ALASKA LEGISLATURE COMMITTEE FILES 1993-1994 8672

8012 HOUSE RESOURCES

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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, Bloodborne 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.

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 scientists 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 of 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

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-

Judge dismisses apple growers' Alar lawsuit

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.

cals used on food.

Shortly before the program aired, the EPA announced that daminozide 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 DRR
Water Quality Management Section

PHONE: 465-5276

FROM: Dave Sturdevant DCS
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 2,043 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:

	SUPPORT	OPPOSE
Individuals	490	491
Entities	61	72
Petition Signatures	535	161
Postcards	---	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

	SUPPORT	OPPOSE
Individuals		
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
	490	491
Postcards (Fish/Risk)	--	131
Petition Signatures	535	161
Entities		
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
	61	72
TOTAL	**1080**	**855**

No Tally	
Federal Agencies	3
State Agencies	2
Mixed Comments	29
Late Comments	68
	102

WQM/DCS, 12-10-93

Percent of Individual Responses as FORM LETTERS:**

Individuals	SUPPORT	%	OPPOSE	%
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	# pages	SUPPORT	# pages
Associations, Statewide			
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
Businesses			
17. Alaska Applied Sciences	14	26. Advanced Technical Svcs.	3
18. Alaska Survival	2	27. Automatic Welding & Supply	1
19. Cottoti-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
Chambers of Commerce (Mixed)			
39. Juneau	2		
40. Sitka	1		
41. Kodiak	2		
Cities			
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	# pages	SUPPORT	# pages
Environmental Groups			
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. PWS 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		
Federal Agencies (Mixed)			
69. US EPA	28		
70. US FWS	4		
71. US NOAA/NMFS	3		
Fishing Groups			
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	# pages	SUPPORT	# pages
Forestry Companies		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
Alaska Legislators		96. Senator Steve Frank	1
		97. Senator Robin Taylor	2
		98. Rep. Jeanette James	3
		99. Rep. Cynthia Toohey	1
Mining Companies		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. Taiga Mining Co.	
Native Groups			
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		
Oil & Gas Companies		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	# pages	SUPPORT	# pages
State Agencies (Mixed)			
126. Fish & Game	4		
127. Commerce & Economic Develop.	2		
Tourism & Recreation Companies			
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 <u>any</u> increased risk. The idea of anyone putting or allowing carcinogens in <u>their</u> water and <u>their</u> 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 <u>or something</u> 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 12, 1993

FILE #:

THRU:

PHONE #:

FROM: 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 <u>any</u> increased risk. The idea of anyone putting or allowing carcinogens in <u>their</u> water and <u>their</u> 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 <u>or something</u> 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 underlyng 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

FILE #:

THRU:

PHONE #:

FROM: 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^{-5}. 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

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 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 understantement and imprecise at the same time. Cartainly 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 Hickel 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.

(Rev. 8/85)

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. The 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. Unfortuately 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 <u>all</u> 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

FILE #:

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FROM: Dick Stokes
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SUBJECT: Public Hearing on proposed revisions to Alaska's Water Quality Stds., Ketchikan's Westmark Cape Fox, 7-8:30 PM, 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 Redburn
Dave Sturdevant
Earl Hubbard
Attendees at the Sitka Hearing

MEMORANDUM State of Alaska

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

DATE: OCTOBER 19, 1993

FILE NO.

TELEPHONE NO.

THRU:

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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 43 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 Hickel 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.

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To LAURA FLEMING	From SB Grow for Dick Stokes
Co. Rep. Bill Williams	Co. ADEC - SERO
Dept.	Phone # 465-5355
Fax # 465-3793	Fax # 465-5362

02-001 (Rev. 8/85)

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. The 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. Unfortuately 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 <u>all</u> 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 statues.**

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

P.O. BOX 964 HAINES, ALASKA 99827 (907) 766-2488 or 766-2028

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 prohibits 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 accumlate. 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 "IC_{25}") 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.

P.O. BOX 964 HAINES, ALASKA 99827 (907) 766-2488 or 766-2028

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)

