

PLACER

MINING

TESTIMONY OF RONALD A. KREIZENBECK
DIRECTOR, ALASKA OPERATIONS OFFICE
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE SENATE RESOURCES HEARING
ON STATE AGENCY ACTIVITIES IN
PLACER MINING RESEARCH AND STUDIES
SEPTEMBER 28, 1984, FAIRBANKS

Good Morning. My name is Ron Kreizenbeck, Director of the Alaska Operations Office, EPA Region X. I have been asked by Senator Fahrenkamp to report on EPA activities in Placer Mining and also to describe the purpose and scope of use attainability analysis.

Let me begin with our permitting and field activities. Four hundred and forty seven National Pollutant Discharge Elimination System (NPDES) Permits were issued by EPA this past season. We have approximately one hundred additional applications which we expect to issue permits by the end of December 1984.

EPA Region 10 1984 Field Activities

- o For this first time, Region 10 established a liaison office in Fairbanks to work with the mining industry. The success of this office is due in part to the cooperation which was received by all State agencies and the officers of the Alaska Mining Association.
- o Region 10 sent two field teams to interior Alaska in 1984:
 - (1) A Compliance team and (2) A Trend Analysis Team.
- o The compliance team performed 46 site inspections; 37 sampling, 9 non-sampling. Samples were not collected at the 9 sites due to the non-operational status of the mine or to other factors which preclude the team from taking samples.

- o The trend analysis team sampled seven mines in diverse locations for 3-4 days each.
- o The mines were geographically located as follows:
 - 2 - Livengood area
 - 1 - Central area
 - 2 - outside Fox off the Steese Highway
 - 2 - Fairbanks Creek area
- o The trend analysis team collected samples for Settleable Solids, Total Suspended Solids, Arsenic, and Turbidity over a 3-4 period at seven mines.
- o Both teams found that the Settleable Solids effluent limitations were, in the majority of cases, in compliance. Turbidity, on the other hand, was in most cases not in compliance.
- o Both teams found the attitude of the mining community to be cooperative, helpful, and increasingly aware of its responsibilities under the permit.
- o At present, the samples collected by each team have not been fully analyzed. When this is complete, copies of our findings will be provided to appropriate regulatory, mining, and environmental representatives.

In addition, the National Effluent Guidelines Division sampled 10 miners to test various treatment systems. A preliminary report from the contractor is herein submitted to the committee.

Now let me briefly describe the purpose and scope of use attainability analysis.

The basic purpose of use attainability analysis is to determine whether or not the goal of the Clean Water Act, protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water, is achievable on a given stream. They are also required to demonstrate that other stream uses designated for the stream but not required by The Act are not actually attainable on the stream. Federal regulations (40 cfr 131) list six reasons why the Clean Water Act goal or designated uses may not be attainable on a stream:

1. Naturally occurring pollutants
2. Insufficient flow
3. Human caused conditions
4. Hydrologic modifications
5. Physical conditions in the stream
6. Attainment of the use would cause substantial and widespread economic and social impacts.

The regulation requires a use attainability analysis be conducted whenever designated uses are to be removed from a stream or the Clean Water Act goals are not to be designated for the stream. The analysis is to document that the designated uses or the goal are not attainable on the stream for one or more of the six reasons cited above.

The scope of these analyses can vary substantially depending on the complexity of the stream system and the factors apparently precluding attainment of the Clean Water Act goal or other designated uses. The scope must be sufficient to accomplish the following:

1. Determine existing stream uses including biological uses such as fish spawning or migration routes.
2. Determine the factors precluding attainment of the Clean Water Act goal or other designated uses.
3. Determine the uses that are attainable.

As described in the guidance manual "Water Quality Standards Handbook" further analyses could be required depending on the situation. These could include economic analyses and wasteload allocations.

In conclusion, we at EPA, the state agencies and the mining community have made a great deal of progress this past season towards the goals of meeting the requirements of the state and federal laws and maintaining a viable mining industry. We still have a considerable task before us, however, I am confident based upon the accomplishment to date that these goals are achievable.

