DOE/EIS-0186

FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED HEALY CLEAN COAL PROJECT

Volume II of II
Comments and Responses

December 1993

U.S. DEPARTMENT OF ENERGY

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FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
PROPOSED HEALY CLEAN COAL PROJECT

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U.S. DEPARTMENT OF ENERGY

COVER SHEET

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LEAD AGENCY

U.S. Department of Energy (DOE)

COOPERATING AGENCIES

U.S. Department of Agriculture, Rural Electrification Administration
U.S. Department of the Army, U.S. Army Engineer District, Alaska (Corps of Engineers)
U.S. Department of the Interior, National Park Service, Alaska Regional Office
U.S. Environmental Protection Agency, Region 10

TITLE

Final Environmental Impact Statement for the Proposed Healy Clean Coal Project; Denali Borough, Alaska

CONTACT

Additional copies or information concerning this ***final*** environmental impact statement (EIS) can be obtained from Dr. Earl W. Evans, Environmental Coordinator, Office of Clean Coal Technology, U.S. Department of Energy, Pittsburgh Energy Technology Center, P.O. Box 10940, Pittsburgh, PA 15236. Telephone: (412) 892-5709.

ABSTRACT

DOE has prepared this EIS to assess environmental issues associated with the Healy Clean Coal Project (HCCP), a proposed demonstration project that would be cost-shared by DOE and the Alaska Industrial Development and Export Authority (a state agency) under the Clean Coal Technology Program. The ***proposed*** HCCP ***would*** demonstrate novel technologies using a new 50-MW coal-fired power generating facility to be built adjacent to the existing 25-MW Healy Unit No. 1 conventional pulverized-coal unit on a site about 4 miles north of the Denali National Park and Preserve (DNPP). The HCCP would use low-sulfur coal from the Usibelli Coal Mine, Inc., Poker Flats Mine, located about 4 miles north of the site. ***Golden Valley Electric Association, Inc. is the owner and operator of the existing Unit No. 1, and has entered into a power sales agreement for the purchase and distribution of the electricity that would be generated by the HCCP.*** After a 1-year demonstration and testing period, commercial operation of the HCCP is anticipated in ***1998***. The HCCP is intended to demonstrate the combined removal of sulfur dioxide (SO_2), nitrogen oxides (NO_x), and particulate matter (PM) using innovative combustion and flue gas cleanup technologies. The project is expected to generate data sufficient to allow private industry to assess the potential for commercial application of these technologies. Environmental impacts from construction and operation of the HCCP at the proposed site were evaluated and found to be minor for most resource areas. However, one concern is the potential impact to air quality and visibility expected from HCCP operation as predicted by computer-based models. Maximum concentrations resulting from the HCCP for the demonstration case were predicted to use up to 40% of the degradation allowed within DNPP and up to 56% of the degradation allowed outside of DNPP. ***Modeling*** of cumulative air quality impacts during simultaneous operation of the HCCP and Healy Unit No. 1 revealed that the maximum close-in concentrations ***could*** be as high as 96% of the National Ambient Air Quality Standards ***(NAAQS)*** because of downwash (downward movement) of the Unit No. 1 stack plume resulting from the presence of the new HCCP boiler building. ***However, mitigation of Unit No. 1 would reduce these concentrations; modeling predicts that the concentrations would decrease to 81% of the NAAQS. A visible plume from NO_2 emissions viewed from the valley containing*** the DNPP Visitor Access Center is predicted to occur during less than 1% of the ***daytime*** hours per year. ***However, a sensitivity analysis of the effect of using other assumptions indicated that a plume could be perceptible as much as 8% of the daytime hours per year for the combined operation of Unit No. 1 and the HCCP. Mitigation would reduce this latter prediction to 7% of the daytime hours per year. Further reductions would be implemented if visibility impacts occur.*** Ice bridge formation on the Nenana River near Ferry, Alaska, may be affected by HCCP thermal discharge. Although it is expected that the river would continue to freeze over at Ferry, remnants of the thermal plume reaching Ferry could cause a delay in the formation of the ice bridge at the beginning of winter and an earlier breakup of the ice sheet in the spring.

Socioeconomic impacts are expected during HCCP construction and operation, particularly in the areas of housing, education, police and fire protection, and medical services. In addition to the proposed action, the EIS considers the no-action alternative and an alternative site located about 4 miles from the proposed site. For the no-action alternative, if no new electrical generating facilities were built, impacts would remain unchanged from baseline conditions; if a conventional plant were built at Healy, the level of impacts would be almost identical to that of the HCCP for most resources, except air quality impacts would be greater. At the alternative site, environmental impacts are generally expected to be greater than at the proposed site because the proposed site has already been disturbed by the construction and operation of Healy Unit No. 1. However, air quality impacts would be less for the alternative site.

AVAILABILITY

This ***final*** EIS and the ***draft*** EIS ***are*** available for public inspection in the following public reading rooms.