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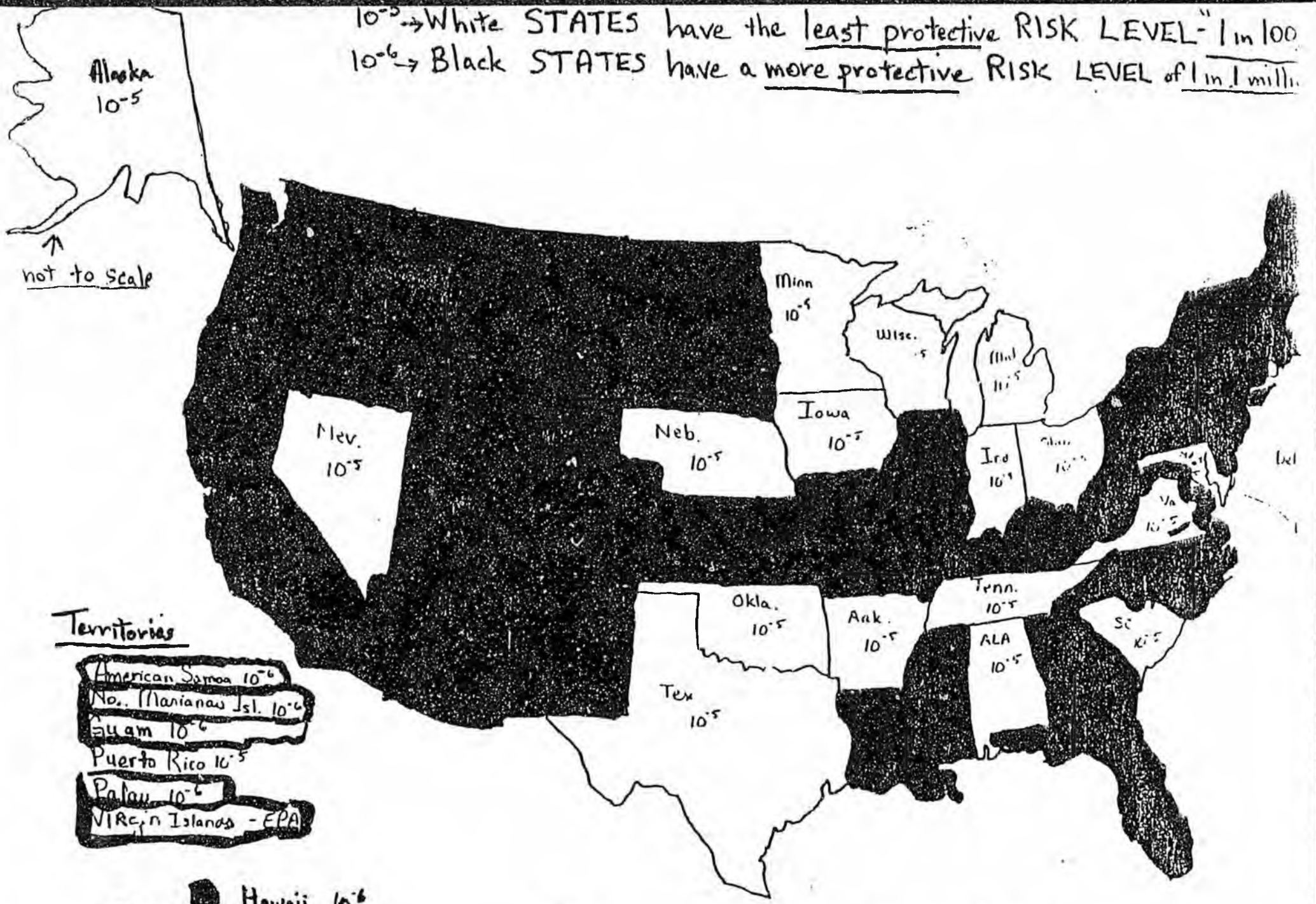
The DEC claims that Hickel's proposed cancer "risk level" would increase each person's "risk" by only 1 in 100,000. This is a deliberate lie. The DEC is hoping to confuse the public by interchanging "risk level" with "risk". " Our real "risk" is much greater because all risks are additive and our real 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^{-5} → 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 milli



Cancer Risk Level by States

Firm puts $400 million into pulp mill

HE 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, 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.

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.

L-P Mill to Go Chlorine-Free?

Via EcoNet — Louisiana-Pacific has taken a first step in the public-review process to tra form its Samoa, California pulp papermill fr one of the worst water polluters in the countr a model of chlorine-free production. The l project would allow the mill to produce bleacl pulp that is absolutely chlorine-free, a changeo that will permit the recycling of highly to effluents that are now released into the ocea

L-P also plans to "steam-strip" the effluen process similar to distillation) to reduce the o and coloration of the mill's liquid discharges P also will extend its outfall pips 1.5 mi offshore to reduce effluent levels in the zone.

Members from the Clean Air Network, h ever, expressed concerns that elements of project were being overlooked and have qu tioned 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).*

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	40:1 dilution = 4 % of need
	PLUS	**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 of Pipe 2000 cu. 40/1 = 75%	
1) Maximize Mixing Zone	200:1 dilution = 80 % of need	40:1 dilution = 30 % of need
	PLUS	**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	40:1 dilution = 25 % of need
	OR	**PLUS**
2) AWQS revision	Change standards = 100 % of need	Change standards = 100 % of need
CLOROFORM		
1) Maximize Mixing Zone	200:1 dilution = 100 % of need	40:1 dilution = 90 % of need
	OR	**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 not the comments received by the committee.

UNITED FISHERMEN OF ALASKA

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

November 1, 1993

Organizations, Corporate Committee

FAX: 907/465-5274

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.

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 recommended 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.

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

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 Wate. 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).

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 LC_{50}) be retained, (not dropped as recommended by ADEC);

* the existing standard of "0.01 times the 96 hour LC_{50}" be replaced by a mandatory chronic toxicity test (either "No Observable Effects Concentration"--NOEC--or "25 Percent Inhibition Concentration"--IC_{25}), (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

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 LC_{50} 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 LC_{50} 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.

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

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.

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 ADEC);

* 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 antidegration 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.

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).

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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ARCO Alaska, Inc.
Post Office Box 100360
Anchorage, Alaska 99510-0360
Telephone 907 276 1215

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

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 µg/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 <u>not</u> 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 <u>cannot be used</u> 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 <u>cannot</u> 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

primary drinking water standard for toluene is 1,000 µg/L, whereas the primary drinking water standard for xylene is 10,000 µg/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

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

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 µg/L, 2 µg/L, and 5 µg/L for benzene, thallium,

and trichloroethylene. A 10^{-6} risk level would prohibit discharge of those compounds above the level of 1.2, 1.7, and 2.7 µg/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,

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,

Martin A Bozeman

Martin A. Bozeman
Senior Consultant, Aquatic Science

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bcc: Rep. Bill Williams
House Resources Chairman

Alaska Forest Association, Inc.

111 STEDMAN SUITE 200
KETCHIKAN, ALASKA 99901-6599
Phone 907-225-6114
FAX 907-225-5920

November 4, 1993

Dave Sturdevant
Department of Environmental Conservation
410 Willoughby Avenue, No. 105
Juneau, AK 99801

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

Alaska Forest Association, Inc.

111 STEDMAN SUITE 200
KETCHIKAN, ALASKA 99901-6599
Phone 907-225-6114
FAX 907-225-5920

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