected.

Regarding the toxicity testing, ADEC proposes to drop the requirement for toxicity testing on individual hydrocarbons and require instead whole effluent chronic toxicity testing, when needed. The need for mandatory testing is discussed under section 70.023.

The concept for testing only whole effluent is flawed. In the past, ADEC has used individual LC₅₀ data from mandatory toxicity tests to justify denying industry requests to obtain site-specific (reduced) water quality criteria for hydrocarbons (ADEC 1988). In fact, the State found in this particular instance that the existing criterion of 10 ppb for total aromatic hydrocarbons was actually much greater than what was justifiable utilizing the individual LC₅₀ data for the most sensitive species.

The requirement for toxicity testing of individual hydrocarbons has proven to be a useful tool for ADEC to enforce its WQS. In light of ADEC's proposals for chronic toxicity tests, this requirement should be retained and expanded to include a mandatory requirement for all toxicity tests (both chronic and acute) for individual compounds, in addition to the whole effluent toxicity tests.

UFA

page 7

18 AAC 70.022. HUMAN HEALTH CRITERIA.

To reiterate our September 1992 comments, UFA strongly recommends that:

- * the State of Alaska adopt a "human health criteria" for cancer risk level of 1 in a million, not 1 in a 100,000 as recommended by ADEC.

Justification: In addition to the justification in our September 1992 comments (pg. 11-14), we offer the following rationale.

Cancer in Alaska, as well as in the entire U.S. is rapidly on the rise (Enge 1993, Lewis et al. 1992)). It seems that after decades of sharply increasing production of synthetic chemicals in the U.S., we as a society suddenly became aware that both our environment and our species have become saturated with these and other compounds.

Our understanding of most of these compounds is abysmal. Quantitative risk analyses seek to assure us of "acceptable risk," yet inherent flaws in exposure design lend the results to presume innocence until proven guilty (O'Brien 1988). Any chemical risk analysis based on laboratory experiments with a single chemical, controlled dose and exposure, and healthy animals of a homogeneous genetic strain cannot be used to assure safety among humans and nonhumans exposed in the field to multiple compounds, of undetermined dose or exposure duration, with greatly varying genetic characteristics, age, sensitivity and health conditions. Further, it only within the last decade that tests have expanded to include endpoints other than death or cancer, yet it is now well established that many reproductive, immune and neurological sicknesses are caused at lower concentrations than necessary to cause cancer.

It is small wonder then, but we are continually surprised, when some compound wreaks havoc somewhere. Times Beach and dioxin. Agent Orange and dioxin. Fish kills in Southeast near the Ketchikan and Sitka pulp mills. A health advisory to seafood processors in Sitka because of water quality...

These are wake up calls to reduce the amount of chemicals entering our land, air and water. These are wake up calls to adopt minimal or even zero risk alternatives for chemical exposure. Two-thirds of the states have found that the costs to society of medical treatment, litigation and environmental mitigation outweigh any short-term economic gains that would benefit a handful of industries.

By adopting a one-in-a-million cancer risk now, as have two-thirds of the other states, we will be better prepared for the future when inevitable steps are taken nationwide, such as in the Great Lakes region, to further reduce or eliminate exposure to

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chemical poisons. After all, no one can define an acceptable cancer risk for another person. It is just a matter of time before we all realize this.

We need a cancer risk that positions us to meet the challenges of the 21st century. We need at least a one-in-a-million cancer risk level.

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18 AAC 70.023. CHRONIC TOXICITY OF AN EFFLUENT.

To reiterate our September 1992 comments, UFA recommends that:

- * chronic toxicity tests should be mandatory, (not discretionary as recommended by ADEG);
- * chronic toxicity tests should encompass a safety margin such as 10% of the value found to have no observable effects; and
- * chronic toxicity tests should NOT be adopted without mandatory acute toxicity testing of whole effluent.

Justification: The justification for our recommendations is presented in our September 1992 comments (pg. 31-34).

18 AAC 70.025. SITE-SPECIFIC CRITERIA.

UFA strongly recommends that

- * a "natural conditions" regulation should NOT be implemented for any pollutant until the state adopts an antidegradation policy for protecting outstanding water resources as mandated by the Clean Water Act;
- * a "natural conditions" regulation should NOT be implemented for any pollutant until the state writes--and the public approves--a Technical Support Document; and
- * ADEC should NOT be allowed to reduce the state's water quality standards "on its own motion" as proposed.

Justification: Allowing the state's water quality standards to be virtually ignored in situations where the water naturally contains high levels of contaminants is a large step for ADEC to be taking, and the potential for abuse is extremely high, especially in light of the fact that this state has NOT adopted an antidegradation policy for outstanding waters. (Refer to 70.010(e) for further discussion on the antidegradation policy.)

Probably every waterbody in the state exceeds the WQS at some point during the year because of natural variations in water quality. ADF&G notes that "natural background water quality may only exceed the numeric criteria on a temporary or seasonal basis. The remainder of the time, the base water quality is below the established criteria. Fish and wildlife populations often have adapted to these short-term fluctuations, but may not survive more prolonged exposures if the applicable criteria are raised."

Criteria for temporary or seasonal variations of the WQS to coincide with natural variations in water quality, as well as variations in WQS for waterbodies with prolonged conditions of naturally high background levels of compounds, should all be addressed in a Technical Support Document (TSD). The TSD should provide the applicant and ADEC with the information necessary to decide if and when "natural conditions" should be used, how this criterion should be determined, and what safety margins should be included. ADEC's proposal to write this document "in the future" is inadequate: the "natural condition" regulation cannot be implemented without a TSD in regulation first.

Regarding the proposed wording "at its own motion," ADEC does not have the resources, especially after the latest budget cuts, to determine on a case-by-case basis if and when to reduce the WQS. Requests for "natural conditions" exemptions should be initiated by an applicant--and supporting data should also be provided by the applicant.

18 AAC 70.032. MIXING ZONES.

To reiterate our September and November 1992 comments, UFA recommends that:

- * the entire language should be changed to reflect the fact that granting a mixing zone is the exception and not the rule; and
- * ADEC's proposal to allow discharge of only proven carcinogens, mutagens, and teratogens should be rejected.

Further, UFA recommends that:

- * prior to authorization of any new mixing zones, the state should adopt an antidegradation policy for protecting outstanding water resources as mandated by the Clean Water Act;
- * the state should immediately initiate research to determine the feasibility and applicability of adopting in Alaska
 - (1) the "Zero Risk or No Risk Alternative" that is being currently initiated in the Great Lakes region by an international commission, and
 - (2) the simple "worst case analysis" invoked by the state of Iowa regarding contamination of its groundwater with pesticides.

Justification: The proposed wording of subsection (a) places the burden of proof to determine that a mixing zone is NOT appropriate on the public and the state instead of on the applicant. The rest of the nation is moving towards pollution prevention while Alaska relies on end-of-the-pipe technology, and then gives expansive mixing zones for faulty technology. This is not good public policy, and it is definitely not policy that will protect the state's water quality.

In the Great Lakes region, the International Joint Commission is currently initiating a "Zero Risk Alternative" to mixing zones, in which new mixing zones are prohibited and existing mixing zones will be phased out by 2004. This is the type of public policy that Alaska should be striving towards.

Regarding the standard of proof itself, ADEC has essentially asked for the nearly nonexistent. For example, despite the fact that about one-sixth of the U.S. population lives within four miles of a chemical dump or other potentially hazardous waste site, and the fact that numerous medical and scientific studies have demonstrated links between toxic pollution and various diseases or other medical problems, "conclusive studies of the linkages between exposure and disease at these sites... have been a rarity" (Lewis et al. 1992).

Lack of conclusive studies may be largely a function of flaws and inherent biases within scientific design (O'Brien 1988, 1992, 1993), or it may be a function of intentional bias in and abuse of research (Lewis et al. 1992). (Interestingly, one researcher (Vernon Houk), who ADEC cited extensively in its 1992 dioxin issue paper, has been targeted by citizen oversight groups for his "fundamental hostility to the idea that environmental exposures cause illness," pg. vi in Lewis et al.)

Whatever the reason for the lack of conclusive studies, ADEC is charged with protecting the public and the environment, but ADEC's proposed standard of proof will not uphold its mandate. As District Judge Robert Belloni succinctly stated in his *S.O.S. v. Block* opinion, "Plainly, the worst result that can occur as a result of proceeding in the face of uncertainty as to whether a herbicide causes cancer is that *it does cause cancer*" (*Save our ecoSystems v. Clark* D.C. No. CV-83-6090-BE in O'Brien 1988). ADEC should take this same approach when dealing with potential carcinogens, mutagens or teratogens.

Further, UFA recommends that:

* mixing zones should be banned in

(1) lakes,

(2) "index streams" used by ADF&G for fisheries management, and other identified special resource or critical freshwater areas, including state and federally-designated critical habitats, refuges, parks, and wildlife sanctuaries, and recreational or wild and scenic rivers,

(3) waterbodies listed as impaired under Section 305(b) of the Clean Water Act, and

(4) areas of anadromous fish spawning or resident game fish spawning redds.

Justification: To its credit, ADEC has responded to UFA's request to ban mixing zones in areas with fish spawning redds, and has proposed to do just this. UFA supports this revision. However, there are other waters in which UFA believes mixing zones should be banned.

ADF&G has stated "it should be recognized that lentic (lake) environments in Alaska typically mix only two times per year, or less. Most lakes do not exhibit a "flushing" flow. So most material that is dumped into the lake remains there. As such, the basic concept of a mixing zone is brought into question, particularly for toxic or other non-conventional pollutants" (1992 pg.11). UFA believes that until such time as ADEC can justify (research, evaluate and discuss) adopting policy for mixing zones in lakes, mixing zones in lakes should be

prohibited. Lakes are critical habitat for fisheries resources: this habitat is too important to risk by allowing zones of pollution for which no one knows the consequences.

In "index streams," any disruptions of water clarity could make the stream unfit as an index stream, because of inability to count fish, and a valuable management tool would be lost.

For waterbodies listed as impaired under the Clean Water Act, federal and state efforts are supposed to be directed at environmental mitigation, restoration and rehabilitation. Increasing the amount of pollutants discharged into the waterway certainly does not fall into any of these categories.

UFA recommends that:

- * ADEC's proposal to allow mixing zones as long as they do not cause "permanent or irreparable displacement" of biota or "reductions in fish populations levels in the waterbody as a whole" should be rejected;
- * the phrase "waterbody as a whole" should be defined or rejected (the existing term is either "waterbody" or "receiving water").

Justification: ADEC does not have the background information right now necessary to justify this proposal. We do not have comprehensive baseline data on existing fish population numbers, and we do not know how many members of a biotic community or fish population are expendable before irreparable damage is done to the overall population. Relying on industry to provide this basic data is unacceptable, as it is industry's best interests to find no long-term damage from its operations.

The proposed phrase "waterbody as a whole" should also be rejected for these same reasons. ADEC is attempting to allow a temporary (nonpermanent) reduction in numbers or a dislocation of those individuals near or in the mixing zone, as long as the population levels remain the same in the "waterbody as a whole." Will ADEC know when a temporary problem is turning into an irreparable problem? Is ADEC going to monitor the entire watershed for effects? Or does "waterbody as a whole" mean riparian and oceanic systems for anadromous species? Using this phrase will either create a management nightmare, (assuming there would be an attempt to monitor and enforce compliance), or a potentially severely degraded waterbody where there is no monitoring. As both of these consequences are undesirable, this phrase should be rejected.

UFA recommends that:

- * accumulation of pollutants in the sediments under a mixing zone should not be allowed and should be expressly prohibited.

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Justification: See 70.020 toxic and other deleterious substances.

UFA recommends that:

- * for mixing zones authorized in streams, the upstream flow should be calculated using the 10-year, 7-day low flow, (instead of the 2-year, 3-day summer low flow as proposed by ADEC).

Justification: As stated repeatedly by UFA during the Advisory Group meetings, summer may not always be the period of low flow. In fact, for glacier-fed streams, summer is the period of high flow.

Half the states use the method (computer model) recommended by UFA (10-year, 7-day low flow), and it is the standard method/model for U.S. Geological Survey (Stedinger 1989).

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18 AAC 70.100. DEFINITIONS.

UFA recommends that:

- * the phrase "reasonably demonstrates" should be defined, as discussed during the Advisory Group meetings, or rejected (the existing term is "demonstrated to the department's satisfaction").

Justification: The entire Advisory Group decided, by consensus, on the following definition:

"reasoned determination" means a written expression of a position or conclusion that includes a careful, balanced and critical review of available relevant information; reflects current scientific and technical information; and cites relevant sources of information."

Either ADEC should adopt this definition to "reasonably demonstrates" or the phrase should be rejected in favor of existing wording.

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- UFA. Nov. 16, 1992. Letter from Jerry McCune, UFA President, to ADEC/WQM Dave Sturdevant. Letter 5 pg.

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CONFIRMATION COPY

THIS IS THE ORIGINAL, FOR YOUR RECORDS,
OF A FACSIMILE TRANSMISSION SENT TO
YOU ON 11/15/93

November 15, 1993

Mr. David Sturdevant
Water Quality Management
Alaska Department of Environmental
Conservation
Suite 105
410 Willoughby Avenue
Juneau, Alaska 99801-1795

Re: ARCO Alaska, Inc.'s Comments on the Proposed Revisions to
Water Quality Standards, 18 AAC 70, August 1993

Dear Mr. Sturdevant:

ARCO Alaska, Inc. ("ARCO") appreciates this opportunity to comment on the Alaska Department of Environmental Conservation's ("ADEC") proposed revisions to the Water Quality Standards regulation dated August 1993.

ARCO previously submitted its original comments regarding the proposed revisions in a letter dated October 30, 1992. We ask that those comments be retained as part of the official record along with the comments submitted below. In addition, ARCO participated in preparing the comments which the Alaska Oil and Gas Association ("AOGA") will submit to ADEC regarding the water quality standards revisions. ARCO hereby references AOGA's comments and adopts them in full.

In addition, ARCO hereby submits the following comments.

1. Petroleum Hydrocarbon Standards

ARCO strongly disagrees with ADEC's proposal to retain 10 µg/L for total aromatic hydrocarbons ("TAH") and 15 µg/L for total aqueous hydrocarbons ("TAqH"). As detailed in AOGA's comments, these standards are technically unsound and are not supported by EPA policy. No other state has numeric standards for total hydrocarbons that are as low as this - in fact, the next most stringent state (Virginia) has groundwater standards 67 times higher. Other states (Arkansas, Indiana, Nebraska, South Dakota) have total hydrocarbon standards that are 667 times higher than the State of Alaska water quality standard

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for total aqueous hydrocarbons. EPA's standards for monocyclic aromatic compounds have federal marine water quality criteria in the range of 430 to 5,100 $\mu\text{g/L}$, or 43 to 510 times greater than ADEC's proposal. ADEC has not adequately demonstrated the technical basis, or need, for such low standards.

These low standards are technically unsound for all of the reasons detailed in AOGA's comments. These reasons include:

- The proposed water quality standards for TAqH and TAH are the same as those originally implemented in 1979 and are primarily based on results of laboratory studies of the acute and chronic toxicity of water-soluble fractions (WSFs) of crude and refined oil conducted in the 1970s. The hydrocarbon composition and concentrations of total hydrocarbons and total aromatic hydrocarbons vary widely in WSFs prepared by different methods from different crude and refined oils. The composition of a WSF prepared in the laboratory for use in toxicity tests does not resemble the composition of the dissolved hydrocarbon assemblage in the water column near an oily wastewater discharge or an oil spill. Therefore, results of laboratory toxicity tests with WSFs prepared in the laboratory cannot be used as the basis for predicting the biological effects of dissolved petroleum hydrocarbon mixtures in natural water bodies.
- Much of the oil toxicity research performed during the 1970s and early 1980s, upon which the standards originally were based, used nominal exposure concentrations or inappropriate, nonspecific methods for characterizing and quantifying the composition and concentrations of hydrocarbons in exposure mixtures. In other studies, control mortalities or sublethal effects were not adequately controlled or accounted for. Oil-water mixtures are extremely difficult to work with in laboratory and field settings. Exposures are difficult to control and document. Results of many of these early studies cannot be used as the basis for regulation.
- An application factor - the factor by which acute effects concentration is multiplied to derive a criterion value - of 0.01 (equivalent to an acute-chronic ratio of 100) is overly conservative for a complex, nonpersistent mixture such as a water-soluble fraction of oil. Acute-

chronic ratios in marine and freshwater organisms for oil-water mixtures usually are in the ratio of 1.5 to 4.

- The great disparity between the Alaska standard and standards adopted by other states, as well as the large difference between federal and Alaska criteria, indicates that the Alaska standard is substantially overprotective and unnecessarily restrictive.
- The proposed regulation requires analysis of TAqH by a combination of three analytical methods. The value for TAqH is derived by summing the results for the three methods. However, two of the analytical methods measure many of the same aromatic hydrocarbons in water samples. Therefore, the methods will "double count" the most abundant petroleum hydrocarbons in most water samples.
- The required method for analyzing TAqH in water samples is the same as one of the three methods required for analysis of TAqH. Therefore, there will be considerable overlap in the chemicals included in the two water quality standards. This will cause problems in compliance monitoring and regulatory enforcement.
- The methods proposed by ADEC for collection, preparation, and analysis of water samples are not EPA approved and will lead to contamination of the samples with hydrocarbons from nonwater column sources and lack the sensitivity and specificity necessary to identify petroleum hydrocarbons at or below the concentrations specified in the water quality standards (i.e. practical qualification limits are too high).
- State water quality standards intended to regulate discharges of petroleum hydrocarbons from point sources must consider other sources of hydrocarbons and their concentrations in the receiving water environment. This is not possible if the standards are based on such poorly defined parameters as total aromatic hydrocarbons and total aqueous hydrocarbons.
- It is inappropriate to establish a single numeric criterion for a complex, highly variable mixture, such as the water-soluble fraction of petroleum, that varies substantially in toxicity to freshwater and marine organisms, depending on the type of petroleum product involved and the age of the mixture. (For example, the

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primary drinking water standard for toluene is 1,000 $\mu\text{g/L}$, whereas the primary drinking water standard for xylene is 10,000 $\mu\text{g/L}$. A single numeric criterion for both compounds is inappropriate.)

- A better, more technically sound approach to regulation of potentially toxic petroleum hydrocarbons in fresh and marine waters of Alaska is to have standards, based on national water quality criteria values, for individual hydrocarbons of greatest concern.

The State of Alaska, like EPA, must develop water quality standards which accurately reflect the latest scientific knowledge. 33 U.S.C. § 304(a)(1); 33 U.S.C. § 303(a)(3)(C). Numerical water quality criteria must either be based on EPA's criteria or be developed by scientifically defensible methods. EPA's Water Quality Standards Handbook (1983), pp. 1-2. Because the proposed petroleum hydrocarbon standards are based on technically flawed analyses, ADEC should not revise the standards at this point but should establish a working group to develop sound standards for the next triennial review.

The low standards are also unsound from a policy standpoint. EPA has stated that the purpose of water quality standards is not to return all waters to their "pristine state." Questions and Answers on Water Quality Standards, EPA Office of Water and Hazardous Materials, Criteria and Standards Division, July 12, 1979. EPA has also stated that it is inappropriate to use large safety factors to "make up" for insufficient data. 45 Fed. Reg. 79359 (November 28, 1980). Instead, EPA supports criteria which are "reasonably conservative." 50 Fed. Reg. 30793 (July 29, 1985).

EPA supports criteria which protect most of the species and their uses most of the time, but not necessarily all of the species all of the time. EPA recognizes that aquatic communities can tolerate some stress and occasional adverse effects on a few species so that total protection of all species all of the time is not necessary. EPA supports criteria which provide a reasonable and adequate amount of protection with only a small possibility of substantial overprotection or underprotection. 57 Fed. Reg. 60861-62 (Dec. 22, 1992).

ADEC has stated that the existing petroleum hydrocarbon standards are flawed. We agree. EPA has commented that it is essential that proposed revisions include a scientifically

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defensible and enforceable standard. We also concur. However, we maintain that, as written, ADEC's proposed changes fail to achieve those qualities. ARCO reiterates the need to defer adoption of the changes and to refer the issue to a technical working group for development of appropriate criteria and test methods during subsequent phases of the triennial review.

2. Toxic Substances/Whole Effluent Toxicity

ARCO believes that application of Alaska drinking water standards (Primary MCLs) is inappropriate for marine water uses.

ARCO strongly disagrees with the ADEC proposal that would require the use of indigenous (resident) aquatic species for toxicity tests and broad-scale, chronic toxicity testing where no evidence of effluent toxicity exists.

EPA counsels against testing resident species for routine whole effluent toxicity testing. EPA's Technical Support Document for Water Quality-Based Toxics Control (1991) clearly states that it is unnecessary to test resident species since "standard test species have been shown to represent the sensitive range of all ecosystems analyzed." Use of established EPA protocols with standard species offers a more reliable and cost-effective option.

ARCO is opposed to the ADEC proposal that would establish a narrative sediment toxicity standard (18 AAC 70.020 and 70.032) requiring new testing protocols for measuring toxicity in aquatic sediments. While we support the goal of having no toxic buildup in aquatic sediments, we also recognize that, as advanced as technology is, it has not yet reached a level that can support such sediment toxicity testing. We believe the proposal for sediment toxicity testing is premature and urge ADEC to defer consideration until such time that EPA-established protocols are developed.

3. Fresh Water Mixing Zones

ARCO strongly supports ADEC's efforts to maintain provisions for use of mixing zones. We recommend that ADEC form a working group to facilitate preparation of a Technical Guidance Document for the development of future revisions of criteria

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to be used in determining mixing zones in the marine and estuarine environment.

4. Human Health Risk Level

ARCO supports ADEC's proposal to adopt the 10^{-5} human health risk level. This risk level is reasonable, given that EPA has approved risk levels of 10^{-4} for some public water supply standards.

As ADEC has pointed out, a risk level of 10^{-5} means that only one person in 100,000 who ingests contaminated water and contaminated fish over a 70-year lifetime is estimated to develop cancer. Thus, the 10^{-5} estimate requires 70 years of ingesting contaminated water and fish. It is highly unlikely that these circumstances would occur, especially given ADEC's inherently conservative method of deriving water quality criteria.

ADEC has noted that a 10^{-5} level is widely accepted as a reasonable risk: the risk of death from smoking is 22,000 times more probable than the risk of death from exposure to a carcinogen at a 10^{-5} level; the risk of death from auto travel is 1,600 times more probable than the risk of death from exposure to a carcinogen at a 10^{-5} level; and the risk of death from lightning is 3 times more probable than the risk of death from exposure to a carcinogen at a 10^{-5} level.

A risk level of 10^{-6} is difficult to support, given that numerous commonplace activities involve a risk of death at this level. For instance, the risk of death incurred in riding a bicycle 10 miles, driving a car 300 miles, drinking 1/2 liter of wine, undergoing one chest x-ray, drinking 30 cans of diet soda, living 2 months in a brick building, or eating 40 tablespoons of peanut butter corresponds to a 10^{-6} risk of death.

Further, ADEC has estimated that the cost difference between human health criteria at the 10^{-5} and 10^{-6} levels is likely to be hundreds of millions of dollars. This cost would be borne by municipalities, hence the public, as well as industries.

Finally, ADEC should note that the institution of a 10^{-6} risk level could preclude the discharge of drinking water. For example, the drinking water regulations at 11 AAC 80 allow levels of 5 $\mu\text{g/L}$, 2 $\mu\text{g/L}$, and 5 $\mu\text{g/L}$ for benzene, thallium,

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and trichloroethylene. A 10^{-6} risk level would prohibit discharge of those compounds above the level of 1.2, 1.7, and 2.7 $\mu\text{g/L}$, respectively.

For these reasons, most of which were propounded by ADEC in its regulatory issue paper dated August 1993, ARCO supports ADEC's proposal of a 10^{-5} human health risk level.

5. Miscellaneous

- a. 18 AAC 70.020(b)I(A)(i); 70.020(b)I(B)(i); 70.020(b)II(B)(i) and (ii). The revisions increase allowable color units from 5 to 15. Dave Sturdevant noted at the water quality standards workshop in Anchorage that 30 or 40 color units look as clear as 15 color units. If true, the revision should increase the allowable color units to 30 or 40.
- b. 18 AAC 70.020(b)I(A)(iii) and (C). The revision states: "There shall be no concentrations of petroleum hydrocarbons . . . that cause deleterious effects to aquatic life." The word "deleterious" is not defined in the regulations. It either needs to be defined, or a different, already-defined word should be used.
- c. 18 AAC 70.032(b). The revision prohibits discharge that "could cause a toxic effect." "Could" may mean a 1% chance, or it may mean a 51% chance. This needs to be defined or clarified - how about "would reasonably be expected to cause a toxic effect"?
- d. 18 AAC 70.032(e). The revision states that a mixing zone will be reduced or denied if the pollutants discharged would produce "objectionable color, taste or odor." "Objectionable" is highly subjective and should be defined.
- e. 18 AAC 70.032(f). The revision allows mixing zone sizes to be increased if it can be done "safely." "Safely" needs to be defined, or perhaps the section can be reworded: "Unless evidence is provided to the department that reasonably demonstrates that size limitations, if increased,

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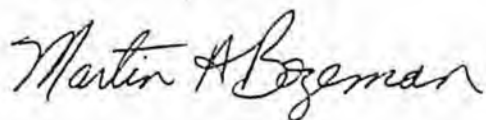
would not result in a violation of the provisions of this section, mixing zones must comply with the following size limitations"

- f. 18 AAC 70.110(2). The revision states: "'Carcinogenic' means a compound that is expected to cause carcinogenic effects on aquatic life" What does "expected" mean? Fifty-one percent? Perhaps should use the words "would reasonably be expected to." Also, the word "carcinogenic" should not be used within the definition of "carcinogenic." Perhaps should use a word other than carcinogenic, such as "toxic."

- g. 18 AAC 70.110(3). The revision requires the observation of effects for a "time similar to the life cycle." Established EPA protocols for chronic toxicity testing frequently do not entail exposure across the entire life cycle of the organism. Accordingly, we suggest the following: ". . . sublethal effects in aquatic organisms exposed for extended periods of time, including effects on growth"

ARCO appreciates the opportunity to comment on ADEC's proposed revisions to the water quality standard regulations.

Very truly yours,



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Senior Consultant, Aquatic Science

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bcc: Rep. Bill Williams
House Resources Chairman

Alaska Forest Association, Inc.



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November 4, 1993

Dave Sturdevant
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Dear Mr. Sturdevant:

Please accept this letter and attachments as the comments of Alaska Forest Association to the DEC proposed water quality standards. AFA is a strong supporter of these proposed regulations.

As former United States Environmental Protection Agency Regional Administrator for Region 10, a member of the Governor's Water Quality Advisory Committee and a former member of the National Academy of Sciences Committee on Risk Perception, I have learned that the public fears risks with which they are unfamiliar way out of proportion to their actual safety. People fear death from radioactive fallout more than the danger associated with chain saws and smoking even though the latter are eminently more dangerous.

Much has been said about the proposed risk level to which carcinogens will be regulated. In my experience risk based regulation is not a precise science and is an extremely effective use of natural resources. The opportunity cost of diverting capital from other productive uses is also enormous in lost jobs, lost productivity, lost taxes and more.

The designation of a human health risk in association with water discharge permits is a form of risk based regulation. The use of such a criteria will depend on performing dose/response and exposure analyses to calculate human health impacts. Such analyses extrapolate from extremely high doses to extremely low doses and they attempt to correlate human and animal reactions. Then they are used to make a safety decision out of a tool that was originally intended to be a screening device.

AFA believes that a one in a hundred thousand risk level provides adequate safety. Safety is much more objective than risk. There is no endeavor that is without risk. Every day we engage in regulated activities that are calculated to be safe, but are not without risk. The issue is how much risk renders an activity unsafe.

With the industrial era has come modern technology and modern risk. Life spans are significantly longer and the risks of dying from waterborne disease, malnutrition, viral or bacterial contamination and trauma are vastly reduced. We have some new risks to contend with. The risk of surgery, the risk of chemical contamination, the risk of death on the highway are all new risks.

The environmental laws are premised on the concept of permitting development that adequately controls risk and thereby public health. Risk reduction makes regulatory sense as long as it is associated with a measurable benefit. The burden of the regulator is to decide whether or not to make a safety call before de minimus risk reduction makes development impossible altogether.

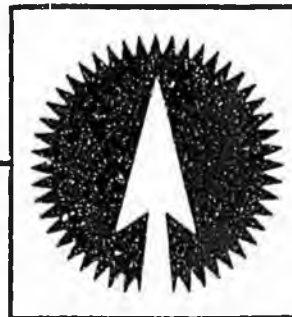
The current process must come to closure. Testimony, including that of AFA, is repetitive. Much of that given by environmental groups during this current period is not based on the facts but rather scare tactics.

The delay in this regulation equates to phantom regulation: that is the promise of action when none is forthcoming. The regulated community and the people whose lives are affected by economic prosperity deserve a decision soon. The science and general public desire shows the path to be chosen is adoption of the regulations currently proposed.

Sincerely,

Ernesta Ballard
Forest Issues Committee Chair

cc Governor Walter J. Hickel
Representative Bill Williams
House Resources Committee



TESTIMONY OF TROY REINHART
EXECUTIVE DIRECTOR, ALASKA FOREST ASSOCIATION
BEFORE THE HOUSE RESOURCES COMMITTEE
ON PROPOSED WATER QUALITY REGULATIONS
OCTOBER 25, 1993

Thank you for the opportunity to express the position of AFA concerning the Proposed State Water Quality Standard Regulations. I am Troy Reinhart, executive director of the Alaska Forest Association. AFA is an association of over 300 companies which depend on the forest products industry in Alaska. AFA represents thousands of families and jobs throughout Alaska.

AFA has been directly involved in the process of developing these regulations. AFA and many of its members are on record as to their position regarding this proposal. They remain committed to their earlier comments, which we feel should remain part of the public record. AFA supports the current proposed regulations as the maximum level of restriction needed to protect the water resources of this region. The DEC proposal is the safest, most cost effective plan for protecting humans, the environment and the economy of Alaska.

Human Health Risk Level: AFA is in total support of the State's choice of 10^{-5} (1 in 100,000) as a human health risk level. This level of risk is acceptable for meeting water quality standards, especially when it assumes every Alaskan would have to drink two liters of contaminated water every day and eat five pounds of contaminated fish every year for 70 years. In reality it is highly unlikely that anyone in Alaska would be exposed to this level of risk.

It must be understood that the proposed level of 1 in 100,000 risk of developing cancer due to exposure to polluted water is very very small compared to the risk of dying from cancer which is 1 in 4 with 90% of those deaths caused by smoking. Also this standard is 1000 times less than the current risk from background exposure to all other environmental contaminants, including ones that occur naturally in foods.

For those concerned about family, friends or themselves being diagnosed with cancer I share that concern. My mother died six years ago after battling two separate occurrences of

cancer. While I would not wish what my family or my mother suffered on anyone, raising the level from 10^{-5} to 10^{-6} is not the answer. The energy resources and cost is better spent fighting the real causes of cancer which include smoking and a sedentary life style. A risk of 1 in 100,000 is very small when compared to the chances of 80% of all life on the planet being eliminated by a comet/asteroid smashing into the earth. The odds of that happening as reported by Economist magazine is 1 in 30,000.

An increase to risk levels of 1 in 1,000,000 would cost millions of extra dollars with virtually no gain. A level of 1 in 100,000 is more reasonable and an acceptable health risk.

MIXING ZONES: AFA supports the concept and practice of mixing zones which allow for the natural assimilative capacity of the surrounding water to efficiently dilute a waste-water discharge to levels below any that could be harmful. In some cases it is very probable waste water being discharged could be cleaner than that into which it is being released. AFA supports the continued use of mixing zones in both fresh and marine waters.

TREATMENT WORKS: AFA supports and wishes to emphasize the importance of the proposed "treatment works" definition. We urge and support the continued exemption of discharges into treatment works from having to meet water quality standards. It is not realistic to expect water quality standards to be met inside properly authorized treatment facilities such as sediment settling ponds.

NATURAL BACKGROUND LEVELS: Nature can create situations where the existing concentrations of a substance are higher in the receiving water than the concentration in the proposed discharge. For this reason, AFA supports the consideration of natural background levels through the development of site specific water quality criteria. It is only logical the discharge being released can be equal to the natural level without increasing the concentration of the substance overall. In fact, some site concentrations exceeding the natural background level may be discharged while still fully protecting all uses of the water.

Thank you for this opportunity to present comments before the Committee. We trust DEC will take the prudent course and adopt the proposed rules in their present form.



Cordova District Fishermen United

P.O. Box 939

Cordova, Alaska 99574

(907) 424-3447 FAX (907) 424-3430

November 12, 1993

Mr. Dave Sturdevant, Project Coordinator
Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Dear Mr. Sturdevant:

I wish to express CDFU's objections to the latest proposed revisions to the state's water quality regulations. It has been a year since we last commented on the first round of proposed changes, and frankly, it looks like *deja vu* all over again. Nothing seems to have changed in terms of the issues surrounding the water quality debate, so I will take this opportunity to reiterate our position on ADEC's most recent proposal.

The seafood industry is Alaska's largest private sector employer and second-largest income producer. At present, Alaska has an enviable marketing edge for promoting its seafood products: pure, uncontaminated water. CDFU is particularly concerned that reducing our current water quality standards, as currently proposed by ADEC, will erode this marketing advantage and affect the public's perception regarding the purity of Alaskan seafood. Consumers are becoming more sophisticated and concerned about the wholesomeness of what they eat and where it comes from. In an era where Alaskan wild salmon products are facing increased competition from farmed salmon, we cannot afford to lose this marketing advantage. For us the bottom line is simple, clean water sells fish.

To meet this end, CDFU maintains that:

1. The acceptable cancer risk level should be reestablished at 1 in 1 million. The state's current risk level of 1 in 100,000 was based on the assumption that the average Alaskan might eat only five pounds of contaminated fish per year. Unfortunately, this assumption does not take into account that residents of coastal communities and subsistence users eat a great deal of fish, between 50 and 700 pounds per person per year. Basing the cancer risk level on a five-pound fish consumption rate ignores the cumulative effects of carcinogens and the fact that many reproductive, immune and neurological diseases can result from concentrations lower than the levels which produce cancer.

2. ADEC should preserve the current standard which prohibits mixing zones for carcinogenic compounds harmful to humans and aquatic life. Mixing zones should also be prohibited for toxins which accumulate and/or persist in the environment.

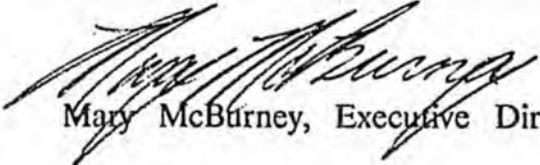
3. Impounded water bodies used as "treatment works" should not be exempt from water quality standards. These sorts of impoundments serve as holding ponds for all sorts of chemical "soups." To exempt them from water quality regulation is to deny that they exist and pose potential harm to human health and the environment. There need to be provisions that guarantee that "treatment works" will not adversely affect humans, fish or wildlife.

4. The proposal to allow the discharging of wastes up to "natural background levels" is, at best, premature. Most waterbodies in the state exceed water quality standards for short periods of time throughout the year, particularly during spring breakup and the rainy season. Currently there are no guidelines for determining natural background conditions for waterbodies and defining situations where such conditions may be used. Before ADEC implements regulations regarding natural background conditions, draft guidelines should be written and submitted to the public for review and approval. These guidelines should specifically address when natural conditions should be used, criteria for how they will be defined and determined, and acceptable safety considerations to protect human health and fish and wildlife resources.

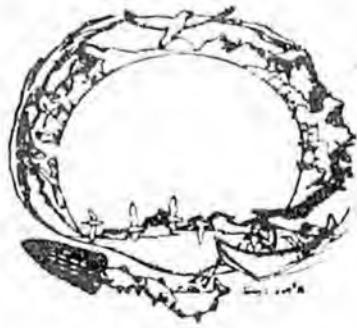
CDFU recognizes that development and utilization of Alaska's resources is the key to our state's economic well being. However, the proposed changes to the state's water quality regulations will require the commercial fishing industry to sacrifice the economic benefits it derives from clean water to benefit the forest products and mining industries. We don't believe that this is an acceptable tradeoff. Degrading the state's water quality standards does nothing to support and foster Alaska's seafood industry and will only be counterproductive to the long-term economic welfare of our state.

We encourage you to not only consider, but to adopt our recommendations regarding the state's water quality standards.

Sincerely,
CORDOVA DISTRICT FISHERMEN UNITED


Mary McBurney, Executive Director

cc: John Sandor, Commissioner, ADEC
Rep. Bill Williams, Chair, House Resources Committee
Rep. Harley Olberg
Senator Georgianna Lincoln



TANANA CHIEFS CONFERENCE, INC.

122 FIRST AVENUE
FAIRBANKS, ALASKA 99701-4897
PHONE (907) 452-8251 FAX (907) 451-8936

November 9, 1993

Rep. Bill Williams
House Resources Committee
352 Front Street
Ketchikan, Ak. 99901

RE: Analysis and Comments of the Proposed Revisions by ADEC
to the Alaska Water Quality Standards 18 AAC 70

Dear Mr. Williams:

Enclosed you will find our analysis of the proposed revisions to the Alaska Water Quality Standards. It appears that the individuals who are in charge of protecting our resources are comfortable allowing more pollution for the economic gain of large industries. These individuals will not admit this openly, but today's public is more informed and more concerned, and we can see what the real motives are. Please take these comments into consideration when making decisions on this issue. Our resources and future depend on it.

Sincerely,

Paul Headlee
Water Resources Specialist



TANANA CHIEFS CONFERENCE, INC.

122 FIRST AVENUE
FAIRBANKS, ALASKA 99701 4897
PHONE (907) 452-8251 FAX (907) 451-8936

NOVEMBER 3, 1993

John A. Sandor, Commissioner
Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, AK 99801-1795

RE: ANALYSIS AND COMMENTS OF THE PROPOSED REVISIONS BY ADEC
TO THE WATER QUALITY STANDARDS 18 AAC 70

Dear Mr. Sandor:

Tanana Chief's Conference, Inc. (TCC) is a tribal consortium of the 43 villages of Interior Alaska. TCC is a non-profit organization that works toward meeting the health and social service challenges for more than 10,000 members spread across a region of 235,000 square miles. Among the many challenges faced by TCC, is the need to maintain active involvement and influence in the development of environmental regulations and how they impact our member villages. Therefore, TCC is providing the following comments regarding the proposed revisions to the Alaska Water Quality Standards.

SECTION .022 HUMAN HEALTH CRITERIA

The ADEC is proposing to adopt the standard of 1 in 100,000 risk of contracting cancer from ingestion of freshwater, fish, shellfish, and other aquatic products. The "Target Population" has not yet been defined. If the "Target Population" includes all Alaskans then the 1 in 100,000 risk level is not in line with the unique lifestyles of Alaska residents.

The Regulatory Issue Paper on the Human Health Criteria, enclosed in the Public Review Packet of the Proposed Revisions to the Water Quality Standards August 1993, states that the cancer risk of 1 in 100,000 is a hypothesis that represents average situations. The term "average situations" is not defined, nor is there any guidance of what amounts can be consumed and at what carcinogenic level.

Clearly, a subsistence lifestyle is not an average situation. Many of the residents of the Interior region consume 200-500 pounds of fish per year. ADF&G Subsistence Division data support this. These levels are up to 100 times what the proposed risk level is based on (5 pounds of fish/person/year). In reality the risk level for these individuals would be dramatically increased. How do high consumption rates figure into the risk level model/formula? Under conditions of chronic exposure (consuming contaminated fish for 3-12 months of the year) are the risk levels greater for more sensitive individuals such as pregnant women and the fetus as compared to non-pregnant women and adult males? These concerns are real, and they need to be addressed.

Two-thirds of the United States have adopted a cancer risk level of 1 in 1,000,000 while the remainder have chosen the 1 in 100,000 level. Washington, Oregon, and Idaho, are states that have similar large scale industries as in Alaska and have all chosen the 1 in 1,000,000 risk level of protection for their people.

Due to the unique lifestyles of Alaska residents, both rural and urban, the State of Alaska should adopt the 1 in 1,000,000 risk level. Once again, our concerns are very real and no Alaskan should have to be exposed to a higher risk of cancer for the economic gain of any individual or group.

SECTION .032 MIXING ZONES

(a) The department "will" should be changed to "may" in this section. Unless this change is made in the first sentence of the Standard, the impression is given that the permit for a mixing zone will in fact be granted.

(a)(3) "waterbody as a whole" is not defined.

(b) Toxic compounds should not be allowed to accumulate in toxic amounts within a mixing zone or within the zone of initial dilution (ZID). Due to the migratory nature of anadromous fish, seasonal movements of resident fish, and downstream drift of juvenile fish, allowing the effluent

to pollute the receiving water to a toxic level is unacceptable, dangerous, and should be prohibited.

(f)(1) Mixing zones in lakes should not even be considered due to their relatively low flush rates. Water movements in lakes are of major importance to the biota, productivity, and nutrient cycles within. Wind generated water movements such as Langmuir circulations and internal seiches could greatly increase the potential for exceeding the 10% surface area allocated for the mixing zone. Also, density differences between the discharge and the receiving water must be considered.

(f)(3)(B)(ii) If the actual concurrent upstream flow data cannot be determined, then the 2-year, 3-day summer low flow (3Q2) method should be used for non-glacial streams/ivers, and the 2-year, 7-day flow method used for glacial stream/ivers. The reason being is that not all streams and rivers experience their lowest flow during mid-summer.

(f)(3)(D) This should also read that no mixing zone will be approved in an "index stream" or "index section" of a stream or river that is monitored by ADF&G to determine escapement and escapement goals, or any other management applications.