Alaska State Legislature

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DICK ELIASON
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Senate

Committee on Resources

OPENING REMARKS OF SENATOR BETTYE FAHRENKAMP, CHAIRMAN
SENATE RESOURCES COMMITTEE HEARING - SEPTEMBER 28, 1984

GOOD MORNING & INTRODUCTIONS

THE PURPOSE OF TODAY'S MEETING IS TO HEAR FROM THE DEPARTMENTS OF ENVIRONMENTAL CONSERVATION, NATURAL RESOURCES, FISH AND GAME, AND THE FEDERAL ENVIRONMENTAL PROTECTION AGENCY ON PLACER MINING STUDIES CONDUCTED THIS SUMMER.

AS YOU ALL KNOW, WE ARE CONFRONTED WITH A DIFFICULT SITUATION REGARDING WATER QUALITY AND USE OF OUR STREAMS BY PLACER MINERS. THE MINERS, WHO HAVE AN ESTABLISHED HISTORY OF USE OF OUR STREAMS, ARE REGULATED BY THE THREE STATE AGENCIES, WHOSE APPLICATION AND ENFORCEMENT OF WATER QUALITY STANDARDS IS GUIDED BY THE FEDERAL CLEAN WATER ACT.

IN THE EARLY 1970'S, THE CLEAN WATER ACT REQUIRED THAT THE STATE CLASSIFY ITS STREAMS ACCORDING TO USE. LACKING THE DATA NECESSARY TO MAKE INFORMED DECISIONS, THE STATE CLASSIFIED ALL ITS STREAMS UNDER THE MOST STRINGENT CLASSIFICATION: DRINKING WATER.

STATE LAW AUTHORIZES DEC TO DETERMINE WHAT QUALITIES OF WATER INDICATE POLLUTED CONDITIONS FOR EACH CLASSIFICATION. IN THE CASE OF DRINKING WATER, THE TURBIDITY STANDARD, WHICH IS BASICALLY HOW "MURKY" THE WATER IS, IS 5 "NTU", OR 5 TURBIDITY UNITS ABOVE

NATURAL CONDITIONS. THIS IS THE STANDARD THAT HAS PROVEN IMPOSSIBLE FOR THE MINERS TO MEET, AND HAS PLACED MANY OF THEM IN VIOLATION OF STATE AND FEDERAL LAW.

THE EPA HAS GRANTED THE STATE SOME TIME TO DETERMINE IF OUR WATER QUALITY STANDARDS ARE REALISTIC, AND TO ASSIST THE MINERS IN ACHIEVING COMPLIANCE WITH THE STANDARDS THROUGH CORRECTLY CLASSIFYING OUR STREAMS OR DEVELOPING NEW TECHNOLOGIES. TOWARD THIS END, NEARLY \$1 MILLION WAS APPROPRIATED IN THE FY 85 OPERATING BUDGET TO DEC, DNR, AND FISH AND GAME FOR GATHERING DATA ON OUR STREAMS AND FOR RESEARCHING EFFECTS OF THE STANDARDS. IN ADDITION, A GRANT PROGRAM THAT WILL ACTIVELY INVOLVE THE MINERS THEMSELVES IN THE RESEARCH EFFORT WAS ESTABLISHED AND FUNDED.