- U.S. Department of Energy, Freedom of Information Reading Room, Room 1E-190, Forrestal Building, 1000 Independence Avenue SW, Washington, DC 20585
- Rocky Flats Area Office, c/o Front Range Community College, 3645 West 112th Avenue, Westminster, CO 80030
- Alaska Power Administration, ***2770 Sherwood Lane, Suite 2B***, Juneau, AK ***99801***
- Tri-Valley Community School Library, P.O. Box 400, Healy, AK 99743
- ***Alaska Resources Library, U.S. Bureau of Land Management, 222 W. Seventh Avenue No. 36, Anchorage, AK 99513***
- Fairbanks North Star Borough Library, 1215 Cowles Street, Fairbanks, AK 99701

PUBLIC COMMENTS

DOE encourages public participation in the National Environmental Policy Act process. Accordingly, ***public scoping meetings were held in Healy, Alaska, on October 22, 1990; in Fairbanks, Alaska, on October 23, 1990; and in Anchorage, Alaska, on October 24, 1990. Written comments were accepted for 30 days, from October 5, 1990 until November 5, 1990. In preparing the draft EIS, DOE considered both oral and written comments. Public hearings on the draft EIS were held in Healy, Alaska, on December 7, 1992; in Fairbanks, Alaska, on December 9, 1992; and in Anchorage, Alaska, on December 10, 1992. Written comments on the draft EIS were accepted for 60 days, from November 20, 1992 until January 20, 1993. In response to several requests, the original deadline of January 5, 1993 was extended for 15 days. DOE considered both oral and written comments in preparing the final EIS.***

CHANGES FROM THE DRAFT EIS

This final EIS is divided into two volumes: Volume I contains the text of the EIS and Volume II contains the public comments and responses pertaining to the draft EIS. Where responses to comments have initiated changes that appear in the text of the EIS, they have been so noted in the comment response. All changes, including correcting typographical errors, making grammatical improvements, and further clarifying information in the draft EIS, have been made to improve the usefulness of the document to the decision maker and to be responsive to the public. These changes are shown in a boldface italics font (as is this paragraph) in Volume I. Because Volume II contains comments and responses on the draft EIS, it is printed without a boldface italics font.

Changes from the draft EIS are shown in a boldface italics font.

TRANSCRIPTS AND RESPONSES TO THREE PUBLIC SCOPING MEETINGS

FOR THE

U.S. DEPARTMENT OF ENERGY

PROPOSED HEALY CLEAN COAL PROJECT

HELD AT HEALY, FAIRBANKS, AND ANCHORAGE, ALASKA

December 7, 9, and 10, 1992

AND

PUBLIC COMMENT LETTERS AND RESPONSES

ENVIRONMENTAL IMPACT STATEMENT
FOR THE U.S. DEPARTMENT OF ENERGY
PROPOSED HEALY CLEAN COAL PROJECT
HEALY, ALASKA

TABLE OF CONTENTS

PART 1

PUBLIC HEARING TESTIMONY AND RESPONSES

U.S. DEPARTMENT OF ENERGY

PROPOSED HEALY CLEAN COAL PROJECT

PUBLIC SCOPING MEETING

Held at

TRI-VALLEY COMMUNITY CENTER

HEALY, ALASKA

December 7, 1992

8:40 p.m.

PROJECT PERSONNEL PRESENT

ROY L. EIGUREN, Moderator	Hearings Officer
ELMER HOLT	U.S. Department of Energy
STEVE FERGUSON	U.S. Department of Energy
JERRY PELL	U.S. Department of Energy
DON KUHLE	Army Corps of Engineers
TOM RUPPEL	Pittsburgh Energy Technology Center
STEVE HEINTZ	Pittsburgh Energy Technology Center
BOB MILLER	Oak Ridge National Labs

PUBLIC SPEAKERS

MR. RICK BREWER
MR. JOSEPH USIBELLI
MS. JAN ST. PETERS
MR. JERRY PELL
MR. RON DANE
MR. R.E. STICKLE
STEVE CARIVILE
SANDY KOGL
MR. BILL JAMES
LINDA FRANKLIN
MICHAEL R. MARK
COURTNEY STEWART
JENASY JENSON
WAYNE VALEQ
KIM HEACOX
A.E. ARTESON

PROCEEDINGS

MR. EIGUREN: Good evening, once again, ladies and gentlemen. I would like to formally commence this public hearing concerning the review of the Draft Environmental Impact Statement relative to the United States Department of Energy's proposed Healy Clean Coal Project. This proceeding is officially designated as the Healy, Inc. Alaska Public Hearing on the Department of Energy Document DOE EIS 0186, which is being held December 7th, 1992 and which pursuant to Federal Register Notice commenced this evening here in Healy. The Federal Register Notice provided that the time for the hearing was 7 p.m. I would like to note for the record that we're beginning the hearing formally at 8:40 local time. The reason for that is that prior to this public hearing it was the Department's position to have a workshop or a town hall meeting at which time members of our hearing panel, the names and the titles of which will go officially into the record, were here responding to questions from the public. In addition to that, the actual presentation materials by the two presenters for the Department will go into the formal record.

As I'd mentioned earlier, my name is Roy Eiguren. I'm the hearings officer for this and the other public hearings being held in Alaska to receive public and governmental agency comment on the draft environmental impact statement for the proposed demonstration by the Alaska Industrial Development and Export

Authority of a clean coal project demonstrating novel technologies, using a new 50 megawatt coal-fired power generating facility known as the Healy Clean Coal Project, or the HCCP.

As mentioned earlier, I'm not a departmental employee. I am an attorney in private practice that's been retained for the purpose of conducting this and the other hearings as an independent neutral third party.

I would like to put this hearing in perspective relative to the law that we're operating pursuant to. It's important that you understand that the key elements of the federal law that requires the Department's final decision in this matter be preceded by a comprehensive review of the environmental factors associated with each of the alternatives being considered by the Department. The law that we're following is the National Environmental Policy Act of 1969, known as NEPA. It requires that all federal agencies develop procedures that ensure that environmental amenities or values are given appropriate consideration in federal government decision making along with technical considerations. The law also requires that recommendations for major federal actions significantly affecting the quality of the human environment be first preceded by the development and completion of an environmental impact statement, or EIS, that fully and carefully examines the potential environmental impacts of the proposed federal action.