GENERAL COMMENTS:

1. Until the wording in Section 9607(a) Liability, of the Comprehensive Environmental Response, and Compensation and Liability Act (CERCLA), is changed to a disposition in which the "polluter pays," relaxing the WQS is not acceptable. In the cases of several Alaska Native lands, the landowner is being held liable when the landowner is not the polluter. Many of these sites are the result of mismanagement of hazardous substances by Federal and State agencies.

2. It appears that the revisions proposed by ADEC are not consistent with any antidegradation policy as required by 40 CFR 131.6. ADEC seems to feel that it is acceptable to allow clean waters to be polluted down to "background levels." This would appear to be feasible because the initial clean waters would end up being no worse off than similar acceptable (but polluted) waters. This is a temptation that must be avoided. Otherwise agencies find themselves

ADEC
NOVEMBER 3, 1993
PAGE 4

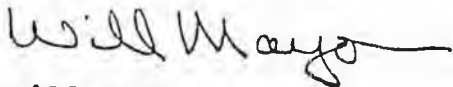
battling to clean up downstream waters, only to have them polluted once again by upstream flow.

The above comments are in addition to verbal testimony provided September 28, 1993 here in Fairbanks. We urge you to take these comments seriously and incorporate them into the new Water Quality Standards. Clean water is the foundation for the natural resources that our member Villages depend on. Water quality should not be compromised.

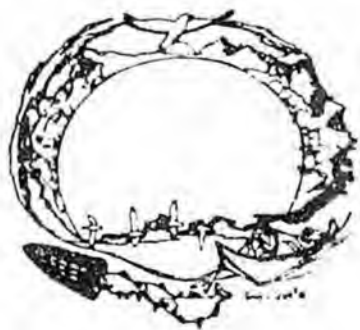
Thank you for the opportunity to provide input on these consequential revisions.

Sincerely,

TANANA CHIEF'S CONFERENCE, INC.



Will Mayo
President



TANANA CHIEFS CONFERENCE, INC.

122 FIRST AVENUE
FAIRBANKS, ALASKA 99701-4897
PHONE (907) 452-8251 FAX (907) 451-8936

Also enclosed are two letters that I have received from Kias Peter, Traditional Chief of Arctic Village. These two letters are written "from the heart" and are directed at the foundation of the resources, WATER. Please take Kias Peter's and many other villager's concerns into consideration. Thank you.

Sincerely,

Paul Headlee

Paul Headlee
Water Resources Specialist

Sept, 4, 1993
Traditional Chief Kias T. Peter Sr.
P.O. Box 22032
Arctic Village, Ak. 99722

Paul Headlee,
Tanana Chief Conf. Inc.

I was kind of Very happy to Recieve
your Letter. About our (Land) (Game)
Timber's & Water. I been working in
North Slope for 18 Year's. with a
Constriction. while I work up there.
I see the River water are change. in +
three - year's. And last winter.
the Caribou up there are die out.

Paul, Where American to. And where +
Trying to Left. Like in early day.
And this is the way. we want.
So if our food. change, we be all die out
And many of our poor Little kids.

When ever I come to Fairbanks, again
I be look for you. I Really want. to
talk with you. about this, it is important

Cincerely.

Kias T. Peter Sr.

P.S. I am working on Native Survival. so I could safe.
~~at least~~ people life. yes I be glad to talk to you.
When I see you. at your office

(1)

Oct 16th 1993
Kiss T. Peter Sr.
P.O. Box 82032
Arctic Village, Ak.
99722

Paul Headline,
Tanaqua Chief Con. Inc.
122 Frist Ave,
Fairbanks, Ak. 99701-4897

my helper Paul. I'm not good writer,
But I sure like to say something about this
since last two days. I told to my people in
Village. There is about 60 people say NO.
about this (water) (mixing zones) & cancer.
This water ~~this~~ if its all dream, or dead.
What's what's ~~can~~ this Alaska people will do.
we all die out. out Village; will have to charter
the Air ^{+ plane} to FBKS & Anchorage, we dont have that
kind of money as you know Alaska native dont
have no money in bank, we dont want even say
something about this mixing zones, ~~and~~ Lets.
all help ^{LEACH} weather and work on it, and say NO NO
I remember about 1935 to 1945 ~~they~~ ^{we} dont even know it
There is Fairbanks, we dont get no help from ~~the state~~
Any white people, we just left off the Land.
Today they found out the ^{last} good ^{+ things} Timber w/o it
many others. So they try to kill us all.
Paul Last thank about next 40 to 50 years.

(2)

I Really want to talk to you.

Okey, I will be in Fairbanks, Nov. 18th 93.
Let's come over to talk you, sometime when
you get together. Why don't you tell me to come.
And the meeting right in Tanana Chief Conference
building. Let's be very happy to say about our
Land, about our game fish Birds Timber +
+ water, all the other good things that we have
+ in ALASKA. Let's work together and fight it out.
~~we~~ never give-up, ~~myself~~ I myself. I got Retired
from Labor Union there in Fairbanks. And I +
+ also. Retired from ALASKA ARMY NATIONAL GUARD.
So I think, I got power to say something. PAUL
Let's all say one day of a Time, and work.
I be very happy to be one of them.

PAUL. Please answer soon. good luck.

Very close friend KIAS T. PETER SR.

Kias T. Peter Sr.



November 15, 1993

Chair of House Resources
Representative Bill Williams
352 Front Street
Ketchikan, AK 99901

Dear Chairman Williams:

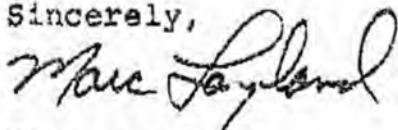
Please accept my position as a businessman that actions being taken and proposed by DEC on State Water Quality Standards is acceptable.

I care very much about clean air and water, but expect the scientific community to provide rational guidelines that will balance the environmental concerns, human health and economic factors without needlessly sacrificing local jobs.

Please adopt standards that will allow us to live, work and play in this state safely. Please do not take the position of the radical few who do not care who or what businesses will be displaced.

I support the DEC proposal and request no further extreme criteria be used.

Sincerely,



Marc Langland
President

ML:ef



ALASKA CLEAN WATER ALLIANCE

10-28-93

Commissioner John Sandor
Alaska Department of Environmental Conservation
410 Willoughby Ave
Juneau, Alaska 99801

Re: Comments to ADEC's Proposed WQS Revisions

General Comments

The WQS proposals proposed by ADEC in this triennial review continue to be problematic for the following reason; they were originally conceived as a method by which the administration could lessen the regulatory burden on a select group of industrial polluters. This intent is documented in charts from an April '92 ADEC/pulp mill meeting. They describe in detail the necessary changes in the Alaska Water Quality Standards so that the mills might approach compliance with their draft NPDES permits. This agenda was also confirmed in statements by the WQM staff regarding the proposed revisions during an informational hearing in Haines in July '92 regarding the permitting needs of the mining and pulp mill industries. ADEC was clearly attempting to solve local problems for industries with major changes in the state wide regulations for water quality instead of leaving the legal, not to mention financial responsibility, of pursuing site-specific criteria applications for particular projects to the applicants desiring the regulatory relief. Fighting these battles for polluting industries was improper for the state agency entrusted with the mandate of protecting and conserving our environment. Over the course of the last eighteen months, this policy has cost a staggering amount of money, and the confidence and respect of Alaskans statewide.

Unfortunately, the overwhelmingly poor public reception for the original proposed revisions and the negative evaluation by the EPA have not as yet been able to alter the department's course. The evidence for this in the current set of proposals is incontestable. For example; if the ADEC was interested, as they allege, in providing treatment works exemptions that would allow villages to continue to use lagoons for sewage disposal, there would be no need to adopt language that would permit large scale hard rock mines to use existing water bodies of the State (and U.S.) as unlined tailings disposal ponds exempted from WQS. ADEC is intentionally relaxing the Mixing Zone (MZ) regulations to allow for the release of carcinogens. The applicant's responsibility to prove that a carcinogenic compound isn't able to bioaccumulate or persist in the environment has now shifted to the State and/or public, for a scientific and legal demonstration that some loosely defined "significantly adverse level" of damage has indeed occurred. Another problem in the implementation of any MZ regulations is the continued lack of acute toxicity criteria in State regulation, despite repeated demands by the EPA for the State to adopt the Clean Water Act (CWA) toxics free language that does not allow "toxics in toxic amounts". According to the EPA, we may at this time be the only state in the country that still has no acute toxicity regulation. It is

2.

obvious that any MZ for the pulp mills would have an acutely toxic Zone of Initial Dilution (ZID), and yet our regulators have no regulatory direction on how to determine the extent and effects of such an acutely toxic volume. This situation is made even more difficult because industries are permitted to self-monitor their effluent and mixing zones. A March 1993 GAO study (GAO/RCED-93-21) spoke to the tremendous abuse in the federal self-monitoring program. It detailed the possibilities and incentives for a company to be dishonest, as well as the prosecutions and convictions of a significant number of "independent laboratories" for falsifying data and results. Our regulations need to be as definitive as possible; since regardless of the good intentions of some of the WQM team, the ever shrinking ADEC staff has neither the funding nor the expertise to achieve an adequate level of control and protection.

For many months the WQM staff maintained the position that the proposed WQS would not weaken the quality of water in Alaska. At the recent round of workshops the staff admitted that the legal potential for increasing toxic discharges would now exist. After six public hearings, at which according to the S.E. Regional Director a very "...rational, focused and sophisticated..." public spoke out in nearly unanimous opposition to the standards revisions, a DEC official finally admitted that regulations are being relaxed.

Perhaps the most serious omission from these standards is the continued absence of a legitimate antidegradation policy as required by the CWA. Under 40 CFR 131.6, it states:

Minimum requirements for water quality standards submission.

The following elements must be included in each State's water quality standards *submitted* to EPA for review:

...(d) An antidegradation policy *consistent* with 131.12. (emphasis added)

The policy of 131.12 expressly states that there must be intergovernmental coordination and public participation coincident with the State's continuing planning process to assure that a lowering of water quality does not impair the existing uses. In addition, the federal policy demands that the State achieve the highest statutory and regulatory requirements and best management practices for point and non-point source control. Furthermore, 131.12 requires the State to provide a mechanism for the establishment of Outstanding National Resource Waters (ONRW) that would insure the highest levels of water quality protection. This ONRW classification is not only intended to protect the most pristine waters, but offers special protection for waters of "ecological significance" where the water body may already be compromised to some degree as measured by the traditional parameters of water quality.

Despite the fact that 40 CFR 131.6 has **required** the State to include 40 CFR 131.12 for the **submission** of every standards package for over ten years, Alaska has repeatedly failed to comply. This omission has occurred despite the clear knowledge of this requirement by both the EPA and the ADEC staff. The inclusion of this policy is critical because it provides the sideboards for the other regulations - many of which are

3.

designed to provide for specific exemptions from the intent of the CWA - to maintain or improve the waters of the U.S. The responsibility for this omission has been passed freely between the State and Federal governments. We are being told again that a subsequent phase of the triennial review will contain the required language. Regardless of the "phasing" concept that ADEC has initiated for these revisions, the State is required to include this policy with every standards submission. Indeed, several of the currently proposed changes in the WQS would be in direct conflict with 40 CFR131.12. For this reason alone this set of proposals will need to be significantly modified, and should therefore be returned to the WQM staff for the preparation of a new draft.

While it is understood that this is a draft document, the typographical errors, procedural omissions, and inconsistencies between the current regulations, the issue papers and the proposed regulations make this document unusable as the document of public disclosure for regulatory modification as required by the Administrative Procedures Act. For example: under Toxic Substances, the existing regulations require the testing of the most sensitive species when doing bioassays for chronic toxicity. In several places in the new proposals, this wording was dropped and replaced with a sensitive species. This is significant because a sensitive species may be *far less sensitive* than the most sensitive species. When I asked the WQM staff at the workshop in Anchorage why this change had been made, I was told that they were unaware of the modification in the testing language! I then asked why the "harvesting of mollusks" marine use had been separated from the rest of the Toxic Substances section, which removes it from the protective "toxics free narrative", and again was answered with a look of bewilderment. If the WQM staff cannot identify and support the changes and modifications from past language, how can the public be expected to make informed comment?

Another example of the confusion in this document is in the Treatment Works section. In the issue paper, it states that "All such facilities should be required to meet water quality criteria at designated points of compliance within the treatment facility waterbody or *immediately* adjacent surface or groundwaters". (emphasis added). However, in the regulation, the word *immediately* has been dropped, and the points of compliance phrase has been moved from within the treatment facility to some area outside of the facility to be specified in a permit! Again, the WQM staff was unaware at the time of the workshops and hearings of how this discrepancy arose, and had a difficult time discussing the implications of the change.

The WQS Advisory Group could have played a significant role in preventing many of these problems. But the group's participation was limited to internal debate and posturing, instead of functioning in a truly "advisory" capacity to address specific language as the proposals progressed. The final draft package itself was never reviewed by the WQSAG prior to its forwarding up the chain of command for departmental signatures, in contrast to the intent of several of the objectives from the groups charter. The confusing treatment works language that attempts to separate the waters of the State from waters of the U.S., hinges on the definition of navigable waters and the legitimacy of "water body to treatment works conversion". Both this TW language (which is currently under legal challenge) and the controversial cancer risk level language were never presented to the group at all -- but were still being written by

4.

WQM staff after the final WQSAG meeting.

Most of the technical deficiencies in these proposals have been overshadowed in the recent round of hearings and workshops by the public's outrage over the Human Health Criteria section and the cancer risk level choice of 1 in 100,000. WQM staff admitted at the October 25th House Resources Committee hearing that this "safety factor" does not consider the cumulative or synergistic effects of each pollutant. As you remember, I was unable to persuade the department last winter to keep the cancer risk level factor discussion with the rest of the human health risk equation. The cancer risk level, which has no basis in hard science, is part of the human health equation because many carcinogens appear to have no threshold dose. In other words, one exposure of an almost imperceptible amount of a compound like one of the 200 or so members of the dioxin-furan family can cause cancer. Dioxin, by virtue of its similarity in structure to the steroid hormones, has been found to have direct cell membrane and cytoplasmic receptor pathways that transfer the compound to the DNA. Once there, its ability to cause serious malfunctions in the cell's activity is enormous. The amount and frequency of that effect is dependent upon the individual's genetic predisposition, diet, exposure to other pollutants that may stimulate synergistic interactions, and physical status at the time of exposure.

Because of the enormous mathematical uncertainty of determining the effect of exposure on any person, in addition to the tremendous variability of effects that have been recorded from animal testing to date, the federal government has advised that effluent concentrations be reduced by a factor of a million in an attempt to protect the vast majority of people in our society. Alaskans are confronted with a disproportionate amount of risk because of the percentage of our population that consumes hundreds of times the amount of potentially contaminated fish. Even worse, Alaskans eat mammals and waterfowl that have further concentrated the toxins from the marine plants and lower consumers. We should therefore have an even higher safety factor than most other states. Instead, we are being told to accept the lowest standard applied nationally, a standard considered inadequate by 36 other states in our country, many of whom have the same industrial and municipal needs of Alaskan communities. It is tragic that we are involved in such a hotly contested debate over an order of magnitude of safety - as if the number was scientifically relevant in the first place - when in reality, no one can say what is safe, or what is an "acceptable level of risk" for another person. Obviously, if you or a loved one were the recipient of this anonymous dose of poison, then the risk was too great. The fact is that cancer is running rampant throughout our society, and the medical and scientific experts are at a loss to explain its increase in recent years. What we do know is that there is a growing body of evidence indicating that the rise in ubiquitous pollution in our air, water, and food, is linked to many of the cancers, auto-immune diseases, and reproductive and neurological disorders that are rapidly increasing in our population. For this reason we should be making every effort to completely eliminate the release of carcinogens and mutagens from our industrial discharges, consistent with the intent of the CWA.

Deputy Commissioner Treadwell spoke at the recent House Resources Committee hearing about the need for common sense in addressing these issues. I couldn't agree

more. He implied that there was something illegitimate about the public having a "political agenda". Certainly the public has an agenda - as does the administration! But to characterize the public as misinformed is not only wrong, it is an insulting disservice to the many Alaskans who have spent tremendous time and energy educating themselves over the past fifteen months, and making their feelings known to the administration over the last six weeks. Some are concerned with their families health. Others see their nonpolluting, sustainable industries being threatened for the benefit of short term highly polluting industries. All are people whose gut level common sense has told them that increasing the amount of toxic pollutants in our environment is a mistake. It would be a tragic abuse of power to ignore their advice.

Specific Comments to the WQS Re-revisions

70.010 General

- 1. (b) The antidegradation requirement is (e) not (d).
- 2. (c) Treatment Works (TW)

The State and Federal government appear to have very different ideas on what defines a water body as belonging to the U.S. or the State. Federal interpretation is extremely broad and includes all waters, even groundwaters, that eventually flow into a navigable water as waters of the U.S.

Sections (c) 1, 2, and 3, are very confusing and involve the state in a current legal challenge regarding the right of a discharger to "convert" a water body into a treatment facility. It would be foolish to allow the State via these regulations to permit discharges that have already been successfully challenged by the EPA, and that are currently being discussed for a national rule making. Regardless of the outcome of this issue on a federal level, Alaska should not allow a wetland or water body to be converted into a TW by placing a dam or other structure in such a way as to form an impoundment reservoir.

TW should be exempted from WQS **only** when the facility is totally man-made and constructed in a way that prevents **any** seepage into surface or groundwaters. Exemptions should only be considered on a site-specific basis, perhaps for publicly owned and/or operated sewage treatment systems. TW should not be permitted if they present a significant potential for adverse effects to either wildlife or public health.

- 3. (d) the issue paper states that WQS should be met **immediately** adjacent to the TW, but the regulation states WQS should be met at **points of compliance** further specified. This implies a mixing zone would occur beyond a TW. The regulations and issue papers must be consistent!

- 4. (e) is the ADEC's partial acknowledgment of the CWA Antidegradation policy; see comments above.

6.

70.020(b)I(B)I, (b)II(B)I Fecal Coliform

5. The EPA has stated that they will not authorize the state to change to a standard that is 7 years out of date. The state should be changing all of the criteria to the new enterococci standard simultaneously.

70.020 (b)I, (b)II, (b)I(A)I, (b)II(B)I, (b)II(C) Sediment

6. Suspended solids are considered to be a conventional pollutant by the EPA and it has been established by the courts that a combination of turbidity, settleable solids, and color are not an adequate surrogate for a suspended solids criteria in marine waters. The WQM staff's assurance that a suspended solids criteria may be reintroduced later is unacceptable. This change in the sediments regulation is an attempt to subvert the adjudicatory decision from December '92 regarding the State's lack of an adequate test for suspended solids. Instead of adopting the proper test, the State has chosen to change the definition of sediment so that a test of suspended solids will no longer be necessary.

70.020(b)I(A)i, (b)I(A)III, (C), (b)II(A)I, (C), (D) Toxic Substances

7. The new wording that switches the criterion for a substance from the Drinking Water to EPA standards or vice-versa is confusing. The state should retain the language "whichever concentration is less" to provide the most protection in the clearest manner.

8. Under the current regulations, toxicity testing must be done on the most sensitive species, this has been dropped without explanation, and is now written as a sensitive species.

9. It is stated that the State can choose "alternate methods and species as approved by the department" without requiring EPA approval. This is unacceptable. The NOEC testing procedure should not be substituted for the LC50 until standardized testing methods have been clearly defined.

10. No toxics should be allowed in any concentrations in shoreline or bottom sediments, because they would be trapped there and accumulate over time.

11. The EPA has repeatedly asked the state to adopt acute toxicity criteria for aquatic life -- this is the appropriate time and place in the regulations for this to occur. We are currently reviewing a permit for the Kelchikan pulp mill in an area that has had many instances of acute toxicity. Without an acute toxicity regulation, how can ADEC monitor, regulate or enforce compliance with the NPDES permit?

12. (b) II (D) retains only the EPA Water Quality Criteria. If there is no standard listed for a particular pollutant, how will that pollutant be regulated? (Marine water does get ingested, or could be desalinated, etc...)

7.

13. (b) II (D) why isn't the "free from toxics" language above included? Why aren't all of the marine uses together?

70.020(b)I(A)I, (b)I(A)III, (b)I(B)I, (b)I(C)(b)II(A)I, (b)II(B)II, (b)II(C) Color

14. There is inadequate guidance for determining the natural color of a given water body within this regulation.

70.020 (b)II(A)II Color

15. Flesh discoloration of seafood (especially shellfish) is known to occur at color levels of 5-15 CU. Replacing the numeric color standard for marine seafood processing with a narrative standard when there are known uses of preparing and packaging in marine waters is not protective of an existing use. The recent ADEC advisory to fish processors in Silver Bay because of color (and sludge) is a perfect illustration of why this relaxation of the color standard would be a mistake.

70.020(b)I(A)III, (C), (b)II(A)I, (C), Petroleum Hydrocarbons

16. The testing method proposed is inadequate because the procedure includes a settling period with no resuspension -- a toxic fraction of particulate hydrocarbons would be totally missed by this procedure.

17. Removal of the sample from an area below or away from a sheen would obviously reduce the amount of hydrocarbons that would show up in the test!

18. The LC50 test should not be dropped as an acute test without being replaced by another test. Chronic testing should be performed as well.

70.022 Human Health Risk Level

19. The constitutions of the U.S. and the state of Alaska guarantee equal protection under the law for every individual; this would preclude a state from determining that any person should suffer an increased risk of cancer for the economic (or any other) benefit of another person or group. An anonymous and involuntary human health risk for a carcinogenic pollutant that is dependent upon fish consumption, location, etc... is unconstitutional. (See comments in General section for further discussion).

20. The risk level as applied here fails to recognize that each carcinogen released by a discharger has additive and potentially synergistic effects, and that there are significant immune, reproductive, and neurological problems that have been identified at toxin concentrations far below those that have been implicated in carcinogenesis.

70.023 Chronic Toxicity

21. All toxicity testing should be conducted by methods and species approved by EPA; again, the most sensitive species phrase has been dropped.

70.025 Site-specific Criteria

22. (a) there is no definition for "reasonably demonstrates" in the definitions section of the regulations. The term "reasoned determination" was defined at the March 4-5 WQSAG meeting as: "Reasoned determination" means a written expression of a position or conclusion accompanied by supporting documentation. Supporting documentation shall be based on careful, balanced and critical review of available relevant information bearing on the subject of the determination and shall include all references consulted during preparation of the supporting documentation. The reasoned determination shall reflect the preponderance of scientific and technical information on the subject of the determination. This definition was considered acceptable by the WQSAG at that time. Since it was never brought back to the group for further consideration and therefore not rejected, it should be proposed at this time.

23. (a)(3) What is the rationale for having this statement in the regulations? EPA would consider a change in criterion a rule change and as such it would require EPA approval. Administrative criterion changes without public input and EPA approval are not appropriate.

24. (b) a "natural conditions" regulation should not be implemented until there is sufficient written technical guidance to provide the applicant and the technical staff with the information necessary to decide if the "natural conditions" should be used and how they should be determined. With so little data and dwindling ADEC resources, a change in criteria to "natural conditions" should only be allowed to reflect the most stringent natural condition, and not allow the department to, "in its discretion, determine a natural condition for one or more seasonal or *shorter time periods*" ... (emphasis added). ADEC does not have the personnel, time or money to do justice to this proposal.

25. This definition does not preclude the possibility that a discharger could release a larger volume of water at a "natural level of pollution" (e.g. because the water had been pumped from groundwater and then polluted) into a stream which would then increase the overall volume of higher polluted water which might have downstream effects not previously experienced.

26. (d) the term "waterbody as a whole" is undefined, and could allow for gross misapplications of this regulation. EPA's definition of this term describes effects that are not permitted in the whole water body, whereas ADEC is interpreting this to mean as long as something isn't happening in the whole water body, it's acceptable. This clearly needs to be resolved in a regulatory definition.

70.032 Mixing Zones (MZ)

The MZ language should be rewritten to state that a MZ for a limited group of pollutants under specific conditions would be the exception and not the rule. Regardless of the department's stated intentions to limit MZ in practice, the proposed language would allow every discharger to refer to other permitted MZ

9.

as precedents to substantiate the granting of their own MZ. The difficulties of realistic modeling and monitoring would permit multiple MZ to destroy a waterbody, and therefore violate the designated uses guaranteed the public under state and federal law.

27. (a) the department "will, upon application ..." should be changed to "may, upon application". The current wording of (a) places the burden on the public and the state to determine that a MZ is not appropriate, and can only be demonstrated after a facility has been operating for some extended period of time. The State needs the power to deny a MZ before the damage occurs. The failure of the current MZ regulations (which are far stronger than the proposed revisions language) is evident in the record of repeated permit violations of the now defunct Greens Creek Mine, the Red Dog Mine, and the Ballast Water Treatment Plant at Port Valdez. The pulp mills in S.E. Alaska have been operating without legal mixing zones, and have been responsible for multiple fish and bird kills over the past thirty years. As recently as this past August, the commercial fleet in Silver Bay was advised to not process their catch with water from Silver Bay because of the threat of tainting by the floating sludge and color present in the water at a distance of eight to ten miles from the pulp mill at Sawmill Cove. As mentioned above, the NPDES draft pulp mill permits which were going to address the potential of pulp mill MZ, were a major catalyst for this attempt at standards modification by ADEC in the first place.

28. (a)1(A) "significantly adverse levels" is totally dependent upon the definition of the term "waterbody as a whole", would only be determinable after the fact, and would place an impossible burden of proof on the public. It does not address the effect that a mixing zone might have on a subpopulation of a species, and assumes that we know how many members of a biotic community are expendable before irreparable damage is done to the overall population. The idea that toxic substances should be allowed to bioaccumulate, concentrate or persist in the environment at all is incongruous with the Clean Water Act and the concept of anti-degradation.

29. (a)1(C) should include a phrase regarding consumption of aquatic resources in addition to water supply and contact recreation.

30. Somewhere in Section (a) there should be a statement that addresses threatened and/or endangered species.

31. (a)3) "waterbody as a whole" is not defined.

32. (b) are these acute toxic compounds in acutely toxic amounts or chronic? Acute toxicity is in violation of the CWA, and we have no State acute toxicity regulations.

33. (c) "waterbody as a whole" is not defined.

34. (d) "reasonably demonstrates" is not defined, ADEC should require the best available technology, not methods found to be economically feasible.

10.

35. (e) what is meant by "or would unreasonably preclude"...

36. (f)(3)(A) what is meant by "a public health hazard is reasonably expected to occur"? Does this protect for all designated uses or does there have to be current human use? There should be a buffer zone between any mixing zone and an area where there could be a potential public health hazard.

37. (f)(3)(C) "irreparable" is inadequately defined. Are we talking about this season or geologic time? The difficulty of arriving at a workable definition for terms like these are the proof that MZ were never intended to be used on a regular basis, as would be allowed by the opening language.

Definitions

38. There is no definition for acute toxicity.

39. There is no definition for "waterbody as a whole".

40. There is no definition for "unreasonably precludes".

41. There is no definition for the time frame of "irreparable".

The above statements and all oral testimony submitted during the public hearings constitute the public comment for the Alaska Clean Water Alliance, prepared by Gershon Cohen, ACWA WQS Project Coordinator, WQSAG Conservation Representative.

cc: Governor Hickel
Senate and House Resource Committees
Attorney General Charles Cole

Alaska State Legislature

Senate Majority Leader
Chair, Judiciary Committee
Vice Chair, Community &
Regional Affairs



Member, State Affairs Committee
Committee on Committees
Western States Legislative Forestry Task Force
Legislative Council


Senator Robin L. Taylor

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November 12, 1993

Commissioner John Sandor
Dept. of Environmental Conservation
410 Willoughby Ave., Suite 105
Juneau, AK. 99801-1795


Dear Commissioner Sandor:

After closely following the public debate on your department's proposed revisions to the state water quality standards, I urge the formal adoption of the standards without further revision or delay.

As you know, I supported the standards as originally drafted more than a year ago. I also understand the decision to revise the original proposal in light of public comment. The revised proposal, developed with oversight from a citizens advisory group, is a common sense approach and needs no further revision.

Most of the comment against the proposed standards appears to have been generated by the public's natural concern over increased cancer risk. From the testimony I heard, most of those supporting more stringent risk levels thought the human health risk level of 1 in 100,000 applied to the general population. Somehow, despite workshops and public hearings, some members of the public fail to understand that the 1 in 100,000 risk level would only apply to people who consumed specific amounts of contaminated water or fish over a lifetime!

(more)

District A:

Hyder • Ketchikan • Kupreanof • Meyers Chuck • Petersburg • Saxman • Sitka • Wrangell

Senator Taylor

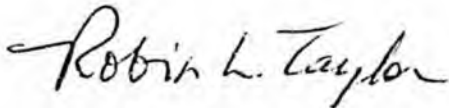
11/12/93

Page Two

To put it another way, if a group of 100,000 people ate and drank contaminated fish and water over a lifetime, the expected number of cancer cases in that group would increase by **one**.

The water quality standards as revised are both reasonable and responsible. They will serve to protect the public health without placing an undue burden on our economy.

Sincerely

A handwritten signature in cursive script that reads "Robin L. Taylor".

Robin L. Taylor

RLT/ja

cc: David Sturdevant, ADEC
Rep. Bill Williams

ALEUTIANS WEST

COASTAL RESOURCE SERVICE AREA

November 12, 1993

Mr. Dave Sturdevant/WQM
Department of Environmental Conservation
410 Willoughby Ave., Suite 105
Juneau, AK 99801-1795

Dear Mr. Sturdevant:

Subject: Proposed Water Quality Standards Revisions

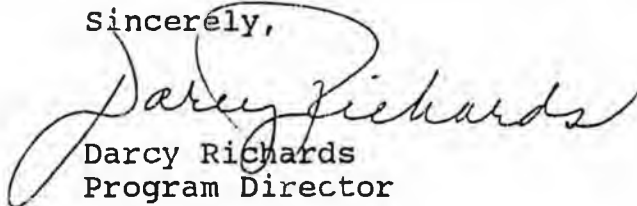
I made public testimony on, September 29, 1993, at the public hearing in Anchorage on the proposed water quality standards revisions and have previously informally submitted a copy of my testimony to you.

On behalf of the Aleutians West CRSA Board of Directors, I would like to formally submit a written transcript of that testimony, with minor editing changes, into the record.

Please keep the AWCRSA informed of the status of the revisions and any further opportunity for public comment on this important issue.

Thank you for the opportunity to comment.

Sincerely,



Darcy Richards
Program Director

Attachment:

cc with attachment:

- ✓ Rep. Bill Williams, House Resources Committee
- Charles Findley, EPA, Region X
- AWCRSA Board of Directors

ALEUTIANS WEST

COASTAL RESOURCE SERVICE AREA

Public testimony presented September 29, 1993 in Anchorage
Proposed Water Quality Standards Revisions

My name is Darcy Richards. I am the program director for the Aleutians West Coastal Resource Service Area, P. O. Box 220170, Anchorage 99522. The AWCRSA is the coastal district for the western Aleutians. The CRSA has been concerned for several years about the water quality problems in marine waters in Unalaska. DEC has recognized, to a certain extent, those problems by listing all five inner Unalaska bay water bodies on the impaired list for non attainment of water quality standards.

I would like to comments on some of the proposed revisions.

Site Specific Criteria

It is not clear for what reasons or purpose an applicant could apply for establishment by the Department of site specific criteria. Would existing permit holders or new applicants be able to apply for site specific criteria establishment in waters that are already declared impaired for non- attainment of water quality standards?

This appears to be an avenue to circumvent the reclassification of waterbodies process which requires a high level of documentation.

It was stated last evening that this is a departure from the EPA aquatic life criteria in favor of an Alaska criteria. It was further stated that DEC does not have the funds to establish an Alaska criteria or determine sensitive species or habitats. DEC is asking the public to discard one established defined set of criteria for an undefined set of Alaskan criteria which it does not have the ability to establish.

It is proposed that "natural conditions" be those before human contact. It is unclear as to how "natural conditions" will be discerned.

A further clarifying statement that "sufficient and available" information will be used to determine natural conditions raises some questions as well. It is our experience that there is a significant lack of information about natural conditions in the Aleutians, even in a major population and processing center such as Unalaska. If such sufficient information is not available would the DEC deny the permit or issue in the absence of available information? It has been our experience that discharge permits are issued

Aleutians West CRSA
Public Hearing Testimony - 9/29/93
1993 Proposed Revisions to Water Quality Standards

without sufficient background information to discern the potential adverse impacts to the receiving waters and biota. The most recent NPDES permit was issued to an Unalaska seafood processor without the State or EPA requiring pre-discharge background information to be gathered. Now all data from that waterbody, by default, includes the discharge in the ambient condition. This situation is certain to arise again under these proposed site specific provisions. A case in point is found under proposed 18 AAC 70.025 (b) which states: "If a natural condition varies with time, the natural condition will be determined as the prevailing highest quality natural condition measured during an annual, seasonal, or shorter time period prior to discharge or operation OR the actual natural condition measured concurrent with discharge or operation." We do not believe measurement of natural conditions should be less than the annual cycle. A short time period measure is arbitrary and indefensible. It would open the door for industry to use short time periods to justify degradation. Without extensive species and habitat information, it is very difficult to determine whether the biota can be sustained at the "short time period level" for a longer time period. The clause which states "or the actual natural condition measured concurrent with discharge or operation" is in conflict with the presumption that natural conditions means before human contact and is therefore meaningless.

We foresee major problems with discerning "natural conditions" and political solutions applied to these problems. The Department and EPA do not have the good track record in the Aleutians of insisting that applicants gather the needed data prior to discharge. In fact, they have taken the wait and see approach. They issue the permits and wait to see what impacts arise. This is contrary to the AWCRSA enforceable policies which call for reasonable assurance that the proposed discharge will meet water quality criteria for the receiving waters. The burden of proof is on the applicant to demonstrate their proposed activity will meet state standards, instead the state and federal government allow them to demonstrate after the fact with sorry consequences. This gamble with the environment has contributed to five impaired water bodies in Unalaska.

Further clarification is needed on how the natural condition before human contact will be determined. Will historical information be included? Will anecdotal information by long term residents be considered acceptable as historical data? In the absence of pre-human contact information, does the Department anticipating using extrapolation from other waterbodies? We do not favor this approach, as

extrapolation is too speculative and defeats the site specific definition.

It is not clear that there is a need for a site specific criteria to be established for all the uses in deference to the interest of one use. It will be a time consuming and expensive endeavor to determine appropriate criteria for each use. If all criteria for all the uses must be changed, how does this differ from reclassification of a waterbody?

Sediment/Settleable Solids

While the desire to clear up ambiguous terminology is commendable, we find it disconcerting that the present standard would be dropped, until a technical advisory group is formed, sometime in the future to deal with this issue, particularly, in light of ADF&G contention that TSS is meaningful for marine waters.

Toxic Substances

We would like clarification as to whether seafood processing waste which may contribute to low dissolved oxygen levels in the receiving waters is considered a toxic or deleterious organic substance?

Mixing Zones

Provisions should include prohibition of mixing zones in marine waters which have been declared impaired for non attainment of existing water quality standards.

Provisions should include consideration of cumulative impact, to which a single mixing zone may be a contributor.

Packet of information

The packet of information did not present who made what comments. We consider this to be pertinent information for the public to have. We suggest in future information packets this information be included.

In our opinion, these proposed changes would weaken the state water quality standards, which is very disconcerting to us while we are trying to resolve water quality problems in our district. The changes proposed by the Department would exacerbate those problems.

Thank you for the opportunity to comment.

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October 17, 1993

Commissioner John A. Sandor
Alaska Department of Environmental Conservation
P.O. Box 0
Juneau, Alaska 99802-1800

RE: Proposed Revisions to Water Quality Standards

Dear Commissioner Sandor,

Please take the time to personally read these comments as I want to do more than make specific recommendations for change; I want to enlighten you about how you need not view your pending decisions as making a choice between economic development and protecting the environment. With creative considerations you can promote both agendas. First, some prodding for creative considerations, then onto specific recommendations.

Are you aware that many prominent corporations and economists now realize that addressing environmental concerns at the front end of the extraction and manufacturing cycle is almost always cheaper and easier than solving back-end environmental problems? Instead of setting aside contingency funds for liability lawsuits, companies in the cases of toxic or carcinogenic pollutants, many companies have discovered it is most effective to eliminate, reduce, or ameliorate the pollutant ahead of time. Here is how Michael Silverstein, an economist who writes regularly for the The Wall Street Journal and In Business Magazine puts the environmental - economic connection:

"The best and brightest in the American marketplace soon enough realized that what others were lamenting as a "forced" regulation-induced, dietlike change advanced a larger market agenda and their own best interests. They came to identify environmental economics as just plain old good economics; environmental engineering as superior engineering; and environmental management as quality management. With these realizations came an end to compliance thinking aimed at simply keeping government off their backs and making peripheral public relations point. It was the beginning of a true commitment to getting ahead of the regulatory wave for purely economic purposes."

Mr. Sandor, if you just expand your vision, you'll see that Alaska doesn't need to cast clean water regulation as a choice between good economics and environmental protection. Alaska can get on the awareness curve of competitive, efficient, market savvy companies. For example, the dioxin standards of the State of California was supposed to be the death knell for the pulp industry there. Instead the pulp and paper industry found renewed market interest because they

reduced dioxin run-offs into waterways by 80% in recent years and have embraced new de-inking technology for recycling. (Silverstein, 1993 The Environmental Economic Revolution)

Not only does it make sense from the marketplace for industries such as pulp and mining to get on with front loading pollution abatement, but it also makes sense from the economic perspective of compatibility with the fishing and tourism industries. The perception that Alaska sets the lowest possible water quality standards is a grave threat to the fishing and tourism industries. My earlier general comments (enclosed) focused on the economic relationship between water quality and seafood marketing.

What you are up against is resistance to change by Alaska's pulp and mining industries. But change is not necessarily bad when viewed in the broader context of environmental economics. In fact, many expanding companies have found change to be positive when what was once waste, becomes a new by-product; when what was once viewed as forced compliance now makes the company more energy efficient. To quote Mr. Silverstein once more:

"This [environmental economic revolution] occurred largely because government elites in Germany, and Japan and business elites in the United States, finally began to appreciate the growing correlation between what produced contemporary wealth (efficiency) and what destroyed wealth (pollution). Pollution is laziness. Pollution is underdeveloped management." Change - pollution reduction and environmental protection - can be positive, particularly for Alaska (Odd, that I'm pleading this case to the Commissioner of Environmental Conservation). In fact, from my way of thinking, Alaska with its strong seafood and tourism industry has the most to gain economically from prudent changes in water quality standards.

Now onto the specific changes, I recommend. These are *in addition* to those changes outlined in my Sept. 30 th letter.

Human Health Risk Level

Thirty-six states, including most of the Pacific Northwest, have chosen a higher level of protection for its citizens. Alaska should adopt the level of protection that most leading companies have worked with. . .10 to the minus 7. This level will ensure the health of residents who eat a lot of fish, as well as the fisheries resource itself.

Mixing Zones

As with many of the proposed revisions the burden of proof for pollution is put on the public instead of the industry. The one case where it should be clearly shifted is mixing zones. At a minimum, the language should reflect that mixing zones are an exception and not the rule. Furthermore, allowing mixing zones in ADF&G index streams is totally unacceptable. These streams are essential to assess the health of wildstocks and for managing the salmon fisheries.

Color

The numeric standard for color should not be deleted. Just this summer, your department issued a warning to fishermen not to use the waters of Silver Bay and Eastern Channel near Sitka to process their fish because of the high color values. This is an example of why the numeric standard is important to retain.

Toxic Substances

Chronic tests for toxicity should be mandatory. . .thereby leveling the playing field for all industries using or producing toxic substances. Acute toxicity tests should also be mandatory

because without these tests, an industry could legally pump out toxic material which could be diluted enough to meet chronic toxicity test, yet could still kill fish and other aquatic life before the pollutants are diluted.

In closing, I hope you give these comments creative consideration. I would appreciate knowing if you ever read these comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kathryn Troll".

Kathryn Troll
Executive Director

c. c. Chairman Bill Williams and House Resources Committee

c.c. Chairman Mike Miller and Senate Resources Committee

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September 30, 1992

Commissioner John A. Sandor
Alaska Department of Environmental Conservation
P.O. Box O
Juneau, Alaska 99802-1800

Dear Commissioner Sandor,

On behalf of Southeast Alaska Seiners Association, I am submitting general and specific comments on DEC's proposed revisions of the State Water Quality Standards. Based on the technical comments submitted by United Fishermen of Alaska (UFA) and ADF&G Habitat Division, it clear that DEC is proposing to make water quality standards less stringent in most instances. Hence, my general comments will focus on the impacts caused by this systematic weakening of the state regulations.

General Comments

The feature report of Consumer Reports detailing the presence of dioxins and PCBs in fish, confirmed for the entire Alaska seafood industry the critical importance of having clean fish from pristine waters. Part and parcel to ASMI's efforts to diffuse the negative impact was Alaska strong water quality standards. Like many industries dealing with informed, concientous consumers the Alaska seafood industry recognizes the economics of perception and consumer confidence. ASMI even includes this statement in their press packets:

"According to National Oceanic and Atmospheric Administration (NOAA) research, Alaska has the world's most pristine waters. Analysis of strategic sample sites conducted by NOAA, such as the 1984-85 "National Benthic Surveillance Project: West Coast," shows Alaska's fishing grounds to be located in waters free from heavy pollutants."

Instead of holding onto this special marketing advantage at a time when Alaska's salmon industry faces stiff competition, DEC is proposing just the opposite. While changing the regulations to allow more dioxin, arsenic and other heavy metals and to expand mixing zones may not result in immediate pollution of our pristine waters, it is clearly moving in the opposite direction. With the prospects of world class mines throughout Southeast Alaska, with Ketchikan Pulp Company already on EPA's list of ten worst industrial sites (also covered in the press), and with the dominating presence of Alaska as an oil state, the likelihood of DEC's revisions undermining consumer confidence in Alaska seafood is indeed very real.