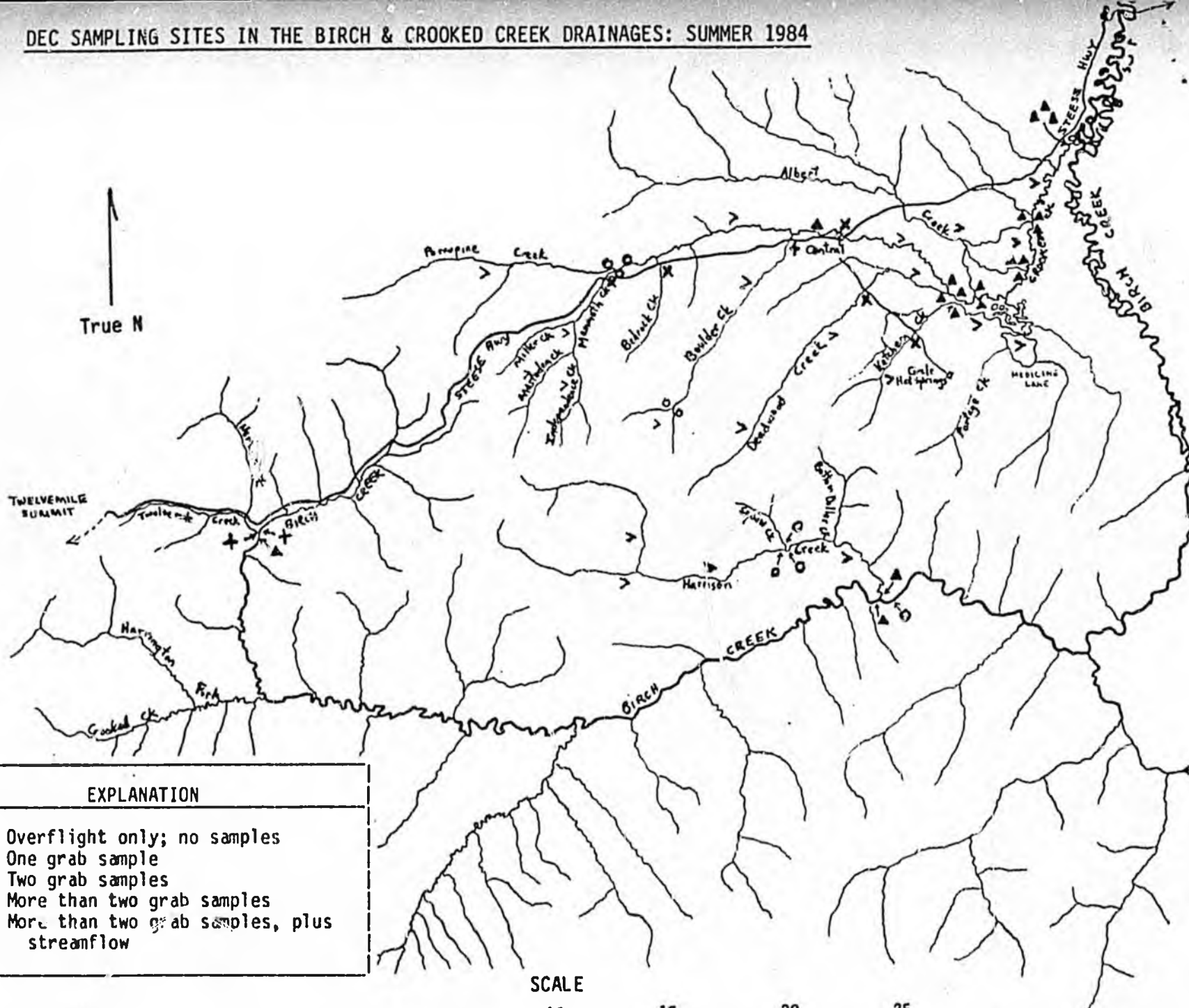
I'VE ASKED THE AGENCIES FOR A SUMMARY OF THIS SUMMER'S ACTIVITIES, A RUNDOWN OF THE GRANT PROGRAM, AND TO DISCUSS WHERE WE GO FROM HERE. EPA, WHO ALSO HAD SCIENTISTS IN THE FIELD THIS SUMMER, HAS BEEN ASKED TO MAKE A SIMILAR PRESENTATION.

I HAVE GENERALLY BEEN PLEASED WITH THE DILIGENCE OF OUR STATE AGENCIES THIS SEASON, AND LOOK FORWARD TO NOT ONLY AN INFORMATIVE PRESENTATION BUT TO AN OPEN DISCUSSION OF WHERE WE'RE HEADING AND WHAT WE HAVE FOR OPTIONS.

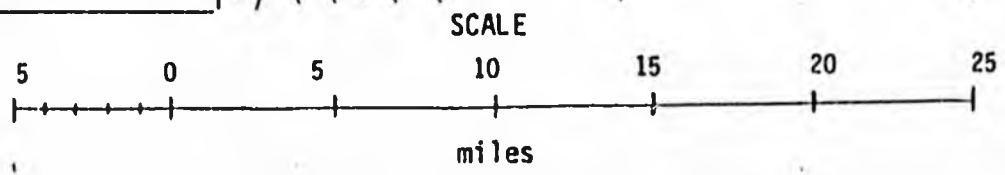
COMMISSIONER NEVE ...