In this particular case, a notice of intent to prepare a

draft environmental impact statement and hold public scoping meetings was published by the Department of Energy in the Federal Register on October 5th, 1990. The publication of that notice then was followed by a public scoping period within which initial meetings were held both here and Healy as well as in Fairbanks and in Anchorage in 1990 to solicit initial input from the public on the issues that you, the members of the public, felt should be addressed from an environmental standpoint in this particular process.

As a result of the scoping meetings, a number of issues were identified by the Department of Energy and a great many of those issues have been discussed already by the presentations by departmental officials. The preparation of environmental impact statement and the review process is governed by federal regulations as are established by the Council on Environmental Quality, or CEQ, which is an agency within the executive office of the President of the United States, as well as the Department of Energy's own regulations. The Council's Environmental Quality Regulations, as well as the Department's own regulations, have been previously marked by me as Exhibit Number 1 and will be introduced into the formal record of this proceeding as Exhibit Number 1.

(Exhibit Number 1 introduced)

The CEQ regulations that I referenced require that there be a lead agency in the preparation of the document, which in this

case is the Department of Energy, and any other federal agency that has jurisdiction by law shall be a cooperating agency in the preparation of the environmental impact statement. The regulations add that any other federal agency that has a special expertise with respect to any environmental issue which should be addressed in the EIS may be a cooperating agency upon request of the lead agency. In this particular circumstance, four federal agencies have been designated as cooperating agencies for this particular EIS. Text has been contributed to the EIS or the draft EIS by the cooperating agencies, and they've commented on the preliminary DEIS. The four federal agencies that are cooperating agencies in this particular proceeding are the following: the United States Department of Agriculture, Rural Electrification Administration; the United States Department of the Army, Corps of Engineers, Alaska District; the United States Department of the Interior, National Parks Service; and the U.S. Environmental Protection Agency, Region 10.

As I'd mentioned earlier, some of those agencies, or at least one of those agencies, is represented here tonight, that being the Corps of Engineers. They have a member of our panel. As I'd mentioned earlier, the members of this panel which consists of senior project team leaders for this project as well as headquarters personnel from the DOE are here to listen to your comments and, as appropriate, ask you questions to help

interpret the comments that you make.

After the completion of this particular series of public hearings, the Department of Energy may choose to modify, supplement or reissue the Draft Environmental Impact Statement prior to issuing the final environmental impact statement. The Department may also choose to issue the Draft Environmental Impact Statement as the final environmental impact statement without modification. A record of decision, an ROD, will identify the environmentally preferred alternative chosen by the Department along with any practical means to avoid or minimize environmental harm from the alternative that is selected. The Department of Energy, as a matter of federal regulation, cannot proceed with its proposed action, in the record of decision, until a minimum of 30 days has passed from the date of issuance of the final environmental impact statement. Under current schedules, it's the Department's intent to issue a final EIS and a record of decision in the spring of 1993. The scheduled as it currently stands is as follows:

The completion of the 45-day comment period on the Draft Environmental Impact Statement, which is the period that we're in now, will end on January 5th, 1993. Any potential revision to the DEIS based upon the comment that we receive at these hearings as well as any written comment that the Department receives will be examined and the completion of that examination process will occur some time in the early spring of 1993. A

notice of availability of the final environmental impact statement will be released later in the spring. And then finally, DOE will issue a record of decision on whether to proceed with the proposed project or select some other alternative. It will publish its proposed decision the Federal Register some time in the late spring.

Now to govern the conduct of this hearing as well as the other hearings in this particular proceeding here in the State of Alaska we developed a number of guidelines, and those guidelines are pasted up over the wall, on the wall over there. They are very, very simple. Anybody and everybody that would like to comment on the record may do so this evening. Everyone will have five minutes within which to make their comment. I'll serve as the timekeeper up here. I have a series of signaling lights. When four minutes is elapsed, a green light goes on. When five minutes is elapsed, a red light goes on. You don't have to end right then. Just begin starting to wind down your comments. If you go much past five minutes, however, you will be in very serious trouble.

Anyway, I'd like to indicate, as I'd mentioned earlier, that oral comments and written comments are going to receive the same weight, same consideration, in this particular proceeding. So if you would like to present written comment for the record, you can leave it with me and I'll give it to the court reporter, or you can leave a copy back at the registration table in the

back of the room, or you can mail it to the Department of Energy, to Dr. Earl Evans. Dr. Evans is here. You can mail it to Dr. Evans and we have his address at the back of the room. Again, the close of comment is January 5th, 1993. To the extent possible, the Department will also consider any written comments that are postmarked after January the 5th.

I think I've covered all the issues that we need to cover in terms of conducting this particular proceeding. As I'd mentioned, all of our commentors have five minutes within which to comment. In order to be able to get your comment for the record, we're going to have to ask you to come up to the front, because our court reporting system uses these two microphones. So, when I call your name, if you'd please step forward, either to this podium or to that podium over there, give us your name and address for the record, and then I'll begin marking time. Again, everyone has five minutes.

And with that our first commentor this evening is Rick Brewer.

RICK BREWER: My name is Rick Brewer. I'm the Mayor of Denali Borough. My address is P.O. Box 3140, Anderson, Alaska, 99744. Resident address is 373 D Street, Anderson. I guess my comments are basically limited to the impacts concerning the Denali Borough, which we haven't had time to thoroughly investigate. And so, I will be very brief.