As noted by the enclosed newspaper clipping, Governor Hickel once understood this fundamental economic relationship between water quality and seafood marketing. This relationship is of critical importance to the state's largest employer, the seafood industry. I hope through a

earnest consideration of the comments provided by UFA that the Hickel Administration will once again realize and protect this economic relationship.

I know that resource development is a high priority of the Hickel administration. Therefore, the challenge is to find reasonable ways to promote resource development without degradation to the environment or loss to another resource industry. This challenge appears to have alluded DEC. To assist you in your quest for regaining the economic relationship discussed above and to enlighten you as to how address this challenge, I will highlight specific recommendations of UFA.

Specific Comments

1. UFA recommends first and most importantly that DEC adopt the following narrative statement relating to toxic discharges in the general section of the water quality standards 18 AAC 70.010:

"There shall be no discharge of toxic materials in toxic amounts. For point source discharges, this shall be interpreted as no discharges in excess of the numeric criteria for acute toxicity testing of whole effluent as measured at the end of the discharge pipe, and no discharges in excess of the numeric criteria for chronic toxicity testing of whole effluent outside the boundaries of the mixing zone."

This statement would clearly indicate the state's intent to maintain its high water quality standards in narrative language. As such, this statement has positive marketing value for Alaska seafood.

2. To assure that one resource industry isn't promoted at the expense of another resource industry, UFA strongly recommends:

"The state should develop a "Clean Water Task Force" with representatives from all interests to approach the challenge of maintaining high water quality while allowing discharge of nonconventional and toxic pollutants. Key elements of success for the "Clean Water Task Force" are obtaining an objective moderator and a dispute resolution format."

3. To eliminate too much discretion by the department and to promote treatment at realistic cost levels for industry, UFA proposes this language change for:

(a)(3) " A mixing zone will be granted only after the applicant has shown to the department's satisfaction that the wastes or substances that may exceed the water quality criteria will be treated using [methods found by the Department to be most effective and feasible] all technological and managerial methods available for pollution reduction and removal that are economically achievable, and [at the discretion of the department] discharged in a manner that maximizes initial dispersion and dilution."

4. Recognizing that spawning areas serve as the economic nursery for the salmon industry, UFA is adamant that DEC accept this language:

(e)(3)(iv) mixing zones are prohibited in anadromous and resident game fish spawning areas. (period!)

5. To exercise this regulatory authority in a responsible manner that balances environmental,

economic and social concerns, UFA strongly recommends that a new subsection be added as follows:

"(i) mixing zones are not authorized in anadromous and resident game waters, and other water with resident fish species of local culutral or social significance without the express concurrence of the Alaska Department of Fish and Game;"

ADF&G has the statutory responsibility for protecting aquatic life and its habitat. This would only allow ADF&G to properly excercise its authority.

6. With a strong technical back up, UFA recommends:

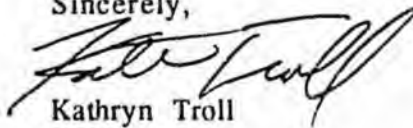
"for marine waters adopting a dioxin standard of 0.00006 ppq for human health based on the risk level of one in a million, a fish consumption rate of 65 g/day, a bioconcentration factor of 210,000 and a cancer potency factor of 86,750."

DEC must bear in mind that they are proposing a statewide health risk; it will not just be applied to the two pulp mills in Ketchikan and Sitka. As indicated above a market scare from dioxin-contaminated fish could have ripple effects statewide, much like the botulism scare in 1981 which resulted in depressed fish markets and prices for several years. A market scare from dioxin would be more difficult to respond to than a market scare from botulism, as dioxin is rightly perceived as a "polluted environment" while botulism is perceived as "processing error". A polluted environment is far more difficult to rectify. This marketing concern is not concoted as a defense for a stronger standard; it is very real as evidenced by the Consumer Reports articles which have made it tougher to convinve non-seafood eaters to turn to seafood as a protein choice over chicken or pork. This legitimate marketing concern is only excerbated by DEC's clear intention ot adopt a dioxin criterion less stringent than the standard recommended by EPA.

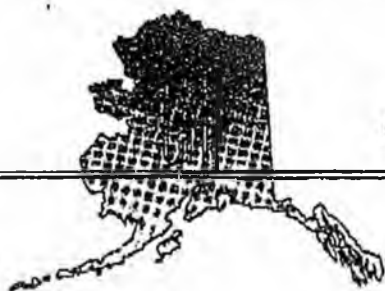
7. The definition of water should not be changed to allow unlined tailings ponds to be exempt from water quality standards. When there is technology readily available which can mitigate and prevent environmental degradation it should be used. Lining tailings pond is standard practice in many other states; states who don't even have valuable fisheries to protect. Unlined tailings ponds and other waste water treatment facilities containing levels of toxic waste in excess of water quality standards could contaminate ground and surface waters, including fish spawning areas. As such, UFA encourages the state to leave the definition of water as is.

There is nothing wrong with the state assuming responsibility for discharge of its pollutants into its waters; only the state must do it in a manner that is clearly responsible to the environment and other resource industries. Along with assuming this responsibility the state must make a policy and fiscal commitment to monitor, regulate and enforce its standards. To do anything less is a diservice to Alaska.

Sincerely,



Kathryn Troll
Executive Director



Council of Alaska Producers

P.O. Box 22653 Juneau, Alaska 99802

November 10, 1993

The Honorable John Sandor
Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Re: Proposed Revisions to Alaska's Water Quality Standards

Dear Commissioner Sandor:

Thank you for this opportunity to comment on the proposed revisions to Alaska's water quality standards. The proposed revisions reflect considerable progress on a number of critically important technical issues. However, the procedural and administrative processes by which the standards are enforced need to be addressed as well.

The current proposals retain much of the vague and undefined terminology which made the 1979 standards unworkable. The Council of Alaska Producers strongly supported the Advisory Group which was formed to assist in the development of workable standards. Thus, we are disappointed that so many suggestions from the Advisory Group and from public comments on workability were not incorporated into the revisions.

Our specific comments on the revisions are set forth below, along with suggestions for further improvement.

SPECIFIC COMMENTS ON
PROPOSED REVISIONS TO WATER QUALITY STANDARDS

18 AAC 70.010. GENERAL.

§§ (c) and (d) (The "constructed treatment works" sections)

We support the inclusion of the "constructed treatment works" provision. The provision clarifies the current regulations and guarantees that Alaska's water quality standards will not prevent essential wastewater treatment. However:

- Under (d), water quality standards must be met in surface waters adjacent to the treatment works and in groundwater at specified points of compliance, but the regulation does not

provide any guidance as to where such points of compliance should actually be set. At the public workshop, DEC officials indicated variously that monitoring wells should be as close as possible to the facility, a few hundred feet downstream, or within a few hundred yards. The regulation should specify that points of compliance will be fixed a sufficient distance from the facility to allow for the installation and effective operation of any necessary seepage interception wells or structures.

- Subsection (d) requires that treatment works be as small as practicable. Practicability is not defined, and is a somewhat ambiguous concept. We suggest the following substitute language:

A treatment works must be as small as is technologically and economically feasible.

§ (e) (The anti-degradation section)

This section is filled with the sort of vague and undefined language that makes some of the proposed standards unworkable as written. For example:

- The requirement that an applicant or petitioner must make showings "to the department's satisfaction" is completely unworkable. The "department's satisfaction" is nowhere defined. Currently, such language results in unending discussion and repeated requests for more information. Guidelines must be provided so that an applicant or petitioner can anticipate what needs to be in a petition or application. We suggest that an applicant be required to show "by substantial evidence" instead of "to the department's satisfaction." Substantial evidence has an established legal definition.
- Subsection (e)(3) requires that wastes be treated using "the methods found by the department to be most effective." How is DEC going to make such findings? DEC is not in the engineering or research and development business. Past experience suggests that DEC will not provide guidance, but will instead question an applicant's proposal in an endless cycle of reports and requests for more information. It is better simply to hold dischargers to performance standards, letting companies and municipalities hire expert engineers to figure out the best methods of satisfying the standards. Such an approach puts the burden on dischargers, reducing demands on agency resources. It also allows greater flexibility to adopt new methods as these become available.

- The clarity of subsection (f) should be improved. The language of this section currently requires treatment and control of the discharge "to ensure that the quality of the receiving water meets the standards set by this chapter." We suggest that this be changed as follows:

...to ensure that the quality of the receiving water satisfies the requirements of this chapter.

The change is necessary to avoid confusion. Without the change, a reader might easily conclude that treatment and control is required if the receiving water does not meet the numeric criteria set in this chapter. Such a reading would undermine the provisions of the chapter allowing site-specific standards which replace numeric criteria.

18 AAC 70.020(b)I(A)(i) et al. SETTLEABLE SOLIDS.

We strongly support the changes to this section. By making it clear that the "no measurable increase" requirement applies to settleable solids as measured by the Imhoff cone method, DEC has greatly improved the regulation. The old reference to "sediments" was unclear and led some observers to believe that the standards required slow and expensive laboratory measurement of TSS (Total Suspended Solids).

18 AAC 70.022. HUMAN HEALTH CRITERIA.

We strongly support the choice of a risk level of 10^{-5} over the 10^{-6} level advocated by some parties. EPA has established a range of acceptable risk levels, from 10^{-4} to 10^{-6} . In its own newly-proposed model for toxic pollution control in the Great Lakes region, which many are hailing as a likely national model for water pollution control, EPA has tentatively settled on 10^{-5} as the appropriate risk level. Furthermore, EPA recognizes that 10^{-4} might be an appropriate alternative level and has invited public comment as to whether it should apply 10^{-4} in the Great Lakes model.

The 10^{-4} risk level provides adequate protection under many Alaskan circumstances. The 10^{-6} level is substantially overprotective. In a world where we have a one in three chance of developing cancer from all sources, adding a one-in-a-million chance of developing cancer from a particular source represents a 0.0003 percent increase in total risk. The 10^{-5} level is more than adequate to protect human health under circumstances prevailing in Alaska.

Furthermore, Alaskans will not actually be exposed to this level of risk. The pathways model used to reach this risk

target incorporates numerous conservative assumptions, some of which are too conservative for Alaskan conditions. For example:

- Exposed population: The chosen level of risk will exist only for people who are exposed to the pollution for an average 70-year lifetime. Yet Alaska has a young, small, and mobile population and only a very few sources of pollution. Thus few if any people will be exposed to water pollution continuously for 70 years.
- Fish consumption: The chosen level of risk, as applied to marine water quality, will exist only for people who eat at least five pounds per year (for life) of contaminated fish. Although Alaskans certainly eat more fish than the national average, this number is nonetheless too high. The model assumes that all fish eaten are contaminated. In Alaska, there is no evidence at all of fish contamination. Since pollution sources are few and fish (especially salmon, Alaska's most popular food fish) very mobile, the number of Alaskans actually eating this much contaminated fish is likely to be vanishingly small.
- Water consumption: In fresh water, the chosen level of risk will exist only for those who consume two liters of contaminated water per day. This is in addition to the five pounds of contaminated fish and again must take place continuously for 70 years. However, current figures suggest that 1.4 liters per day is a better nationwide average for drinking water consumption, and in the cooler temperatures predominant in Alaska the figure may be even lower due to reduced frequency and duration of perspiration. Moreover, few if any Alaskans are likely to spend 70 years drinking water from the same contaminated source.

18 AAC 70.025. SITE SPECIFIC CRITERIA.

Although the idea behind this section is an important addition to Alaska's water quality standards, the proposed standard is flawed. The flaws impose a series of possibly insurmountable impediments to the use of site-specific criteria.

§ (a) (The general site-specific criteria section)

We support the inclusion (in this subsection and elsewhere) of language specifying that decisions will be made on the basis of available evidence. This requirement will be very helpful in cutting short the extended process of studies and reports which has often delayed the permitting process in the past.

This section, however, should be reworded as follows:

Comments on Proposed Water Quality Standards

Page 5

(a) The department shall [WILL, IN ITS DISCRETION] administratively approve in its permits, certifications, or other approvals under (b) of this section, or establish in regulation under (c) of this section, site-specific water quality criteria that modify the water quality criteria set out in 18 AAC 70.020(b) if available evidence reasonably demonstrates to the department that:

(1) for reasons specific to a certain site, a criterion is more stringent or less stringent than necessary to protect the corresponding use class;

or

(2) [A CRITERION WOULD REQUIRE THAT THE RECEIVING WATER AT A CERTAIN SITE BE OF HIGHER QUALITY THAN NATURAL CONDITIONS; OR

(3)] a criterion would be better expressed in terms different from those used in 18 AAC 70.020(b).

These changes are necessary for the following reasons:

- As written, the section gives DEC discretion to approve site-specific criteria under certain circumstances, but allows DEC to deny a request for site-specific criteria for any (or no) reason. If the standards are intended to govern DEC's discretion, it makes more sense to apply the standards directly to DEC's decision. However, DEC retains the power to refuse to modify the criteria if the standards are not met.
- We propose to delete subsection (2) because it conflicts with subsection (b). Under subsection (b), if an applicant demonstrates that the natural conditions of a water body are lower than the regulatory criteria, the natural conditions "constitute" the criteria. There is no need for DEC to approve site-specific criteria or modify the regulatory criteria when these have already been modified by operation of subsection (b).
- The intent of subsection (3) is unclear, particularly in light of how the phrase "available evidence reasonably demonstrates" in the text leading up to the subsections might be construed. The decision to establish site-specific criteria should not be arbitrary. Instead, it should be based on substantial evidence. Historically, "available evidence" has been accepted to set discharge limits in municipal discharge permits based de facto on site-specific criteria but almost never for non-municipal discharges. For instance, due to site-specific criteria, the recent Mendenhall Draft NPDES permit is silent as to BMPs, arsenic numbers, and the mixing zone, all of which a non-municipal discharge permit would have to address.

§ (b) (The natural background conditions section)

It is very important to consider natural background when setting effluent limits. We strongly support a system for doing so. However:

- Natural conditions are defined as the conditions existing "before any human-caused influence." This definition is unworkable. In a water body subject to numerous influences, how is it possible to tell how much of a particular pollutant is the result of human influence? For example, how do you attribute some sediment to natural erosion and some to up-stream construction projects? At the workshop, DEC officials indicated that the applicant would have to make an estimate and then convince DEC of the accuracy of that estimate. Without guidance, or even a definition of "human-caused influence," this could be an impossible task. Moreover, the impossibility of a reasoned answer to this question ensures repeated and protracted litigation.
- This subsection provides that if natural conditions "are demonstrated" to be of lower quality than the established water quality criteria, the natural conditions "constitute" the applicable water quality criterion. We support this provision wholeheartedly. However, stating that DEC will approve natural background conditions as criteria "at its discretion" undermines this provision. Similarly, the last sentence discussing "approval of a natural condition" undermines the effect of the provision as a whole. If natural background conditions "constitute" the applicable criteria, DEC is not in a position to "approve" the criteria. It seems likely that the intent is merely for DEC to pass judgement on the applicant's characterization of natural conditions. In order to reflect this intent, the last sentence should be deleted and the first two sentences should be reworded as follows:

If it is demonstrated by substantial evidence that the natural conditions in a waterbody are [DEMONSTRATED TO BE] of lower quality than the water quality criteria for the use classes in 18 AAC 70.020(b), the natural conditions constitute the water quality criteria. Upon application, or on its own motion, the department [WILL, IN ITS DISCRETION] shall accept a demonstrated [APPROVE A] natural condition as a site-specific water quality criterion.

- It is unclear what purpose the public notice and comment period serves. Environmental groups will use this opportunity

to thwart development by contesting necessary applications, and yet the only question which should be at issue is a purely scientific one: Are natural conditions of lower quality than the regulatory criteria? Since this is not a question of policy or rule-making, public participation is not essential or desirable. Public notice and comment requirements are well established for rule-makings and permit decisions under Alaska's Administrative Procedure Act and the ACMP review process regulations. The specific notice and comment provision in this subsection is surplus and should be deleted.

§ (c) (The site-specific-criteria-by-regulation section)

See above comments on "discretion", "available evidence", and "reasonably demonstrates to the department" wordings.

§ (d) (The burden of proof section)

This section puts the burden on the applicant to provide "all information the department deems necessary" to modify an existing criterion. There are a number of problems with this:

- Despite language in the other sections which suggests that the department should be limited to available information where such is sufficient, this section would allow DEC to "deem" that more study is required, irrespective of whether information already available is sufficient from a science viewpoint. Accordingly, the process could become protracted and expensive.
- If an applicant provides information amounting to substantial evidence that a natural background condition is of lesser quality than the regulatory criteria, that should satisfy DEC, unless DEC can show that the information is flawed.
- An applicant should never bear the burden of proof unless the standard of proof is explicitly spelled out in regulation. Whenever an applicant bears a burden of proof, the information required should be listed in the regulations or a definable, reviewable legal standard like "substantial evidence" must be used.

18 AAC 70.032. MIXING ZONES.

We strongly support the mixing zone proposal. If mixing zones were not allowed, all Alaskans would suffer a diminished quality of life due to additional costs of operating domestic and industrial treatment facilities and the resultant loss of economic activity and jobs, because mixing zones often are required for operations to be economical while satisfying water quality standards.

The mixing zone provisions suffer, however, from many of the flaws discussed in the comments on site-specific criteria. Specifically:

§ (a)

- The proposal allows mixing zones only in DEC's discretion. The regulation already imposes limits on the circumstances under which a mixing zone is allowed, so DEC does not need seemingly unlimited discretion to reject an application for a mixing zone. Thus the main part of (a) should be rewritten as follows:

In applying the water quality criteria set out in this chapter, the department shall [WILL], upon application [AND IN ITS DISCRETION] prescribe in its permits or certifications a volume for dilution of an effluent or substance within a receiving water unless available evidence reasonably demonstrates that....

[an alternative formulation:

In applying the water quality criteria set out in this chapter, the department shall [WILL], upon application [AND IN ITS DISCRETION] prescribe in its permits or certifications a volume for dilution of an effluent or substance within a receiving water unless substantial [AVAILABLE] evidence available at the time the permitting or certification decision is made [REASONABLY] demonstrates that....]

- Once again, the vague formula of "available evidence reasonably demonstrates" is used. This should be replaced by "there is substantial available evidence that." If the intent of this section is to bind DEC to using available evidence (which we support) then this should be made explicit, as a limiting clause in subsection (g).
- In subsection (a)(1)(B), "biota" should be defined to mean commonly used indicator species. Otherwise, evaluation or testing of all biota might be required. This would be an impossibly large and expensive undertaking.
- In subsections (a)(1), (a)(2), and (a)(4), the word "could" must be replaced with "would" or a similar phrase connoting more than a mere possibility or speculation.

§ (b)

The second sentence of this subsection should read:

A discharge may not result in levels of a toxic substance that would [COULD] cause a toxic effect in the water column, sediments, or biota outside the boundaries of the mixing zone.

Again, the change is to ensure that the language connotes more than mere speculation.

§ (d)

This whole subsection is unworkably vague. It is essential to replace vague and undefined language with concrete terms which make clear the respective rights and duties of DEC and dischargers. Thus it should be rewritten as follows:

A mixing zone [MUST BE AS SMALL AS PRACTICABLE AND] will be granted only after the applicant has provided to the department substantial evidence showing that [REASONABLY DEMONSTRATES THAT] a waste or substance that might exceed the water quality criteria will be treated to remove, reduce, and disperse pollutants, using the [METHODS FOUND TO BE] most effective and technologically feasible methods, consistent with the highest applicable statutory and regulatory treatment requirements.

These changes are needed because:

- The "small as practicable" requirement is vague and redundant, since subsection (f) provides detailed limits on the sizes of mixing zones.
- The phrase "methods found to be most effective and technologically and economically feasible, consistent with the highest statutory and regulatory treatment requirements" is too vague. It is not clear who does the finding, and it is important to ensure that only "applicable" statutory and regulatory treatment requirements can bar feasible treatment methods. Otherwise, the bare existence of an inapplicable standard (applied in some other context) could require expensive and unnecessary treatment.
- This regulation places the burden of producing evidence on the applicant. Accordingly, if the information required is not or cannot be listed in the regulations, a definable, reviewable legal standard like "substantial evidence" must be used.

§ (e)

"Available evidence reasonably demonstrates" should be replaced with "the department has substantial evidence demonstrating that". DEC should not be able endlessly to demand new studies. DEC should not be able to refuse an application unless DEC has (without demanding more studies) legally sufficient evidence to support its position.

§ (f)

The mixing zone size limitations in this subsection make more sense than the "as small as practicable" language. However:

- The "reasonably demonstrates" language should be replaced with a substantial evidence requirement, which has a set legal meaning.
- Subsection (f)(3)(D) should be reworded. The Advisory Group comments pointed out that resident game fish are often broadcast spawners and thus have no redds. Yet the proposed standards prohibit mixing zones in resident game fish spawning redds. The phrase "area of" is also rather vague. It might or might not encompass an area where spawning once occurred or occurs intermittently. "Area" is an overly broad description of the spawning grounds which might legitimately need protection. After all, the whole of "Southeast Alaska" might be viewed by some as "an area where anadromous fish spawn." We propose that the prohibition be limited to the following:

- 1) Areas where anadromous fish spawning redds exist annually or two out of four years as determined by ADF&G from available information;
- 2) In areas of significant resident game fish spawning, based on substantial evidence.

18 AAC 70.110. DEFINITIONS

§ (1)

The proposed definition of "adverse levels" should be changed as follows.

(1) "Adverse levels" means that conditions within a mixing zone are not adequate to ensure survival, growth, and reproduction of [ALL] representative organisms that are commercially available and normally used for indicator species in the region.

that [MIGHT OTHERWISE ATTEMPT TO] reside within the mixing zone.

Such a change is necessary, or a never-ending process of controversial monitoring studies and litigation likely will result, because:

- There is no way reliably to predict what organisms might attempt to reside in a site selected for a mixing zone.
- Natural variation in reproduction in most organisms is such that impacts will be very hard to detect.

GENERAL COMMENTS

A key definition is missing. This definition would define how to determine statistically "specific natural conditions", how to evaluate numeric criteria, and how to determine compliance with water quality standards. Without a definition or prescription of a statistical method, the numerical standards are almost meaningless. If the standard is 1 mg/l, and 1000 tests of water quality indicate 0.9 mg/l and one indicates 1.1 mg/l, a violation potentially has occurred. Using accepted statistical analysis, however, there should not be a violation. Every sample and every analysis is affected by statistical variability, because laboratory techniques, sampling techniques, and background or "natural" conditions all have some statistical variation.

We suggest that standards, background, and criteria be statistically defined. We should be looking for trends, rather than specific numbers in single samples. The following procedures should apply:

- A statistically significant number of samples is necessary to define averages, background concentrations, or compliance with a numeric standard.
- A trend may be defined as a long-term (more than 5 sample intervals) change (increase or decrease) from a sample set mean that will result in a regression developed trend-line that will exceed 2 standard deviations above the baseline or background mean for the sample set.
- Single sample compliance may be defined as a sample that, for the data set, is 2 standard deviations above the defined numeric standard or mean background concentration as applicable.

Using such procedures, a compliance test, trend analysis, or comparison with a statistically defined background condition is

Comments on Proposed Water Quality Standards

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possible. Currently, one test in a thousand one percent over the numeric standard or over the "background" can be construed as non-compliance. If compliance is not based on valid statistical methods, then statistics guarantee that any discharge will on occasion be out of compliance, because of the variations in sampling and analysis.

Also, such procedures may be the only way many municipal dischargers in Alaska can comply with the new National Toxics Rule arsenic standard.

CONCLUSION

The proposed standards incorporate many conceptual improvements, including the revised suspended solids definition, the mixing zones and treatment works, and the possibility of establishing site-specific criteria or natural background conditions in place of the state-wide numeric criteria. Many of these improvements, however, are set out in vague or undefined language, leaving too much to disputed interpretations or to DEC's discretion. This could result in endless study and monitoring, as well as expensive and delaying litigation. We therefore request that you consider our suggestions for tightening up the language to make these new proposals into a workable system of water quality regulation.

Sincerely,

David Stone, President
Council of Alaska Producers

cc: Mr. Joe Fisher, Alaska Gold Co.
Mr. Ralph Hargrave, Cominco Alaska Inc.
Mr. Bruce Bouley, Cominco Alaska Exploration
Mr. Ken Pohle, Fairbanks Gold, Inc.
Mr. Gerald Booth, CIRI Energy & Minerals
Mr. Tom Albanese, Greens Creek Mining Company
Mr. John Lukens, INCO
Mr. Robert Walish, Cambior
Mr. Steve Borell, AMA



ALASKA MINERS ASSOCIATION, INC.

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*Rep. Wm.
Williams*

November 13, 1993

Mr. Dave Sturdevant
Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, AK 99801-1795

Re: Comments on Proposed State Water Quality Standards

Dear Mr. Sturdevant,

Thank you for the opportunity to comment on these proposed water quality standards. The members of the Alaska Miners Association are personally and directly impacted by changes to the water quality standards. Logical and workable regulations will make the difference between their ability to provide for their families and being forced out of business. We ask that the Department of Environmental Conservation, and each staff member individually, keep this fact in mind when finalizing these regulations. Our members are not third party observers but rather are hard working Alaskans that depend on reasonable regulations to survive.

GENERAL COMMENTS

We feel that many of the changes that have been made to the current draft regulations are beneficial and that these move in the right direction. Of particular importance are the use of the term settleable solids, the selection of 10 to the minus 5th, the addition of a definition for treatment works and addition of the explanatory phrase "unless available evidence reasonably demonstrates" regarding mixing zones. Major improvements have also been made in clarifying the relationship between mixing zones and the waterbody as a whole.

There are however many other areas where the regulations require significant modification. The need now is to correct these areas and change the numerous places in the draft regulations where uncertainty and ambiguity still exist.

A goal should be to remove all possible opportunity for legal challenge by third parties that seek to stop development by harassment of the DEC permitting process. Also, the final regulations should be in terms that will allow understanding by a simple reading so that the requirements are clear for both industry and the DEC. Miners and DEC field staff should not have to consult with DEC management but should be able to follow the clear wording of the regulations without ambiguity or uncertainty.



ALASKA MINERS ASSOCIATION, INC.

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SPECIFIC COMMENTS

The following specific changes and comments should be incorporated into the final regulations. Items [in brackets] are to be removed and items underlined are to be added to the regulations referenced.

1. 17 AAC 70.010.(d) The final sentence in this paragraph should be changed to read -

"A treatment works must be [as small as practicable] sized to effectively treat the effluent being treated."

The phrase "as small as practicable" is an albatross that will not die! It is subjective and is not definable or measurable and works against effective and efficient treatment with a margin of safety. However, because it has been in use for many years it continues to be used. It appears that pride of authorship within the DEC staff is so great that they are not willing correct this very serious problem.

The real purpose of the regulation and real concern is that a treatment system function properly and that it makes the modifications to the waste stream that are needed to insure that the effluent limits are met. The location where these limits must be met is at the discharge point from a treatment works.

2. 17 AAC 70.010.(e)(3) This sentence should be dropped in total. It only adds uncertainty and confusion to the topic. The real goal, as discussed above, is that the treatment works function properly and that it insures that the effluent limits are met. To require "...using the methods found by the Department to be most effective" can work at cross purposes to the goal.

If for example the "most effective" method of removing a particular constituent is to construct a very large shallow treatment area covering tens of acres, that method could be required rather than a smaller more compact facility. This sentence also assumes that DEC is all knowledgeable. Anyone could challenge the Department in court that some new and better method is "most effective". Leaving the sentence in the regulations is an invitation for future third party suits and the ensuing hassles for industry and DEC.

3. 17 AAC 70.010.(f) This paragraph should be changed to read -
"...to ensure that the quality of the discharge [receiving] water meets the standards..."

The regulations are to control discharges. They cannot control the stream, lake or river in its natural setting - that is a given.

4. 18 AAC 70.020 We support the changes proposed to fecal coliform bacteria.



5. 18 AAC 70.020(b)I and II We support the change from sediment to settleable solids. This change is absolutely essential for many mining operations, other businesses and municipalities, but especially for those in the Interior of Alaska. If this change is not made we will continue in the legal morass of the past several years. Without this change, the sampling and testing costs for all Interior Alaska businesses will be greatly increased by one or more orders of magnitude.

6.A. 18 AAC 70.020(b)I(A)(iii) and (C) for fresh water uses, and (b)II(A)(i) and (C) for marine water uses. Change the second sentence to read -

"Individual substances shall not exceed criteria [, established at the department's discretion,] equivalent to the ...".

If the conditions can be met DEC should not have the discretion to deny a permit! It is time that DEC set the standards in a way that will provide certainty for all permittees, including mining. If the limits can be met the permit should be issued. DEC does not need this discretion. EPA does not require this discretion. It should be removed from the regulations.

6.B. Also in the reference given in the above item: The third sentence reads "There shall be no concentrations of toxic substances in water or in shoreline or bottom sediments that cause.. " This section must be changed to give some specifics or be changed to provide some explanation of what "no" means. As now written it is an invitation for challenge and litigation by those that wish to stop development.

7. 18 AAC 70.020(b), Notes 8 and 9. This material should be returned to the previously requirements. As now written the lab cost per sample will increase from the current cost of \$65 each (Test 418.1) to \$367 each for the three tests listed. This is unreasonable. This requirement will be especially burdensome for the municipalities and there is no demonstratable benefit from the change. Either keep the old method or do the test for benzene only in that it is the component that is the first to be detected (method 602).

8. 18 AAC 70.022. Human Health Criteria. We support this designation of risk level. This risk level is extremely important for all industries, municipalities and the future of all business in the State of Alaska. This section should however be expanded to describe what it means in layman terms with examples comparing this risk level to the other human health and safety criteria that we face in our daily lives. This will assist DEC in communicating this topic which can be easily mis-construed by those wishing to stop development mislead and scare the public.



ALASKA MINERS ASSOCIATION, INC.

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9. 18 AAC 70.025(a) Site Specific Criteria. The use of the phrase "in its discretion" is absolutely essential in this location. Where the standard requirements are not applicable and the permittee can scientifically justify this fact, the DEC must have the discretion to apply site specific criteria.

10. 18 AAC 70.025(b) This section should be changed to read -
"(b) If the natural conditions of a waterbody before affects of permitted discharges are demonstrated to be of lower water quality criteria..."

We believe that this change clarifies the intent of the section. This addition is necessary to define the point in time that is to be used as a basis of comparison. If this addition is not made the point of comparison could be construed to mean some time before white settlers arrived in the state. Using the addition shown there should be no opportunity for such a mis-interpretation.

11. 18 AAC 70.025(b) The second sentence in this section should be changed to read -
"Upon application, or on its own motion, the department will[, in its discretion,] approve a natural condition as a site-specific water quality criterion."

The phrase "in its discretion" is not appropriate in this location. If the facts and science show that the natural conditions of a waterbody fall in the range that would qualify under this section, then there should be no discretion for DEC. The facts should stand and not be open to discretion.

12. 18 AAC 70.025(b) The third sentence in this section should be either removed in total or at the very minimum changed to read -
"The department will issue public notice of a proposed approval under this subsection, and provide opportunity for a 30 day period for public comment."

13. 18 AAC 70.025(b) In the next to the last sentence of this section the use of the phrase "in its discretion" is appropriate.

14. 18 AAC 70.032(a) The phrase "...unless available evidence reasonably demonstrates..." is very important and adds an extremely crucial qualifier to the statement.

15. 18 AAC 70.032(a)(1)(A) The use of the phrase "...significantly adverse levels;" is very important and also adds an extremely crucial qualifier to the statement.

16. 18 AAC 70.032(a)(1)(B) This item should be changed to read -
"(B) be expected to cause carcinogenic, mutagenic, or teratogenic effects on [biota] commonly used indicator species or human health;"



ALASKA MINERS ASSOCIATION, INC.

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The use of the single term "biota" without further qualifiers will guarantee legal challenge by those that wish to stop and harass development. One cannot guarantee there will be no effects on biota unless you test all biota. Someone will always be able to find a previously unknown sub-species that has not been tested and DEC will be found not following its regulations. The phrase "commonly used indicator species" removes this line of challenge and accomplishes the need.

17. 18 AAC 70.032(a)(2) This item should be changed to read -
"(2) there could be an adverse impact on anadromous or resident fish or shellfish spawning or rearing as specified in (f)(3)(C) below, or a barrier formed to migratory species;"

This addition is needed to clarify exactly what is considered to be an adverse impact and what criteria is being followed. Without this addition the reader must dig much harder to understand the meaning and will still be uncertain of the meaning, leaving an opening for a third party suit that would attempt to change the meaning into something else.

18. 18 AAC 70.032(b) In the second sentence of this item the term "biota" should be replaced as follows for the same reasons given in paragraph 16. above -
"...that could cause a toxic effect in the water column, sediments, or [biota] commonly used indicator species outside the boundaries of the mixing zone."

19. 18 AAC 70.032(c) The use of the phrase "...the waterbody as a whole..." is extremely important. This will help clarify the misinformation that has been generated by those wishing to confuse and complicate the issue of mixing zones.

20. 18 AAC 70.032(d) The first sentence in this item should be changed to read -
"(d) A mixing zone [must be as small as practicable and] will be granted only after the applicant has provided to the department evidence that reasonably demonstrates that a waste or substance that might exceed the water quality criteria will be treated to remove, reduce, and disperse pollutants, using methods found to be [most] effective and technologically and economically feasible [consistent with the highest statutory and regulatory treatment requirements]."

20.A. Regarding the first change, [must be as small as practicable], this phrase has no definable standard. It is rather an invitation for challenge and must be removed. See paragraph 1. above for additional comment on the need to remove this phrase as we suggest.



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20.B. Regarding the removal of the word [most] - if a method is effective it should be allowed. The issue is "effectiveness" not the method. To include the term [most] seems to impose some other standard that is not defined. If this is not removed it will be an item of uncertainty for the industry and an opportunity for challenge.

20.C. Regarding removal of the phrase [consistent with the highest statutory and regulatory treatment requirements] - What is the purpose of this statement? This serves no purpose. We are aware of no "non-highest" requirement against which this statement seeks to be compared. This should be removed as superfluous and potentially confusing.

21. 18 AAC 70.032(e) This paragraph should be rewritten to remove or clarify use of the word "objectionable" and to include an objective standard. There is now no standard. Objectionable to who? You can always find someone who will find any smell objectionable. For example, I sometimes find it objectionable talking to someone that is a smoker because of the odor but that does not give me the right to tell them not to smoke. The same is true when considering color and taste, as well as odor. The USDA Food and Drug Administration has objective criteria that should be considered.

22. 18 AAC 70.032(f) The word "safely" should be dropped from this item or replaced with an objective criteria. This is a subjective term and adds nothing to the meaning of the statement.

23. 18 AAC 70.70.032(f)(3)(A) This item should be changed. There are two alternatives -

Alternative 1.

"(A) the maximum size of a mixing zone may not extend down stream beyond the point of complete mixing, or the location where a public health hazard reasonably could be expected to occur, [whichever point is nearer to the] but it may extend to that location if it is farther from the point of discharge;"

Alternative 2.

"(A) the maximum size of a mixing zone may [not] extend down stream beyond the point of complete mixing, [or] to the location where a public health hazard reasonably could be expected to occur[, whichever point is nearer to the point of discharge];"

To require that the nearer point be used is not reasonable. In some cases this will mean that the discharger will be operating right on the edge of the legal/illegal limit. A better choice is rather than force this situation, when there is not a public health hazard, to allow the mixing zone to extend further downstream. This will be to the benefit of both the miner and the DEC and will have no adverse impact on anyone else.



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24. 18 AAC 70.032(g) This item should be changed to read -
"(g) An applicant requesting a mixing zone is responsible for providing to the department all information reasonably necessary for assignment of a mixing zone, including information and demonstrations required in this section and other information reasonably demonstrated to be [determined] necessary [by] for the department to meet the requirements of this section."
25. 18 AAC 70.110(29) We agree with the changes proposed by DEC in this item but feel that further changes are needed so it will read -
"(29) "natural condition" means any physical, chemical, biological, or radiological condition existing in a waterbody before any [human-caused influence on] affects from permitted discharges to, or addition of material to, the water;"

The changes shown above more accurately reflects the intent of the paragraph. In many instances it would be impossible to determine if there were "human-caused influences" because the condition before any humans were present is not known and cannot be determined. This issue is also discussed in item 10 above.

26. 18 AAC 70.110 Definition (1) should be changed to read -
"(1) "adverse levels" means that conditions within a mixing zone are not adequate to ensure survival, growth, and reproduction of [all organisms] commonly used indicator species that might otherwise attempt to reside within the [mixing zone] waterbody as a whole;"

The first change in this definition is needed because it may always be possible to argue that some obscure organism may have been left out of the testing and it may be adversely affected and we will never know unless we wait and study this organism. Reference to commonly used indicator species will correct this problem and is the approach taken elsewhere when this potential difficulty arises.

The second change to this definition is the crux of the entire issue of mixing zones. The purpose of a mixing zone is to define an area where the normal limits can be exceeded even if they may temporarily displace some of the species that may otherwise reside there. Without making the change recommended above, this definition will totally negate the two definitions found in (8) & (12) that follow in this same section.

27. 18 AAC 70.110 Definition (8) should be changed to read -
"(8) "irreparable" means a change in aquatic organism presence due to a decrease in water quality that is irreversible by natural processes so that the ecosystem will not return to a state functionally [identical] equivalent to the original after cessation of discharge;"



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The difficulty and cost of proving that something is "identical" is tremendous. Use of the word identical will guarantee a basis for third party suit and will only and uncertainty and confusion to this topic.

CONCLUSIONS

We recognize that DEC has made many important changes to the water quality regulations. Several more changes are needed to clarify the uncertainties and ambiguities that remain and we have described these above.

We recognize that this has been a very difficult and painful process for DEC. It is now our hope that DEC will carry through with this process, make the needed changes and put up with the harassment it is receiving from those that wish to stop development at whatever cost to mining, logging, fish processors, municipalities, etc. Now is the time for DEC to stand up to the pressure and allow nothing to sidetrack the completion of this important work.

Sincerely,

Steven C. Dorell, P.E.
Executive Director

cc: John Sandor, Commissioner DEC
Charles Findley, Director Water Division, EPA
William Williams, State Representative



OFFICIAL BUSINESS

Alaska State Legislature

House of Representatives

REPRESENTATIVE
CYNTHIA TOOHEY
DISTRICT 13

STATE CAPITOL, ROOM 104
JUNEAU, ALASKA 99601-1182
(907) 465-4919

718 WEST 4TH AVENUE, SUITE 330
ANCHORAGE, ALASKA 99501-2133
(907) 258-8195

November 9, 1993

Commissioner John Sandor
Alaska Department of Environmental Conservation
410 Willoughby, Suite 301
Juneau, AK 99801-1795

Re: Proposed Alaska water quality standards' regulations

Dear Commissioner Sandor,

I am writing in support of the above-referenced regulations. The Department has done an outstanding job in developing reasonable standards which protect the water quality in Alaska. The standards are necessary and yet, not so limiting that they would be a disincentive for businesses or industries to operate in the state. I feel that this balanced approach is vital to our state with its resource development financial base.

As I testified last fall, I am very supportive of the Department's using the 1 in 100,000 health risk factor as the basis for the regulations. That standard is sufficient. Any more restrictive standard would upset the balance to which I referred by discouraging businesses to locate or to remain in the state.

It's refreshing to see the Department produce such a practical set of standards. So often, in governmental agencies, the approach is so tilted one way or the other that any practical application of the regulations is next to impossible. Keep up the good work!

Sincerely,

Handwritten signature of Cynthia Toohey in black ink.
Representative Cynthia Toohey

cc. David Sturdevant, Water Quality Manager



City and Borough of Sitka

PUBLIC SERVICES

304 Lake Street • Sitka, Alaska 99835

Phone (907) 747-5500

Fax (907) 747-3158

October 22, 1993

Dept. of Environmental Conservation
WQM
410 Willoughby Avenue, Suite 105
Juneau, AK 99801-1795

ATTEN: Dave Sturdevant

RE: CITY AND BOROUGH OF SITKA (CBS) COMMENTS ON
PROPOSED REVISIONS IN THE ALASKA WATER QUALITY
STANDARDS REGULATIONS, 18AAC70.

Dear Mr. Sturdevant:

In general CBS supports the proposed revisions to the Water Quality Standards Regulations. Following are comments specifically addressing each of the eleven parameters:

Treatment Works

CBS supports the proposed revision.

Fecal Coliform Bacteria

CBS supports the proposed revision.

Sediment/Settleable Solids

CBS supports the proposed revision and applauds the application of a recognized analytical method replacing a vague term.

Toxic Substances

CBS supports the proposed revision. CBS stresses the importance of utilizing accepted species and protocols in performing bioassay testing and is not supportive of the "most sensitive species" wording.

Color

In general CBS supports the proposed revision. However, setting the numeric criteria at "the natural color unit level" may be overly stringent. Color removal can be prohibitively expensive. It seems that standard should allow some predetermined increase in color over the natural level if the natural level already exceeds the numeric standard. Some small increases in natural conditions seems reasonable while not adversely affecting the receiving environment.

Petroleum Hydrocarbons

CBS supports the proposed revision. CBS has not researched the proposed methodologies but is concerned that the proposed aqueous hydrocarbon method is premature due to uncertainties and analytical difficulties. If further study is required to confirm this or find a more appropriate method, CBS urges ADEC to take the time to refine the method for aqueous hydrocarbons and not propose it as a standard at this time.

Human Health Risk

CBS supports the proposed revision of a 10^{-4} risk level. This risk level should adequately protect human health without drastically increasing treatment costs.

Whole Effluent Toxicity

CBS supports the proposed revision. CBS would like to see flexibility, Departmental discretion and/or probability assessment approach in toxicity testing and not a blanket approach. Many times simple systems find themselves spending scarce resources analyzing for something that has a near zero chance of being present. These public resources can be better utilized.

WATER QUALITY REG.S
October 22, 1993
Page 3

Site-specific Criteria

CBS strongly supports site-specific criteria. CBS hopes the requirements for establishing site-specific criteria are not so complicated and costly that site-specific criteria are rarely used. This is analogous to the classification of individual water bodies, where it is the correct social and environmental thing to do but is rarely practiced due to the complexity of the requirements.