(HE'LL MAKE OPENING STATEMENT ON STATE'S BEHALF, AND INTRODUCE THE OTHER PARTICIPANTS.)

DEC SAMPLING SITES IN THE BIRCH & CROOKED CREEK DRAINAGES: SUMMER 1984



SYMBOL	EXPLANATION
▽	Overflight only; no samples
○	One grab sample
▲	Two grab samples
+	More than two grab samples
×	More than two grab samples, plus streamflow



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Senate

Committee on Resources

MINUTES

September 28, 1984
 9:00 a.m.

Noel Wien Library
 Fairbanks North Star
 Borough

MEMBERS PRESENT

Senator Fahrenkamp, Chairman
 Senator Ziegler, Vice Chairman
 Senator Eliason
 Senator Sturgulewski

CALENDAR

Overview of placer mining studies by the Department of Environmental Conservation, Department of Natural Resources, and Department of Fish and Game.

Senator Fahrenkamp stated the purpose of the hearing as a review of placer mining studies conducted this summer by the Departments of Environmental Conservation, Natural Resources, and Fish and Game.

Commissioner Neve, Department of Environmental Conservation, commended the work of the three agencies this summer. He noted that although much data has been collected, an analysis of the data has not yet occurred.

Randy Bayliss, Chief of Water Quality Management, Department of Environmental Conservation, provided background on the federal Clean Water Act, discussing the Environmental Protection Agency's responsibility in establishing effluent discharge controls, and the 1973 provision of the Act that required the state to classify its streams. Bayliss explained the "basin approach" to water quality management and the nature of the Central drainages selected by the three agencies as the study area.

Pedro Denton, Director, Division of Mining, Department of Natural Resources, outlined his agency's role as that of assisting the miners in implementing new approaches that may result from the research now being conducted.

Glenn Miller, Division of Mining, Department of Natural Resources, outlined the Division's tasks this summer as a study and evaluation of present and past mining practices, recordation of current stream conditions, research on mining technologies elsewhere, and research on similar technologies in other industries. He noted that geographic conditions hamper a comparison of Alaska's placer operations with those of other states, and emphasized the suitability of technology transfer with the Yukon Territory.

Bill Iong, Chief, Water Resources Section, Division of Geological and Geophysical Survey, Department of Natural Resources, provided information on the Division's ongoing hydrologic studies.

Steve Mack, Division of Geological and Geophysical Survey, Department of Natural Resources, outlined the Division's studies this summer on stream flow, turbidity, and trace metals.

John Clark, Director, Division of Habitat, Department of Fish and Game, stated that the Division studied ten mined streams and six control streams in the study area, and recorded data on key habitat, stream channels, riparian vegetation, benthic invertebrates, sediment deposits, and fish distribution.

Bayliss discussed two requests for proposal, a use attainability analysis and a review of the State's water quality standards, being prepared by the Department of Environmental Conservation.

Ron Kreizenbeck, Director, Alaska Operations Office, U.S. Environmental Protection Agency, explained EPA's work this summer. A compliance team conducted sampling inspections, and a trend analysis team collected samples for settleable solids, total suspended solids, arsenic, and turbidity. Both teams found that the settleable solids limitations were generally being met, but that turbidity limitations were not. In addition, the National Effluent Guidelines Division sampled mines to test various treatment systems. Kreizenbeck outlined the purpose and scope of a use attainability analysis.

Bayliss provided a status report on the Innovative Gold Recovery and Pollution Control demonstration grant program, stating that permanent regulations should be in place by the end of December 1984.

Senator Sturgulewski emphasized the importance of agency budget requests to allow continuation of the placer mining studies.

Joe Vogler and Don Stein, Fairbanks-area miners, made statements of concern over the turbidity standard.

The meeting was adjourned at 1:20 p.m.