One of the things that we've noticed in the impact study

just briefly is that the contribution that the Borough is required to make to education, which I believe is stated in here on page 3-48 as being 35 percent required by state law. I believe that's incorrect, according to that statement as to what we've been at least told and informed of by the state. Actually that's a four mill equivalent of all real and personal property located within the Denali Borough, which when that all comes down to bottom dollars is roughly about $278,000 a year, which would, I believe at this time, be less than 10 percent of the budget of the school district. H/T-1

So, that's one thing. And there may be others. That's just one of the things that we found as we discussed looking over this briefly. We will submit further written comment to the appropriate person later. Thank you.

MR. EIGUREN: Thank you, Mr. Mayor. We appreciate that. Our next scheduled commentor this evening is Joseph E. Usibelli, Junior.

JOSEPH E. USIBELLI, JR.: I'm Joe Usibelli, Junior, P.O. Box 1000, Healy, Alaska, 99743. I am president of Usibelli Coal Mine. It's appropriate that I comment since I'm the one that started this process about three and a half years ago. Usibelli Coal Mine was responsible for the application to Department of Energy Clean Coal Technology Program and specifically with this proposal. H/T-2

I will speak to the impact to our company and how I view

the proposed power plant affecting us. It will actually have a fairly small impact on physically on our company, the effort that we have to make. It's an increase of 300 to 350,000 tons of coal and waste coal, but it really represents only about a 10 percent increase in our total coal that we mine because half of the 300 to 350,000 ton total will be a waste product that we encounter in our mining process. But because of its quality, it's not a salable product right now. So we will be able to utilize this in the existing plant, extract energy from it, with really no additional impact to the mining that's taking place right now. About 150,000 tons of new and additional coal will be mined and that was the additional four acres of disturbance annually that was mentioned earlier in the comments.

With respect to employment, we really only see the possibility of maybe eight more people of employment, and that's represented by additional coal hauling and the additional mining of the 150,000 tons of coal that we see, which will be a positive impact for employment in this community.

We also envision the overall effect as being a very stabilizing force to our company and to the employment of even people that are employed right now, because we'll have a domestic user of coal that's located right at our mine site effectively that we can enjoy supplying hopefully for 30 to 40 years in the future and it will stabilize the work force that exists today.

With respect to the social economic impacts on our community, I think there is concern and there was concern expressed in the scoping meetings, mostly of what will occur during the construction phase of the power plant, when we get 300 construction workers building the plant. In the long term, we're talking about 40 additional long-term jobs, which I think is a very positive impact for our community. It's a very realistic growth for our community. But the real impact is in the short run and the two to two and a half year period during construction, when we have 300 construction workers, and that is of concern. We've experienced that in our community in the past, specifically with construction. We actually experience much more than that every year though when Denali National Park is in full swing. We have 900 to 1100 additional workers that work in our community, and we seem to handle that okay. So, I think it's something that we'll be able to work through. Thank you.

MR. EIGUREN: Thank you. Our next commentor is Jan St. Peters.

JAN ST. PETERS: Do I state my address? I need to say all that?

MR. EIGUREN: Yes.

JAN ST. PETERS: Okay. Jan St. Peters, P.O. Box 323, Healy, Alaska, 99743. I have to start out with a couple more nitpicky things, and that has to do with the fact that I sent

for the Environmental Impact Statement as soon as the notice was in the paper and I just received it at 5 o'clock tonight. So, it's sort of frustrating to be asked to comment on these issues when, you know, I haven't had it for more than two hours. So I will submit some comments, some additional comments, by the 5th of January.

A couple things though that I thought I might comment on right now. One is there's references to the landfill being used to haul off debris and construction, materials, et cetera, and I was hoping maybe Rick would address that. But it was my understanding that as of March that we -- that's the deadline for our permit on the landfill right now, and the future of our landfill is sort of up in the air. So that's something that's going to have to be addressed with this construction project. H/T-3

Another comment I had is there's a letter here from the Department of the Interior, Office of Environmental Project Review. And they made a comment that the air emissions from coal power, coal-fired power plants using the clean coal technology -- let me go a little past here. I was reading the wrong sentence. They were understanding the Department of Energy might fund demonstration projects and then possibly replace natural gas projects with coal technology. And their opinion was that a coal-fired power plant could increase air emissions by as much as 1,000 percent and should not be funded. Rather, that that federal funding should be limited to coal- H/T-4

fired plants that are already in existence. And in my haste, I left part of my notes at home but I -- you know, the technology here is supposedly, according to your data, reduces the nitrous oxide and sulfur dioxide emissions, doesn't eliminate them, and as far as carbon dioxide, I've heard statistics that is generating four times the amount of carbon dioxide as say natural gas, a greenhouse gas. So, I definitely have concerns about greenhouse gases.

And on a another economic point, I was reading an article that Gary Newman had about the project. And one of the points he brings up is taxes that might be very possibly be levied against emissions of carbon dioxide, technologies using that, and what impact will that have on our community in the future with the Clean Air Act. Will we actually have an economic disadvantage because of the technology that we're developing here and spending all this money on. H/T-5

I actually have a lot of questions but I guess our question period is over. So, I'll leave the rest of my comments for written comments, and I appreciate the opportunity to speak. Thank you.

MR. EIGUREN: Thank you.

DR. PELL: If I could just ask a question about that letter that you referred to from the Department of the Interior.

MR. EIGUREN: I'd note for the record this is?

DR. PELL: Dr. Jerry Pell.

MR. EIGUREN: Thank you.

DR. PELL: I was just curious if you could clarify the origin of that letter you referred to about the Department of the Interior, as to what letter exactly that might be?