Mixing Zones

CBS strongly supports the proposed revision.

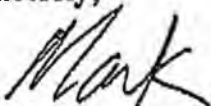
Groundwater

CBS supports the proposed revision and believes that groundwater is more appropriately regulated through separate regulations.

Outside the realm of this revision process is the classification of individual water bodies and the present regulations which protect all unclassified waters to the highest use. CBS would like to see the reclassification process streamlined so that more water bodies could be practically and realistically classified.

In closing, CBS supports the ADEC's efforts to regulate the waters of the State to be maintained as clean as practical for the benefit of all. The balance between how much environmental impact is allowed and how detrimental changes in water quality are, will remain the keystone of these regulations. CBS hopes that economically realistic regulations will be the outcome of this triennial review and revision process.

Sincerely,



Mark Buggins
Environmental Superintendent

c: Dick Smith, Director of Public Works
Gary Paxton, Administrator

RICHARD H. SMITH, PE
CONSULTING CIVIL/SANITARY ENGINEER

4775 Halibut Point Road
Sitka, Alaska 99835

Home: 747-6333

October 29, 1993

Dave Sturdevant
Water Quality Standards Coordinator
Water Quality Management
Alaska Department of Environmental Conservation
410 Willoughby Ave.
Juneau, AK 99810-1795

RE: WATER QUALITY STANDARDS

Dear Dave:

I had not intended to "personally" comment regarding the new regulations, however, the recent press extravaganza and the "overwhelming public outcry" against the modifications deserves comment.

Suffice to say that I endorse the positions of all the agencies and professional organizations in the field of Water Quality assurance -- i.e. the Alaska Water Management Association, the City and Borough of Sitka, the Municipality of Anchorage, and so on.

Although a charged-up public has an important and necessary voice, I am sure that just as strong a voice could have been presented by the engineering/scientific side had it been a mere who can jeer or cheer the loudest contest. It is incumbent on you Dave to make sure that the legislative body recognize the facts and listens to arguments which have not been emotionally contrived. As an example, during last Mondays teleconference you were asked about possible cumulative (or synergistic) effects of non-specified compounds. Not all combinations of compounds are considered bad. I would ask as to how much research has been conducted on the effects of combining sodium thiosulfate and chlorine or on combining chlorine and ammonia.

Sincerely,



Richard Smith, P.E.

Mark Buggins
PO Box 2684
Sitka, AK 99835

November 10, 1993

Dave Sturdevant
Water Quality Management
Alaska Department of Environmental Conservation
410 Willoughby Ave., Suite 105
Juneau, AK 99801

RE: Revisions to Water Quality Standard Regulations

Dear Dave:

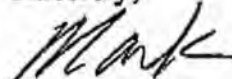
The recent media attention has compelled me to write personal comments on what I consider to be reasonable revisions to the Water Quality Regulations.

I fear this is another case of the vocal minority emotionalizing an environmental issue. I have followed the revision process and public testimony for the last several years. In that time I have heard testimony from individuals claiming their children eat 500 pounds of fish per year (must be big kids) and that the human health risk should be much more conservative than 10^{-5} or 10^{-6} . I wonder, how did those people get to the site to give testimony? I agree completely with the comments of Ernesta Ballard on the use *or misuse* of risk assessment in regulations. This concept puts an agency in a defensive public relations position right from the beginning.

I hope you will convey to the Legislature that what they are receiving through the media and the publicity stunts are not the desires of the entire public and many times are unreasonable. It is my judgement that the proposed revisions are economically realistic while adequately protecting aquatic and human health and the receiving waters from degradation.

I support ADEC's revisions to these regulations as reasonable protection of our State's receiving waters. Also, I urge the agency to streamline the reclassification process so that more water bodies can be practically and realistically classified. As water quality criteria are more closely controlled the reclassification process will become increasingly important.

Sincerely,



Mark Buggins
Environmental Engineer



City and Borough of Sitka

PUBLIC SERVICES

304 Lake Street • Sitka, Alaska 99835

Phone (907) 747-5500

Fax (907) 747-3158

August 31, 1992

John A. Sandor, Commissioner
Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, AK 99801-1795

Dear Mr. Sandor:

The City & Borough of Sitka supports the ADEC regulations whereby the waters of the State of Alaska are maintained as clean and as practical for the benefit of everyone. The recent hearings on specific water quality parameters brought out a number of salient issues to review. The questions of how much environmental impact is enough or how much impact will be detrimental has been and always will be the key to proper regulation.

While some of the water quality standards under current review have effects on our municipal system, the major impact is on private industry. Our unbiased position is that ADEC weigh all the costs of adopting more stringent or less stringent standards. Health and Life Safety should not be compromised below accepted worldwide standards and the importance of economic impacts must always be considered.

Sitka has two major industries which are effected by any revisions to water quality standards ----- The APC Mill and the Seafood processors. Over half of Sitka's economic base is related to these industries. These companies have accepted practical and achievable pollution prevention goals and have cooperated with ADEC and the EPA by constructing necessary facilities to achieve compliance. Please consider economically achievable compliance regulations as you re-write the regulations.

Sincerely,

Gary L. Paxton
Administrator

GP/rr



City and Borough of Sitka

PUBLIC SERVICES

304 Lake Street • Sitka, Alaska 99835

Phone (907) 747-5500

Fax (907) 747-3158

September 29, 1992

Alaska Department of
Environmental Conservation
Water Quality Management
410 Wiloughby Avenue
Juneau, AK 99801

ATTN: Katy Wilkinson

RE: WATER QUALITY STANDARDS

Dear Katy:

The following are additional comments on the proposed revisions to the Water Quality Standards:

Natural Water Quality

The City and Borough of Sitka (CBS) supports altering water quality criteria based on natural background levels.

Color

CBS supports the proposed change to the standard for fresh water supply from 5 to 15 color units and the additional narrative which would prohibit the discharge from making a marine receiving water "unfit or unsafe for use."

Mixing Zone

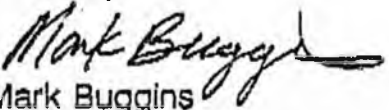
In general CBS supports the proposed change but, as with all regulations, believes costs of treatment required should be considered. Additionally, CBS questions the absolute prohibition of mixing zones in specific areas.

September 29, 1992
WATER QUALITY STANDARDS
Page 2

Human Health

CBS supports the addition of criteria for arsenic, dioxin and chloroform as proposed.

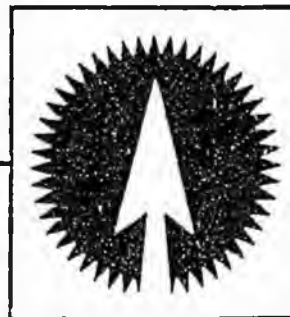
Sincerely,


Mark Buggins
Wastewater Superintendent

MB:cj

Attachments

c: Dick Smith



TESTIMONY OF TROY REINHART
EXECUTIVE DIRECTOR, ALASKA FOREST ASSOCIATION
BEFORE THE HOUSE RESOURCES COMMITTEE
ON PROPOSED WATER QUALITY REGULATIONS
OCTOBER 25, 1993

Thank you for the opportunity to express the position of AFA concerning the Proposed State Water Quality Standard Regulations. I am Troy Reinhart, executive director of the Alaska Forest Association. AFA is an association of over 300 companies which depend on the forest products industry in Alaska. AFA represents thousands of families and jobs throughout Alaska.

AFA has been directly involved in the process of developing these regulations. AFA and many of its members are on record as to their position regarding this proposal. They remain committed to their earlier comments, which we feel should remain part of the public record. AFA supports the current proposed regulations as the maximum level of restriction needed to protect the water resources of this region. The DEC proposal is the safest, most cost effective plan for protecting humans, the environment and the economy of Alaska.

Human Health Risk Level: AFA is in total support of the State's choice of 10^{-5} (1 in 100,000) as a human health risk level. This level of risk is acceptable for meeting water quality standards, especially when it assumes every Alaskan would have to drink two liters of contaminated water every day and eat five pounds of contaminated fish every year for 70 years. In reality it is highly unlikely that anyone in Alaska would be exposed to this level of risk.

It must be understood that the proposed level of 1 in 100,000 risk of developing cancer due to exposure to polluted water is very very small compared to the risk of dying from cancer which is 1 in 4 with 90% of those deaths caused by smoking. Also this standard is 1000 times less than the current risk from background exposure to all other environmental contaminants, including ones that occur naturally in foods.

For those concerned about family, friends or themselves being diagnosed with cancer I share that concern. My mother died six years ago after battling two separate occurrences of

cancer. While I would not wish what my family or my mother suffered on anyone, raising the level from 10^{-5} to 10^{-6} is not the answer. The energy resources and cost is better spent fighting the real causes of cancer which include smoking and a sedentary life style. A risk of 1 in 100,000 is very small when compared to the chances of 80% of all life on the planet being eliminated by a comet/asteroid smashing into the earth. The odds of that happening as reported by Economist magazine is 1 in 30,000.

An increase to risk levels of 1 in 1,000,000 would cost millions of extra dollars with virtually no gain. A level of 1 in 100,000 is more reasonable and an acceptable health risk.

MIXING ZONES: AFA supports the concept and practice of mixing zones which allow for the natural assimilative capacity of the surrounding water to efficiently dilute a waste-water discharge to levels below any that could be harmful. In some cases it is very probable waste water being discharged could be cleaner than that into which it is being released. AFA supports the continued use of mixing zones in both fresh and marine waters.

TREATMENT WORKS: AFA supports and wishes to emphasize the importance of the proposed "treatment works" definition. We urge and support the continued exemption of discharges into treatment works from having to meet water quality standards. It is not realistic to expect water quality standards to be met inside properly authorized treatment facilities such as sediment settling ponds.

NATURAL BACKGROUND LEVELS: Nature can create situations where the existing concentrations of a substance are higher in the receiving water than the concentration in the proposed discharge. For this reason, AFA supports the consideration of natural background levels through the development of site specific water quality criteria. It is only logical the discharge being released can be equal to the natural level without increasing the concentration of the substance overall. In fact, some site concentrations exceeding the natural background level may be discharged while still fully protecting all uses of the water.

Thank you for this opportunity to present comments before the Committee. We trust DEC will take the prudent course and adopt the proposed rules in their present form.



MAPCO ALASKA PETROLEUM INC.

November 11, 1993

Dave Sturdevant
Water Quality Management Section
410 Wiloughby Avenue, Suite 105
Juneau, AK 99801

Chair of House Resources
Representative Bill Williams
352 Front St.
Ketchikan, AK 99901

Dear Mr. Sturdevant and Chairman Williams:

Actions being taken and proposed by DEC on State Water Quality Standards are acceptable.

I care very much about clean air and water, but expect the scientific community to provide rational guidelines that will balance the environmental concerns, human health and economic factors without needlessly sacrificing local jobs.

Please adopt standards that will allow us to live, work and play in this state safely. Please do not take the position of the radical few who do not care who or what businesses will be displaced.

I support the DEC proposal and request no further extreme criteria be used.

Sincerely,

A. L. Buki Wright, Jr.
Vice President
MAPCO ALASKA PETROLEUM Inc.
Past Chair
Alaska State Chamber of Commerce

:jw

fax: 465-5070 / 225-8546



Telephone: (907) 344-2661
 Fax: (907) 267-6429

201 Arctic Slope Avenue Suite 20C
 Anchorage, Alaska 99518-3030

November 15, 1993

WALT SCHLOTTFELDT
 President / C.O.O.

David Sturdevant
 Water Quality Management Section
 410 Willoughby Avenue, Suite 105
 Juneau, AK 99801

By Facsimile

The Hon. Bill Williams
 Chair of House Resources Committee
 352 Front St.
 Ketchikan, AK 99901

Re: Proposed Water Quality Standards

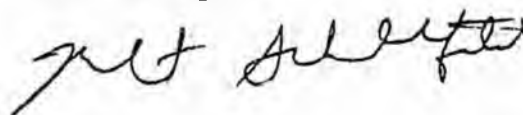
Petro Star Inc. would like to express its support of the Department of Environmental Conservation's proposed State water quality standards.

Petro Star and its people believe that the Department's proposed standards vindicate Alaskans' deep concerns about water quality. At the same time, the Department properly has rejected the efforts of a few who would attempt to use the water quality standards as a means to burden Alaska business and industry. As the public review documents confirm, the Department made its proposals after careful consideration of the relevant factors in the context of Alaska. This kind of scientific and realistic approach is essential to insure the safeguarding of environmental values and at the same time to avoid unnecessary interference with Alaskans' economic activities.

Petro Star supports the DEC proposals and requests that more extreme water quality standards criteria be rejected.

Thank you for your consideration.

Sincerely,



Walt Schlotfeldt
 President and COO
 Petro Star Inc.

Post-It™ brand fax transmittal memo 7671		# of pages >	1
To	BILL WILLIAMS	From	PETRO STAR INC
Co.		Co.	
Dept.		Phone #	
Fax #	225-8546	Fax #	

Jerry Chapman, NCAC I
4400 Abby Way
P.O. Box 22146
Juneau, AK 99802-2146

*Primarily
individual
comments*

October 27, 1993

Department of Environmental Conservation
State of Alaska

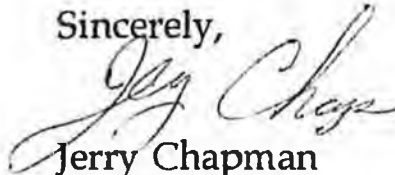
PUBLIC COMMENT ON PROPOSED WATER QUALITY CHANGES

Thank you for extending the period of public comment on water quality standards. I have been unable to participate in the forums and am taking this opportunity to inform you of my opposition to the changes in the standards that is being proposed.

There is no doubt that the standard change will increase the already high prevalence of cancer and other environmentally caused health hazards that plague our state. I experienced a personal tragedy three years ago when my baby was born with a severe birth defect that may have had environmental origins. She died at birth, as did another baby born the same week in Juneau with the same, normally rare, birth defect. This birth defect, anacephaly, has been seen in clusters around the nation in relationship to environmental toxicity. My family and I represent the human experience of one of the statistical sacrifices which is being considered.

By now you have heard a resounding majority of public comments demanding that the State continue to honor our right to the most conservative level of water pollution possible in our waterways. I am adding my voice to this outcry. Please consider the human moral issues being discussed here, and refuse to contribute to increasing the problem of toxic waste in our environment that is slowly eroding our health and that of our children.

Sincerely,



Jerry Chapman
907-780-6299

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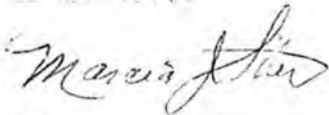
October 20, 1993
P.O. Box 2144
Juneau, AK 99801

Department of Environmental Conservation
Water Quality Regulations
417 Willoughby St.
Juneau, AK 99801

Thank you for giving me the opportunity to respond to your
request for water quality regulations.

I was an active member as a concerned citizen who believed
we should have the same water regulations in force for our
water quality. There are many ways we can help
ourselves and be the best we can be in this instance. I
trust you should advise for a regulation that will keep the
current water quality.

Sincerely,



Marcia Hill

Juneau, AK 99801
P.O. Box 2144
Juneau, AK 99801

October 30, 1993

House Resources Committee
P.O. Box V
State Capitol
Juneau, Alaska 99811

Dear Whom It May Concern,

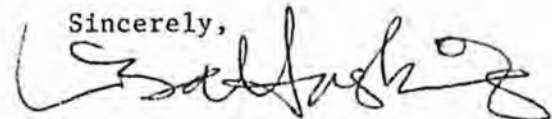
I have read with interest the proposed changes to the water quality standards of Alaska. It seems as though now would be the perfect time to set a higher standard than that which is favored by the governor, since after all, when he's gone from office, we the people of this state will still be around, relying on the highest water quality standards available. It is in the state's best interests to keep the standard high. The very idea of lowering them is unconscionable.

Look at the historical importance of water to Alaskans, native and transplant alike. We have obviously taken for granted that pure water is a priveledge, and not a right, as this new development is making clear to me. From the bottom of the ecosystem to the top, clean water is necessary, imperative, to our survival on this planet, in this state, in this community. It really burns me to a crisp to think that an issue of this importance is so casually decided for us in the halls of government. It's unethical to not allow the citizens to help decide what is in the best interest for all when it comes to the future of Alaska's resources.

If this is an issue of government backbending for corporate's sake, the maybe you should ask yourselves if in the long run, considering the role that pure water plays in the lives of the people of this land, is it really worth lowering water quality standards for short term gain? The mines will come and go, big industry have already proven to be polluters of the land in many ways, and yet you still are able to justify lowering water quality standards as if those are the kinds of activities that in the long run will have a lasting benefit for the people of this community, this entire state?

Please think fish, think tourism, think of all the reasons to make the water quality standards for Alaska the HIGHEST available. Think life, think people, think about the future.

Sincerely,



Lisa M. Haskins

324 2nd St. #9

Juneau, AK 99801

Susan Chapman M.A., NCAC II
4400 Abby Way
P.O. Box 22146
Juneau, AK 99802-2146

October 27, 1993

Department of Environmental Conservation
State of Alaska

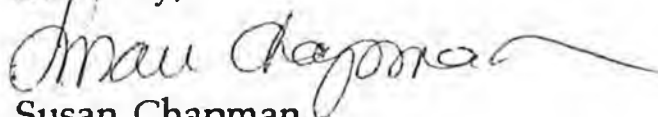
PUBLIC COMMENT ON PROPOSED WATER QUALITY CHANGES

Thank you for extending the period of public comment on water quality standards. I have been unable to participate in the forums and am taking this opportunity to inform you of my opposition to the changes in the standards that is being proposed.

There is no doubt that the standard change will increase the already high prevalence of cancer and other environmentally caused health hazards that plague our state. I experienced a personal tragedy three years ago when my baby was born with a severe birth defect that may have had environmental origins. She died at birth, as did another baby born the same week in Juneau with the same, normally rare, birth defect. This birth defect, anacephaly, has been seen in clusters around the nation in relationship to environmental toxicity. My family and I represent the human experience of one of the statistical sacrifices which is being considered.

By now you have heard a resounding majority of public comments demanding that the State continue to honor our right to the most conservative level of water pollution possible in our waterways. I am adding my voice to this outcry. Please consider the human moral issues being discussed here, and refuse to contribute to increasing the problem of toxic waste in our environment that is slowly eroding our health and that of our children.

Sincerely,


Susan Chapman

907-586-6150

Date 28 Oct 93

Dr. Wayne A. Jenkins
P.O. Box 2608
Sitka, Alaska 99835

Mr Dave Stunderant, D.E.C.

I have not testified in Public Hearings for the following reasons. A very small but vocal group has monopolized and intimidated those individuals who won't go along with their demands to close down our industries and development of natural resources. They are the very group that chain themselves to plants (AFIC) bridges, public buildings etc to disrupt and damage private and public property for their unscientific vein. Their concerns are emotional and not based on fact. Their risk of injury or to health is greater than me in 100,000 just by getting out of bed in the morning.

Attn:

Mr Bill Williams,

Please retain the one in 100,000 risk factor. To raise it will destroy our states economic base without measurable improvement in our health.

Sincerely
Wayne Jenkins

Date Cont

Dr. Wayne A. Jenkins
P.O. Box 2608
Sitka, Alaska 99835

With the writing of New Water Quality Standards please remove statements that are unclear, ambiguous, and uncertain. As they will open the flood gate for Injunctions and frivolous law suits. This fanatical group has already stopped or cost the tax payer thousands of dollars with their actions. The mixing zone should be monitored by use of common organisms that are in the food chain. These people forget that with our large tides and ocean currents these zones are flushed four times a day.

Our oil royalty payments are decreasing and the state and federal economy is not improving. Our local, state, and federal fees and taxes are rising.

Date Cont

Dr. Wayne A. Jenkins
P.O. Box 2608
Sitka, Alaska 99835

If the risk rate is raised from one in 100,000, which is a realistic and obtainable standard, it will close all industry in Alaska. It will close fishing, fish processing, timber, and mining! This will only leave tourism which is seasonal and short

Sincerely
Wayne A. Jenkins

TO: HOUSE RESOURCE COMMITTEE,

Enclosed is a letter urging the D.E.C to uphold the Water Quality Standards. There has been a good deal of outcry around Southeast Alaska for the state not to lower the standards. IF the present administration will not listen to the people and do what is right, then it is your duty to legislate proper standards. Thank you for considering this issue, as I believe Clean Water is Alaska's #1 Resource.

Sincerely,
Ken Bane

FROM: Ken BARE
P.O. Box 6209
Sitka Alaska
99835

To: Alaska Department of Environmental Conservation
DAVE STURDEVANT,

I URGE YOU NOT TO LOWER ALASKA'S WATER QUALITY STANDARDS. CLEAN WATER IS ALASKA'S MOST IMPORTANT RESOURCE, WE SHOULD HAVE THE HIGHEST STANDARDS NOT THE LOWEST.

By lowering standards or even keeping them status quo, or allowing dirty industries to operate out of compliance, or with insufficient regulations, you are making the state, all of us, responsible for future repercussions. We cannot afford this. It seems that DEC is more concerned for the profitability of business, than the effects on the environment and the people of Alaska. If you consider the long term effects, short term profits for big business by polluting is a very bad investment for the state.

I live 4 1/2 miles from the APC mill in Sitka AK. The mill has been closed about a month. The water is now clear enough to see the bottom in >10' of water. When the mill operates you can't see 2'. This is obvious but I'm concerned about the unobvious. I feel it is your department's duty to protect me, the people of Alaska, not the mill. You should have to do a study immediately, it should have been done years ago on a continuous basis, on the safety of the fish and water adjacent to the mill.

We need to know how far from this mill is it safe to eat which fish and shellfish. People need to be protected and you're not doing it now. How can you consider lowering the existing regulations when there are important unanswered questions?? Many people of Sitka eat mostly seafood gathered and caught from local waters. Now the water looks good people may harvest from unsafe areas - we don't know. If you were to do an honest study and found unsafe fish or shellfish, or seaweed, even in a small area, what are the possible effects on the people here and the markets for our seafood? What is the real cost of this one case? I don't think you're dept. or the state is looking at the whole picture.

I urge you to:

- 1) Adopt the most protective Cancer Risk level possible - not the least 10^{-5}

There should be no Cancer Risk at All.

I eat close to 5# seafood a week not per year.

- 2) Keep Alaska's Existing law that prohibits mixing zones for Carcinogens, and enforce it,
- 3) Keep and improve Existing Standards for Hydrocarbons, Color, total suspended solids,
- 4) "Treatment works" should not be exempt from Alaska Water Quality Standards
- 5) "NATURAL Conditions" must not be used to Avoid State Water Quality Standards.

Sincerely
Ken Bone

Oct 20 '93

①

In regard to the proposed Water Quality Standards in Alaska I have attended ADEC hearings last year and this year. Your ^{ADEC} summary to the House Resource Committee indicated you listened but I fail to see an adequate response as reflected in your continuing policy of "flexibility". My economic viability as a fisher business owner operator is not flexible. I should not have to bare the burden of another's industrial toxins. I am responsible for my own as they should be. To spare you the tedious business of reading an even longer letter please check one for each point of all the United Fishermen of Alaska points when you sum up and categorize these letters to pass on to the EPA.

(2)

You don't even have a handle on the monitoring or enforcement of existing laws. How can you propose mixing zones and declare them safe when you haven't tested the waters in Sitka beyond the mixing zone since 1990. These waters were visibly filthy enough to warrant a closure to cleaning the fish by ADEC staff and we were told that sportsmen in the area know better than to clean their fish in the contaminated water. If the mill is out of compliance in regards to contamination of the water they should be shut down, not my business, I didn't dump the toxin.

I eat upwards of 150 lbs of fish a year so I fall off the chart when your slinging your numbers around. How can you

(3)

assume pounds of fish clean or contaminated when you haven't tested those fish

If your policy is an economic justification your math is screwed. How can you propose economic viability when the EPA has spent 12 Billion in studies alone of toxics deposited?

The burden being placed on taxpayers and land owners not the industry that caused it.

I understand log rafts are sprayed with pesticides. Did you know the pesticide sevin (Alixei Yablokov in earth in balance) in a billionth concentration causes uncoordinated movement in large schools of fish. Something as simple and minute as that can lead a chain of events to a collapse of a fishery, movement being an intrinsic condition of well being in a fish. I don't

④ Think you are even monitoring for this or even if sevin isn't being used what about the miracle of compounds and combinations too numerous to study. If all this boils down to a "perceived" problem (though the problems in the lower 48 are not perceived but very much real and the closure of the water to my business conduction was not a rumor or imaginary). How would you attempt to address the perception of outsiders if you can't even get it straight with those of us who are involved and seeking information.

Perception or misperception alone can detrimentally impact the fish industry. The lawyers are happy in court they get paid to discuss your "flexible" language and "flexible" responsibilities for damage

⑤ done (exons not over yet)

(Unless you provide incentives to industries to be clean they won't bother, while they take the profits we pay the price.)

A higher standard of water quality has been backed by sound science done in 1989 by ADEC staff. Take your own advice by your own staff.

Cheryl Pritchard

Box 6209

Sitka AK 99835



LEGISLATIVE AFFAIRS AGENCY

DIVISION OF PUBLIC SERVICES

DATE: 10/25/93

Please accept the enclosed original(s) of written testimony for the House Resources teleconference hearing that was scheduled on Oct. 25, 1993.

A copy of this testimony was transmitted to your committee via fax on 10/25/93.

Thank you,

LEGISLATIVE AFFAIRS AGENCY
Sitka Legislative Office
210 Lake Street
Sitka, Alaska 99835
747-6276

Please note:

Several participants expressed the desire for a follow-up teleconference on water quality and requested that we convey this interest to the committee.

REMARKS BEFORE THE NATURAL RESOURCES COMMITTEE
October 25, 1993

My name is Ernesta Ballard. I live at 705 Main St. in Ketchikan, Alaska.

I served in the United States Environmental Protection Agency as Regional Administrator for Region 10 from 1983 to 1986. I served on the Governor's Water Quality Advisory Committee.

My remarks are based in part on the knowledge I gained when I served on the National Academy of Sciences Committee on Risk Perception. I am the co-author with this committee of a book on risk Communication. We studied thousands of cases such as this in which the public was asked to comment on a proposed rule or regulation that entailed some risk.

We learned that the public fear risks with which they are unfamiliar way out of proportion to their actual safety. People fear death from radioactive fallout more than the danger associated with chains saws and smoking even though the latter are eminently more dangerous.

Much has been said about the proposed risk level to which carcinogens will be regulated. It might help this discussion to look briefly at the history of environmental law and regulation in the United States.

In the early years the EPA used primarily technology based permitting which is, by definition, site specific. In the last decade, and in revisions to the Clean Water Act which result in today's hearing, there had been a trend toward pollutant specific requirements and specifically human health criteria.

In my experience at EPA and the National Academy risk based regulation is not a precise science and has resulted in extremely ineffective use of national resources. The past, present and future costs of achieving compliance with the extremely stringent criteria derived from risk based regulation are virtually incalculable. The opportunity cost of diverting capital from other productive uses is also enormous in lost jobs, lost productivity, lost taxes etc...

The benefits have generally not been shown to outweigh the significant costs of attaining the goals of risk management of this sort.

The designation of a human health risk in association with water discharge permits is a form of risk based regulation. The use of such a criteria will depend on performing dose/response and exposure analyses to calculate human health impacts. Such analyses extrapolate from extremely high doses

to extremely low doses and they attempt to correlate human and animal reactions. Then they are used to make a safety decision out of a tool that was originally intended to be a screening device.

The history of risk assessment clearly shows that the early uses of these techniques were to determine exposure levels below which effect or impact could not be measured. They were measurement thresholds, and they established a "de minimum" level beyond which additional measurement yielded no results. They were originally used to establish a level where risk could be considered essentially zero.

As regulatory tools, such risk assessments, and the levels below which no additional risk can be measured, are being used to set a management level for acceptable exposure. If such an approach were used for highway safety, and a one in a million human health level used, speed limits would be set at 1 mile per hour. That is the level below which there is no measurable increase in risk if the automobile is to be operated at all.

Continuing the highway analogy, 1 mile per hour is certainly not the level of acceptable risk. That level is considerably higher.

The public perception of what is the actual risk of exposure has an enormous impact on the public perception of acceptable risk. In other words, if the public believes that nuclear power plants are very, very risky, (even if they are not), then the public will have very little tolerance of nuclear power plants. Many sources that pose measurable risk to society such as automobile emissions, cigarette smoking and even the use of chain saws are regulated less stringently simply because they are perceived by the public to pose less risk than chemicals and metals which, at some levels may be toxic.

Regulators and rule makers respond to real public fear. Public fear may, or may not correspond to real public threat of harm.

I believe that a one in a hundred thousand risk level provides adequate safety. Safety is much more objective than risk. There is no endeavor that is without risk. Everyday we engage in regulated activities that are calculated to be safe, but are not without risk. The issue here is how much risk renders an activity unsafe.

With the industrial era has come modern technology, and modern risk. Life spans are significantly longer, and the risks of dying from waterborne disease, malnutrition, viral or bacterial contamination and trauma are vastly reduced. We

have some new risks to contend with. The risk of surgery, the risk of chemical contamination, the risk of death on the highway are all new risks.

The environmental laws are premised on the concept of permitting development that adequately controls risk and thereby public health. Risk reduction makes regulatory sense as long as it is associated with a measurable benefit. The burden of the regulator is to decide whether or not to make a safety call before de minimus risk reduction makes development impossible altogether.

This process needs to come to closure. It has gone on for two years. Testimony, including my own is repetitive. Much is not based on the facts of this particular issue. Naturally people want to be safe. Naturally they do not want to suffer a public relations fall out from bad information about the safety of our waters or fish.

The delay in this regulation equates to phantom regulation: that is the promise of action when none is forthcoming. The regulated community, and the people whose lives are affected by economic prosperity deserve a decision soon. No action is the worst action in that it will lead to costly litigation in which all that is cleaned up is the public's pocket book.

Thank you.



Alaska State Legislature

Please enter into the record my testimony to the House Resource Committee
committee name

committee on Water Quality, dated 10-26-93
bill/subject

The water quality standard 10^{-5} is unsafe in my opinion. I do not feel that we should allow any risk to human health in Alaska's waters. I would like to see a no risk level for human health and would like to see mixing zones be eliminated, especially when it damages, (or may damage) the food for human consumption.

There are so many tests and discoveries today trying to cure cancer. It doesn't make sense to me that the water of Alaska would have a known poison in it that may kill ^(know about) ~~one~~ to who knows how many and that we allowed it! Please reconsider the standing water quality standard and provide Alaskans with a no risk standard to human health.

Signed: Mega Rashid
Testifier

Citizens of Sitka

Representing (Optional)

801 Lincoln Street, Sitka AK 99835

Address

747-1473

Phone No.

Issues

SURPRISE - IT'S NATURAL

Most cancer rates haven't changed in 60 years - what's going on?

Bruce Ames
Special to The Times

I'd like to tell you about how people are discovering the causes of cancer, why I think in the next decade they will figure out most of the causes of cancer, why the world is full of carcinogens, and why it doesn't matter very much.

The American Cancer Society puts out a brochure every year called "About Cancer." It has a graph that shows all the different types of cancer in the U.S. and what's been happening over the last 60 years. There's one striking line - lung cancer - which was very rare in 1930 and is now our leading cancer. Epidemiologists, scientists who study cancer in humans, have pinned it down - beyond doubt - to smoking.

Smoking accounts for 30 percent of cancer, 25 percent of heart disease, 400,000 premature deaths a year, and eight years off your life for a two pack-a-day smoker. If you remove smoking-related cancer, cancer death rates have been staying the same or going down.

Stomach cancer and soy sauce

Another very striking line on the graph is stomach cancer. Stomach cancer was the leading cancer in the U.S. in 1930. Now it's relatively uncommon. We've done something right, but we're not sure what. The Japanese would like to know, because they have one of the world's highest stomach-cancer rates.

Many very good Japanese scientists are looking at stomach cancer, and they're coming up with a lot of clues. One of the main culprits seems to be salt. Salt isn't your sexiest carcinogen, but the Japanese eat about twice as much as Americans - soy sauce and pickled vegetables are very salty - at levels that irritate the stomach.

Chronic irritation is a risk factor. Whenever you have a chronic irritation, you get oxidization, because the phagocytic cells that defend us against infection clean up debris by incinerating cells with a burst of oxygen radicals.

Since radiation is also an oxygen mutagen, it's the equivalent of irradiating the tissue - it protects us against infection, but there is a price: It's in some ways like irradiating the tissue.

What helps are antioxidants. Vitamin C is probably the most effective antioxidant. You get vitamin C from fresh fruits and vegetables, and the Japanese aren't eating enough of those.

Another source of stomach cancer is a bacteria that infects just below the lining of the stomach. People are finding ways to get rid of that bacteria with antibiotics. In the next decade the Japanese will have figured out stomach cancer.

Other cancers

Liver cancer used to be pretty high but it has been coming down for 50 years. It's one of the most common cancers in the world, but very rare in the U.S. Liver cancer is caused by the Hepatitis C virus, a chronic infection of the liver that is common in China and Africa. The day they get rich enough to immunize people against that virus, they'll be able to solve the liver cancer problem too.

Alcoholic beverages are a carcinogen, just as salt is a carcinogen. You get liver cancer from alcoholic cirrhosis. Five drinks a day is a risk factor for cancer. But one drink a day is the country's average - do we have to worry about that? Probably not.

The major cancers - breast, colon, rectum, prostate - haven't changed much in 60 years. Whatever is causing them hasn't been changing very much. Colon and breast cancer rates are very low in Japan. Colon cancer looks like it's dietary. Fiber seems to be protective; calcium might be protective; high fat and meats seem to be a risk factor. So we should be eating more vegetables and fruit and less fatty meats.

With breast cancer there's a dietary component, but it seems to be mainly due to hormones. If you have children early and often, you have a low risk of breast cancer. If you don't have children, you have a high risk of breast cancer. In 10 years we may know enough about hormone therapy to lower breast cancer rates.

We're making very good progress, and in the next decade we're going to figure out all these things. In any case, there's no evidence that any of this is coming from the modern chemical world.

Rat tests

Epidemiologists are very suspicious of rat tests - there are millions of chemicals in the world, almost all of them natural, and they wonder how we know what to test. But the people doing rat tests say, "We know industrial chemicals at high levels can cause cancer, and we should be testing all these chemicals on rats so that people aren't the guinea pigs."

So we've done a lot of rat tests. Some interesting things have come out of them but we're misinterpreting the results. How do we do rat tests? Thirty percent get cancer anyway, so to see an increase is difficult statistically. You need 50 male rats, 50 female rats, and controls, and it takes two years and \$1 million to test a chemical on rats and mice.

They started rat tests with chemicals that were known to cause cancer in people and they didn't see anything. They went to higher doses and still didn't see anything. Eventually they



CARCINOGENS: NO CAUSE FOR ALARM

went to the maximum tolerated dose, and then they started seeing tumors. The maximum tolerated dose is the level under the level that will kill the animal. That's the standard way of doing rat and mouse tests.

About 10 years ago we set up a database of all the animal cancer tests in the world. Dr. Lois Gold and I have been analyzing a lot of these tests to see what they mean. Eighty-two percent of the chemicals tested in rats and mice are synthetic industrial chemicals: pesticides, food additives, solvents and drugs. Half of them are carcinogens.

What about the whole natural world? Almost all the chemicals that get into us are natural. What happens with a low dose? People are getting 1/100,000th of the dose they're giving to the rat. Does it mean anything? To protect public health, to be prudent, they piled worst-case assumption upon worst-case assumption. It was very hypothetical.

But when half the chemicals come out positive, one wants to rethink it. We've looked at natural chemicals, and I'd like to tell you about two groups: chemicals in plants that are the main natural toxic chemicals in the world, and chemicals you get from cooking your food - the amounts of which dwarf anything we're getting in man-made chemicals. Half of the chemicals from each of the groups that have been tested are carcinogens.

Nature's pesticides

Every plant has its own set of 50 or so chemicals to kill insects, fungi, bacteria, or predators. That's how plants have to survive in this world. Plants don't have

claws, teeth, or immune systems, and they can't run away. Plant evolution is chemical warfare. They're much better chemists than Dow or Monsanto - they've been at it a long time. Biology is not benign.

We found 52 natural pesticides that have been tested in animal cancer tests - we're eating 10,000 chemicals at enormous levels - and half of them are carcinogens. That shakes one up.

How much of these pesticides are we eating a day? The Food and Drug Administration does a survey every year of all the pesticide residues Americans eat. The teenage boy, who eats the most, eats .09 milligrams of pesticide residues a day, a very tiny amount. The pesticides you eat are 99.99 percent-plus natural, and half of those that have been tested come out positive. We're testing synthetic chemicals because man is "evil." We're not thinking about the natural world.

When plants are attacked they jack up the synthesis of these natural pesticides. Celery normally has 3 parts per billion of these two carcinogens, but if you stress the celery it can go up to 25,000 parts per billion. Plant breeders are breeding plants to be insect-resistant. A grower in California made a marvelous new celery. Organic farmers love it because it's insect-resistant. Organic celery has 6,000 parts per billion of carcinogens, and nobody cares - it's been selling all over the U.S.

A part per billion

A part per billion is one person in all of China, an incredibly small amount.

It's a tribute to modern science that you can measure a part per billion of anything - you couldn't do that 10 or 20 years ago. But it doesn't mean you should worry about it, or that pollution is necessarily increasing if you find a part per billion of something. Every item in your supermarket has natural carcinogens and teratogens, clastogens and mutagens.

Dioxin is a chemical you get when you burn things. Everybody is terribly afraid of dioxin. It is a potent teratogen. If you give it to pregnant rats or mice it causes birth defects. But let's compare it to the natural world.

Alcohol is a teratogen, and it's a real teratogen, because it causes birth defects in people. Every year 10,000 mentally retarded children are born from pregnant women drinking. Ethyl alcohol also causes birth defects in rats and mice.

EPA is trying to regulate incredibly tiny levels of dioxin. The level of this stuff that EPA is trying to regulate is equivalent to drinking one beer every 8,000 years. That shows the double standard.

We've set up tremendously strict standards on man-made things and completely ignored the whole natural world. We can sell celery full of carcinogens - as long as they are "natural" nobody cares.

There is a compound in broccoli that has all the same properties as dioxin. I calculated a portion of broccoli as 20,000 times the possible hazard of dioxin - but who knows whether either is a hazard at those levels. If we know one

thing about epidemiology, it is that we should be eating more fruits and vegetables and less meat and saturated fat.

Burnt material

When you smoke, about a gram of burnt material coats your lungs every day - a gram is about three aspirin tablets worth. If you coat your lungs with that amount every day for 40 years it takes eight years off your life.

What about air pollution? It takes a year of Los Angeles smog to get the same amount of burnt material that a smoker gets in one day. In Contra Costa County, they blamed the refineries for causing extra lung cancer. It never made any sense because in that area, the wind blows off the bay and there is very little air pollution. Knowing that, you have to ask different questions. Who lives around refineries? Blue-collar workers

We've set up tremendously strict standards on man-made things and completely ignored the whole natural world. We can sell celery full of carcinogens - as long as they are "natural" nobody cares.

who smoke more than the rest of Californians. My guess is that all of the extra cancer is due to extra smoking.

But where do we get most burnt material? Not from smoking or air pollution, but from cooking our food. We eat grams of burnt material each day, more than a smoker gets. People have been finding all sorts of mutagens and carcinogens in burnt material. We looked at coffee and identified close to 1,000 chemicals. 11 have been used in cancer tests, and eight of those are carcinogens. So there are nine milligrams of known carcinogens in a cup of coffee. But this does not mean that coffee causes cancer. These are chemicals giving cancer to rats at high levels.

Nobody is comparing anything. If you compare things like coffee or beer, pesticide residues just fade away. In addition, pesticides are lowering the price of fruits and vegetables. Anything that lowers the price of fruits and vegetables is good because it gets people to eat more of them and therefore lower cancer rates.

Plants vs. animals

The war between plants and animals has been going on for millions of years. Animals are designed to live in a world of toxic chemicals because they are always eating new plants.

Our diet is completely different from that of an African hunter-gatherer. We are always eating new things, and we have general rather than specific defenses. One general defense is that every day we shed the surface of our skin, eyes, inside of our mouth, esophagus, stomach, intestines and colon - any part of us that is exposed to the outside world is thrown away every day. Any of those cells that might get mutated and give rise to cancer cells are thrown away. That is just one of the layers and layers of defense.

So we have all kinds of defenses that we induce when we are attacked; animals are designed to live in a world of toxic chemicals, and we are very well protected. That is why I can't get very worried about a part per billion of anything.

Does it make any sense that half the chemicals could be carcinogens? The more we learn, the more sense it makes that a high percentage of all the chemicals in the world are going to be carcinogens. As for the very high doses that we put in rats, what we are doing is a chronic wounding experiment.

When a cell divides, it is enormously at risk because all this damage that is going on all the time is getting repaired. When you do a maximum tolerated dose in a rat, you are killing cells; neighboring cells divide and then you are in trouble.