MS. ST. PETERS: Okay. Well, as I said earlier, I thought I was -- at the library earlier was looking at the Environmental Impact Statement, and I wasn't. It was this document that looks like identical to this and addresses all kind of coal technologies. But the letter in the back was dealing with clean coal technology programs. And it was dated September 13th, 1989. I really found that a lot of the letters responding to the clean coal technology, it was easier to respond to those or get information from those than it was to wade through a lot of this scientific stuff that the average person doesn't know what it means.

MR. EIGUREN: Thank you. Our next scheduled commentor is Ron Dane.

RON DANE: My name is Ron Dane, Box 108, Cantwell. I live 20 miles south of the park and I travel through the park occasionally, I visit it occasionally. And I can't see where this project is going to harm the park in any way. The prevailing winds will carry any pollutants away from the park. And you can't see it from the park. And the average tourist that comes through here is used to this sort of thing; they have them in their communities. And I don't think it's going to

H/T-6

bother the tourists at all. And I think it will give us a lot more stable electric base for the railbelt. It will eliminate maybe some of these blackouts that Fairbanks and Anchorage tend to have. And besides that, I hope to hook up to electricity some day myself. So, that's all I have.

MR. EIGUREN: Thank you. Our next commentor is R.E. Stickle. Mr. Stickle, I understand you're representing an organization. If you could identify both your name and address as well as the organization for the record.

R.E. (RICHARD) STICKLE: My name is Richard Stickle, Post Office Box 10, Healy, Alaska, and I'm presently chairman of Golden Valley Member Advisory Committee. And I would like to, first of all, comment on the visibility impact that this power plant would have on the community. There was comments made that possibly they would -- they're talking about the visibility they could see from the park. And personally, I don't see where this is too great a concern, as far as seeing the plume coming out of the power plant and the tourists can see it and other people can see it, because I mean it's just one of those things. It's there and you have to put up with it. I've lived in this community for 28 years and I live about approximately a mile from here. And I've watched that plume every day come out of that power plant, and as far as it spreading south into the park, I haven't yet seen it go through the canyon over there. And usually the prevailing wind comes from the south and goes to

H/T-7

the north.

And then the hot water coming out of the power plant and going down the river approximately nine miles when they're talking about the ice bridge down there, years past we used an ice bridge over here to Healy when we worked at the coal mines and we crossed the Nenana River and we got the railroad to work with us and we planked the bridge coming across the railroad bridge. So, I would like to see them, if possible, to work with the railroad and get that railroad trestle planked so that people in Ferry can cross that bridge when they want to. Of course they would have to monitor the time the trains was coming and when they could get back and forth from the trains so that they wouldn't conflict with the railroad. But in the past we did that and Golden Valley monitored the bridge down there and opened the gates for us a certain time of the day. And so, I think that would be a good thing.

And also, I would like to see the power plant, they have the primary site and the alternate site, and I would like to see them build it at the primary site next to the existing power plant. And they would not have to build anymore roads or any lines up to the substation. They could maintain the new power plant right from the operations room that they have in the existing power plant. And my opinion is that Golden Valley has maintained this power plant and did a very good job at it and they haven't had any health hazards or anything from it. And I

think they would continue to do the same thing in the future. Thank you.

MR. EIGUREN: Thank you. Our next commentor is Steve Carwile. Can I have your name and address for the record, sir.

STEVE CARWILE: Sure. Steve Carwile, Box 374, Healy, Alaska.

MR. EIGUREN: Thank you.

STEVE CARWILE: Just two short comments. I wonder with all the work and money that's going into this effort why the demonstration period is limited to one year. I suspect there'll be a lot of bugs, personnel, equipment, functioning, systems, whatever, that would ask for a longer period of experimentation to make sure that the coal gets burned cleaner than it might have in the past. H/T-8

And also, in the -- I would like to see in the final EIS or subsequent volumes to this a representation of the effects using the PLUVUE II model discussed in the DEIS but discounted out of hand because no one has documented that they've been in the park and have been adversely effected by air pollution. I think that's a red herring as far as supporting the case that PLUVUE II or PLUVUE I doesn't work in this case. H/T-9

MR. EIGUREN: Thank you. Our next commentor is Sandy Kogl. May we have your name and address for the record, please.

SANDY KOGL: Sandy Kogl, Box 1, Denali Park, Mile 224 Parks Highway. I've been a resident for 26 years in the area. I

commend Joe's objectives in increasing the efficiency of the existing coal-fired power plant. I think that's especially commendable in the light of burning waste coal that's not presently used. And along with that though I have to go on record as opposing the building of a new clean fire coal burning plant in that I don't think bigger is always necessarily better. H/T-10

And I think that our energies would be better spent in developing alternative energy sources and dedicated towards energy conservation rather than doubling, essentially tripling the energy output from this plant and creating cheaper power which therefore is easier to use, et cetera, et cetera, et cetera. So I guess I come from the standpoint of less is better and energy conservation. I don't think there is at this point or in the near future a demonstrated need for tripling the energy output. H/T-11

I think not all of the environmental concerns have been adequately addressed. I think we talk about well, we'll meet this level, we won't exceed this level of degradation of either air quality, visibility, impairment or water quality. But in my opinion any degradation is too much. I think there is already too much and we've seen too many examples of if you get a little degradation here and a little there, the cumulative effects are more than we should be dealing with. And Alaska's big, yes. The Nenana River is big, yes. But I'm going to err on the side of saying no, any amount is too much. And even with all of the safeguards in place, I think we have the glaring example of the H/T-12

Exxon Valdez as hey, there aren't enough protections in place.

MR. EIGUREN: Thank you. Our next commentor is Bill James.