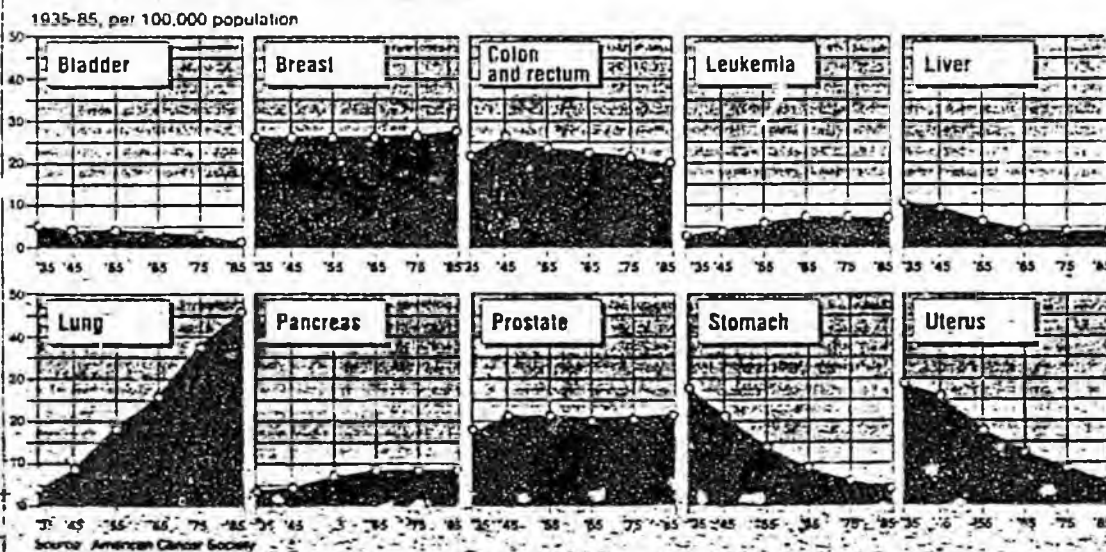
That does not mean that a mutagen could not work at a low dose but you are adding it on to some enormous rate. All sorts of things might influence this. Antioxidants are very important. Where do you get antioxidants? From fruits and vegetables. Fibers are important. Where do you get those? From fruits and vegetables. If we eliminate all the man-made pesticides, we will raise the price of fruits and vegetables and we will raise cancer rates.

Organic food isn't much more dangerous than ordinary food. I wouldn't worry about the difference. If you drive an extra mile to the organic food store, your risks from a car accident will be enormously more than any possible risk from the pesticides.

Life expectancy gets longer every year in Western countries and Japan. Why? Because we have a rich modern technology that has brought us health and wealth. Wealth and health are related. Yet everybody is so worried that technology is doing us all in. We can talk about the ozone layer and global warming, but if those things turn out to be true, which is not quite so clear, there are plenty of things we can do about them. The environment is not causing a lot of cancer.

Bruce Ames is a professor of cell biology and director of the Environmental Health Sciences Center at the University of California, Berkeley. This article is the edited transcript of a speech Ames gave to the Commonwealth Club of San Francisco in July.

U.S. cancer death rates



Source: American Cancer Society

699 89

THE INSTITUTE FOR REGULATORY POLICY

11 DUPONT CIRCLE
WASHINGTON, D.C. 20036, U.S.A.

(202) 939-6976
FAX: (202) 939-6969

MEMORANDUM

FROM: Thorne G. Auchter, Director
Institute for Regulatory Policy

DATE: January 28, 1992

Enclosed for your information are the results of a survey commissioned by the Institute for Regulatory Policy of nearly 1300 health professionals in the fields of epidemiology, toxicology, medicine and other health sciences. The *Health Scientist Survey: Identifying Consensus on Assessing Human Health Risk* is believed to be the largest survey of its kind conducted to date and has broad implications for regulatory policy in the United States. The findings are astounding.

The *Health Scientist Survey* shows that:

- Over eighty-one percent (81%) of the professionals surveyed believe that public health dollars for reduction of environmental health risks in the United States are improperly targeted.
- Nearly eighty-seven percent (87%) of the scientists surveyed agreed that it is impossible to accurately calculate human cancer deaths based solely on extrapolations from animal data (upon which most regulatory and legislative decisions are founded).
- The data overwhelmingly support a better method for assessing environmental health hazards -- a "weight-of-the-evidence" approach that takes all plausible human and animal data into account. Consistency between animal and human data was clearly important to the participants; basing decisions about human health risk solely on animal data was not acceptable to them.

As you know, most of our legislative and regulatory decisions involving human health risks are based primarily on the assumption that animal data alone are sufficient to assess and manage such risks. The *Health Scientist Survey* not only exposes the scientific flaw of that assumption, but it also reflects the view of the vast majority of health scientists that the result has been a massive misallocation of the Nation's health care dollars.

The *Health Scientist Survey* clearly shows the need to:

- Make risk assessments as scientifically objective as possible;
- Make the results of risk assessments more accurate and understandable; and
- Establish the consistency needed for more effective prioritizing and allocation of limited governmental regulatory resources among the many involved agencies and programs.

Testimony of Florian Sever before Alaska House Resource Committee

on ADEC's Proposed Water Quality Revisions

October 25, 1993

I would like to begin by voicing my objections to each and every revision to the current Alaska Water Quality Standards, proposed by ADEC at the current time. The revisions, as written, represent a massive and unconscionable "sell-out" of both, the health interests of the Alaskan public; and, the future welfare of the Alaskan fishing industry . . . all to further the financial health of, basically, one industry --- the timber industry.

Commissioner Sandor's roots can be traced to the largest of all timber industries in America . . . The United States Forest Service. Mr. Sandor has had a long and powerful career in the Forest Service; always acting, *primarily*, to nurture, enhance and further the financial interests of "big timber" operators . . . especially those operating in Alaska.

Mr. Sandor's "policy decision" to mandate 10 -5th, as Alaska's chosen standard was a decision which ADEC admits was *not* grounded in science; but one grounded in political and profit-oriented expediency; and, at the behest of the timber industry. Dave Sturdevant, a spokesman for ADEC, stated "on the record" at an ADEC "workshop" held in Sitka (on October 13, 1993) that a water quality standard of 10 -6th is a virtual certainty, in the near future. If this is so, then why not now? Why throw our fishing industry open to attack from other "fish-producing" states? Why force the innocent people of Alaska to be thrust "in harms way", by compelling them to face a heightened, and totally unnecessary, risk of cancer?

I believe Mr. Sandor's decision was aimed solely at opening a "window of opportunity" to allow both pulp mills in Southeast Alaska to obtain federal, 5-year EPA National Pollutant Discharge Elimination Permits, or "NPDES" permits (regulating water pollution), under a relaxed state standard; and thus, the mills would then be "grandfathered-in" under relaxed state standards for the next five year period; that being the term of both upcoming NPDES permits, for both mills.

Mr. Sandor's personal "policy decision", to mandate and promote the most "pollution-intensive" water quality standard, and all of the other "weasel-wording" contained in ADEC's proposed revisions, are just logical extensions of his past, fervent dedication to furthering the profit-making capabilities of the "industrial logging interests", and in particular, the two pulp mills in Southeast Alaska; those being the masters he has always served.

The federal EPA announced, on Friday, October 22, 1993, that the EPA would *not* issue an NPDES permit to the Alaska Pulp Corporation pulp mill, because of that corporation's prolonged indecision, as to if, and when, that company would resume operations in Sitka. This is all the more reason why Mr. Sandor should abandon his effort

to "pave the way to pollute", embodied in the proposed revisions.

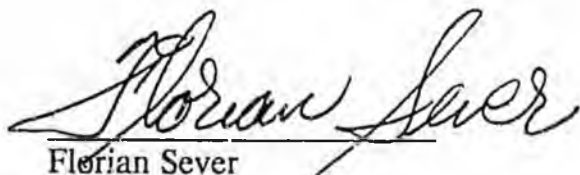
I implore Commissioner Sandor to now hear the voice of the people who will suffer for his actions, if his "1 in 100,000" cancer risk level is not withdrawn in favor of a saner, safer standard. All across the state, the people who live on the land, and work and live off of the sea, all ask . . . and, indeed . . . demand, a higher standard. First and foremost . . . Commissioner Sandor bears the burden of his sworn duty to uphold the public interest, and thus, he owes it to the people of the State of Alaska, to provide them with the highest, safest water quality standard possible.

All of the states on the Pacific Coast . . . except Alaska . . . have chosen the 10 -6th, or "1 in 1,000,000" cancer risk level. How long will it be before we hear and see paid advertisements from the Washington, and Oregon, and California fishing industries, calling for buyers in the American and foreign markets, to buy their fish . . . because their fish were caught in clean water . . . not in the polluted waters of Alaska? Will it be too late, for Commissioner Sandor to change his mind . . . then?

Alaska should, and must, remain as an exemplar of the finest, cleanest, and most healthful sea products producer in the world. To put Alaska's position in the sea products marketplace at risk . . . as the proposed ADDEC revisions will most assuredly do, if allowed to be finalized . . . is not only foolish; it's unforgiveable. Alaska cannot remain at the "pinnacle of purity" in the seafood marketplace, while, at the same time, allowing its' water to be polluted; the "1 in 100,000" standard will be, not only the death of the fishing industry in Alaska, but also, the death of 1 out of every 100,000 Alaskans, randomly condemned to suffer the terrible onslaughts of cancer . . . if the Commissioner's ill-conceived "policy decision" is allowed to stand.

There is still time to do the right thing. I, once again, implore Commissioner Sandor to heed the overwhelming cry of the people, and repudiate his "1 in 100,000 policy decision"; and, choose, instead, a standard the people choose . . . a standard higher than 10 - 5th . . . for the good of all Alaskans.

Thank you,



Florian Sever

1706 EDGE CUMBE DR.
SITKA, AK 99835



Alaska State Legislature

Please enter into the record my testimony to the House Resource Committee
 committee name
 committee on Water Quality, dated 10/26/93
 bill/subject

I am present to oppose the ^{proposed} revisions to Alaska Water Quality standards. Since Alaska has more shoreline than all the rest of the United States it is important that Alaska retains the most stringent standards. I support a ~~one~~ one in a million or better risk level. I have been following this issue for the past two years and have never heard anyone support the one in 100,000 risk level. I have only heard rumors that industries such as logging, mining, and pulp could not survive with more stringent standards. The ADEC is the organization in charge of "conserving the environment," it is fine that they focus only on that. Please establish the 1 in 1,000,000 risk level, keep mixing zones within the effluent pipe, keep water color units small, and make community water as clean as possible for the sake of the environment, people and sustainable industry like fishing.

Signed: Katrinka Hibler Katrinka Hibler
 Testifier

Representing (Optional)
801 Lincoln St Sitka AK 99835
 Address
(907) 747-1473
 Phone No.



Alaska State Legislature

Please enter into the record my testimony to the House Resource Committee
 committee name
 committee on Water Quality, dated Oct 25, 1993.
 bill/subject

I send you these comments as an Alaskan resident, a part time commercial fisherman, and a wilderness guide. As I sit listening to the testimony given regarding water quality standards on Sept. 25 1993 I find myself amazed that so much public comment is necessary to try and persuade D.E.C. to protect Alaska's environment and the people and species living in it. Isn't this supposed to be D.E.C.'s job in the first place? I look forward to our next elections when Alaskans will hopefully have the opportunity to elect individuals who show that they truly care about Alaska's economic future by protecting its environment, public health, and fisheries industry. If Alaska ~~enacts~~ enacts the proposed

Signed: Red Luth
 Testifier
Self
 Representing (Optional)
407 B Dehoff S. Ken, AK 99835
 Address
(907) 747-1473
 Phone No.

(WIRTH CONTINUED)

low water quality standards the state will have the lowest water quality standards for domestic public fisheries. Once word of this spreads southwards we can expect our fisheries to be devastated. I would like to see D.E.C. stop holding industry's hand and ^{begin to} perform their job of protecting Alaska's environmental and public health. Otherwise DEC is a sham. Having attended many hearings on this issue, I know the strong court is favor of greater protection for Alaska's waters. If you fail to respond to this overwhelming public comment it will be obvious that our democracy has also failed. Please do not contribute to the public's loss of faith in their government.

Finally, I would like to ask for at least a 1 in 1 million risk level or higher protection for Alaska's water. I feel strongly that carcinogens and potential carcinogens should not be allowed in mixing zones. These public waters are on dinner plates & should be respected as such. Industry should not be allowed to put public's health at risk for their own profits!

Sincerely,

Phil Wirth



Alaska State Legislature

Please enter into the record my testimony to the House Resource Comm.
 committee name
 committee on Water Quality Standards, dated 25 October '93
 bill/subject

I would like to thank the Resource Committee for taking the time to gain an understanding of the ADEC's proposed water quality standards. I would like to make my comments general at this time and submit specific recommendations in written form. I occupy a fishes seat on the DEC citizens advisory group.

Committee members must understand that the proposed WQS will lower the existing water quality standards. This must not be allowed to occur. In light of the environmental degradation in the lower 48, how can ADEC propose standards that would move our state in that direction. We must learn from past mistakes, Alaska fishing and tourism industries are dependant on the highest water quality - real and perceived.

Signed: Steve Puental
 Testifier

Representing (Optional)
1308 Sawmill Creek Rd Sitka, Ak
 Address
747-6850
 Phone No.



Alaska State Legislature

Please enter into the record my testimony to the House Resource Committee
committee name
committee on Water Quality, dated 10-26-93
bill/subject

The proposed changes in the water quality for Alaska waters to 10-5 in carcinogens in my & my colleagues opinion is the most dangerous & health risking proposal to date, having known friends and family that have died of cancer. The mere thought our state government would suggest such an action is incomprehensible. To say that only 1 in every 100,000 persons would be affected by that decision, is the same as saying you might as well pull out a gun, & draw names out of a hat & then randomly assassinate those individuals. The only difference is that ethically that would be immoral (as if that proposal isn't) - yet the end results would be the same.

As a fisherman, am appalled that one would think that consumers eat only 5 lbs of fish annually, when that amount is typically consumed daily if not weekly, particularly by those ~~communities~~ communities that mostly sustain themselves by subsistence means.

I feel a 10-7 risk factor should be adopted, and that the DEC should always assume guilty before proven innocent on all future proposals

Signed: CHRISTINE VOLIN

Testifier

Self & SITC Students (250+)

Representing (Optional)

PO BX 1364 Sitka AK 99835

Address

747-1005

Phone No.

regarding
health standards
and industry.



Alaska State Legislature

Please enter into the record my testimony to the HOUSE RESOURCE
committee name

committee on WATER QUALITY, dated 10-25-
bill/subject

I am in opposition of proposed standards - Demand Higher
TREC summarized the hearings and concluded with a "but"
the economics - they ignored the downside of economics
of lower standards, ① litigation due to interpretation of
confusing wording in the proposed regulations ② clean up
of resultant pollution (12 Billion in EPA studies alone
of superfund sites) ③ detrimental effects on affected industries
tourism fishing

they propose mix zones yet don't have any data beyond
the mix zones. ~~if~~ the water was contaminated enough beyond the
mixzone to warrant the closure of cleaning the fish if I can't
clean the fish how would I eat one the grew here
no tests are available on the fish here so how would I know
if its safe to eat?

Need scientific back up for stronger standards?

DEC did it in '89

Signed: Cheryl Pritchard

Testifier

self consumer of 200 lb fish/year owner operator
even fish business

Representing (Optional)

Box 6209

Address

Sitka AK 99835

Phone No.

standards



Alaska State Legislature

Please enter into the record my testimony to the DEC committee name

committee on water quality, dated _____
bill/subject

I feel the DEC should be tightening, not loosening the water quality regulations. As a fisherman my family's income is 100% dependent on clean water. Fishing is a healthy industry - using a very renewable resource - A resource ~~renewable~~ renewable every few years - varying on species - To endanger this for nonrenewable uses is ludicrous. I realize timber is renewable - but not even once in AK. in your + my lifetime whereas fish will renew ~~many~~ many times in your + my lives. ~~MINING~~ never will

I feel the people at DEC should be in the business of protecting our environment not encouraging its demise!

I really object to the 1/100,000 cancer level. It should

Signed: Carolyn Nichols
Testifier

Representing (Optional)
305 Islander Dr. Sitka AK
Address
747 3146
Phone No.

be much higher - My family eats far more seafood than your risk level is calculated on - and the actual risk level is far higher than you admit as that's for each cancer causing pollutant - not as a whole. I do not feel my family should run about a 30x higher risk because we eat a lot of seafood. You have no right to condemn anyone else who eats lots of fish. Fish + tourism are #1 + 2 in our state. - With the stroke of your pens you can ruin this or keep this. The choice should not be yours - It is the public as the public lives here - owns the waters & has the right to say so. Allow the state people are objecting to your proposed regulations - Listen up - If you don't our only hope is that the EPA will for you.

The Department of Environmental Conservation huh. I would hope you know this - or does DEC really stand for the Department Encouraging Catastrophes?

To: House Resource Committee

From: Roland Wirth, 407 B Degroff, Sitka, Alaska 99835 (907) 747-1473

Regarding: Water Quality Standards - Written Testimony

Date: October 25, 1993

I appreciate the opportunity which the public hearing process has provided for Alaskans to express their views regarding the water quality proposals currently being considered. Thank you for taking the time to listen. Contrary to the point of view expressed by Rollo Pool at this hearing, (APC spokesperson) I strongly support the democratic process of the public hearing and hope that you will consider all testimony in your decision process. I would like to take this opportunity to share my testimony with you as I was unable to do during the teleconference due to the lack of time.

1. First, I would like to state that I believe in the importance of maintaining a healthy economy in Alaska. The resources of this state provide the backbone for our economy. For this reason, it is critical that the state examine the potential negative impact which the passing of the currently proposed water quality standards could have on Alaska fisheries industry. The fisheries are a renewable resource which rely heavily on clean water and a healthy environment if they are to serve Alaska's economic future when all the oil wells and mines have ceased producing. If our current policy makers have any foresight and concern for Alaska's future they will seek higher water quality standards for their state.
2. I strongly disagree with two points made by Rollo Pool (APC spokesperson) during his testimony. He compared the public hearing process to a barroom brawl. To the contrary, I would like to take this opportunity to contend that what has happened at these hearings reflects democracy at its best (if it is listened to). It is the public's exposure to increased cancer rates which we are discussing here and the public's views should be heeded most closely on this issue. I would like to see the state select a risk level of 1 in 1 million or lower in best interest of environmental and public health. For the same reason, carcinogens and potential carcinogens do not belong in mixing zones. These are public waters and we need assurance that we can gather seafood from local waters without fear of increased risk of cancer.
3. Mr. Pool also suggested that although a very large percentage of individuals giving testimony have expressed their opposition to the proposed water quality standards they represent only a small proportion of the state's population. This is bad math at its worst. I do hope that the proper analysis will be used when considering the testimony which is received on this issue. I am sure you recognize that the percentage of testimony from either side of the debate must be viewed as representational of an equal percentage of the source population. Obviously this provides only a rough indicator of public sentiment but it certainly cannot be ignored or considered totally invalid. The vast majority of public comment on these proposed standards strongly favors greater protection for Alaska's environment, public health and fisheries. It would make the whole public process a sham if public comment is not weighed heavily in the final

decision in this situation where the voice is so overwhelmingly in favor of higher water quality standards.

4. Finally, I would like to say that I was disappointed that not all interested parties were provided opportunity to give testimony at today's hearing. I realize we were running short on time but I feel the situation was handled in a biased manner as the final testimony was taken only from Ketchikan participants (with a large pro-industry contingent) and that Rollo Pool's testimony was taken out of order, bumping two other Sitkan individuals who would have advocated for higher water quality standards.

Sincerely,

Phil White

10/25/93



Alaska State Legislature

Please enter into the record my testimony to the House Resources
 committee on Water Quality, dated 10/25/93.
committee name
bill/subject

I am totally disgusted that so many people were heard from Ketchikan while so many people in Sitka were excluded.

I recommend you be fairer in the future.

DEC should be enhanced 10^{-6} is the minimum level.

Signed: Eric Judson
 Testifier

Representing (Optional)
103 Gibson, Sitka AK 99835
 Address
747-6743
 Phone No.



Alaska State Legislature

Please enter into the record my testimony to the House Resource Committee
committee name

committee on Water Quality, dated 25 OCT 1993
bill/subject

It has been really hard for me to come to talk with you. I went to the D.E.C. hearings in Sitka & heard people ask ^{DEC.} you to reconsider ^{THEIR} your proposed water quality regulations; to adopt the most protective cancer risk level possible; to keep Alaska's existing law that prohibits mixing zones for carcinogens; to keep existing standards for hydrocarbons, color & total suspended solids. It was a meeting where people spoke with depth of feeling. I saw Mothers, Fathers, husbands & wife wives, fishermen, children, students, environmentalists, and friends speak with clarity, honesty, concern, and thought.

The newspaper reported the comments of the governor upon hearing of this meeting in Sitka. He was quoted as saying that these people have a political agenda. Are you kidding? Where is my gain? How much money do I make off these proposed regulations? Is it the industry that stands to benefit? Is it true ^{DEC.} you have

Signed: June Eidler
Testifier

Representing (Optional)
P.O. Box 1673
Address
747-5354
Phone No.

made up ^{their} ~~your~~ minds & the public out cry is an exercise in futility?

What do we have to prove, to show you or how much money do we have to give to convince public officials that the public doesn't want these regulations?

This is not a political issue for me nor is this an economic one. That is an issue for government & industry. This is because I want to see my children & their children's children's children all have the oceans for their food & pleasures. The ocean is not an open system, it is closed - when you keep dumping sludge, PCBs, chlorine, high levels of toxic elements, garbage & carcinogens in the ocean where do you think it goes? Do you really think organisms in the sea will not be effected? How much can you pour in for how long? Why do politicians close one eye & open only the eye that means money for a few. Water may migrate out of Sitka, but it doesn't disappear. The ocean is for all of us.

~~Environment~~
I think a government that cares about its people, can have a clearer vision - No chlorine bleaching ~~at~~ pulp mills, small saw mills & cleaner industries

But it is time to stop having public meetings and taking up everyone's time, ^{with} talk if indeed the decisions are already made & any disagreement is called a private agenda. Overwhelming public opposition to these new regulations should have all public officials re-evaluating what they are doing.

TESTIMONY

House Resources Committee
October 25, 1993

Alaska Pulp Corporation
Rollo Pool, Manager of Public Relations

My name is Rollo Pool. I am manager of public relations for Alaska Pulp Corporation in Sitka. We own two large manufacturing facilities in Southeast Alaska and have a current workforce of 450. During the last month, we have closed our largest facility, a pulp mill in Sitka and have laid-off about 300 people.

I am going to spend most of my time today talking about communication and not about dioxin and arsenic. I hope I can take this discussion to some higher plane. I also would like to offer some advice for that think public hearings are in the public's best interest.

Over the passed few weeks, the headlines have been nearly unanimous. "Critics Speak out against water quality changes." "Proposed water standards criticized at hearing." "Southeast Raps DEC at Hearing on Water Regs," the headlines read.

The logical presumption of these glaring headlines and stories must be that the people have spoken. Perhaps 100, maybe 200 people have paraded before the ADEC officials and officially spoken. And loudly. That represents 200 of 550,000 residents, or .03 of the state. Even if I am off by a factor of 2, only 1/2 of 1 percent of the population has spoken.

Basically, the state has heard from the environmentalists and their various shades of coalitions, and from some of those who fish for a living, a few moms worried about cancer, and a couple folks from the industry.

To me, as a communicator, what this water quality debate and quagmire has shown is **not** that public has spoken. It has shown that DEC has done a horrible job of communicating risks, and of putting into perspective various pollution risks. They have produced fodder, called fear, for the group of people that advocates zero risk, not low risk. We have confused actual risk with acceptable risk with no risk at all.

Our side - the industry perspective - has done a horrible job of organizing its forces to public hearings on this issue. Our company, also absent, has been focusing on its mill closure.

What we have learned from the DEC hearings on WQ Standards:

- There is nothing more precious to us than ^Nwater. People care both about purity of water and availability of water.
- The Public Hearing Process is flawed when used to interpret public opinion and sentiment. If you like bar-room fights and traveling circuses, you'll love Alaska's public hearings.

What we have not learned from the past.

- There are ways that DEC can deal with these issues in a less confrontational environment.
- If DEC really wanted to educate and also learn from the public it would move into the 20th Century. It would use communicators, not technicians to express its ideas and to forge a consensus. It would use focus groups and public opinion surveys. It would hold workshops over several months.
- DEC should learn from the lopsided debate that public hearings are not a good way to gauge public concern.
- The AK Forest Association in 2 of the last three years has done statewide public opinion surveys of voters. What they find is an overwhelmingly accepting public of logging. In fact, the support is about 75%. Public opinion surveys in Juneau also show high approval for mining. This runs contrary to what we hear and see in the media.
- A survey done last year by the Institute for Regulatory Policy (epidemiologists, toxicologists, clinicians and other public health scientists) found that 81% of 1300 health professionals in the US felt that public health dollars for reduction of environmental health risks are improperly targeted. Also, 87% said it is impossible to accurately calculate human cancer deaths based solely on animal studies.

Their findings:

- 1) Make risk assessments as scientifically objective as possible;
- 2) Make the results of risk assessments more accurate and understandable

RISK:

People are talking about risk at a purely personal level. An emotional level. If one has a choice, whether to die sooner or later, most choose later. We make personal choices for different types of risk. And there are several types of risks/ We smoke cigarettes, we burn wood, we charcoal-broil our steaks, we eat too much, we eat the wrong foods. There are known risks for sunbathing, for driving automobiles. We have to distinguish between voluntary and involuntary risks, natural or man-made, fair or unfair, familiar or unfamiliar.

Activities that increase the chance of death by one in a million:

- One chest X-Ray
- Eating 40 tablespoons of peanut butter
- Drinking 30 12-oz. cans of diet pop with saccharin
- Drinking Miami city water for 1 year
- Drinking 1/2 liter of wine
- Smoking 1.4 cigarettes
- Living 2 days in New York or Boston
- Living 2 months in an average stone or brick building

How far will we take risk reduction? Just think what might happen for those that enjoy peanut butter with a nice Cabernet. What about coffee? It has some 826 volatile organic chemicals. Broccoli has a known toxin in it that is 20,000 times more potent than dioxin.

10⁻⁶ only represents a 0.0003% chance over our current 1 in 3 chances of developing cancer. It is no small wonder that studies are now reporting that billions of dollars are being spent to reach 10⁻⁶ only to find there are no appreciable reductions in impact to public health or the environment.

- When choosing an acceptable risk level, regulators should also consider the public health risks caused by regulation. The costs of regulation reduce real family incomes by increasing the costs of goods and services, and in some areas reducing the level of jobs and those that can afford to purchase health care. If regulatory costs are excessive, the regulator may inadvertently cause more harm to the health status of families that will be prevented.

Before we bankrupt our companies and send thousands of workers scrambling for food lines and unemployment (and away from the family doctors), shouldn't we have a better understanding of what we are going to achieve and what it is going to cost - either companies or communities.

in terms of

TYPES OF RISK

But we have to distinguish first between risk and hazard and hazard and outrage. Risk is a probability of hazard that can be estimated by

(1)

scientists. A different component of risk is outrage. The outrage factor elevates risks that scientists may think are unimportant or small to global proportions. One is estimated empirically or objectively; one is estimated subjectively, and, I might add, with a lot of raw emotion. Public debate has been taken over by enviro-demagogues espousing incredible illogical parodies. DEC planted the seed for the perception of crisis.

What DEC has found, and public relations studies show this, is that it cannot communicate a LOW HAZARD when OUTRAGE IS HIGH and there is no attempt made to mitigate it. It can be mitigated when fairness, openness to public participation. The public has a right to expect that reasonable improvement over time in the quality of life and the quality of the environment.

Can you image what will happen if DEC does not bend to the will of the people; if it decides in its judgment that the proper risk is 1 in a 100,000 - the same as about 1/4 of the other United States? The OUTRAGE will continue.

How to do it right:

EPA is trying to use mediation for the first time on the water permits for the two pulp mills. It hasn't begun, but it's a step in the right direction.

- 1) The process should be participatory. You should have industry, community, business, environmentalists put in a room and ordered to hammer out a plan using an old fashioned method of mediation.. This could be done in communities through advisory committees.
- 2) Foster and maintain open communications., providing information in a timely manner before issues explode. How many times do we go to a public meeting and later ask, "What did that mean?" or "That person had all the numbers reversed.
- 3) You need to understand that there will be outbursts from time to time as emotions surface. This is human behavior being uncorked.
- 4) Foster involvement of broad-based community groups. Chambers, League of Women's Voters, City of Sitka. I would not trust a plan developed in a vacuum by the Sitka Conservation Troop, nor would they sit still for a plan developed by Alaska Pulp Corporation.
- 5) Use PR Tools like visuals. Informational handouts. Public opinion.

P.O. Box 7263
Ketchikan, AK. 99901
12 November 1993

To: The Honorable Bill Williams
The Alaska State House Resource Committee
Alaska Department of Environmental Conservation
Environmental Protection Agency, Region X

From: Marilyn Lee
Robin Emmens
Allis May Davis
Kathy Lockhart

Subject: Water Quality Standards

On November 1, 1993, we met with Mr. Williams to express our concerns over the ADEC's proposal to weaken Alaska's Water Quality Standards. Our opinions, concerns and research appeared to be of little interest to Mr. Williams. He said he did not want to hear that "the sky is falling," and asked that we return with additional scientific evidence. Here, in brief and with supporting documents, are some of our concerns and research.

I. ADEC conducted a study in 1987 researching Ward Cove's water quality. They conclude that, "the present and historic studies provide a picture of a biologically declining marine environment in Ward Cove" due to:

1. Sludge deposits composed of both waste from KPC and a Ward Cove seafood processor facility. Sludge contributes to oxygen depletion in the bottom waters.
2. Limited flushing ability in the cove.
3. KPC's effluents, which deplete oxygen concentrations, raise water temperature, and emit sulfite waste liquor (SWL), other toxic materials, and color (which modifies light penetration). SWL is inherently toxic to aquatic fauna and can diminish primary productivity of phytoplankton.

This report also says, "there is historical evidence that Ward Cove had a diverse and healthy benthic community and had relatively good water quality prior to the beginning of operations of KPC in 1953." A series of studies from 1952 through 1990 document the gradual decline of biological activity and water quality.

A study of Silver Bay by the Federal Water Quality Administration and U.S. Fish and Wildlife recommends sludge removal, SWL reduction, and minimizing the mixing zone because of the diminished water quality resulting from APC's discharges. Considering that Silver Bay has a much greater flushing ability (40:1) than Ward Cove (14:1), citizens of Ketchikan have a very real concern over the proposed cancer risk level of 1 in 100,000.

II. There is controversy over whether contamination risk is diminished in migratory fish.

In 1991, the ADEC collected and analyzed salmon tissue. Dioxin was found in "all four composite samples." The samples ranged from 0.45ppt to 1.8ppt, far above EPA's calculated health advisory concentration for

children at 0.1ppm over a 10-day period. It should be noted that ANY detection of dioxin in food classifies it as carcinogenic. We conclude that dioxin in harmful amounts exist in migratory fish in Ward Cove.

III. Testimony was given in Ketchikan that, "there are no cancer clusters in this area." We disagree that any conclusive cancer study has been conducted in Ketchikan, and, in fact, suspect that there may indeed be a cancer cluster among residents living in the vicinity of KPC. All four of us are community health care professionals, two of us nurses, two case managers, all noticing the disproportionate incidents of cancer ("young" victims) "north of town" and are organizing to encourage the local medical community or another impartial research group to conduct a local cancer study or create a Cancer Registry.

Scientists know little about the effects of many individual chemicals because it has not been a priority of chemical companies or users to observe a chemical's effects on living things and the environment, rather on production and marketing. Even less is known about the combined effects of chemicals, and in Ketchikan we are talking about approximately 126 toxic substances, each of which could be allowed to exist at a 1 in 100,000 risk level if the State were to have its way. Dioxins suppress the immune system and enhance the carcinogenic effect of other chemicals.

This we know. Cancer is caused by carcinogens. Industrial supporters frame the cause of cancer as a problem of behavior rather than one of exposure to cancer-causing agents. Testing must be done not only to detect birth defects, but the long term, delayed effects, from fertility and carcinogenicity in offspring through three generations in order to determine real evidence of harm. We feel Alaska could benefit from the Veteran Administration research on the harmful effects of dioxin exposure, plus numerous comprehensive studies done in the Great Lakes region, as well as our own local study.

KPC is distinguished as the greatest polluting mill in the Pacific Northwest, eliminating staggering amounts of dioxins, furans, chloroform and other chlorinated compounds, creating a public health hazard, particularly for those living in proximity of the mill.

IV. The EPA recently proposed regulations that would greatly reduce dioxin discharges and other pollutants by U.S. pulp mills. This change is based on scientific evidence, quickly becoming "common knowledge," that widespread unregulated toxic pollutants do interfere with public health and the environment.

We recommend the following:

1. That Alaska adopt a risk level of no less than 1 in 1,000,000 .
2. We object to mixing zones, and at the very least support Alaska's existing law that prohibits mixing zones for carcinogens.
3. Treatment works should not be exempt from water quality standards.

Thank you for your attention to this matter.

Sincerely,

Bob Enneas, M.S.
Allis May Davis, R.N.

Marilyn Lee B.Ed.
Judy R. Turt R. BS

Water Quality Standards Petition

FAX TO: Dave Sturdevant / WQM
 Department of Environmental Conservation
 410 Willoughby Avenue, Suite 105
 Juneau, AK 99801-1795

FAX: (907) 466-5274

Dear Mr. Sturdevant,

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Signature	Name (Print)	Address
	PAUL R. WIERKER	12760 Pintail St Anchorage AK 99576
	ERIC E. G. JOHNSON	12760 Pintail St Anchorage Alaska 99576
	Clark Hirsch	11134 Prescott Dr S.L.C. UT
	Edwin HANSEN	12217 So JANCE Rd, SLC UT
	TODD COURTNEY	10630 JAMESTOWN DR #11 Anchorage AK 99504
	Maria Barrett	60231 A Collins way
	John Heatcote	1032 Smith Ave Harrisonburg Va
	RANDALL L. BISHOP	3200 W. 2nd, Louisville, Miss Harrisonburg Va
	Jason R Brossler	2640 W. 66th Ave AK 99502
	MAX FACKLER	P.O. BOX 2337 SEWARD AK 99664
	MARY FACKLER	BX 2227 SEWARD AK
	GARY LEWIS	3407 SEPPALA, A-CIT, AK 99517
	DAVID D. ROWLAND	201 BARRON ST #202 ANCH. 99501
	Bill Schaffner	705 MULLDOON Sp. #46 -
	STEPHEN R. SAUNDERS	P.O. Box 110611 Anch, AK 99511
	KENNETH BOBBIE	3470 NOLA, Anch, AK, 99503
	GERALD DUMMEL	5317 So. 297th Place; Auburn, WA 98001
	John Hislop	45 W. VINE Granville Utah 84029

FAX this page to DEC at the number above and to State Rep. William Williams, Chairman, House Natural Resources at (907) 225-8546.

Water Quality Standards Petition

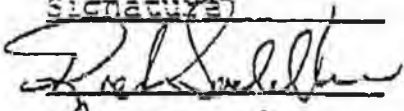
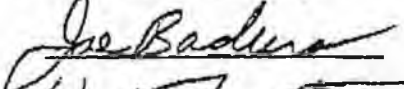

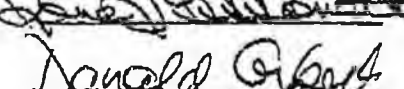
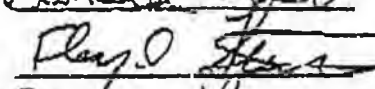
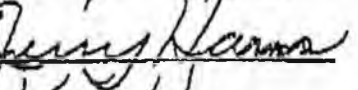
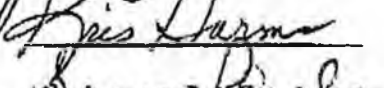
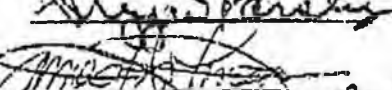
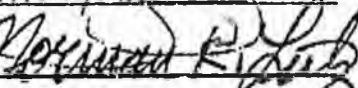
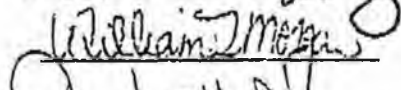

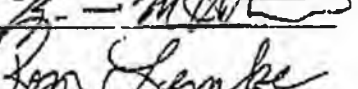
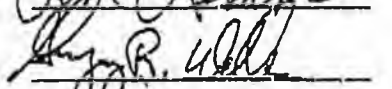
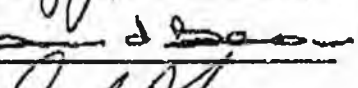
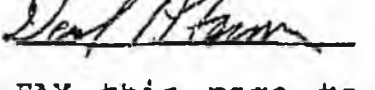
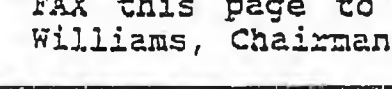
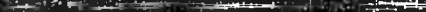
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FAX: (907) 465-5274

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Signature	Name (Print)	Address
	Rick Sadler	18-28 KENNEDY F&K S
	Joe Radwan	5521 WHISPERING SPRUCE ANCH ⁹⁹⁵¹⁶
	WALTER FOSTER	2172 OTTER DR NORTH ALE
	RONALD BISSINGER	11900 TIMBERLAND APT 1006
	DONALD GYLBEEK	2028 BEAUCLYN ANCHORAGE
	Floyd Stuebel	6935 Whitshull St. Anch
	JERRY HARMS	500 West Potter Suite 102
	KRIS HARMS	500 W Potter Suite 102
	Gregg Parvlex	4033 BURBANK PI. ANCH 99508
	James H. Johnson	121 Timmish Drive Fairbanks AK 99709
	NORMAN R. LUTZ	2140 ARCADIA DR. ANCHORAGE ⁹⁹⁵¹⁷
	WILLIAM T. MORHART	1424 W. 11th Anchorage, Alaska. 99501
	DENNIS L. HAHL	1555 BIRCHWOOD ST ANCH, 99508
	Kevin M Hartman	9631 NOVA SR. AK 99577
	RON LEMKE	82.44 Endicott AN 99502
	Gregory R. Weller	27955 Canyon Road CATALDO ID 83810
	David Beasone	6696 Wade Rd. Delta BC
	David P. Farmer	2110 E 90th Tacoma WA 98445

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Water Quality Standards Petition

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We the undersigned support the DEC recommended human health risk level of 10 to the minus 6th and the work of DEC to make logical and reasonable changes to the Alaska Water Quality Regulations. Please add our comments to the official record on this issue.

Signature	Name (Print)	Address
<u>Joseph Kurtek</u>	Joseph Kurtek	3301 C. St. Suite 525 Anchorage AK 99501-3973
<u>SABRA REID</u>	Sabra Reid	127 E. Independence Dr Anchorage 99508
<u>Eskil Anderson</u>	Eskil Anderson	924 W 22nd Ave Seward AK 99216 417 CLOVER ST
<u>Peter Robinson</u>	Peter Robinson	P.O. Box 6356 Bethel AK 99801
<u>Philip Rusk</u>	Philip Rusk	
<u>Roger C Burggraf</u>	Roger C Burggraf	830 Sheep Creek Rd Ft. 9976
<u>Joseph E. Vid</u>	JOSEPH E. VID	1577 C ST ANCH AK.
<u>Raymond C. Rice</u>	Raymond C. Rice	1577 C St. Anch. AK 99501
<u>Forest A. Hayden</u>	Forest A. Hayden	P.O. Box 110930 Anch AK 99511
<u>Steve Teller</u>	STEVE TELLER	P.O. Box 454 Chugiak AK 99567
<u>Bruce C. Sten</u>	Bruce C. Sten	11525 Our Rd Anch 99516
<u>Wm K. Blessington</u>	Wm K. Blessington	24236 Heathstone Dr Chugiak 99567
<u>R.H. Trent</u>	R.H. Trent	1000 EAGLE RINGE RD. FBKS 99712
<u>Richard Wilmarth</u>	Richard Wilmarth	Flat, Ak 99584

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<u>Signature</u>	<u>Name (Print)</u>	<u>Address</u>
	Claude D. ...	1346 Sauriso Dr, Anch. AK 99508
	JIM HALLORAN	6725 Raspberry Anch AK 99502
	MICHAEL G. NELSON	1904 Cassin Ave., Fiske, AK 99709
	GANG CHEN	1260 Airport Way, 3F2 Fiske, AK 99709
	DAN SNODGRASS	1245 LANCE LANE FB., AK. 99712
	LAWRENCE NERENBERG	3154 TIDE AVE, KETCHIKAN AK 99901
	Carl H Reistling	P.O. Box 80148, Fiske AK 99708
	BILL OHMAN	P.O. Box 11094, Fiske, AK 99710
	EDWARD J NEUSER	634 FISCHER AV ANCH AK 99518
	Kathleen M. Charlie	P.O. Box 74771, Fairbanks, AK 99707

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Signature	Name (Print)	Address
<i>[Handwritten Signature]</i>	<u>Diana G. Higgins</u>	<u>Hc 50 5352 025/11</u>
<i>[Handwritten Signature]</i>	<u>Helen Warner</u>	<u>POB 80674, College, AK 99708</u>
<i>[Handwritten Signature]</i>	<u>Dana Higgins</u>	<u>Hc 32 Box 5382 Was. 110 AK 998</u>
<i>[Handwritten Signature]</i>	<u>Paul S. Spinks</u>	<u>POB 112516 Anch 99511</u>
<i>[Handwritten Signature]</i>	<u>Lester L. Maxwell</u>	<u>3910 Loc. Suit Anch AK 99516</u>
<i>[Handwritten Signature]</i>	<u>JAN BORLAND</u>	<u>8611 Barney Cir. Anch 99507</u>
<i>[Handwritten Signature]</i>	<u>Barbara Maxwell</u>	<u>3910 Loc. Suit Anch 99516</u>
<i>[Handwritten Signature]</i>	<u>Thomas S. Spinks</u>	<u>Box 1808 Nome AK 9976</u>
<i>[Handwritten Signature]</i>	<u>S.M. Ellis</u>	<u>1007 W. Third #400 99501</u>
<i>[Handwritten Signature]</i>	<u>Jacqueline R. Glavinand</u>	<u>2940 - Safaree Loop Anch. AK 99516</u>
<i>[Handwritten Signature]</i>	<u>Paul A. Harmon</u>	<u>1700 Emery Ave #145 Corcoran CA 99212</u>
<i>[Handwritten Signature]</i>	<u>MARY A. NORDACKE</u>	<u>800 F St., P-4, Juneau 99801</u>
<i>[Handwritten Signature]</i>	<u>Irene Anderson</u>	<u>Box 1971 Nome AK 99762</u>

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Signature	Name (Print)	Address
	Mark K. Johnson	^{ANCH} 13631 WINDWARD CIRCLE
	David M. Bushel	^{Box} 214 Huston Alaska 99594
	Carol Aubertin	9501 Kavik St. 99515
	LORRAINE HELENAU	19244 Adak Ci. ^{E.R.} 99577
	Sam West	9300 Arlene 22-3995/S
	Tom Hamer	Box 2301 Homer AK 99603
	Richard Flanders	1870 Becker Ridge Pt Fbks AK 99709
	C. ROCKINGHAM	2552 SWINBURNE AVE N. ^{BC.} VANCOUVER
	Cindy Roberts	2634 JOHN ST JUNEAU 99801
	Jeff Foley	3539 Reflection Dr. Anch. 99502 3701 E

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Signature	Name (Print)	Address
<u>[Signature]</u>	<u>TERRI CAMPBELL</u>	<u>437 WILL^{OR} MEAD AK 99804</u>
<u>[Signature]</u>	<u>Shelley S. Szymanski</u>	<u>PO Box 574025 L. Anchorage AK 99507</u>
<u>[Signature]</u>	<u>Boni K. Munnell</u>	<u>P.O. Box 83102 Fairbanks AK 99708</u>
<u>[Signature]</u>	<u>BARBARA HAYDEN</u>	<u>P.O. Box 11093 Anchorage AK 99511</u>
<u>[Signature]</u>	<u>J.C. Todd</u>	<u>PO Box 4560 Sparks NV 89432</u>
<u>[Signature]</u>	<u>ERLENE Tachick</u>	<u>P.O. Box 3503 Soldotna, AK 99669</u>
<u>[Signature]</u>	<u>Wendy Tachick</u>	<u>P.O. Box 3503 Soldotna AK 99669</u>
<u>[Signature]</u>	<u>James C. Lewis</u>	<u>27907 Raven Ct Chugiak, AK</u>
<u>[Signature]</u>	<u>DALE E. HENKINS</u>	<u>P.O. Box 240261 Douglas, AK 99824</u>
<u>[Signature]</u>	<u>Stanley E. Rybacker</u>	<u>P.O. Box 55698 Anchorage AK 99705</u>
<u>[Signature]</u>	<u>Rose Rybacker</u>	<u>Box 55698 North Pole AK 99705</u>
<u>[Signature]</u>	<u>KEN NESTING</u>	<u>7330 Silver Birch Ave. Anchorage AK 99502</u>
<u>[Signature]</u>	<u>George Scuffert</u>	<u>PO Box 156 Central AK 99511</u>
<u>[Signature]</u>	<u>ED J NEUSER</u>	<u>634 FISCHER AV ANCH AK 99518</u>
<u>[Signature]</u>	<u>Wendy Tachick</u>	<u>Box 3503 Soldotna AK 99669</u>
<u>[Signature]</u>	<u>ERNEST W. Chase</u>	<u>701 Stearns 108 Anchorage</u>
<u>[Signature]</u>	<u>George E Meyer</u>	<u>Box 2452 Palmer AK 99645</u>
<u>[Signature]</u>	<u>FARMER FORSTER JR.</u>	<u>2605 Aspen Dr. Anchorage AK 99517</u>

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Water Quality Standards Petition

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<u>Signature</u>	<u>Name (Print)</u>	<u>Address</u>
	Jenna Christiana	3039 Rampart Dr. Anchorage, AK 99501
	JOHN LARSEN	14060 SW 56th Ave Beverlyton, ORG. 97005
	NATHAN RATHBUN	3315 Dubon Ave. Anch. AK. 99509
	Joseph Kurtak	5621 Whispering Spruce Anch. AK 99516
	John DiMarchi	2700 S. CUSHMAN ST FAIRBANKS, AK 99706
	LLOYD TWAITES	212 BROOKSBANK AVE N. VAN B.C. CANADA
	SAM DOBBITT	303 C St, Fairbanks, AK 99701
	Norman P. Spangon	3912 Duro Dr. Fairbanks, AK 99709
	Edward Belsky	3620 114 AVE. E. D. VALUD, WA 98370
	KIRK BUTCHER	12901 KILLEY ST. ANCHORAGE, AK 99575
	GERALD HAGAN	10 INDUSTRIAL PARK RD FAIRBANKS 99709
	DAVID E. MURPHY	3021 Ivan Dr. HIA 99507
	Johnny T. Jackson	4610 Cordellia Ct. Anch. 99502
	DAN LEE	4003 Box 2323 Palmer, 99645
	EARNEST A. PARHAM	1401 College Rd F. B.
	Leo Mark Anthony	2020 Lake Cir, Anchorage 99517
	JOHN PROFFETT	P.O. Box 111253 ANCHORAGE 99513
	Wody Patrick	PO Box 337052, Anchorage AK 99508

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We the undersigned support the DEC recommended human health risk level of 10 to the minus 3rd and the work of DEC to make logical and reasonable changes to the Alaska Water Quality Regulations. Please add our comments to the official record on this issue.

Signature

Name (Print)

Address

J. S. Dreclister Jr
Howard F. Gray

J. S. Dreclister Jr

P.O. 775594 Eagle River AK 99577

Howard F. Gray

1927 W 13th Anchorage AK 99502

Multiple sets of horizontal lines for additional signatures and addresses.

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<i>Tim McKou</i>	TIM MCKOU	2552 Steese Hwy N. Ektas AK 99712
<i>Rocky Macdonald</i>	ROCKY MACDONALD	Box 61618 FOX AK 99706
<i>Alvin Agoff</i>	ALVIN AGOFF	Box 2791 PALMER, AK. 99645
<i>Donald E. Mullikin</i>	DONALD E. MULLIKIN	P.O. Box 750, Homer, AK
<i>Deryl Box</i>	DERYL BOX	P.O. Box 33391 JUNEAU, AK 99803
<i>Paul Wharton</i>	Paul Wharton	PO Box 401 Girdwood AK 99587
<i>Lee Barber</i>	Lee Barber	211 Henry St Whittier AK
<i>Ernest M. Choe</i>	ERNEST M. CHOE	Box 141 Anvik AK 99577
<i>Judy Rock</i>	Judy Rock	Box 141 Anvik, AK 99558
<i>John T. Larsen</i>	John T. Larsen	1937 Old Skene N.H. 99712
<i>P.A. Harmon</i>	P.A. HARMON	221 Petter Rd. Anch AK 99515
<i>P. Jeffrey Burton</i>	P. Jeffrey Burton	6311 Debrae Rd #301, Anchorage AK 99504
<i>W.M. Massengale</i>	W.M. Massengale	2500 Bonifant Hwy #745 Anchorage AK 99504

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	Student Hagenstrik	2175 Union Ave So Fairbanks, AK
	TRISH MILLER (BRAD)	1039 DELWOOD CT #2 FAIRBANKS, AK 99702
	Gregory F. Duracher	3707 Biscuit Dr. 997508
	Shari Duracher	" " "
	June Fowler	2022 CRASCUS
	MARY A. NEUBAUER	443 Cowles Fairbanks 99701-4434
	Robert C. Davis	14270 Snowshoe Lane - Delta 99510
	Brian L. Martin	P.O. Box 34641 Juneau, AK 99802
	Ronald Alan Brooks	PO BOX 10816 FAIRBANKS AK 99710
	Rob SYKES	Box 75 Central AK 99730
	George Patonki	130 W 1st St Juneau 99801
	RALPH SWARTZ	Box 101801, Juneau
	Dave Thrupp	Box 201901 99520

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	Jean Halloran	6225 Blackberry Anch, AK 99502
	Michael G. Nelson	1904 ... Fair, AK 99709
	GANG CHEN	1260 Airport Way, 3F2, Fair, AK 99709
	DAN SNODGRASS	1245 LAKE LANE FB, AK. 99712
	LAWRENCE NERENBERG	3154 TIDE AVE, KETCHIKAN, AK 99901
	Carl H. Beistling	P.O. Box 86148, Fair, AK 99708
	BILL OHMAN	P.O. Box 11194, Fair, AK 99710
	EDWARD J NEUSER	634 FISCHER AV ANCH AK 99518
	Kathleen M. Charlie	P.O. Box 74776, Fair, AK 99706

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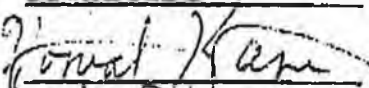
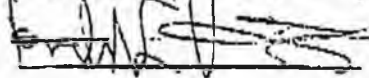
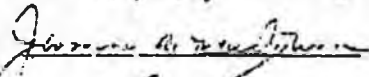
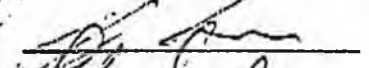
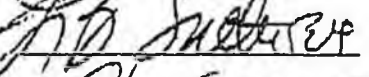
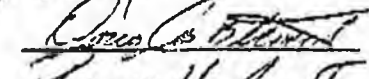
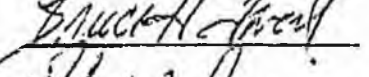
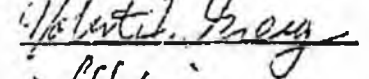
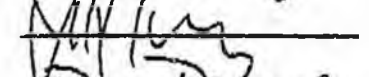
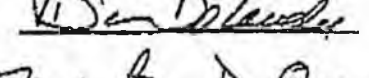
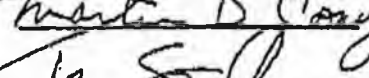
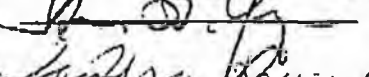
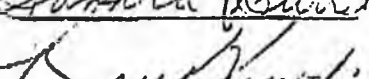
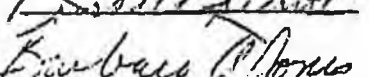
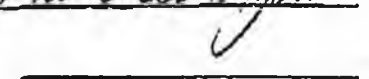
FAX TO: Dave Sturdevant / WQM
 Department of Environmental Conservation
 410 Willoughby Avenue, Suite 105
 Juneau, AK 99801-1795

FAX: (907) 465-5274

Dear Mr. Sturdevant,

It is our understanding that the deadline for comments on the proposed Water Quality Regulations has been extended to November 15, 1993.

We the undersigned support the DEC recommended human health risk level of 10 to the minus 5th and the work of DEC to make logical and reasonable changes to the Alaska Water Quality Regulations. Please add our comments to the official record on this issue.

Signature	Name (Print)	Address
	NORVAL KANE	4203 Wilson Ahd. 99503
	RONALD L. RICKETTS	269 TOPSIDE RD. FAI 99712
	JAMES A. [unclear]	527 COLLIERIE RD. FAIRBANKS AK 99701
	GEORGE McLAUGHLIN	8361 TOP OF THE WORLD, S.C. UT 8412
	L.R. STILLWELL	557 BRD St, FAIRBANKS AK 99701
	DOUGLAS P. TWEET	Box 1712 Nome AK 99762
	BRUCE H. TWEET	Box 1126 Nome, AK 99762
	ROBERT T. GREIG	POB 22434 JUNEAU AK
	JULI K. HINDERMAN	11341 OLIVE LANE ANC 99515
	DAN DOLANDER	7802 ARLENE, ANCH 99502
	MARTIN D. CONYDE	8721 Pluto Dr., Anchorage 99507
	JIM ST. GEORGE	1165 CREWTON DRIVE ANCH 99515
	SANDRA E. GREIG	1039 Birch Court, Anch. 99504
	RUSSELL K. [unclear]	11911 Rainbow Ave Anchorage 9950
	BARBARA A. JONES	PO BOX 24348, SEA HC WA 98058
_____	_____	_____
_____	_____	_____
_____	_____	_____

FAX this page to DEC at the number above and to State Rep. William Williams, Chairman, House Natural Resources at (907) 225-8546.

Water Quality Standards Petition

FAX TO: Dave Sturdevant / WQM
 Department of Environmental Conservation
 410 Willoughby Avenue, Suite 105
 Juneau, AK 99801-1795

FAX: (907) 465-5274

Dear Mr. Sturdevant,

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We the undersigned support the DEC recommended human health risk level of 10 to the minus 5th and the work of DEC to make logical and reasonable changes to the Alaska Water Quality Regulations. Please add our comments to the official record on this issue.

Signature	Name (Print)	Address
<u>Joseph Kurtaik</u>	Joseph Kurtaik	3301 C. St. Suite 525 Anchorage AK 99501-3935
<u>SABRA REID</u>	Sabra L. Reid	127 S Annapolis Dr Anch 99508
<u>Eskil Anderson</u>	Eskil Anderson	924 W 22nd Ave Spokhna AK 99210 4017 CLOSTER ST
<u>Peter Robinson</u>	Peter Robinson	P.O. Box 6356 Ketchikan AK 99901
<u>Philip R. Smith</u>	Philip R. Smith	
<u>Roger C. Berggraf</u>	Roger C. Berggraf	830 Sheep Creek Rd Ft. Hs 9970
<u>Joseph R. Vid</u>	JOSEPH R. VID	1577 C ST ANC AK
<u>Raymond O. Rose</u>	Raymond O. Rose	1577 C St. Anch. AK 99504
<u>Forest A. Hayden</u>	Forest A. Hayden	P.O. Box 110930 Anch AK 99511
<u>Steve Teller</u>	STEVE TELLER	P.O. BOX 454 CHUGIAK AK 99567
<u>Bonnie C. Smith</u>	Bonnie C. Smith	11525 Our Rd Anch 99516
<u>Wm K. Blessington</u>	Wm K. Blessington	24236 Heathstone Dr Chugiak 99567
<u>R.H. Trent</u>	R.H. Trent	1000 EAGLE RIDGE RD FRKS 99712
<u>Richard Wilmarth</u>	Richard Wilmarth	Flat, Ak 99584

FAX this page to DEC at the number above and to State Rep. William Williams, Chairman, House Natural Resources at (907) 225-8546.

Water Quality Standards Petition

FAX TO: Dave Sturdevant / WQM
Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, AK 99801 1799

FAX: (907) 465-5274

Dear Mr. Sturdevant,

It is our understanding that the deadline for comments on the proposed Water Quality Regulations has been extended to November 15, 1993.

We the undersigned support the DEC recommended human health risk level of 10 to the minus 5th and the work of DEC to make logical and reasonable changes to the Alaska Water Quality Regulations. Please add our comments to the official record on this issue.

Table with 3 columns: Signature, Name (Print), Address. Contains handwritten entries for various individuals such as Rick Sandler, Mike Rowland, Donald Grisek, etc.

FAX this page to DEC at the number above and to State Rep. William Williams, Chairman, House Natural Resources at (907) 225-0540.

Paul J. Wescott
P.O. Box 231
Sitka, AK 99835

TEL 907-747-0549 (H)
TEL 907 747 5500 (W)

October 20, 1993

Dave Sturdevant, WQM
ADEC
410 Willoughby Ave., Suite 105
Juneau, AK 99801-1795

Ladies and Gentlemen:

I won't bother to rebut the goofy reasoning of Sitka's environmental fanatics, but I would like to say that many people avoid public hearings on such matters BECAUSE these folks pack the meetings. My old boss used to say that mentally impaired folks could ask more questions than a wise man could answer - Bill Cosby, "Why is there air?" Likewise, religious fanatics - oops, I mean those terribly concerned with the environment and MY health, damn the cost! - can twist reason into some pretty bizarre shapes.

Most people I know have plenty to do without having to defend their pocketbooks from these folks. We trust you to do so. They are certainly not the majority; they are simply the noisiest and most, well, fanatical.

Ok, OK, I can't resist.

Tim Hines and Don Muller are quick to trot out numbers and projections. If they are right, say about Sitka's pulp mill, there should be a big blip in our cancer stats. After all, the mill, built in the late '50's, has, according to Hines, been spewing out 50 times the currently recommended minimum daily requirement of dioxins. There is no such blip that I know of.

They fail to tell everyone that better than ninety percent of the carcinogens we are exposed to are natural in origin, so what's the big deal?

Mssrs. Hines and Muller neglect to point out that losing jobs, moving, etc., is incredibly stressful. I wouldn't be surprised if far more pathology attends the mill closure than does an order-of-magnitude reduction in pollutants at their present rarified concentrations. Ask Don what effect his favorite organization's screwball campaign against alar may have had on the apple-growing community.

Advances in production methods and technologies - and a reasonable amount of attention to environmental matters - lead naturally to a reduction in undesirable emissions; the environuts

are like a doctor telling his/her patient to take ALL the medicine NOW, none of this "twice daily until gone" stuff.

The environuts as reported in the Sitka Sentinel assume that everyone in Sitka catches all their fish at the mouth of Silver Bay. With gazillion miles of coastal waters, bays, estuaries, Don and Tim fish by the mill, you bet. The author of Field of Dreams originally had environmentalists in mind: "Build a pulp mill, they will come," but he didn't figure alarmists with ponytails would attract box office like a baseball team would, hence the switch.

At this point in time, I trust you guys to figure out a balance between the economy and a reasonably healthy environment. You're proposals are just fine with me.

Thanks,

[signed]

Water Quality Standards Petition

FAX TO: Dave Sturdevant / WOM

Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, AK 99801-1795

FAX: (907) 469-5274

Dear Mr. Sturdevant,

It is our understanding that the deadline for comments on the proposed Water Quality Regulations has been extended to November 15, 1993.

We the undersigned support the DEC recommended human health risk level of 10 to the minus 5th and the work of DEC to make logical and reasonable changes to the Alaska Water Quality Regulations. Please add our comments to the official record on this issue.

Signature	Name (Print)	Address
	Paul R. Wierler	12760 Prudhoe St Anchorage AK 98516
	Eric E. G. Fisher	12760 Prudhoe St Anchorage, Alaska 98516
	Mark Hirsch	11134 Prescott Dr S.L.C. WA
	Carl Hae	12207 S. Juneau Ave. Juneau AK
	John Conroy	10230 JAMESON DR #4 Anchorage AK 99504
	Maria Curran	10951 A Collins way
	John Henderson	1032 Smith Ave Harrisonburg Va
	RANDALL BRINK	3700 Kenilworth Ave Huntsville, AL 35895
	Jason P. Broder	2440 W. 66th Ave AK 99502
	MAX F. P. K. F. R.	P.O. Box 1137 C. F. WARD, AK 99566
	MARY FRANCES	Box 2027 Zuni, NM
	Amy Levin	3407 SEPPALA, Anchorage AK 99517
	DAVID D. ROWLAND	201 BARRETT ST. 9202 ANCH 99501
	Bill Schaffner	705 MULLDOON Dr. #46 -
	SIGMOND SUNKAS	12207 S. Juneau Ave, Anchorage AK 99516
	KENNETH B. B. B.	3470 N. 11th Ave, Anchorage AK 99503
	GERALD DURAMEL	5311 So. 29th Place, Anchorage AK 99501
	John H. H. H.	145 W. VINE Anchorage AK 99501

FAX this page to DEC at the number above and to State Rep. William Williams, Chairman, House Natural Resources at (907) 225-8516.

Michael Leccese
107 Kincroft Way
Sitka, Alaska 99835

November 15, 1993

Mr. Dave Sturdevant
Water Quality Management
Alaska Dept. of Environmental
Conservation
410 Willoughby Ave., Suite 105
Juneau, Alaska 99801-1795

Dear Mr. Sturdevant:

I am writing to protest the proposed changes to the Alaska Water Quality Regulations.

It is alarming to believe any State or Federal agency would consider using a greater risk factor in a time when pollution throughout the world is endangering our lives. The technology is available to prevent much of the pollution of our rivers and oceans as well as the air we breathe. The days of acid rain, turbid waters could be coming to an end yet Alaska, the most pristine State in the Union is willing to allow industry to dictate our standards.

My family lives mainly on subsistence foods of which a large percentage is derived from the waters of Sitka Sound. We have been unable to use the clams that are most accessible to us in the Eastern Channel area due to the brown water and sludge. Even the meat of the clams has a dark color. This limits our food supply considerably and the cost of traveling further to fish and gather seafood is high.

We have noticed a gradual clearing of the waters around Sitka since the closing of the Pulp Mill but it will likely take years before the ocean bottom is cleared of the toxic sediment from the years of operation allowing for safe use of local sea life.

If the State wants to encourage industry, make sure it's a clean industry meeting the most stringent requirements possible. Then we will be setting an example for other states as well as meeting the more restrictive standards that are surely to be required in the next few years.

Thank you for the opportunity to comment on this most important matter.

Sincerely,



Michael Leccese

cc: Charles Findley, Director
Water Division, EPA Region X

Bill Williams
State Representative

P.O. Box 7263
Ketchikan, AK. 99901
12 November 1993

To: The Honorable Bill Williams
The Alaska State House Resource Committee
Alaska Department of Environmental Conservation
Environmental Protection Agency, Region X

From: Marilyn Lee
Robin Emmens
Allis May Davis
Kathy Lockhart

Subject: Water Quality Standards

On November 1, 1993, we met with Mr. Williams to express our concerns over the ADEC's proposal to weaken Alaska's Water Quality Standards. Our opinions, concerns and research appeared to be of little interest to Mr. Williams. He said he did not want to hear that "the sky is falling," and asked that we return with additional scientific evidence. Here, in brief and with supporting documents, are some of our concerns and research.

I. ADEC conducted a study in 1987 researching Ward Cove's water quality. They conclude that, "the present and historic studies provide a picture of a biologically declining marine environment in Ward Cove" due to:

1. Sludge deposits composed of both waste from KPC and a Ward Cove seafood processor facility. Sludge contributes to oxygen depletion in the bottom waters.
2. Limited flushing ability in the cove.
3. KPC's effluents, which deplete oxygen concentrations, raise water temperature, and emit sulfite waste liquor (SWL), other toxic materials, and color (which modifies light penetration). SWL is inherently toxic to aquatic fauna and can diminish primary productivity of phytoplankton.

This report also says, "there is historical evidence that Ward Cove had a diverse and healthy benthic community and had relatively good water quality prior to the beginning of operations of KPC in 1953." A series of studies from 1952 through 1990 document the gradual decline of biological activity and water quality.

A study of Silver Bay by the Federal Water Quality Administration and U.S. Fish and Wildlife recommends sludge removal, SWL reduction, and minimizing the mixing zone because of the diminished water quality resulting from APC's discharges. Considering that Silver Bay has a much greater flushing ability (40:1) than Ward Cove (14:1), citizens of Ketchikan have a very real concern over the proposed cancer risk level of 1 in 100,000.

II. There is controversy over whether contamination risk is diminished in migratory fish.

In 1991, the ADEC collected and analyzed salmon tissue. Dioxin was found in "all four composite samples." The samples ranged from 0.45ppt to 1.8ppt, far above EPA's calculated health advisory concentration for

children at 0.1ppt over a 10-day period. It should be noted that ANY detection of dioxin in food classifies it as carcinogenic. We conclude that dioxin in harmful amounts exist in migratory fish in Ward Cove.

III. Testimony was given in Ketchikan that, "there are no cancer clusters in this area." We disagree that any conclusive cancer study has been conducted in Ketchikan, and, in fact, suspect that there may indeed be a cancer cluster among residents living in the vicinity of KPC. All four of us are community health care professionals, two of us nurses, two case managers, all noticing the disproportionate incidents of cancer ("young" victims) "north of town" and are organizing to encourage the local medical community or another impartial research group to conduct a local cancer study or create a Cancer Registry.

Scientists know little about the effects of many individual chemicals because it has not been a priority of chemical companies or users to observe a chemical's effects on living things and the environment, rather on production and marketing. Even less is known about the combined effects of chemicals, and in Ketchikan we are talking about approximately 126 toxic substances, each of which could be allowed to exist at a 1 in 100,000 risk level if the State were to have its way. Dioxins suppress the immune system and enhance the carcinogenic effect of other chemicals.

This we know. Cancer is caused by carcinogens. Industrial supporters frame the cause of cancer as a problem of behavior rather than one of exposure to cancer-causing agents. Testing must be done not only to detect birth defects, but the long term, delayed effects, from fertility and carcinogenicity in offspring through three generations in order to determine real evidence of harm. We feel Alaska could benefit from the Veteran Administration research on the harmful effects of dioxin exposure, plus numerous comprehensive studies done in the Great Lakes region, as well as our own local study.

KPC is distinguished as the greatest polluting mill in the Pacific Northwest, eliminating staggering amounts of dioxins, furans, chloroform and other chlorinated compounds, creating a public health hazard, particularly for those living in proximity of the mill.

IV. The EPA recently proposed regulations that would greatly reduce dioxin discharges and other pollutants by U.S. pulp mills. This change is based on scientific evidence, quickly becoming "common knowledge," that widespread unregulated toxic pollutants do interfere with public health and the environment.

We recommend the following:

1. That Alaska adopt a risk level of no less than 1 in 1,000,000 .
2. We object to mixing zones, and at the very least support Alaska's existing law that prohibits mixing zones for carcinogens.
3. Treatment works should not be exempt from water quality standards.

Thank you for your attention to this matter.

Sincerely,

Robin Enneaus, M.S.
Allis May Davis, R.N.

Marilyn Lee B.Ed.
Phyllis R. [unclear] B.S.

Albert W. Wilson
P. O. Box 597
Sitka, Alaska 99835

November 15, 1993

Dave Sturdevant, WQM, ADEC
410 Willoughby Ave., Suite 105
Juneau, Alaska 99801-1795

Dear Mr. Sturdevant:

Please include the following remarks in your review of public comments concerning the proposed water quality regulations.

I am an Alaska Native. I have spent my life in the construction industry. I have lived adjacent to Eastern Channel in Sitka Sound for over thirty years. I am a cancer victim. In late '92 I was diagnosed with cancer of the colon. In December I had a lower anterior resection, a complex surgical procedure from which I am still recovering and I am told by my doctors it may still be a year before I can lead a normal life.

In thirty-three years I have seen Eastern Channel and adjacent waters go from pristine to the sewer it is now and as it will remain until Alaska Pulp Mill cleans up the toxic waste in these waters left from its operation. I dove using scuba gear commercially, for subsistence foods, and for pleasure extensively in the 60's and until 1980. From observations made during this time I can say the effluent from the pulp mill has become worse through the years, not accumulatively but seemingly by change of the pulp mill operation and in spite of added pollution control equipment. It seems the addition of pollution control equipment has little effect when no control of the effluent upstream from the equipment exists and the mill operator chooses to use a dirtier, perhaps more economical, processing system.

In 1989 I brought clams gathered from beaches twenty miles south of Sitka to our residence on Berry Island and hung them in a sack off our dock. The next day all of the clams were dead. After that day my family discussed at length the apparent increase in pollution from the pulp mill such as the dark colored water, the sludge floating on top of the water and the stench in the air when temperature inversions exist in the atmosphere and the smog floats out of Silver Bay. We had been aware of this pollution before but now were alarmed that we must do something to protect ourselves from what now appeared to be dangerously toxic materials. We stopped using all clams, abalone and other seallife for food from anywhere around Eastern Channel or Silver Bay.

When diagnosed with cancer, I read at length and discussed with my doctors the causes of colon cancer. The first main reason cited is hereditary but no one in my family ever had cancer. Another main cause cited was type of diet. My own diet consists largely of subsistence gathered seafoods, wild game, berries and home grown

Dave Sturdevant, WQM, ADEC

Page 2

vegetables. I came from a family that has lived the same way including growing their own vegetable garden and these eating habits are deeply ingrained in me so there appeared to be nothing wrong with my diet. The other main reason cited is pollutants. Pollutants that largely contaminate the food we eat. When I told my doctor I stopped eating seafoods from the polluted areas of Sitka Sound two years before the first symptoms of my illness appeared, he replied I should have stopped eating these foods four years before because that was how long it takes for a tumor such as mine to develop. I cannot take this information without feeling I am the "one" in the "one in one hundred thousand" you say is okay to have cancer. When I think of the terrible uncertainties that existed leading up to my diagnosis of cancer; the traumatic troubled time for myself and my family thereafter; the extensive testing, surgery, hospital stay and tremendous illness and discomfort that followed; of spending the entire day after returning home from the hospital in the bathroom vomiting while family and friends sat in our living room the day of our 25th wedding anniversary; and the continuing loss of income as a result of this illness; there is nothing I can say to you that would adequately express the anger I feel that you would allow toxic pollutants to exist in our waters to the extent you have. Strong as this anger is, it is quickly displaced with fear. Fear that this could have happened or may happen to another member of our family, my wife, my child, or my grandchild. Now you intend to loosen the standards for toxic pollutants to the benefit of a few large corporations that already have shown they have little regard for human lives.

Strangely, I find there are many "ones" of the "one in one hundred thousand" here in Sitka. Herman Kitka has colon cancer and continues to survive. My friends Ray Ozawa and Conrad Baines did not survive nor did many others. There is no statistical data available on incidence of cancer in Alaska and perhaps there should be but my doctor here has told me colon cancer is the most prevalent form of cancer in the Sitka area. Let's look at this more closely. I don't believe anyone would contradict the statement that all Alaska Natives use subsistence foods consisting mostly of seafoods. These seafoods are not only fish and shellfish but plant life such as seaweed and kelp along with herring roe. Much of these foods have been taken right out of the waters polluted from effluent from the Alaska Pulp Corporation's pulp mill. Clearly, the Alaska Native is at higher risk than others in the highly theoretical numbers establishing risk level. One could say since Alaska Natives comprise 17% of Alaska's population that the risk level for the Alaska Native as proposed in the State Water Quality Regulations is one in seventeen thousand. This is even more true when considering the much higher amount of seafood consumed by Alaska Natives than the 5.2 pounds per year you say you will use to "calculate" risk level.

Dave Sturdevant, WQM, ADEC

Page 3

It is a sham that Mr. Sandor would publicly claim he will continue to promote the water quality regulation proposals as they stand in the interest of protecting the health of the Alaska Native. If you indeed wish to protect the Alaska Native or at least provide us the same level of risk afforded others, then adopt the most stringent risk level available to you instead of the least. Protect the waters from which we obtain our foods from toxic chemicals. This is not an impossible task. The technology exists today to reduce or eliminate these toxic chemicals from polluting our waters. We care very much more for the health of our families than we do economic gain.

Sincerely,



Al Wilson

cc: Rep. Bill Williams
House Resources Committee

Alaska Federation of Natives
Health Committee

Charles Findley, Director of Water Division
EPA Region X

"Cross Town Insurance"
P.O. Box 71410
Fairbanks, AK. 99707

Located: 1741 College Rd
Phone: 907/452-6891 Fax: 907/452-4858

Date: 11/11, 1993 From: Tamara Knight
To: State of Alaska Dept DEC
Person: _____ Policy: _____
RE: Water Quality Regulations of Mining
This Cover Plus 1 Pages.

Subject:

We are in support of Representative
Jeanette James position on Water
Quality standards stated in her
letter of Nov 2nd.

The current regulations are prohibitive
to mining operations in Alaska for
resources and jobs. Mining money in
Alaska directly affects small business
more than the Oil Industry.

Regulations should say a good sense
approach the Federal Government has
lacked causing discriminatory and
selective enforcement tainting the
public opinion more so than the
Water.

In support
Tamara Knight

"Cross Town Insurance"
P.O. Box 71410
Fairbanks, AK. 99707

Located: 1741 College Rd
Phone: 907/452-6891 Fax: 907/452-4858

Date: 11/11/93 From: CHERYL A LAVALLEY

To: STATE OF ALASKA, DEC.

Person: COMMISSIONER JOHN A SANDOR

RE: WATER QUALITY REGULATIONS & MINING

This Cover Plus 1 Pages.

Subject:

WE ARE IN SUPPORT OF REPRESENTATIVE JEANETTE JAMES POSITION
ON WATER QUALITY STANDARDS AS STATED IN HER LETTER OF 11/2/93.

PLEASE CONSIDER THE FOLLOWING 8 POINTS AS YOU COMPLETE
YOUR REVIEW, LETS BE FAIR AND USE A LITTLE GOOD SENSE!

THANK YOU!

captive with their emotional and silly observations, and powerful, tainted public testimony.

I fully support the comments made by the Alaska Miners Association, I will elaborate on some of their comments that I feel quite strongly about.

Comments

1. I strongly support the DEC's choice of 10 to the minus 5th for the human health risk factor.

2. I support the DEC's change to use "settleable solids" to define sediment. The current standard of "no measurable increase" is not realistic.

3. I support the use of the phrases "unless available evidence reasonably demonstrates" and "water body as a whole" now appearing in the section on mixing zones. The new regulations will be more objective and workable.

4. I support the definition of "treatment works". This definition is logical and workable.

5. Remove phrases "at the discretion of the Department" and "other information deemed necessary". These phrases leave the door open for arbitrary, capricious, discriminatory and selective application and enforcement.

6. Replace the phrases "all organisms" in the definition section and "biota" in the mixing zone section with the phrase "commonly used indicator species". The regulations need to be tailored to the site and not applied Statewide.

7. Eliminate the phrase "as small as practicable" from the mixing zone section. The real issue is effective mixing, not the size of the mixing zones.

8. Change the mixing zone site definition to allow the mixing zone for placer mining to extend "downstream to the point of complete mixing or the point of the next substantiated use if that use is farther from the point of discharge. The current

October 25, 1993

Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Attn: Dave Sturdevant/WQM

Dear Mr. Sturdevant:

The following are my comments on the proposed water quality regulations:

First, I support the 10^{-5} (one in 100,000) for the "human health risk level". I think that level is safe and more reasonable than the 10^{-6} (one in 1,000,000) level.

Second, I oppose any "color" limits. The water around Southeast changes color dramatically every time it rains. I do not think the color is harmful and is certainly inconsequential compared to the natural "color" changes that occur.

Lastly, I support the DEC's decision to allow mixing zones. There is such a vast amount of shoreline and waterway in Southeast Alaska that local mixing zones would not be a health hazard or significant harm to the environment.

Sincerely,



Owen J. Graham
Post Office Box 9023
Ketchikan, Alaska 99901

October 25, 1993

Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Attn: Dave Sturdevant/WQM

Dear Mr. Sturdevant:

My comments on the State's proposed water quality regulations are listed below:

1. I believe the 10^{-5} (one in 100,000) "human health risk level" is safe and more reasonable than the one in 1,000,000 level.
2. I oppose the color limit. I have lived in Southeast Alaska for the last 30 years and know how the water color can change when it rains. I am sure this color change is not harmful.
3. I support the DEC's decision to allow mixing zones. With the vast amount of shoreline and the strong tidal current in Southeast Alaska, this should not pose any health hazards.

Sincerely,



Edward M. Coville
Post Office Box 1259
Ward Cove, Alaska 99928

October 25, 1993

Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Attn: Dave Sturdevant/WQM

Dear Mr. Sturdevant:

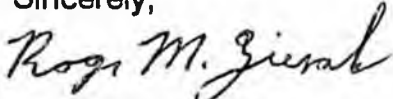
The following are my comments on the proposed water quality regulations:

First, I support the 10^{-5} (one in 100,000) for the "human health risk level". I think that level is safe and more reasonable than the 10^{-6} (one in 1,000,000) level.

Second, I oppose any "color" limits. The water around Southeast changes color dramatically every time it rains. The stream which crosses my property is muskeg fed. If I were to take water out of it and not do anything to it, under the proposed color regulations I could not dump it back in due to its natural color. This is ridiculous! Please do not adopt a color regulation.

Lastly, I support the DEC's decision to allow mixing zones. There is such a vast amount of shoreline and waterway in Southeast Alaska that local mixing zones would not be a health hazard or significant harm to the environment.

Sincerely,



Roger M. Ziesak
15033 North Tongass Hwy.
Ketchikan, Alaska 99901

October 25, 1993

Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Attn: Dave Sturdevant/WQM

Dear Mr. Sturdevant:

The following are my comments on the proposed water quality regulations:

I am in favor of the 10^{-5} (one in 100,000) for the "human health risk level". I think that level is safe and much more reasonable than the 10^{-6} (one in 1,000,000) level.

I oppose any "color" limits. The fresh water in Southeast has natural color and it changes dramatically every time it rains. I do not think the color is harmful.

Lastly, I support the DEC's decision to allow mixing zones. There is such a vast amount of shoreline and waterway in Southeast Alaska that local mixing zones would not be a health hazard or significant harm to the environment.

Sincerely,



Thomas G. Hicks
Post Office Box 825
Ward Cove, Alaska 99928

October 25, 1993

Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Attn: Dave Sturdevant/WQM

Dear Mr. Sturdevant:

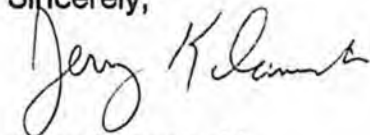
The following are my comments on the proposed water quality regulations:

First, I support the 10^{-5} (one in 100,000) for the "human health risk level". I think that level is safe and more reasonable than the 10^{-6} (one in 1,000,000) level.

Second, I oppose any "color" limits. The water around Southeast changes color every time it rains. I do not think the color is harmful and is certainly inconsequential compared to the natural "color" changes that occur.

Lastly, I support the DEC's decision to allow mixing zones. Local mixing zones would not be a health hazard or cause significant harm to the environment.

Sincerely,



Jerry Kilanowski
Post Office Box 18153
Coffman Cove, Alaska 99918

RALPH D LEWIS
3338 1st Street
KETCHIKAN ALASKA

October 25, 1993

Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Attn: Dave Sturdevant/WQM

Dear Mr. Sturdevant:

The following are my comments on the proposed water quality regulations:

First, I support the 10^{-5} (one in 100,000) for the "human health risk level". I think that level is safe and more reasonable than the 10^{-6} (one in 1,000,000) level.

Second, I oppose any "color" limits. The water around Southeast changes color dramatically every time it rains. The stream which crosses my property is muskeg fed. If I were to take water out of it and not do anything to it, under the proposed color regulations I could not dump it back in due to its natural color. This is ridiculous! Please do not adopt a color regulation.

~~Thirdly~~
Lastly, I support the DEC's decision to allow mixing zones. There is such a vast amount of shoreline and waterway in Southeast Alaska that local mixing zones would not be a health hazard or significant harm to the environment.

Faithful and most important - The state has a job to do for people and economies - We can not be a keeper and leader in the world without jobs. Set the regulations which allow ^{us} to continue to go forward, as technology changes and the rest of the world climbs on board we will opt to discharge. We can't change overnight. it's your job to make decisions without ~~the~~ "chicken little" sky is falling" mentality making your decisions.

Thank You
Ralph D Lewis

Kristen Griffin
3708 Halibut Point Road
Sitka, Alaska 99835
(907)747-4955

October 27, 1993

Dear *Rep. Williams:*
~~Rep. Williams:~~

I am writing in reference to the proposed change in Alaska water quality standards. I am not affiliated with any environmental group or industry; at present I am an at-home mother. My family has lived in Alaska for eight years which has been long enough that I now can't imagine living anywhere else. The familiar "downsides" to living in Alaska (distance from family, high cost of living, unavailability of some services) are a small enough price to pay for raising children in a healthy setting with a spectacular natural environment at our door.

The most important reason I am writing is to express my dismay at the lack of moral and ethical reasoning that went into the proposed decision to allow increased water pollution-related cancer rates with the goal of fostering more favorable profit margins for certain industries. Although I do not feel qualified to address the technical aspects of water quality, I oppose any revision of water quality standards that poses even a slight increased health risk to the public.

I further believe that this decision is incredibly short sighted from an economic point of view. Times are changing all over the world. Due to the inevitable dwindling supply of raw materials, economies are moving away from intensive (quantity not quality based) mining of natural resources. Alaska is unique in that we still have some natural resources, some environmental quality, left. I believe that in the not very distant future, Alaska's natural beauty and purity will be the most important "natural resource" that Alaska has; it will be the reason that people want to live and visit here, it will be the reason that people put a premium on our unpolluted seafood, it will be the reason we still have quality timber to harvest, it will be the very key to our economy. Our government should be leading the fight to preserve every shred of Alaska's environmental quality. Thank you for the opportunity to comment.

Sincerely,

Kristen Griffin

Kristen Griffin

Nancy Lord
P. O. Box 558
Homer, Alaska 99603

(907) 235-8252 phone
(907) 235-8253 fax

November 11, 1993

Dave Sturdevant, WQM
Alaska Department of Environmental Conservation
410 Willoughby Ave., Suite 105
Juneau, AK 99801-1795

COPY

RE: STATE WATER QUALITY STANDARDS

Dear Dave Sturdevant:

I strongly object to any weakening of Alaska's water quality standards. As a commercial fisherman, coastal resident, and person who depends on Alaska's clean water for my life and livelihood, I cannot see how weakening our current standards can possibly be in the best interest of Alaskans.

In particular, I ask that the regulations protect us from levels of pollutants that increase cancer risk. One in one million is certainly not too much to insist upon. Like most coastal Alaskans, I eat a great deal of seafood. I easily eat several hundred pounds of salmon each year in the form of fresh, frozen, smoked, canned, and jerked salmon, and salmon caviar. I regularly eat, in addition, halibut, cod, clams, crab, Dolly Varden, steelhead, octopus, herring roe, and scallops.

I don't believe that mixing zones for carcinogens or other pollutants result in anything other than dilution of poisons. Surely the burden should be upon industries to prove the safety of any mixing zones.

I'm concerned as well with the proposed exemption for "treatment works." We should simply not allow any bodies of water to pose health dangers to Alaskans or to adversely affect fish and wildlife, including birds.

Bottom line--We should maintain or strengthen, not weaken, our existing water standards. In an increasingly polluted world, there's nothing more valuable than protecting the health of our environment, ourselves, and our children. Furthermore, the industries that depend on clean water--particularly fishing, mariculture, and tourism--should not be sacrificed to polluting industries.

Sincerely,


Nancy Lord

cc: Charles Findley, EPA
✓ Rep. Bill Williams, House Resources Com.

To: The House Resource Committee 1
State Capitol
Juneau, AK 99901-1182

10-27-93

Honorable Committee Members:

My name is Marilyn Lee and I have lived in Ketchikan for 21 years. My husband and I have built our home here and we are raising our family here.