BILL JAMES: Bill James, Box 357, Healy, Alaska, 99743.

MR. EIGUREN: Thank you.

BILL JAMES: And I'm not going to get scientific about it. But I have a number of grandchildren and several great-grandchildren and the only way they're going to stay in this state, keep warm, drive their vehicles, and enjoy life is to not do less but burn some carbon. And they're going to have to use, we should use the cheapest carbon we can get, and that's coal. And whenever you burn carbon, sorry to say, you're going to produce carbon dioxide. And I think this is got to be a step in the right direction if it improves that burning capability. Thank you. H/T-13

MR. EIGUREN: Thank you, Mr. James. Our next commentor is Linda Franklin. Again I'd ask if you would give your name and address for the record, and I would note that you're representing an organization. Give us the name of the organization.

LINDA FRANKLIN: Do you want my personal address as well as the organization?

MR. EIGUREN: However you'd like to do it, whatever.

LINDA FRANKLIN: Okay. My name's Linda Franklin. I'm representing Denali Citizens Council. The address is P.O. Box 78, Denali Park, Alaska, 99755.

Denali Citizens Council is a local conservation group

dedicated to preserving the wilderness values of Denali National Park. At this time we are neither supporting or opposing this project but obviously because of its proximity to the national park we are concerned about the environmental impacts, especially ambient air quality and visibility. But we also received our DEIS very late and we haven't had time to go over it very well, and we are an all volunteer group. So the scientific jargon is a little hard to get through. But anyway, we will be providing written comment for our immediate and detailed concerns. Thank you. H/T-14

MR. EIGUREN: Thank you. Next commentor is Michael Mark. And again I'd note that Mr. Mark is representing an organization. If we could have the name of the organization and the address of it, sir.

MICHAEL MARK: Michael Mark, Post Office Box 15, Healy, Alaska. And I'm here representing partially the Chamber of Commerce and the Tri-Valley Volunteer Fire Department, and which I'm the chairman of the board of.

Several comments. First of all, the Chamber of Commerce was and is in favor of this project, and for a variety of reasons. And Joe Usibelli addressed most of them.

The other one, now getting to the fire department, is the landfill here currently is run by the fire department. And we have a renewal process that we're going through with the state now on the renewal of our dump application, landfill. And H/T-15

there's some glitches in it and we're trying to work with the borough. And we still have an application on file. And the dump is still open. How long depends on what other glitches as government agencies go that we have to jump through.

On the map that you people are using for the park in your stuff, you filed this originally in the Federal Register. You might refer to the same document and get the map that's filed for the Park Service in the Federal Register, which would be the legal point to start instead of one donated or offered to you. And that's on page 45,185 is the page number and that's in the September 30th, 1992 register. H/T-16

Some other documents about the park. Mount McKinley is only visible for seven days in the summertime, as a rule, and sometimes it's low as three days a year. And so consequently, the plume being visible from the other direction versus the mountain, looking the other way, isn't a very critical criteria. That's it.

MR. EIGUREN: Thank you. Next commentor is Courtney Stewart.

COURTNEY STEWART: Hi. My name's Courtney Stewart and my post office box is 385, Healy, Alaska, 99743. And what I'd like to address is the fact that number one, I'm an environmentalist. I mean I have worked as an environmentalist since I got out of college. I own a video company. My living depends upon having good scenery and good vistas to video tape and animals to video

tape and that sort of thing. That's what I depend upon. And I've worked as an environmental investigator. I've worked for journalism groups that have done documentaries about environmental issues and that sort of thing, both here and abroad, and I have to say that I'm for this power plant because I don't feel that the plume is going to be visible from the park, and I don't feel that with the south winds and that sort of thing that the plume that already exists with the power plant has been a problem and I don't feel that this one will be a problem.

I also do not think that it will affect tourism. In fact, I think it can be a benefit to tourism. I think it can be an added attraction to the Healy area, that we care enough about the environment, not just our environment, but the world environment to go forth with a project that is trying to improve the technology that exists today, and to burn cleaner coal. And I would argue that as an electricity user and as most of us are, that while I agree that we should conserve electricity in our own homes and that sort of thing, that the wood and oil that we burn separately puts out more emissions than the emissions that are released from this power plant with the scrubbers and that sort of thing in place. And if there isn't a problem with the slag or the water or that sort of thing being leached back down into the groundwater, I would argue that this is a good technology.

I would also like to say that, you know, if you're really

worried about the environment in Alaska, there's a lot of issues to address. And Healy stands in a unique position to be an energy producer, not just for Healy but for the entire state. Not only are we in the middle of the state, so to say in terms of the regions that are inhabited, but we're in the middle of the state as far as having a power source that is clean burning and it's right there. The reclamation of the land has been very good. I mean Usibelli Coal Mine has an excellent record in reclaiming the land. And I would say that between coal power and wind power, which is another industry that could very well be developed here. I mean we've got more wind than anywhere else. That we're in an excellent position to provide clean power for the rest of the state for a very long time. And that these things should be looked into. And I do not feel that this in any way takes away from the beauty of our national park. And that's what I'd like to say. H/T-17

MR. EIGUREN: Thank you. Next commentor is Jenasy Jenson..

JENASY JENSON: I'm Jenasy Jenson. And my address is HC Box 3102A, Healy, Alaska. I am a resident of Ferry, Alaska, which is one of the communities that you've mentioned that would have impact. I believe I'm -- and I'm a member of the local school board. And I'm a mental health professional. And I'd like to address those issues.