As a family, we love to sport fish and commercially hand troll. My husband also is a ^{licensed} charter boat operator.

Tourism and fishing are of great importance to us and fish is the mainstay of our diet. I feel the D.E.C.'s proposed revisions to the water quality standards regulations are not in the best interest of the health and well being of Alaskans. I support the Alaska Trollers' Association's position on the proposed revisions.

Specifically, I think:

- Mixing zones should not be allowed. As a state we would be moving away from rather than toward upholding the Clean Water Act.

- Treatment works should not be exempt from water quality standards. This exemption would allow unlined & uncovered tailing ponds of several hundred acres without provision for adequate monitoring or restoration when the mining activities are done.

- Maximum protection for cancer risk should be established. I ask the D.E.C. to consider in their figuring of an acceptable cancer risk level that rural Alaskans eat an average of 256 pounds of fish per

year (ADEC's statistic). The risk level should be set at least at 1 in 1 million based on the average fish consumption of rural Alaskans. To do anything less follows the alarming trend in this country of rural & minority populations bearing the brunt of risk from pollutants. 36 States have established the 1 in 1 million risk level as reasonable, practical, and attainable, including all the Pacific Northwest States. Please keep in mind that the proposed risk level is asking the citizens of Alaska to determine how many lives are reasonably acceptable to sacrifice to cancer for the benefits of economic development. Can we not afford protection at least as great as the rest of the Pacific Northwest?

Sincerely,

Marilyn Lee

Box 1081

Ward Cove, AK 99928

C.C. Dave Stenderant, WQM, ADEC

Charles Fundley, EPA Region X

Ward Cove Water Quality Assessment

Jones & Sides, 1989

Submitted by Marilyn Lee,
11/15

Chapter 1
INTRODUCTI

Overview

Post-It™ brand fax transmittal memo 7871 # of pages 1	
To: <u>Gerston Eskin</u>	From: <u>Leisa G. S.</u>
Co.	Co. <u>ADEC</u>
Dept.	Phone # <u>465-5369</u>
Fax # <u>766-2087</u>	Fax # <u>465-5367</u>

Ward Cove, located near Ketchikan in southeastern Alaska, is the site of a pulp mill operated by the Ketchikan Pulp Company (KPC) and a fish processing plant. Ward Cove is located on the north side of Tongass Narrows about 5 miles northwest of the City of Ketchikan (Figure 1-1). The Cove is located at 55°24' N Latitude and 131°44' W Longitude. The cove is 0.3 mile wide at the entrance, 0.5 mile wide at the widest point, and about 1 mile long. At mean lower low water (MLLW), the cove contains approximately 30,000,000 m³ (25,500 acre feet) of water.

The country surrounding the cove is mountainous, rising steeply from the seacoast. The steep slopes are forested with areas of muskeg dispersed throughout. The entire shore of Ward Cove is of a permanent, rocky nature and appears typical of the many coves in the area.

Ward Creek is a swiftly moving stream dropping quickly from the mountains to the head of the cove. Three small lakes provide brief stretches of calm in its otherwise rapid descent. Stream discharge is subject to wide variation, as the stream collects water quickly from the steep mountain slopes from and between which the stream passes. The cove is located in an area of heavy rainfall, receiving an average of 150 inches annually. Ward Cove has no sill; therefore, water column stratification is expected to be similar to that in Tongass Narrows, with the exception of effects of surface runoff and local wind.

Following reports of a fish kill in Ward Cove in Fall 1987, the Alaska Department of Environmental Conservation (ADEC) reviewed the water quality monitoring data collected in Ward Cove by KPC at established water quality stations (Figure 1-2) as required by their wastewater discharge (NPDES) permit. ADEC examined dissolved oxygen (DO), pH, temperature, and salinity data for the months of May-October 1985 and 1986, and May-August 1987.

The ADEC analysis (Kruse and Viteri 1988), summarized in Table 1-1, showed surface DO levels were depressed below Alaska Water Quality Standards (6.0 mg/l in the upper 1 m of water) for significant periods of time. Figure 1-3 plots the surface DO observations for each of the KPC monitoring stations.

Reasons for low DO in the surface waters were attributed by Kruse and Viteri (1988) to: 1) BOD, chemical oxygen demand (COD), TSS, and temperature of the pulp mill effluent;

2) dredging; and 3) the cove's limited flushing ability. Reasons for low DO in the bottom waters were attributed by Kruse and Viteri (1988) to: 1) the oxygen demand from the sludge mat, bark, and wood waste deposited by the effluent; 2) dredging; 3) the cove's limited flushing ability; and 4) BOD in the waste discharge of a seafood processor located on the southeast shore of Ward Cove.

During the summer of 1988, studies were carried out in the cove to assess the levels of pollution within the cove and in particular to look for factors potentially contributing to fish kills. The present and historic studies provide a picture of a biologically declining marine environment in Ward Cove.

There is historical evidence that Ward Cove had a diverse and healthy benthic community and had relatively good water quality prior to the beginning of operations of KPC in 1953. Ward Cove was studied in 1952, 1955, 1965, 1968, 1974, and 1987. Additional evidence of conditions within the cove is provided by monthly KPC discharge monitoring reports (DMRs) which are required as a part of their NPDES permit. The series of studies documents a gradual decline in biological activity and in water quality, in particular with respect to dissolved oxygen (DO), and prior to 1978, sulfite waste liquor (SWL) concentrations. These two factors (and possibly others) have combined to cause an often stressful situation for phytoplankton, fish, invertebrates, and benthic fauna.

The mill effluent modifies the aquatic environment by contributing oxygen demand, heat (which reduces oxygen saturation levels), sulfite waste liquor (SWL), other toxic materials, and color (which modifies light penetration). In addition to being inherently toxic to aquatic fauna, SWL also can diminish primary productivity of phytoplankton, resulting in the reduction of an important oxygen-production mechanism. Wood wastes and fibers (sludge) deposited on the bottom contribute to additional oxygen depletion in the bottom waters.

Objectives

~~The primary objective of this report is to identify and characterize sources of water pollution problems in Ward Cove. An important focus of the study is on depletion of oxygen in the waters of Ward Cove because low oxygen conditions are expected to result from the BOD load of current and historical discharges. An understanding of effluent toxicity and oceanographic processes is also needed to assess if changes in mill operations would substantially improve water quality conditions within the cove.~~

~~The following is a list of the questions that are addressed with a review of historical data integrated with field and laboratory studies carried out as part of this study.~~

- ~~• What is the toxicity of the mill effluent?~~

Dioxin KA #1

KA
#1

ATTACHMENT V

Ke'chikan Dioxin: October 1990 Sampling

Summary statement:

On October 11, 1990 ADEC carried out a preliminary sampling effort to determine the possibility of Dioxin contamination in fish caught in the Ward Cove area. A total of 20 salmon were collected from 2 sites upstream of Ward Lake, Ward Creek and Signal Creek. 4 composite samples, consisting of 3 to 7 whole individual fish, were analyzed. One of the composites was analyzed after removal of the livers and a composite of the livers was analyzed separately. All samples showed the presence of 2,3,7,8-Tetrachlorodioxifuran (2,3,7,8 TCDF). Concentrations ranged from .45 parts per trillion (ppt) in the composite without the livers to 1.8 ppt in the liver composite. No other Dioxin analogs were detected.

The samples were analyzed by Alta Labs of El Dorado California. A thorough data review verified that all analytical and quality control requirements were met.

Results:

Composite #	Site	2,3,7,8 TCDF	Tox. Equivalent
1 (whole)	I	1.4 ppt	.14 ppt
2 (whole)	I	1.4 ppt	.14 ppt
3 (whole)	II	0.54 ppt	.054 ppt
4 (whole)	II	0.45 ppt	.045 ppt
5 (liver)	II	1.8 ppt	.18 ppt

Sampling Sites :

- Site I, Ward Creek about 300 yards upstream of Ward Lake
1 1/4 miles from mill.
- Site II, Signal Creek about 150 yards upstream of Ward Lake
1 mile from mill.

Description of Composites:

- Composite 1 (Whole Fish) Site I, 3 Pink Salmon
- Composite 2 (Whole Fish) Site I, 7 Sockeye Salmon
- Composite 3 (Whole Fish) Site II, 3 Pink Salmon
- Composite 4 (Whole Fish. minus livers) Site II, Pink Salmon
- Composite 5 (Liver) Site II, Liver from 3 Pink Salmon from composite III

2. Effects of Pulp Mill Wastes on Receiving Waters at Silver Bay, Alaska, 1974.
 USEPA WQ office NW region. The report evaluates waste treatment and disposal practices at APC and water quality impacts on Silver Bay and Eastern Channel. Data were collected, during different seasons in 1963 and 69 by the Federal Water Quality Administration and the US Fish and Wildlife Service. Data included DO, SWL, temperature, salinity, currents, biota. The report establishes significant (adverse changes to the water quality resulting from the discharges and concludes that waste water treatment at APC is insufficient to achieve water quality standards. Compared to 1957, the diversity of aquatic organisms was lower.
Sludge. Sludge deposits, consisting of fibers and wood chips were found over 0.2 sq. miles, causing emission of H₂S, and preventing establishment of aquatic organism found elsewhere in similar habitats. Anaerobic bulking has resulted in floating sludge mats.
Fish kill. 100,000 fish were killed in 1970 as a result from H₂S released from floating sludge.
SWL. High sulfite waste liquor (SWL) concentrations were measured through half of Silver Bay (136 -300 ppm). SWL concentrations near the outfall are up to 9600 ppm.
Toxicity. SWL was found to be toxic to copepods at 10 ppm and Salmon at 500 ppm. In comparison to 1956, 57 data a significant reduction of mussels was observed.
Dissolved oxygen. Inability of waters of Silver Bay to effectively disperse SWL and Solids - have resulted in reduced DO from 9-1 ppm in 1957 to 4- 6 ppm at some surface locations in Silver Bay and Eastern Channel.
Report recommendations. 1. Remove all settleable solids, remove 70% of volatile solids, modify log handling practices, remove all sludge beds.
 2. Implement SWL reduction plan to achieve reduction of SWL to < 10 ppm at 0 - 10 m below surface.
 3. Construct an outfall system that minimizes the dispersion (mixing) zone and locate it away from near-shore areas. Submit plans for oceanographic and water quality studies to EPA and ADEC. Implement secondary treatment.

Note: Useable data on SWL concentrations, some toxicity information. Determine if WQ and oceanographic plans were submitted and obtain copies. Determine if bottom deposits were removed and when.

Post-It™ brand fax transmittal memo 7671 # of pages >

To	Gerstein Eskin	From	WIS40 S.
Co.		City	ADEC
Dept	766-2488	Phone #	465-5362
Fax #	766-2080	Fax #	465-5362

PO Box 21966
Juneau, AK 99802
November 15, 1993

Dave Sturdevant WQM

ADEC

410 Willoughby Ave, Suite 105

Juneau, AK 99801-1795

Dear Mr. Sturdevant:

I object to the proposed water quality standards that would increase our exposure to pollutants and raise our risk of cancer. Given the very close tie between Alaskans and our coastal waters, for food and subsistence, recreation, and our jobs, it is foolhardy to risk the cleanness of that water.

I urge adoption of the 1 in 1 million cancer risk level; keeping existing standards for hydrocarbons, color, total suspended solids and fecal coliform; and keeping our existing law that prohibits mixing zones for carcinogens. We must not exempt "treatment works" from water quality standards nor can we allow industry to use "natural conditions" as a loophole to avoid water quality standards.

In short, we must be more diligent than these proposed standards to protect all of the citizens of our state, as well as our renowned environment and wildlife. While these proposed regulations would have a short term benefit for a few industries, they have a very high long term cost for all Alaskans that we can't afford.

Please keep our water clean!

Sincerely,
Laura S. Dameron
Laura Dameron

cc: Charles Findley, US EPA

Representative Bill Williams, House Resources Committee

~~From:~~ Amy Kruse

TO: MeadT JUNEAU/ADEC

DATE: 06-17-91

TIME: 14:51

CC: Amy Kruse
Dick Stokes
Ron Flinn
ursula spannagel
Jim Hayden CENTRAL3/ADEC

SUBJECT: Ktn. Pulp Dioxin - Cost Recovery

PRIORITY:

ATTACHMENTS:

GL
p15

Let me try to fill in some more of the details on where we are and try to answer some of your questions. I agree with your theory of cost recovery. Here's a very condensed history of this project. EPA has completed a study of several pulp and paper plants around the country as part of their study on dioxin generation from this industry. They generated lists of the mills that had measureable dioxin in either effluent, sediments or biota from areas adjacent to the plant. KPC was listed because dioxin was found in two species of fish during a study conducted in about 1985. This study was the only known bit of information on dioxin concentrations around Ward Cove. APC was not listed, mostly because there was no information on dioxin in Silver Bay. However, during this time period EPA was just completing their multi-media investigation of APC, which included dioxin analysis of effluent, sediment and biota. Some of the info generated from the multi-media study is available now. I don't have the details, Dick knows more. When EPA released their li with KPC on it Ketchikan residents started to ask us some tough questions about how safe the seafood was to eat, what was their exposure level, worker safety, etc. Ward Cove has a personal use fishery for crab, salmon and steelhead. ADF&G, FRED division has been running an enhancement project for Steelhead for several years. They are soon going to include King and Coho enhancement on Ward Creek. Ward Creek is directly adjacent to the mill property. There have been several documented fish kills in ward cove and dissolved oxygen levels are below standards frequently. DEC committed to try to answer some of the public's questions, that is why I asked for \$ 75,000 from Jim Hayden's shop to complete some preliminary studies. We have managed to collect and analyze salmon tissue for dioxin concentrations. The results show measureable amounts of 2,3,7,8-TCDF in all four composite samples (three composites of tissues, one composite of livers). The concentrations ranged from 0.45 parts per trillion to 0.54, 1.4 and 1.8. No other dioxin or furan compounds were above detection levels. According to the U.S. Public Health Service document Toxicological Profile for 2,3,7,8-tetrachloro-dibenzo-p-dioxin, the EPA calculated health advisory concentration for children is 0.1 ppt over a 10 day period. The life time health advisory for adults is 0.035 ppt. The study further states "The EPA also calculated the amount of 2,3,7,8-TCDD in ambient waters (lakes and rivers) that would be associated with increases in one additional incidence of cancer over background cancer incidence in a population of 1,000,000 to be 0.013 pp quadrillion, an extremely small amount. This calculated measurement takes into account that 2,3,7,8-TCDD concentrates in fish; hence, exposure may occur through both the drinking of water and the eating of fish." The EPA says no serious health concerns below 25 ppt for 2,3,7,8-TCDD in fish tissue (EPA. 1985. Health Assessment Document for Polychlorinated Dibenzo-p-Dioxins. Washington, DC. Office of Health and Environmental Assessment. EPA report number 600/8-84-014). We talked to Ms. Dana Devoll, toxicologist for EPA in Region X. She says that FDA numbers should not be taken too seriously, because they are based on low seafood consumption rates

and Alaskan rates are much higher. She said the relative toxicity of 2,3,7,8-TCDD to 2,3,7,8-TCDF is 10:1 (e.g. TCDD is 10 times more toxic). She also gave us some numbers for dioxin in fish from the Columbia River, > 80 ppt. I don't know what kind of fish that was, species accumulate dioxin differently. We should also be concerned about concentrations in other species like crabs.

We were not expecting to find measurable levels in pelagic migratory fish (salmon). The previous fish samples were bottom dwelling resident fish and were expected to have higher exposure rates and thus higher concentrations.

You asked what the handles were. I don't quite know what you mean, but one handle may be the pending renewal of the NPDES permit. A draft version is being worked on now by Region X. They may release it in late summer. I think they are trying to wrestle with the dioxin question too. I have only had preliminary conversations with Ben Cope, the permit writer for KPC. So, the bottom line to your answers is we have only done very preliminary work to try to identify the concentration of dioxin in Ward Cove. We found some in fish, which was unexpected. SERO recognizes the importance of this issue.

We also recognize the public's interest and the potential visibility of this problem. However, that still doesn't get us past the lack of staff...

Hope this fills in some of your questions. Let me know if you want more. Also, FYI, the dept. put out a press release 9/24/1990 that said we were going to investigate and gave some idea of the scope.

REPLY FROM: Amy Kruse
FROM: Mead Treadwell

TO: Barbara Frank
AmyK SERO/ADEC

DATE: 06-14-91
TIME: 17:57

CC: Dick Stokes SERO/ADEC

SUBJECT: Ktn. Pulp Dioxin - Cost Recovery
PRIORITY:
ATTACHMENTS:

Dick, Amy, Barbara -- you may want to look at the Commissioner's recent memo on 470 funds because our interest in cost recovery does not mean we don't spend from the fund if there is a real emergency. We want cost recovery in place for many reasons, including the fact that if we're creating a financial liability for someone else its only fair, in a non emergency situation, that the person be informed and have the right to move forward.

Is there a violation of law or regs suspected here? What are the handles? Us spending money the only one? Can we modify a permit to require monitoring, with reports by an independent lab? If this is a chronic problem, and a commitment has been made to work on it, I hope we're not going to find ourselves being blamed for reversing a commitment -- because we did not.

Thanks. MT

REPLY FROM: Mead Treadwell FROM: Amy Kruse

TO: Barbara Frank JUNEAU/ADEC

DATE: 06-14-91
TIME: 09:37

Oct. 25, 1993.

TO: THE WATER QUALITY HEARING BOARD

FROM: RICHARD SHEN, KETCHIKAN RESIDENT 2619 1/2 3RD AVE

COMMENTS RE THE COLOR STANDARD AND 10^{-5} RISK LEVEL

I DO NOT BELIEVE IN THE NEED FOR ANY NUMERIC COLOR RESTRICTIONS. AS A DRINKING WATER STANDARD, THE STATE FINDS THE COLOR UNIT TO BE UNENFORCEABLE AT 15 CU FOR WATER THAT IS TREATED AND DISTRIBUTED FOR CONSUMPTION (18 AAC 80.50). WHY, AS A WATER QUALITY CRITERIA, IS THE COLOR LIMIT 15 ENFORCEABLE FOR [70.020(b)(1)(B)(ii)] CONTACT RECREATION USE? IT APPEARS THAT BECAUSE THE STATE IS RELUCTANT TO CLASSIFY A LARGE NUMBER OF WATERBODIES, ALL USERS ARE RESPONSIBLE FOR MEETING THE MOST RESTRICTIVE STANDARD. THE COLOR RESTRICTIONS PROPOSED BY THE WATER QUALITY STANDARDS ARE SEVERE AND OVERALL BENEFITS ARE DEBATABLE AS COLOR IS AN AESTHETIC ISSUE RATHER THAN A WATER QUALITY ONE.

I ALSO BELIEVE THAT ADEC IS CORRECT IN SUPPORTING A 10^{-5} OR 1 IN 100,000 RISK LEVEL ASSESSMENT.

Richard Shen

Comments on the Proposed State of Alaska's
Water Quality Standards.

10/25/93

It's important to all of those who live and work in Alaska that the decisions made regarding the State's Water Quality Standards are based on science and not on emotion.

To date there is no evidence to show that color has a detrimental affect on phytoplankton, as shown by research done by Wildish, Kiefer and others. There is no evidence that shows color to be toxic. From an economic standpoint, color removal to low levels is very difficult and costly.

The natural background water color, as we all know, is significant because the decaying material in muskegs imparts a significant amount of highly colored organic acids ("humic acid") to Southeast streams. This fact needs to be taken into account if a color standard is going to be established.

Mills in other parts of the country that have had color standards placed on them have had the standard take effect only after complete mixing outside a mixing zone. Mixing zones are a necessary part of industry's use of natural bodies of water and should be part of the decisions made in regard to the Water Quality Standards.

I support ADEC's Human Health Risk of 10^{-5} . This would not cause any measurable increase in risk to the population, but would be much more reasonable than 10^{-6} for industry to meet.

Alaska needs industry to provide a reasonable standard of living for its people. We must make room for it in our pursuit of a healthy environment. I feel Ketchikan Pulp is asking for reasonable standards that will allow it to operate profitably while still maintaining environmental quality.

Sincerely

J. Troy Olivadoti
J. Troy Olivadoti

P.O. Box 8574
Ketchikan, AK
99901

November 10, 1993 - Unalaska

Mr. Dave Sturdevant
Water Quality Manager
Alaska Department of Environmental Conservation
410 Willoughby Ave., Ste 105
Juneau, Ak 99801-1795
FAX: 465-5274

Dear Mr. Sturdevant,

What follows is comment on particular issues facing the Aleutian Community of Unalaska/Dutch Harbor as well as other areas of the region as they relate to the proposed revisions to the Alaska Water Quality Standards - Regulation 18 AAC 70.

Most people who live here in Unalaska/Dutch Harbor work an average of 6 days a week 10 hours a day. One way or another we are all linked to the primary industry of fishing. Most of us are not highly educated in the sciences, and the arcane subject of statistical manipulation, but we all have eyes. We have witnessed a tremendous decline in the last 15-20 years (accelerated in the past 4-5), of the numbers of sea mammals, fish, crab and shrimp that inhabit our local waters. Additionally, we have seen significant declines in numbers and species of sea and wetland birds that live here year round, as well as of those that winter over or migrate through the Aleutians. We have witnessed increasing amounts of oil contaminated waters, increasing amounts of biological waste and other more toxic pollutants in our local bays and harbors. There is a connection between the two.

During this period of declining wildlife, fish, crab and shrimp stock, the Fishing Industry, particularly the bottom fish industry has developed into a formidable killing machine. The high seas processing fleet is over capitalized and destructive to the point of obscenity. The onshore plants here in Unalaska, while having made considerable strides at reducing waste stream, did so only because of pressure brought to bear by ADEC and EPA. These two agencies only acted because of local citizen concern and demands that water quality be improved and that a cessation of pollution occur. It was only after considerable agitation that the Region X EPA office began sending personnel here to investigate the situation and begin the process of regulatory control. After that changes began to be evidenced. However, since we only have a "revolving door" ADEC office here, we feel that there are still many more actions that need to be made by your Department before we feel confident that ADEC is working to benefit the general public of Alaska and Unalaska/Dutch Harbor in particular.

For example, in areas such as Akutan, where there was not as much pressure to comply with State and Federal regulations, the fishing industry was allowed to create a waste pile and dead zone that is astonishing. Only now, years and years into the destruction of a beautiful Bay's natural and formerly highly productive marine environment, are ADEC and EPA making serious demands that Trident clean up its act.

Here in Unalaska, the Federal Government is still looking the other way from its admitted responsibility to clean up the land and marine toxic waste dumping of WWII. Adak, Amchitka, Shemya, Kiska, and Attu all have solid waste landfills that in some instances have toxic waste left from WWII as well as from recent accumulations. As the Military downsizes, it will be extremely important to monitor the clean up activity making certain that waste is not just covered and left behind as it was here in our Bays. Lowering State water quality standards will provide a clear message for all the fishing related industries as well as the military that it is not important to clean up and cease polluting. In addition it removes leverage which is sometimes necessary to persuade the Federal Government and private industry that they MUST prevent or clean up pollution.

Historically, there have been only two mechanisms that motivate any given industry to action. One is economic and the other is actively enforced government regulation. Today there is emerging a worldwide awareness of the need to create and maintain high ethical standards and behavior in relation to environmental protection. This is evidenced particularly among the more enlightened of the big businesses, international corporations, States, some agencies of our Federal Government and some Foreign Nations. Alaska has more clean water than any other part of the United States and probably significantly more than most of the world, and it is imperative that we maintain or enhance that quality rather than lower it.

There is no doubt that it is going to cost the onshore fishing industry serious money to continue to develop ways to avoid further pollution of our Alaskan bays and local waters. The high seas fishery is going to have to be more responsible in its harvesting efforts. The fuel suppliers will have to spend increasing amounts of money in oil spill prevention and recovery efforts, (a situation only now being seriously addressed through recent "C plan" developments, although there is still much that needs fine tuning). The Federal Government is going to have to spend money to continue cleaning military toxic waste and dumping in Alaskan coastal waters. Local City administrations will be faced with more demands to spend greater amounts of tax revenue in clean-up and prevention of point source as well as non-point source pollution.

This is going to have to be part of the cost of doing business in Alaska, of living and working in Alaska. This is emerging as part of the cost of doing business worldwide. If we Alaskans don't start now, it will only be more costly later on. The problems aren't going to go away just because we want them to. The burden of prevention and clean up should not be on the State of Alaska and its people. The burden should be on the Federal Government, the Military or the Industries involved, particularly when those industries are significantly foreign owned and extractive in nature.

It is not only the Fishing industry that pollutes Aleutian and Bering Sea waters. Large numbers of ships which come into our ports contribute substantial amounts of toxic waste to the already biologically stressed waters here and the growing population necessary to work and support industry also adds considerable waste. All 5 of the Unalaska/Dutch Harbor bays and adjacent waters are on the State's impaired water body list. As mentioned earlier, those bodies of water have an incalculable amount of waste left from WWII. Daily additions of

petrochemical pollution, other industrial wastes from boat haul-out and ship repair, human sewage and bio-waste from the onshore processors all combine into a fairly unhealthy mix, particularly in areas adjacent to outfall lines all of which threaten Captains Bay, a deep fjord like system.

Several of our local lakes and streams are contaminated with high levels of coliform bacteria and in some cases they are reported by returning WWII veterans, to contain toxic waste dumped at the end of the war. Road runoff containing high levels of salt used to suppress dust, increasing amounts of salutation due to hill and roadside erosion, improper road maintenance practices as well as the high count coliform levels from the contaminated lakes, have probably contributed to the pollution of Iliuliuk Lake and Iliuliuk River (Town Creek) and the numbers of spawning salmon have declined significantly in the past 15 years.

Prior to WWII, Unalaska's Bays were extraordinarily rich in diverse numbers of species as well as in numbers. Once we had a very rich herring and red salmon fishery. After the impact of impaired water quality in the lakes, inter tidal zone encroachment, small bay and wetland fill by the military 50 years ago, the Herring fishery declined. Admittedly the high seas intercept fishery of the past 15-20 years seriously impacted the health of the local Red Salmon fishery, but the continued and escalating decline in water quality is probably responsible for the poor recovery of that species.

A study made in 1974 indicated that Captains Bay and the surrounding waters were recovering nicely after the wartime impact. As recently as 10 years ago local herring spawned in tremendous numbers on the kelp growing along the edges of the bays, and we had a very lucrative local fishery. Recently, because of increased water pollution, oil spills, new roadway encroachment into the inter tidal zone etc., we have had a significant decline in local spawning herring and stock. What is caught here now is probably Togiak herring traveling through. If we had a healthy local herring stock to add to what is presently being taken, if we had a healthy Red Salmon run, our local small boat fleet would be back in business and the local onshore processors would have considerably more to process.

At the present time the City of Unalaska is faced with the costly process of closing our land fill and creating a new solid waste disposal site next to the old one. We have to size it to configure with projected local industrial needs, MARPOL waste, the developing tourist industry and community growth and expansion. We must plan for the next 40 years as we are relatively land poor and can't just go out and dig in a new dump whenever we need one. We have now gotten to our last chance. Because of Federal regulations that rightfully demand that we line the landfill with a water impermeable material, so that toxic waste does not leach into the adjacent Iliuliuk Bay, we are faced with the prospect of having to dispose of approximately 20,000 gallons of contaminated water A DAY! Where will we put it? How will we treat it?

As of this writing, the main option being considered is the building of a pipeline from the landfill site at the edge of Iliuliuk Bay, tie into the main sewer line, cross over to Amaknak Island and pump it into Unalaska Bay at the City's sewer outfall!!! Why bother? There are no plans to filter it. In fact, none of the sewage collected by the City's system is even subjected to primary treatment!!! We simply sieve for solids and discharge. The discharge site is next to

Unisea's outfall and adjacent to the entrance to Captains Bay. The solution to pollution is not dilution. We can expect to pay a high price if we persist in such Antediluvian practices.

These examples are just a few of the situations we are faced with out here in the Aleutians. Every coastal community of Alaska, indeed the entire coast of the US faces similar problems. Worldwide, coastal communities are faced with devastating and destructive pollution of both marine and fresh water. Only the specific toxics vary. The results are all the same. Cumulatively, we are poisoning our marine environment.

At a time when virtually every single person in the United States over the age of 10 is aware of the existing and the potentially catastrophic water pollution problems nationwide, when 36 States have instituted more stringent regulations regarding water pollution and others are considering tightening their regulations, **IT IS ASTONISHING THAT THE STATE OF ALASKA EVEN CONSIDER RELAXING OR LOWERING OUR WATER QUALITY STANDARDS.** This kind of retrograde thinking, this yielding to the demands of big business to lower our standards to theirs and thus halting pollution prevention, is abhorrent.

What follows are some specific comments directly relating to the 1993 proposed regulation changes:

Human Health Risk Level:

We urge the State of Alaska to establish a risk level which affords the public the highest protection. Two thirds of the states have adopted the 1:1 Million risk level. In Alaska, we eat a significantly higher level of seafood than the general population of the U.S. and therefore should have a greater level of protection. In addition, there is a very high cancer rate among Native people from Unalaska. We are not certain to what to attribute this rate, but it is a fact of life in our community. Between 1946 and 1982 exactly 50% of those people who died in the Native community, died of cancer. Since then cancer rates in the non-native community have risen. None of us is willing to increase our risk further. We ask the State to adopt the 1:1 million risk level, better yet, the 1:10 risk level.

Site-specific Criteria:

We are very concerned that DEC is proposing to use site-specific criteria "at levels equivalent to natural conditions, where natural conditions exceed the existing State criteria". DEC is unclear on how natural conditions will be established in areas such as ours and presumably any other coastal community over 20 years old. Our community has had heavy industrial use/discharge for the past two decades as well as catastrophic impact from WWII toxic waste discharge. A discharge which continues after 50 years, to seep and leach out into both our marine and fresh waters. **By default, natural conditions can not be established.** Considering "natural conditions" to be those concurrent with discharge or operation, is absolutely stretching the term "natural" to unnatural limits!!!

This is as ludicrous as the plan to prevent toxic leachate from getting into one Bay by lining the new land fill (situated next to an old one that will continue to leech forever unless it is mined

5-93 MON 14:17 P. 03

and cleaned up) and piping the newly contaminated water to another site and discharging it into another Bay without treatment. Again we ask, "Why bother!" The proposed regulation change would mean that "NATURAL CONDITIONS" in Unalaska waters would be that level which includes discharge and which do not even meet present state standards. Our impaired water bodies would by the wave of the DEC wand, meet State standards. 1? How is the public being served by this? It is obvious that industry is being served, but at what cost to the general public and the state's natural resources? ADEC has an obligation and a responsibility to promulgate water quality standards of the highest ethical and technological degree.

Additionally, we feel that we are being asked to rely on DEC's decision to determine conditions as "natural conditions" by measuring them in one or more seasons or in periods of time even shorter than seasonal. **We find any measurements of natural conditions less than an annual cycle or in fact a series of documented annual cycles to be completely unacceptable.**

It is entirely too convenient to specific shoreside processors to determine natural conditions this way. If a shorter time period than an annual cycle is used, this opens the door for such standards to become the norm. By doing this the Department would allow dischargers to pollute down to that level. How is this going to improve our water quality situation? Does DEC have the funds to provide the studies needed to measure natural conditions? With dwindling state funds, it is not likely. Yet, without such studies, how can the Department reasonably determine natural conditions? It can be argued that we have a "catch 22" situation here, but the most simple solution is to gather data from the most pristine Bays and Estuarine Systems in the region for example, and use that for baseline "Natural conditions" here. Doing the same for other parts of the coast would result in similar upgrade to "natural conditions".

We consider the maneuver to use site specific criteria at levels equivalent to natural conditions a backdoor approach to lowering the water quality standards both locally and statewide in favor of the very industries which have polluted our waters to the detriment of the other uses of area waters, such as fish and wildlife habitat, subsistence use, commercial fishing, and recreation. We all depend on good water quality and ADEC should be leading the way in maintaining the highest possible standards rather than being the apologists for industry and making it easier to pollute for short term economic gains. We will all be the losers in the end, with this approach. **We urge you not to adopt these revisions!**

Mixing zones:

We are concerned that DEC is proposing to loosen the restrictions on mixing zones particularly for discharge water that may have carcinogens, and will permit larger mixing zones for other toxic wastes. Mixing zones of highly toxic or carcinogenic substances should be highly regulated and certainly not be allowed in waters which are declared impaired. To date, ADEC has not been very diligent in placing the burden of proof on the applicant to demonstrate compliance with State standards prior to discharge. Now you are proposing that the public provide proof that the discharges are dangerous, thus relieving the polluter of the responsibility. This is heinous and shocking. What do we, the public have to do to make you

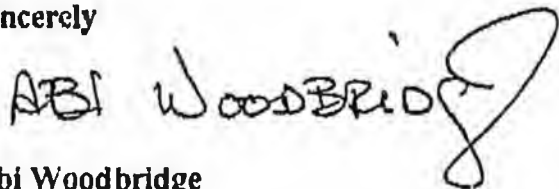
understand that water quality and its related problems in rural Alaska rank in the first magnitude of situations that need redress. We need to keep regulations that clearly prohibit mixing zones for carcinogens and we need to promulgate regulations that tighten the rules for discharges of any kind.

Furthermore, allowing a particular situation to continue when we know that similar situations in nearby waters have yielded consistently negative results (e.g. Akutan Bay, or Udagak Bay) is irresponsible. Following such a course of action will result in continued poor water quality and the further diminishment of fish and wildlife resources. We implore you to not allow mixing zones for waterbodies which don't even meet current state standards. In addition, removing waterbodies from the impaired list so as to allow mixing zones and other water pollution practices is simply not acceptable!

We recognize that industrial waste water has to go somewhere. However we feel that there is more that can be done to reduce the volume and content of polluted discharges within the State of Alaska. For example, encouraging or demanding that localized industries whether they be fishing, mining or logging combine efforts to treat or eliminate waste discharge would be an appropriate course of action. For ADEC to be finding ways within the present regulatory structure to lower water quality standards, may give the appearance of progress but is a perpetuation of existing polluting practices is unethical, and quite likely a violation of the public trust.

Thank you for the opportunity to comment.

Sincerely



Abi Woodbridge
P.O.Box 107
Unalaska, AK 99685

CC: Charles Findley, Water Quality Division
EPA Region X
1200 Sixth Avenue
Seattle, WA 98101
FAX: 206-553-0165

Rep. Bill Williams,
House Resources Committee
352 Front Street
Ketchikan, AK 99010
FAX: 225-8546

Mr. Dave Sturdevant
ADEC Water Quality Management
410 Willoughby Ave.
Juneau, Alaska 99801

Dear Mr. Sturdevant,

It appears as though the end result of ALASKA WATER QUALITY STANDARDS REGULATION 18 AAC70 is the lowering of standards and therefore the lowering of quality. I find this distressing and wish to comment.

For the majority of my last twenty years in Alaska the Unalaska/Dutch Harbor area has been my home base. In that time I have seen the water quality of the surrounding bays deteriorate alarmingly.

The Unalaska area has expanded rapidly over the past number of years and just the sheer numbers of people has had great effect. But now with REGULATION 18 AAC70, the fish processing industry, which in the past has been "let slide" just because of the remoteness of the area and lack of understanding of the water ways, will be given a free hand. With no burden of proof and only required to meet vague "historical levels" standards, it is not hard to imagine the drastic and dangerous decline of water quality that awaits the Aleutians.

I am adamantly opposed to any regulation that will reduce water quality standards.

Sincerely,

C. Gordon Terpening
P.O. Box 730
Dutch Harbor, Alaska 99692

Mr. Charles Findley
Director
Water Division EPA Region X
1200 6th Ave.
Seattle, Washington 98101

Dear Mr. Findley,

Enclosed please find a copy of a letter mailed to Mr. Dave Sturdevant of the Alaska DEC.

I can not stress enough my objection to any lowering of water quality standards (ALASKA WATER QUALITY STANDARDS REGULATION 18 AAC70). Especially in the Aleutians where quality has declined rapidly even under "more strict" regulations.

I would hope that the EPA is aware of the water quality problems in the Unalaska area and that Federal influence could be used to encourage the ADEC and the State of Alaska to establish and enforce standards aimed at returning the waters to the natural state.

Sincerely,

C. Gordon Terpening
P.O. Box 730
Dutch Harbor, Alaska 99692

The proposed water quality standards are of critical importance to the citizens of Alaska since they not only affect the environmental quality of the State's waters but also affect how the citizens can use the waters. As such, DEC should ensure that standards reflect the following:

First, while the standards should provide for adequate environmental protection, they should not unreasonably impair the domestic, municipal, commercial, and industrial uses of the waters. Second, the standards should recognize the wide variation in the natural water conditions found throughout the State and not be set at limits so restrictive as to exceed the native water quality. Third, the State should consider the experience of other states in formulating water quality policies and strive to set standards that are generally consistent with those of the other forty-nine states.

Of Alaska's more than 3 million lakes and thousands of miles of coastline, the State of Alaska has not classified marine or freshwater bodies in the State of Alaska for specific uses. While we acknowledge the impossible task of classifying all of them, the State has no plan to classify any more of them at the present time. If the State is reluctant to continue this practice based on time and economic constraints, then why have they worked during this triennial review to continue to regulate water bodies for classifications under specific uses? All but a handful of water bodies in the state are responsible for meeting the most

general

General

restrictive standards for each use category regardless of location or use. In most cases, this is unreasonable and puts economic, technological, and growth restraints on the many citizens, municipalities, and industries in the state.

Some specific issues that should be addressed:

COLOR

etc

The proposed water quality standard for color of 15 units is very troublesome. First, it does not reflect the natural levels of color that are found in most Alaskan waters. Many of the streams and coves surrounding Ketchikan have natural levels of color between 30 and 150 units. Under the proposed standard, these streams violate the water quality standard for color despite the fact that there are no man-made discharges into them.

Furthermore, color is mainly an aesthetic issue which generally does not affect the use of marine waters. The very strict standard proposed by the State will not have substantial environmental benefits. Very few states have set numerical color limits and the few that have done so regulate on the basis of increased levels of color at complete mixing.

It is very expensive to remove color from discharge streams. The removal processes frequently generate potential hazardous wastes. Given the very limited benefit and excessive costs associated with

the proposed standard, the State should not adopt a numerical limit. The State should set a standard that considers the natural atmospheric and seasonal variation of color throughout Alaskan waters.

20c

We strongly support the narrative limit as proposed for the seafood processing industry for all marine waters and uses in Alaska.

COLIFORM

The proposed standard of 20 colonies per 100 ml for the most stringent water classification is in some cases 10 times more restrictive than the federal standard. As noted earlier, the most stringent classification is applied unless the waters have been reclassified. No other state regulates this parameter at less than 100 colonies per 100 ml. The level proposed by Alaska is so low that some streams in remote uninhabited areas have coliform numbers that exceed the proposed standard.

20d

We have found no scientific support for such a standard. However, the proposed standard will probably require many dischargers to install and operate disinfection systems to meet a standard required by no state but Alaska.

The position discussed in the state issue papers for dioxins, arsenic, and chloroform are supported.

MIXING ZONES

In setting mixing zones, the State needs to balance the uses of the receiving waters, the size and hydrologic characteristics of the water body, and the measures needed to protect critical resource areas. Since each receiving water has individual characteristics, mixing zones should be set on a case-by-case basis. The State has proposed to get away from arbitrary specifications for determining mixing zones in streams and rivers and should do likewise for marine and estuarine waters. Therefore, the State should suspend its approach of limiting mixing zones in estuarine waters by area and width and adopt the site specific approach proposed for streams and rivers.

This will permit mixing zones to be set in a way that protects the environment yet still allows for the reasonable application of judgment. Otherwise, dischargers may be required to construct expensive facilities merely to satisfy an arbitrary limit with no consideration of whether these facilities will significantly benefit the receiving water.

TOXICITY

The technique of using short-term tests to assess chronic toxicity in waters is a fairly new area of science and needs to be applied cautiously. In setting a standard for toxicity, the State should

specify that the tests used to determine compliance with the standard reflect biological mechanisms that are relevant to the ecology of the receiving waters.

A major concern about short term chronic toxicity tests is that they have not undergone rigorous testing to evaluate inter-laboratory variability and reproducibility. Although these tests can be a useful tool in assessing water quality, extreme caution is needed in using these tests to determine water quality or for setting compliance limits on dischargers. There are still many issues (comparative sensitivities, test exposure regimes, and physiological considerations) that need to be further addressed by research laboratories before these test should be used as a regulatory tool.

23

PETROLEUM HYDROCARBONS

The proposed standard for hydrocarbons is inconsistent with how other states regulate this parameter and may cause substantial problems for dischargers involved in non-petroleum-related activities. This test will place unnecessary limits on non-petroleum activities.

Most states that regulate total hydrocarbons do so at levels ranging from 10 to 75 parts per million. If the State of Alaska adopts the proposed standard, many entities will be forced to treat

20D

discharges containing minute amounts of hydrocarbons. These entities include municipalities, commercial operations with parking lots, and non-petroleum industries. Since the proposed standard would have an enormous impact on activities that do not cause water quality problems, the State should re-examine how best to regulate this parameter and rely on a standard similar to those adopted by other states.

CONCLUSION

Although water quality is important to Alaska, it is important that the water quality standards not be set so strict as to impose burdens on the citizens of the State that will not significantly benefit ambient water quality. The State has generally classified all its waters for the maximum beneficial uses and therefore should acknowledge that in many cases the natural waters of the State cannot meet the proposed limits. Given the extensive experience of other states with regulating water quality, the State of Alaska should not adopt standards that are much stricter than the norm without detailed and substantial justification.

I do not think these proposed standards will survive a legal challenge so why waste state money defending them. I also believe there is a municipality, industrial concern or small business that can meet ^{them}. Examples being - fish processing plants, sports fishing lodge or business any kind located on shoreline. There can't be selective enforcement targeting only major employers.