As a resident of Ferry, I feel that the lack of the ice bridge will impact the people that live on the other side of the H/T-18

bridge, of the Nenana River. We depend on the ice bridge to move large things across every year. There are quite a few miners that live in that area and they take large equipment across. I just got this manual so I haven't had really a chance to go over this with other people in the community and so I will submit some written statements later. But there is a walk bridge right now across the railroad bridge. It's in the middle of the winter sometimes hard, when there's drifts, hard to get to. And that would not help the miners as far as getting their heavy equipment across. You know, they take bulldozers and all kinds of equipment across. I'm not a miner myself but, you know, a lot of my neighbors are. And you know, that would be a definite impact on the people that live in that community. And there is proposed development of the mines in that area. And I think that is an impact that definitely needs to be addressed further.

As far as the school is concerned, I've not talked to other board members; I'm not speaking officially. But your data in here for the schools is incorrect. We are already over capacity. A lot of people have moved to the area in anticipation of jobs. And you talk about most of the jobs will be people that come in from outside. Well, the school experienced about 40 new students this year, far in excess of what we were projecting as far as growth. And we're anticipating continued growth from, you know, what we're seeing right now. We are over

H/T-19

capacity in the school right now. We are using the lunch room. We are using the shop. There is no more classroom space. If anyone's been in the classrooms at Tri-Valley they're packed. The kids are really packed in there. We don't have room for new teachers that we need to hire. And so it definitely is going to impact the school if we continue to get the kind of growth and we'll need additional classroom space. And it sort of glossed over that.

Right now -- and I am a mental health professional, mostly retired at this point in time but had been very -- I am still very involved with the mental health organization here. They're at capacity right now. And I think that a large construction camp will impact our community and will impact the medical, the emergency services, and the mental health services. I think that was kind of glossed over in the impact. H/T-20

People have already addressed the landfill. You know, that's an issue -- that that was one of the resources that they were -- you were talking about here is who will take the stuff to the landfill. We don't even know if we're going to have a landfill. H/T-21

We recently lost our state trooper. You know, our volunteer fire department and our emergency services are at capacity. And so I think all these things are things that, you know, will need to be addressed and I don't -- just quickly looking through this document, I don't think they've really been H/T-22

addressed. And I don't see where the money is going to come from. Our state is losing revenues right now from the oil. I don't know where the solutions are coming -- I'm through but.....

So I am concerned. I like the idea of the technology of reducing acid rain, not just for our own community but for the global environment. It's what we had mentioned. My family does not use electric power. We use wind generators and solar panels, and it works fine for us. But I'm not advocating that for the rest of the community. And I just would like to see the minimum amount of environmental impact and social impact on our community. And I hope that the people that are planning this will take all these things into consideration. And I'll submit written comments.

MR. EIGUREN: Thank you. Ms. Jenson, could I ask one clarifying question for the record. Would it be possible for the school district to provide for the formal record the student population figure that you were speaking of?

MS. JENSON: Yes. I'm sure that -- you know, I'll talk to the superintendent tomorrow. I was definitely not prepared to make comment. I just thought I'd come and get some information. But I seem to be the only person from the school district that.....

MR. EIGUREN: It would be very helpful to have that for the record.

MS. JENSON: And I will make sure that we have some official comment on that. Okay?

MR. EIGUREN: Thank you. Our last scheduled commentor is Wayne Valeq.

WAYNE VALEQ: I will submit a written comment.

MR. EIGUREN: Thank you, sir. That completes the list of individuals who have registered to comment this evening. I would like to encourage any of you out in the audience that have not commented that would like to do so to please step forward now and we'd be glad to take your comment on the record, under the same terms and conditions as everyone else. Is there anyone else would like to? Yes, sir. Please step forward. If you'd just give us your name and address for the record and you'll have five minutes for comment.

KIM HEACOX: My name is Kim Heacox, H-e-a-c-o-x. My address is Box 126, Denali Park, Alaska, 99755. I have one concern and that is the politicization of the regulatory process. I know most of you gentlemen on the panel are with the Department of Energy, correct? Is that correct? Could I have -- could I know how many of you have been with the Department of Energy since late 1980 or early 1981? One, two, three. The other three, you've been with the Department of Energy prior to then? H/T-23

DR. PELL: Been with them since '75.

DR. FERGUSON: Since '76.

DR. RUPPEL: '65.

MR. HEACOX: '65, great. I feel that's important to a certain degree because of the tremendous changes that occurred in -- from the Carter Administration to the Reagan-Bush Administrations and the approach to environmental regulation. A couple examples that I'm afraid that this power plant could parallel in Alaska are two pulp mills in Southeast Alaska. That, for example, one of them now has just been approaching the State, the Hickel Administration, and the EPA office in Seattle, Alaska is regulated by Region 10 of the EPA, which their office is in Seattle. And they're trying to raise the levels of dioxins that can be emitted into the sea, in I believe it's either Sitka or Ketchikan. I don't know which. This worries me because I think that no matter how many linear aggressions you do or chi squares or hypotheses or null hypotheses, no matter how good your science is it can be politicized. And the regulations that exist today can be changed via a Hickel Administration, via a Clinton Administration or a Bush Administration. We all know, you know what I'm talking about. We all see it and read about it in the newspapers every day.

This concerns me about the future of this plant. I can't say that I can stand up here and honestly say I oppose this plant or that I advocate the building of this plant. I have a lot of respect for the Usibelli Coal Mine and the work that they do and the reclamation that they do. I see them. I see

Usibelli as a very stable company right now. How much more stable do you need to be?