I would hope you would balance the threats to our jobs with what would be only marginal benefit to our environment provided by these strict regulations. By attempting to unreasonably burden industry you negate

any attempts local governments are making
to attract new industry and jobs to our
state. We are living in a time of
declining state revenues when the real
money is gone its corporate income
tax that's going to be minus your salary.
Have you considered that?

Testimony of
Meredith Marshall
PO Box 7418
Ketchikan

Hi Abi - Heel's
what I wrote
- Clare

November 10th, 1993
POB 338
Unalaska, Alaska 99685

Mr Dave Sturdevant
Water Quality Manager, DEC
410 Willoughby Ave #105
Juneau, AK 99801-1795

Dear Mr. Sturdevant,

The proposed revisions to regulation 18.AAC.70 do not provide adequate protection for Alaska. I object to the human health risk level accepted, the concept of site-specific criteria, and the lack of control of mixing zones. I have worked as a health care provider in Alaskan coastal communities for eight and a half years, and have grown increasingly concerned about the extent to which the natural resources and the local residents are used and discarded by industrial concerns. Alaska is not a third world country, it is an "owner state." Maintaining human and environmental health should be considered part of the cost of doing business; if we don't pick up the tab now, we will be paying punitive interest in years to come.

Sincerely,

Clare Lattimore

Mr Dave Sturdevant
Water Quality Management
Dept. of Environmental Conservation
410 Willoughby Ave, Suite 105
Juneau, AK 99801-1795

Dear Mr. Sturdevant,

I am writing in response to the proposed lowering of water quality standards in the State of Alaska

It amazes me that any responsible human being, let alone one of our elected officials, can consciously put at risk lives of fellow human beings by trying to lower quality of waters that are already turning toxic from the amount of waste being allowed to enter them.

Our community of Unalaska/Dutch Harbor is probably one of the most polluted fishing communities in our state. This is partly due to the amount of outfall coming from the fish processing plants and floating processors that lie in our bays. Another major pollutant includes very large amounts of World War II waste left by our government that continues to leach into our waters.

I have often wondered if the high rate of cancer and pregnancy problems in our community has anything to do with pollutants in our drinking water, or by the large amount of seafood eaten in this community. And this is the same seafood being sold in the world marketplace.

The negative reasons can go on and on, and will only continue to get worse. The only responsible answer is - TIGHTEN THE STANDARDS!! Don't let the big businesses set our health standards, do your job as it should be done.

cc: Charles Findley
Director of Water Division
EPA Region 10
1200 Sixth Ave
Seattle, Wa 981018

most sincerely
Susan Stone
Susan Stone
P.O. Box 304
UNALASKA, AK 99685

107-13-93 MON 14:20
copy
Dave Sturdevant
ADEC Water Quality
410 Willoughby Ave.
Juneau 99801
fax 465 5274

George Ripley
PO Box 1226
Dutch Harbor Ak 99692

Chuck Findley, Dir.
Water Division US EPA Reg. X
1200 6th Ave.
Seattle, Wa. 98101
fax 206 553 0165

10/30/93

Dear Sir,

The cumulative negative effects of burgeoning global populations should make any knowledgeable and caring administrator aware that the time has come when we must account for years of environmental recklessness. As V.P. Al Gore's book has reminded us, the earth is in the balance. We each, as members of the crew aboard spaceship earth, must take a pledge to leave this planet better than we found it. It will never get easier than now to begin.

We in the State of Alaska are not naive to issues of water quality. We have seen water quality problems in other states, from the industrial sludge of Boston harbor to the toxins released from tailing piles into rivers throughout the west. Many of us came to Alaska hoping that here we could get things done correctly from the start, to do so we must ignore the tailing piles in the Fox Creek valley of Fairbanks, the industrial poisoning of Ship Creek in Anchorage, and the siltation of numerous spawning streams by reckless logging, and the relentless poisoning of the waters of Valdez, Dutch Harbor and Sitka.

Our Governor takes great pride in imagining our industries are a shining example to the world, that we know how to do things right and spare no expense to do so. Such blatant demagoguery! If he wishes these bragging rights he has no business eviscerating our water quality standards while the rest of the country strengthens theirs.

These are times when standards measuring hazardous substances are no longer in the realm of parts/thousand or million but are now couched in terms of parts/billion. 15 years ago the people of our nation were advised that the cumulative storage of mercury at the top of the food chain in tuna made the consumption of tuna hazardous. Alaskan's are no less aware of such hazards now, especially as we take steps to improve marketplace acceptance of our seafood.

Industries must learn to be increasingly responsive to preventing pollution not increasingly negligent.

I can see no justification for the reduction of existing water quality standards.

Sincerely
George Ripley

DEC manager reports people distrust agency

By JEANINE POHL

THE JUNEAU EMPIRE

In memos to Environmental Conservation Commissioner John Sandor, the manager of state water-quality hearings in Southeast Alaska said people testifying don't trust DEC and don't trust Sandor and the Hickel administration to protect the state's waters.

Dick Stokes, Southeast manager for DEC who served as hearing officer at the water-quality sessions, summarized the comments of people who testified at hearings earlier this month in Juneau, Ketchikan, Sitka and Haines.

"I was anxious to get the general message to the commissioner

and (Division of Environmental Quality director) Mike Menge as soon as possible," Stokes said today. "One reason that I wrote the first memo was the frustration that I heard in Haines, that no one (at DEC) was hearing the message."

"People want clean water," Stokes summarized of the Haines testimony. "They call it the essential of life, a priceless ingredient of Alaska life ... a commodity of value to the tourism and seafood industry, a right."

The state is in the midst of a public-comment period on revised water-quality standards, a review

Please see Water, Back page

10-20-93
Juneau Empire

8 JUNEAU EMPIRE WEDNESDAY OCTOBER 20, 1993

Water...

Continued from Page 1

that is required under the federal Clean Water Act.

After an outpouring of negative comments on an earlier version a year ago, DEC's water-quality management section withdrew the regulations last fall and offered revised standards this summer.

In response to Stokes' memos, Sandor said the charges of some people are politically motivated. He defended DEC's emphasis on improving the state's water quality, particularly in villages.

Sandor said the greatest risk Alaskans face from water pollution is waterborne disease caused by unsafe sanitation systems, and that is where his department has concentrated more of its efforts.

Public comment on the new standards has continued to be critical, particularly regarding the state's proposal to allow mixing zones - areas in water bodies where pollution levels may exceed water-quality standards.

The proposed Kensington and

Alaska-Juneau gold mines will require mixing zones in order to operate, as will Southeast Alaska's two pulp mills - although the Alaska Pulp Corp. mill in Sitka recently closed indefinitely.

Many testifiers oppose the state's initial choice of a cancer risk level of 1-in-100,000 in determining levels of cancer-causing pollutants allowed in the water. Final decisions on risk levels have been postponed until next year.

"People are incredulous that DEC is proposing to relax some standards; that DEC is proposing the highest level of (cancer) risk acceptable to EPA," Stokes wrote of the Haines hearing. "They either don't understand or accept the notion that DEC is trying find a balance where a healthy economy can exist in a healthy environment."

"Our proposals have struck a fundamental nerve," Stokes wrote of the Sitka hearing. "They have angered, disappointed and frightened a number of people."

As he noted in his summary of

the Haines hearing, "they suspect DEC and the state of protecting industry too much and of 'caving in' to industry lobby. ... many testifiers weren't sure that DEC is listening, perhaps most doubted that we are.

"People were also worried ... about the proposed Kensington mixing zone near Point Sherman in Lynn Canal. As you know, the proposed mixing zone is an area of exceedingly high sensitivity to the fishing industry. They are worried about possible impacts of the zone on fishing stocks, the perception of tainting of products," Stokes wrote of the Haines comments.

While Stokes noted that the level of anger at the Ketchikan hearing was less than in other Southeast communities, he said opposition there to the revisions was still solid, as it was in Juneau.

Written comments on the water-quality standards are being accepted through Nov. 1 and final regulations must be approved by the federal Environmental Protection Agency.

TCN: 30711 DATE & TIME: 10/25/93 13:30 TO 17:00 STATUS:6 ADJOURNED

**** ORDER SUMMARY ****

SPONSOR: HRES HOUSE RESOURCES CHAIRS: REP. WILLIAMS
PURPOSE: PUB PUBLIC HEARING
CONTACT: LAURA OR PETE TEL#: (907)247-4672
CHAIRING SITE: KETCHIKAN 352 FRONT STREET ZZZ
TOLL FREE: (800)478-7612 DIAL-UP: LIO:(800)478-9910

SPONSOR REMARKS(PUB): TESTIMONY:Y ALLOWED 3 MINUTE LIMIT

SPONSOR REMARKS(LIO): BACKUP MATERIAL:N MEETING IN PROGRESS:N MAX. SITES:20
OTHER SITES MAY ADD IF INTEREST.

**** PLEASE SEE NEW AGENDA AND A SYSM COMING YOUR WAY ****
TCN REQUESTED ON 10/25/93 AND HAS 20 UPDATES

**** AGENDA ****

- 1 1. BRIEFING BY D.E.C.
- 2 2. TESTIMONY ON SOLID WASTE REGS.
- 3 3. TESTIMONY ON WATER QUALITY STANDARDS
- 4 MORE INFO. ON PAGE 6.

**** PARTICIPATING LIOS ****

ANC ANCHORAGE	716 W 4TH, #200	LOCATION STAFF
FBX FAIRBANKS	119 N CUSHMAN ST	LOCATION STAFF
GLN GLENNALLEN	COMMUNITY LIB.	LOCATION STAFF
HOM HOMER LTC	126 W PIONEER #4	LOCATION STAFF
JNU JUNEAU	CAPITOL CAP205	LOCATION STAFF
KOT KOTZEBUE	333 FRONT STREET	LOCATION STAFF
* KTN KETCHIKAN	352 FRONT STREET	LOCATION STAFF
MAT MATSU	165 E PARKS HWY.	LOCATION STAFF
NOM NOME	FRONT STREET	LOCATION STAFF
PSG PETERSBURG	101 GJOA STREET	LOCATION STAFF
SIT SITKA	210 LAKE STREET	LOCATION STAFF
SOL KEN/SOL	34824 KALIFONSKY	LOCATION STAFF
TOK TOK LIO	MP 1314 AK. HWY	LOCATION STAFF

**** VOLUNTEER & OFFNET SITES ****

PSG WRG WRANGELL LTC	LONGSHOREMEN'S	MABEL FENNIMORE	(907)874-3013
SIT CRA CRAIG	CITY HALL	HELEN GRAY	(907)826-3277
SIT GUS GUSTAVUS	FIRE HALL	BECKY KURTZ	(907)697-2348
SIT HNS HAINES	CITY HALL	ALETA ADKINS	(907)766-2294
SIT HOO HOONAH	LOCAL SCHOOL	DEE FISKE	(907)945-3664
SIT KLA KLAWOCK	CITY HALL	KAREN MOORE	(907)755-2261
VAL COR CORDOVA	CITY HALL	LORI DENSON	(907)424-6200

PARTICIPANTS IN: ANCHORAGE

1 MR. CHRIS TOAL	ANC.	REP. FINKELSTEIN	TSFY. 3. TESTIMONY
2 REP. CON BUNDE	ANCHORAGE	AK 99501	(907)258-8190
3 KRIS WARREN	ANCHORAGE	AK 99501	(907)258-8168
4 MS ANNETTE KREITZER	ANCHORAGE	AK 99510	(907)267-4543
5 MR MARTIN ROSEMAN	ANCHORAGE	AK 99501	(907)258-8189

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PARTICIPANTS IN: ANCHORAGE

6 MR MARC LITTLE	ANC	ANCHORAGE	AK 99510 (907)265-6533
952 C STREET, ROOM 501		MOA/DHHS	OBSV. ALL ITEMS
		ANCHORAGE	AK 99501 (907)343-6586

PARTICIPANTS IN: FAIRBANKS

1 REP. JOHN DAVIES	FBX		TSFY. ALL ITEMS
119 N. CUSHMAN ST. #207	FAIRBANKS	AK 99701	(907)456-8172
2 REP. JEANNETTE JAMES			TSFY. ALL ITEMS
P.O. BOX 56622	NORTH POLE	AK 99705	(907)488-1546
3 MS NADINE WINTERS	FBX N. STAR BOROU		OBSV. ALL ITEMS
P.O. BOX 71267	FAIRBANKS	AK 99707	(907)459-1301
4 MR. KURT PARKAN	REP. DAVIES		OBSV. ALL ITEMS
119 N. CUSHMAN ST. #207	FAIRBANKS	AK 99701	(907)456-8172
5 MR. GUY VAN DOREN	FBX N. STAR BOROU		OBSV. ALL ITEMS
P.O. BOX 71267	FAIRBANKS	AK 99707	(907)459-1301
6 MS. TERESA SAGER-STANCLIFF	SEN. MILLERS		OBSV. ALL ITEMS
119 N. CUSHMAN ST. #101	FAIRBANKS	AK 99701	(907)488-0862
7 MS. SARA FISHER	REP. THERRIALT		OBSV. ALL ITEMS
119 N. CUSHMAN ST. #101	FAIRBANKS	AK 99701	(907)488-0862

PARTICIPANTS IN: GLENNALLEN GLN
 1 MRS. CAROL NEELEY CBS SERVICE CO OBSV. 2. TESTIMONY
 BOX 88 GLENNALLEN AK 99588 (907)822-3600

PARTICIPANTS IN: HOMER LTC HOM
 1 MRS. LINDA GJOSUND REP. PHILLIPS OBSV. ALL ITEMS
 126 W. PIONEER AVE., #4 HOMER AK 99603 (907)235-2924
 2 MS. PATRICIA KING TSFY. 3. TESTIMONY
 BOX 15012 FRITZ CREEK AK 99603 (907)000-0000
 3 MR. CHRIS CHAVASSE TSFY. ALL ITEMS
 BOX 15003 FRITZ CREEK AK 99603 (907)000-0000

PARTICIPANTS IN: JUNEAU JNU
 1 CHIP THOMA REPRESENTGN SELF OBSV. 3. TESTIMONY
 #2 MARINE WAY JUNEAU AK (907)000-0000
 2 CHUCK ACHBERGER CHAMBER OF COMM. TSFY. ALL ITEMS
 124 W. 5TH STR. JUNEAU AK 99801 (907)463-5604
 3 PAULA TERREL THANE NEIGHB. ASN TSFY. 3. TESTIMONY
 5025 THANE RD. JUNEAU AK 99801 (907)586-3451
 4 DICK HOFFMAN AK. TROLLERS ASN TSFY. 3. TESTIMONY
 JUNEAU AK (907)586-9400
 5 ELDON DENNIS USAG TSFY. 3. TESTIMONY
 BOX 20070 JUNEAU AK 99802 (907)586-3544
 6 DAVE DONALDSON APRN OBSV. ALL ITEMS
 JUNEAU AK (907)000-0000
 7 LAURA FLEMMING REP. WILLIAMS OBSV. ALL ITEMS
 JUNEAU AK (907)000-0000
 8 PAM DUNDY SEN. ZHAROFF OBSV. ALL ITEMS
 JUNEAU AK (907)000-0000
 9 ED EMSWILER ADEC/SERO OBSV. ALL ITEMS
 JUNEAU AK (907)465-5353
 10 DICK STOKES ADEC/SERO OBSV. ALL ITEMS
 JUNEAU AK (907)465-5350

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PARTICIPANTS IN: JUNEAU JNU
 11 STEVE TOROK EPA OBSV. ALL ITEMS
 JUNEAU AK (907)000-0000
 12 TO OBSERVE JUNEAU AK (907)000-0000
 13 TO OBSERVE JUNEAU AK (907)000-0000
 14 TO OBSERVE JUNEAU AK (907)000-0000
 15 TO OBSERVE JUNEAU AK (907)000-0000
 16 MS. SHARON HAWKINS AUDUBON SOCIETY TSFY. 3. TESTIMONY
 POB 21065 AUKE BAY AK 99821 (907)789-7414
 17 MS CARYL BOEHNERT TSFY. 3. TESTIMONY
 1114 SLIM WILLIAMS WAY JUNEAU AK 99801 (907)000-0000
 18 MS THERESA SVANCARA TSFY. 3. TESTIMONY
 POB 35 DOUGLAS AK 99824 (907)000-0000
 19 MS CLAUDIA ECHAVARRIA TSFY. 3. TESTIMONY
 235 5TH JUNEAU AK 99801 (907)000-0000
 20 TO OBSERVE JUNEAU AK (907)000-0000

PARTICIPANTS IN:KOTZEBUE KOT
 1 MS. CHERYL DAVIS REP. MACLEAN OBSV. ALL ITEMS
 BOX 667 KOTZEBUE AK 99752 (907)442-3061
 2 MS. MARTHA STEWART SEN. ADAMS OBSV. ALL ITEMS
 BOX 33 KOTZEBUE AK 99752 (907)442-3245
 3 MR. JOHN SPRIGGS MANIILAQ ASSOC. OBSV. ALL ITEMS
 BOX 256 KOTZEBUE AK 99752 (907)442-3311

PARTICIPANTS IN:KETCHIKAN KTN
 1 MR. MEAD TREADWELL DEC TSFY. 1. BRIEFING B
 410 WILLOUGHBY AVE. JUNEAU AK 99801 (907)465-5050
 2 MS. HEATHER STOCKARD DEC TSFY. 1. BRIEFING B
 410 WILLOUGHBY AVE. JUNEAU AK 99801 (907)465-5150
 3 MR. DAVID STURDEVANT DEC TSFY. 1. BRIEFING B
 410 WILLOUGHBY AVE. JUNEAU AK 99801 (907)465-5050
 4 MR. DOUGLAS REDBURN DEC OBSV. 1. BRIEFING B
 410 WILLOUGHBY AVE. JUNEAU AK 99801 (907)465-5050
 5 MR. ROLAND STANTON SELF TSFY. 3. TESTIMONY
 3817 FAIRVIEW KETCHIKAN AK 99901 (907)225-3406
 6 MR. ALLYN HAYES SELF TSFY. 3. TESTIMONY
 BOX 722 WARD COVE AK 99928 (907)247-8369
 7 MR. STEVE HAGAN KETCHIKAN PULP TSFY. 3. TESTIMONY
 BOX 6600 KETCHIKAN AK 99901 (907)225-2151
 8 MS. CONSTANCE GRIFFITH SELF TSFY. 3. TESTIMONY
 2509 4TH AVE. KETCHIKAN AK 99901 (907)225-5069
 9 MR. TROY REINHART AFA TSFY. 3. TESTIMONY
 111 STEDMAN #200 KETCHIKAN AK 99901 (907)225-6114
 10 MR. DAVE KATZ TSFY. 3. TESTIMONY
 320 BAWDEN ST. KETCHIKAN AK 99901 (907)225-0750
 11 MR. JACK LEE TONGAS' SPORTFISH TSFY. 3. TESTIMONY
 BOX 1081 WARD COVE AK 99928 (907)247-8156
 12 MR. RALPH LEWIS SELF OBSV. 3. TESTIMONY

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PARTICIPANTS IN:KETCHIKAN KTN
 3338 1ST ST. KETCHIKAN AK 99901 (907)225-2565
 13 MR. ERNIE MCREYNOLDS MOBILE HOME PARK OBSV. 3. TESTIMONY
 BOX 963 WARD COVE AK 99928 (907)225-8608
 14 MS. ERNESTA BALLARD SELF TSFY. 3. TESTIMONY
 705 MAIN ST. KETCHIKAN AK 99901 (907)247-0846
 15 MR. CLIFF TARU SE STEVEDORING TSFY. 3. TESTIMONY
 BOX 8080 KETCHIKAN AK 99901 (907)225-6157
 16 MAYOR JAMES CARLTON BOROUGH MAYOR OBSV. 3. TESTIMONY
 1043 WOODLAND AVE. KETCHIKAN AK 99901 (907)225-4261
 17 MS. ALLIS MAY DAVIS CITIZEN TSFY. 3. TESTIMONY
 BOX 1102 WARD COVE AK 99928 (907)225-8771
 18 MS. MARILYN LEE CITIZEN TSFY. 3. TESTIMONY
 BOX 1081 WARD COVE AK 99928 (907)247-8156
 19 MAYOR ALAIRE STANTON CITY MAYOR TSFY. 3. TESTIMONY
 3817 FAIRVIEW KETCHIKAN AK 99901 (907)000-0000
 20 MR. FRED MONREAN KTN PUBLIC WORKS TSFY. 2. TESTIMONY
 334 FRONT ST. KETCHIKAN AK 99901 (907)228-5615
 21 MR. JACK PEARSON CITY MANAGER OBSV. 2. TESTIMONY
 334 FRONT ST. KETCHIKAN AK 99901 (907)228-5634
 22 MS. MEREDITH MARSHALL CITIZEN TSFY. 3. TESTIMONY
 429 EDMOND KETCHIKAN AK 99901 (907)225-3817
 23 MS. KATY FRENCH KTN PULP CO. TSFY. 3. TESTIMONY
 BOX 6600 KETCHIKAN AK 99901 (907)225-2151
 24 MR. JAMES HEIMRICH OBSV. 3. TESTIMONY
 BOX 9154 KETCHIKAN AK 99901 (907)225-2151
 25 MR. JON COLLIE OBSV. 3. TESTIMONY
 3844 DENALI APT A KETCHIKAN AK 99901 (907)225-2151
 26 MR. TROY OLIVADOTI OBSV. 3. TESTIMONY
 BOX 8974 KETCHIKAN AK 99901 (907)225-2151
 27 MR. STEVEN EILERTSON OBSV. 3. TESTIMONY
 BOX 9154 KETCHIKAN AK 99901 (907)225-2151
 28 MR. RICHARD SHEN OBSV. 3. TESTIMONY
 2619-1/2 3RD AVE. KETCHIKAN AK 99901 (907)228-2239
 29 MR. ROGER ZIESAK OBSV. 3. TESTIMONY
 15033 N. TONGASS HWY KETCHIKAN AK 99901 (907)225-2151
 30 MS. CINDY ROSS-BARBER OBSV. 3. TESTIMONY
 BOX 8595 KETCHIKAN AK 99901 (907)225-9079
 31 MR. JIM FOSTER TSFY. 3. TESTIMONY
 BOX 9068 KETCHIKAN AK 99901 (907)225-7607
 32 MR. JOHN PETERSON TSFY. 3. TESTIMONY
 661 S. POINT HIGGINS KETCHIKAN AK 99901 (907)247-2686

PARTICIPANTS IN:MATSU MAT
 1 REP PAT CARNEY TSFY. 1. BRIEFING B
 165 E PARKS HWY, # 106 WASILLA AK 99654 (907)373-2818

PARTICIPANTS IN:NOME NOM
 1 MR. E.C. WHEELER WHEELER & ASSOC. OBSV. ALL ITEMS
 P. O. BOX 945 NOME AK 99762 (907)443-5433
 2 MR. KENNETH KLANIKA KNOM RADIO OBSV. ALL ITEMS
 P. O. BOX 988 NOME AK 99762 (907)443-2777
 3 MR. RANDY ROMENESKO ADEC-NOME OBSV. ALL ITEMS
 P. O. BOX 1815 NOME AK 99762 (907)443-2600

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PARTICIPANTS IN:PETERSBURG PSG
 1 MR. ELI LUCAS CITY OF PSG TSFY. 2. TESTIMONY
 BOX 329 PETERSBURG AK 99833 (907)772-4520
 2 MS. CHRIS NOROSZ PSG VSSL. OWNERS TSFY. 3. TESTIMONY
 BOX 232 PETERSBURG AK 99833 (907)772-9323

PARTICIPANTS IN:WRANGELL LTC PSG WRG
 1 MR. STEVE REED UNABL. ALL ITEMS
 BOX 2035 WRANGELL AK 99929 (907)874-2258
 2 MR. PETERS BRANSON UNABL. ALL ITEMS
 BOX 2073 WRANGELL AK 99929 (907)874-3291

PARTICIPANTS IN:SITKA SIT
 1 MR. BOB ELLIS TSFY. 3. TESTIMONY
 BOX 2966 SITKA AK 99835 (907)747-8950
 2 MR. DON MULLER TSFY. 3. TESTIMONY
 BOX 1042 SITKA AK 99835 (907)747-8808
 3 MR. DICK SMITH SE CONFERENCE TSFY. 2. TESTIMONY
 304 LAKE ST. SITKA AK 99835 (907)747-5500
 4 MR. FLORIAN SEVER OBSV. 3. TESTIMONY
 1706 EDGE CUMBE DR. SITKA AK 99835 (907)747-8444

5 MS.	CHERYL BOX 6209	FRITCHARD	SITKA	DEC	OBSV. 3. TESTIMONY AK 99835 (907)000-0000
6 MS.	HELEN 1011 HALIBUT	DRURY POINT RD.	SITKA	DEC	TSFY. 3. TESTIMONY AK 99835 (907)747-8019
7 MS.	JANE BOX 1673	EIDLER	SITKA	DEC	OBSV. 3. TESTIMONY AK 99835 (907)000-0000
8 MR.	BOB	CHEVALIER	SITKA	DEC	TSFY. 3. TESTIMONY AK (907)000-0000
9 MR.	AL BOX 33025	KEGLER	JUNEAU	DEC	OBSV. ALL ITEMS AK 99803 (907)465-5348
10 MR.	LES BOX 3292	LEATHERBERRY	JUNEAU	DEC	OBSV. ALL ITEMS AK 99803 (907)465-5348
11 MR.	JIM 901 HALIBUT	CLARE POINT RD.	SITKA	DEC	OBSV. ALL ITEMS AK 99835 (907)747-8614
12 MR.	STEVE 1308 SAWMILL	REIFENSTUHL CREEK RD.	SITKA	DEC	OBSV. ALL ITEMS AK 99835 (907)747-6850
13 MR.	MARK 304 LAKE ST.	BUGGINS	SITKA	CITY OF SITKA	OBSV. ALL ITEM. AK 99835 (907)966-2256
14 MR.	ROLAND 407 DEGROFF ST.	WIRTH	SITKA	DEC	UNABL 3. TESTIMONY AK 99835 (907)747-1473
15 MR.	ERIC 103 GIBSON	JORDAN	SITKA	DEC	UNABL 3. TESTIMONY AK 99835 (907)747-6743
16 MS.	CHRISTINE BOX 1364	YOUNG	SITKA	DEC	UNABL 3. TESTIMONY AK 99835 (907)747-1005
17 MR.	ROLLO 4600 SAWMILL	POOL CREEK RD.	SITKA	AK PULP CORP.	TSFY. 3. TESTIMONY AK 99835 (907)747-2283
18 MS.	KATRINKA 801 LINCOLN ST.	HIBLER	SITKA	DEC	OBSV. 3. TESTIMONY AK 99835 (907)747-1473
19 MS.	MAYA 801 LINCOLN ST.	RASCHEL	SITKA	DEC	OBSV. 3. TESTIMONY AK 99835 (907)747-1473
20 MS.	CAROLYN 305 ISLANDER DR.	NICHOLS	SITKA	DEC	UNABL 3. TESTIMONY AK 99835 (907)747-3146

PARTICIPANTS IN: GUSTAVUS SIT GUS

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PARTICIPANTS IN: GUSTAVUS SIT GUS

1 MR.	GREG	STREVELER	GUSTAVUS	DEC	TSFY. 3. TESTIMONY AK 99826 (907)697-2287
2 MS.	JUDY	BRAKEL	GUSTAVUS	DEC	OBSV. ALL ITEMS AK 99826 (907)000-0000
3 MR.	PAUL	BARNES	GUSTAVUS	DEC	OBSV. ALL ITEMS AK 99826 (907)000-0000
4 MR.	DOUG	OGILVIE	GUSTAVUS	DEC	OBSV. ALL ITEMS AK 99826 (907)000-0000
5 MS.	KATHY	STREVELER	GUSTAVUS	DEC	OBSV. ALL ITEMS AK 99826 (907)000-0000
6 MR.	VAN	BAKER	GUSTAVUS	DEC	OBSV. ALL ITEMS AK 99826 (907)000-0000
7 MR.	THOMAS	IMBODEN	GUSTAVUS	DEC	OBSV. ALL ITEMS AK 99826 (907)000-0000
8 MR.	CHARLIE	RICE	GUSTAVUS	DEC	OBSV. ALL ITEMS AK 99826 (907)000-0000
9 MS.	HEIDI	ROBICHAUD	GUSTAVUS	DEC	OBSV. ALL ITEMS AK 99826 (907)000-0000

PARTICIPANTS IN: HAINES SIT HNS

1 MR.	GERSHON BOX 956	COHEN	HAINES	CLEAN WATER	ALL. TSFY. 3. TESTIMONY AK 99827 (907)766-2488
2 MR.	THOMAS BOX 1014	ELY	HAINES	DEC	TSFY. 3. TESTIMONY AK 99827 (907)766-2869
3 MR.	TIM BOX 672	JURE	HAINES	DEC	UNABL 3. TESTIMONY AK 99827 (907)766-2208
4 MR.	DAVID BOX 387	NANNEY	HAINES	DEC	UNABL 3. TESTIMONY AK 99827 (907)766-2763
5 MR.	BRIAN BOX 318	CLAY	HAINES	DEC	OBSV. ALL ITEMS AK 99827 (907)766-3367
6 MR.	TOM BOX 209	CLAY	HAINES	DEC	OBSV. ALL ITEMS AK 99827 (907)766-2994

PARTICIPANTS IN: HOONAH SIT HOO

1 MAYOR	ALBERT BOX 360	DICK	HOONAH	CITY OF HOONAH	OBSV. ALL ITEMS AK 99829 (907)945-3663
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PARTICIPANTS IN: KLAWOCK SIT KLA

1 MR.	MARVIN BOX 113	YODER	KLAWOCK	CITY OF KLAWOCK	OBSV. ALL ITEMS AK 99925 (907)755-2261
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PARTICIPANTS IN: KEN/SOL SOL

1	CATHERINE 4710 E. POPPY LANE	MAYER	SOLDOTNA	KP BOROUGH	OBSV. 2. TESTIMONY AK 99669 (907)262-9667
2	DARIN 34824 K-BEACH RD.	MORGAN	SOLDOTNA	REP. GARY DAVIS	OBSV. ALL ITEMS AK 99669 (907)262-8414

PARTICIPANTS IN: TOK LIO TOK

1 MR.	JOHN P.O. BOX 101	ERICKSON	TOK	SELF	OBSV. 1. BRIEFING B AK 99780 (907)883-4092
2 MR.	CHARLES P.O. BOX 84	BROKER	TOK	SELF	OBSV. 1. BRIEFING B AK 99780 (907)883-2531

PARTICIPANTS IN: VALDEZ VAL

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PARTICIPANTS IN: VALDEZ VAL

1 MS.	RIKI P.O. BOX 1430	OTT	VAL	VFA	TSFY. ALL ITEMS AK 99574 (907)424-3915
2 MR.	DAVE P.O. BOX 460	LANKARD	VAL	CORDOVA	EYAK ELDER'S COUN OBSV. ALL ITEMS AK 99574 (907)424-5790

PARTICIPANTS IN: CORDOVA VAL COR

1 MS.	RIKI P.O. BOX 1430	OTT	VAL	VEA	TSFY. ALL ITEMS AK 99574 (907)424-3915
2 MR.	DAVE P.O. BOX 460	LANKARD	VAL	CORDOVA	EYAK ELDER'S OBSV. ALL ITEMS AK 99574 (907)424-5790

**** SCHEDULING NOTES ****
 BACKUP: LAURA EXPECTS SOME BACKUP TO BE AVAILABLE IN THE FUTURE. MEANWHILE SHE'S PROVIDING A FAX OF THE MEMO SENT OUT (WHICH WE WILL FAX). 10/11
 ADD-ONS: OTHERS MAY ADD-ON, BUT ADVISE LAURA OF THEM SO THAT THEY ARE AWARE OF WHICH SITES TO EXPECT. 10/11 LCM LAURA'S JNU NUMB. IS 465-3424. AS OF 10/14, SHE HAD BEEN CONTACTED ABOUT SITES WHICH ADDED ON. LCM
 SITKA ADDED PER LAURA 10/14 PW
 ON BEHALF OF REP. WILLIAMS', ISABEL REQ. 3 MINUTE TIME LIMIT. 10/15 LCM
 PETE ADDED ADDITIONAL PARAGRAPH TO THE AGENDA ON 10/15. LCM

TESTIMONY RESTRICTIONS ALTERED. 10/19 LCM PER LAURA.

***** ADDITIONAL AGENDA INFO. *****

BRIEFING BY DEC ON THE PROPOSED CHANGES TO WATER QUALITY AND SOLID WASTE REGS. DEC'S BRIEFING WILL LAST APPROX. 1.5 HRS. PUBLIC COMMENT IS INVITED STARTING AROUND 3:00 PM. THE MEETING WILL CONCLUDE FOLLOWING THE PUBLIC COMMENT PERIOD FOR FURTHER INFO., CONTACT PETE ECKLUND OF REP. WILLIAMS OFC. AT 247-4672.

***** UPDATES *****

01	10/11/93	14:24:55	ANNOUNCING TELECONFERENCE	
02	10/12/93	09:33:37	KEN/SOL	ADDED ON
03	10/12/93	09:35:47	ADDED BRIEFING BY THE DEPT OF ENVIRONMEN	
03	10/12/93	09:35:48	ADDED CONSERVATION ON THE PROPOSED CHANG	
03	10/12/93	09:35:49	ADDED WATER QUALITY AND SOLID WASTE REGU	
03	10/12/93	09:35:50	DROPPED BRIEFING BY THE DEPT OF CONSERVA	
03	10/12/93	09:35:51	DROPPED THE PROPOSED CHANGES TO WATER QU	
03	10/12/93	09:35:52	DROPPED AND SOLID WASTE REGULATIONS	
04	10/12/93	11:21:10	MATSU	ADDED ON
05	10/14/93	13:34:03	CORDOVA	ADDED ON
06	10/14/93	14:02:41	HOMER LTC	ADDED ON
07	10/14/93	14:39:35	SITKA	ADDED ON
08	10/15/93	13:00:17	ADDED ***3 MINUTE TIME LIMIT ON TESTIMON	
09	10/15/93	14:48:56	ADDED DEC'S BRIEFING WILL LAST APPROXIMA	
09	10/15/93	14:48:57	ADDED 1-1/2 HOURS. PUBLIC COMMENT IS IN	
09	10/15/93	14:48:58	ADDED STARTING AROUND 3PM. THE MEETING	
09	10/15/93	14:48:59	ADDED CONCLUDE FOLLOWING THE PUBLIC COMM	
09	10/15/93	14:48:60	ADDED PERIOD NO LATER THAN 5PM.	
09	10/15/93	14:48:61	ADDED ***FOR FURTHER INFORMATION, CONTAC	
09	10/15/93	14:48:62	ADDED PETE ECKLUND OF REP. WILLIAMS' OFF	
09	10/15/93	14:48:63	ADDED 247-4672***	
10	10/15/93	16:35:13	NOME	ADDED ON
11	10/19/93	10:30:34	WRANGELL LTC	ADDED ON
12	10/19/93	11:11:30	PETERSBURG	ADDED ON
13	10/19/93	12:32:01	DROPPED ***3 MINUTE TIME LIMIT ON TESTIM	

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***** UPDATES *****

14	10/20/93	08:18:44	KOTZEBUE	ADDED ON
14	10/20/93	08:18:45	GLENNALLEN	ADDED ON
14	10/20/93	08:18:46	HAINES	ADDED ON
15	10/22/93	07:46:38	TOK LIO	ADDED ON
16	10/22/93	16:31:28	CRAIG	ADDED ON
17	10/25/93	08:14:42	GUSTAVUS	ADDED ON
18	10/25/93	08:44:58	HOONAH	ADDED ON
19	10/25/93	10:26:58	ADDED 1. BRIEFING BY D.E.C.	
19	10/25/93	10:26:59	ADDED 2. TESTIMONY ON SOLID WASTE REGS.	
19	10/25/93	10:26:60	ADDED 3. TESTIMONY ON WATER QUALITY STAN	
19	10/25/93	10:26:61	ADDED MORE INFO. ON PAGE 6.	
19	10/25/93	10:26:62	DROPPED BRIEFING BY THE DEPT OF ENVIRONM	
19	10/25/93	10:26:63	DROPPED CONSERVATION ON THE PROPOSED CHA	
19	10/25/93	10:26:64	DROPPED WATER QUALITY AND SOLID WASTE RE	
19	10/25/93	10:26:65	DROPPED DEC'S BRIEFING WILL LAST APPROXI	
19	10/25/93	10:26:66	DROPPED 1-1/2 HOURS. PUBLIC COMMENT IS	
19	10/25/93	10:26:67	DROPPED STARTING AROUND 3PM. THE MEETIN	
19	10/25/93	10:26:68	DROPPED CONCLUDE FOLLOWING THE PUBLIC CO	
19	10/25/93	10:26:69	DROPPED PERIOD NO LATER THAN 5PM.	
19	10/25/93	10:26:70	DROPPED ***FOR FURTHER INFORMATION, CONT	
19	10/25/93	10:26:71	DROPPED PETE ECKLUND OF REP. WILLIAMS' O	
19	10/25/93	10:26:72	DROPPED 247-4672***	
20	10/25/93	13:15:54	KLAWOCK	ADDED ON



HOUSE RESOURCES COMMITTEE

DATE: 10/25/93

PLACE: Ketchikan

SUBJECT OF MEETING:
DEC Briefing on water quality
and solid waste regulations
followed by public comment

NAME	REPRESENTING	BUSINESS/PERSONAL MAILING ADDRESS	ZIP	(H) PHONE	(W) PHONE	DO YOU WANT TO TESTIFY?	WHAT SUBJECT/ WOULD BE?
Roland J. Stanton	Self	3817 Fairview Ketchikan	99901	225-3400		(Y) N	
Allen Hayes	Self	Box 722 Ward Cove	99928	247-8369		(Y) N	
Steve Hagan	KPC	Box 6600 Ketchikan	99901	225-2151		(Y) N	
Constance Giffels	Self	2509-4 th Ave. Ketchikan	99901-5521	225-5067		(Y) N	
Troy Reinhart	AFA	111 STEDMAN, #200	99901	225-6114		(Y) N	
Dave Korte		420 320 Bowden St. Ketchikan	99901	225-0750		(Y) N	
Jack Lee	TONGUE POINT FISHING ASSOC	Box 1081 Ward Cove	99928	247-8156		(Y) N	
GRAPH D LEWIS	SELF	3338 1 st Street	99901	225-2565		(Y) (N)	
✓ Mead Trendwell	DEC	410 Willoughby Ave. Inu.	99901	465-5050		(Y) N	
✓ Heather Stohard	DEC	"	"	465-5150		Y N	
✓ David Stearns	DEC					(Y) (N)	
✓ Doug Redburn	"					(Y) (N)	

Rep. Williams
Rep. Hudson



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NAME	REPRESENTING	BUSINESS/PERSONAL MAILING ADDRESS	ZIP	(H) PHONE	(W) PHONE	DO YOU WANT TO TESTIFY?	WHAT SUBJECT/ WHICH BILL?
ERIC M. RYANOWS	Beagle, est MORRISON HOME PARK	PO BOX 963 WARD COV. AK 99928		225-8608	247-8120	(Y) (N)	WATER
ERNESTA RALLARD	705 SELF	705 MAIN ST.	99901	247-8546		(Y) N	WATER
CLIFF TARO	SOUTHEAST STEVEDORING CORP	P.O. BOX 8080 KTN	99901	225-6157		(Y) N	WATER
CARLTON, James E.	Borough Mayor	1043 Woodloop KTN	99901	225-4261		Y (N)	
Allis May Davis	Citizen	P.O. Box 1102, Ward Cove AK	99928	225-8771		(Y) N	water
Marilyn Lee	Citizen	P.O. Box 1081, Ward Cove, AK	99928	247-8556		(Y) N	water
Allice Stanley	Ketchikan Mayor	3817 Fairview 1150 SEC conference	99901			(Y) N	Water
FRED M. WREAN	Ketchikan Public Works	334 Front St.	99901	247-8640	225-5615	(Y) N	Solid Waste (02)
Jack Pearson	CITY OF KTN Mayor	334 Front St	"	225-5639	225-5639	Y (N)	Solid Waste Regs
Meredith Marshall	Private Citizen	429 Edmond.	99901	225-3577		(Y) N	
Kathy French	KPC	Box 6600, Ktn.	99901	225-3380	225-2151	(Y) N	clean water



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NAME	REPRESENTING	BUSINESS/PERSONAL MAILING ADDRESS	ZIP	(H) PHONE	(W) PHONE	DO YOU WANT TO TESTIFY?	WHAT SUBJECT/ISSUE?
James L. Helmreich		P.O. Box 9154 KTN	99901	247-6332	225-2151	Y <input type="radio"/> N <input checked="" type="radio"/>	
Jon Colli		3944 Denali apt "A"	99901	-	225-2151	Y <input type="radio"/> N <input checked="" type="radio"/>	
Troy Olivadoti		P.O. Box 8974	99901	247-2266	225-2151	Y <input type="radio"/> N <input checked="" type="radio"/>	
STEVEN ELLERTSON		P.O. Box 9514 KTN	99901	5-8625	5-2151	Y <input type="radio"/> N <input checked="" type="radio"/>	
RICHARD SIEN		2614 1/2 3rd AVE KTN	99901	247-7554	228-2239	Y <input type="radio"/> N <input checked="" type="radio"/>	
Roger M. Ziesak		15033 N Tongass Hwy KTN	99901	225-0247	5-2151	Y <input type="radio"/> N <input checked="" type="radio"/>	
Cindy Kosar Barber		P.O. Box 5595 Ktn.	99901	225-9079		Y <input type="radio"/> N <input checked="" type="radio"/>	
Jim Foster		P.O. Box 9008 Ktn	99901	225-7607		<input checked="" type="radio"/> Y <input type="radio"/> N	
John Peterson		Lele 1 S. Pt. Higgins ^{Ktn}	99901	247-2686		<input checked="" type="radio"/> Y <input type="radio"/> N	
						Y <input type="radio"/> N <input checked="" type="radio"/>	
						Y <input type="radio"/> N <input checked="" type="radio"/>	