It is all relative. But it's a great community. It's quiet. I say to my wife every day, we just almost every night we say back and forth, can you believe how quiet it is here? We've lived in Healy for two years. I've lived off and on in the area prior to that for 11 years. And economic growth is not necessarily -- or economic development does not necessarily have to be economic growth. I suggest that you read the writings of Herman Daily who is just coming out. He works for the World Bank but he does not espouse their situations. He always removes himself from them. That these sorts of things are absolutely necessary.

And if, for example, a new office of the Environmental Protection Agency is established in Anchorage, as Senator Stevens, Senator Murkowski, Congressman Young and Governor Hickel and Lieutenant Governor Coghill wish to do, that has tremendous implications for Alaska because it can therefore be much more heavily politicized by the Alaska Congressional delegation, through appropriations blackmail, for example. Senator Stevens is extremely adept at this. He does it to the National Park Service more than once and to other agencies within the Department of Interior. Now there's a lot of public land in Alaska.

So, I guess I would like to say in a dream situation, okay,

let's build this plant but let's induce term limitations or a restructuring of the amount of money that you're allowed to get in the campaigning process. I just want to go on record as saying that you have to -- that I wish there could be some very careful language written into this that concrete parameters are established for the emissions and all the other environmental possible pollutants, et cetera that could come from this. Thank you. H/T-24

MR. EIGUREN: Thank you. Is there anyone else who would like to comment? You still have the chance to do so. I need your name and address for the record, sir.

A.E. (TREY) ACTESON: My name's Trey Acteson, Box 109, Healy, Alaska. One thing somebody mentioned that we don't need this power. And I don't know. I'm sure a lot of people are aware here of the Fort Knox Gold Mine going into -- I think it's in the process. And that's I'm not sure how many megawatts that is. But does anybody know that offhand?

UNIDENTIFIED SPEAKER: 35.

MR. ACTESON: 35 megawatts there that's going to be needed. Also I think another concern here of some people that has an effect on how they form an opinion about this power plant is if it's build under union contract, and I haven't heard much comment on that tonight. H/T-25

I'd also like to say I've worked on the monitoring sites, at Byson-Goldson (ph) at the airstrip. And just from my

experience as far as what I saw, everything that they've come up is pretty skookum. It's a good representation of what I saw of the plants, at the sites when I was working there.

Also, I'm also concerned on what kind of effects the new change in the political structure is going to have on how things are set up, as far as EPA regulations, and limitations that are set also. You know, and what kind of effect is that going to have on the clean coal technology processes. You know, is Gore going to come in and say, you know, no, we can't do that anymore and going to cut funding to all these programs? I'm not really familiar with exactly how they're all funded, but maybe somebody could reiterate on that a little bit too. Thanks. H/T-26

MR. EIGUREN: Thank you. Are there others that wish to comment that have not done so? And with that, I would like to make several notations for the record. I'd like to thank our court reporter, Mary Johnson, who is here who has recorded this proceeding for us. I'd also like to note that a representative from Golden Valley Electric Association, Mr. Frank Abegg, is here, Director of Power Generation. They would be the folks that would market the output of the project electricity in the event that it's built.

With that, I'd like to thank all of you on behalf of both the hearings panel as well as myself, the hearings officers, for attending this, the first of three public hearings being held here in the State of Alaska on this Draft Environmental Impact

Statement. Once again, I'd like to note for the record that the record will formally close on January 5th, 1993. So if you do have written comment, which a number of you have mentioned that you do have or will have, please send it to the Department at the address that we can provide to you here at the back of the room. Also, if you're so inclined, you're more than free to attend the upcoming hearings that will be held, the first in Fairbanks, which will be held at 7 o'clock this Wednesday evening, and Thursday evening in Anchorage.

So, again, I thank you for your participation and your comments here for the record. With that I will formally close the record of this, the December 7th, 1992 public hearing held on the Draft Environmental Impact Statement for the Healy Clean Coal Project. The hearing record is formally closed.

(Off record - 9:36 p.m.)

* * *

END OF PROCEEDINGS

* * *

C E R T I F I C A T E

UNITED STATES OF AMERICA)
) ss.
STATE OF ALASKA)

I, Lynn Reynolds, Notary Public in and for the State of Alaska, residing at Fairbanks, Alaska, and electronic reporter for Mary Johnson-Fairbanks Court Reporting, do hereby certify:

That the annexed and foregoing transcript of the Public Scoping Meeting for the Healy Clean Coal Project was taken before Mary L. Johnson on the 7th day of December, 1992, beginning at the hour of 8:40 p.m., at the Tri-Valley Community Center, Healy, Alaska;

That this transcript, as heretofore annexed, is a true and correct transcription of the proceedings had, taken by Mary L. Johnson electronically and thereafter transcribed by me to the best of my knowledge and ability.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal this 22nd day of December, 1992.

Lynn Reynolds
Notary Public in and for Alaska
My commission expires: 9-20-93

TRANSCRIPT
HEALY, ALASKA

PRESENTATION MATERIALS

"A description of the Healy Clean Coal Project" by Steve Heintz and "A Brief Overview of the Environmental Impact Statement for the Healy Clean Coal Project" by Tom Ruppel are presentations that may be obtained from Dr. Earl W. Evans, U.S. Department of Energy, Pittsburgh Energy Technology Center, P.O. Box 10940, Pittsburgh, PA 15236. Telephone: (412)892-5709.

TRANSCRIPT
HEALY, ALASKA

EXHIBIT NO. 1

The Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508) and the Department of Energy, National Environmental Policy Act Part II; Implementing Procedures and Guidelines Revocation; Final Rule and Notice (10 CFR 1021) are incorporated by reference in the transcript.

These two documents, which together are about 85 pages in length, are publicly available at most libraries or may be obtained from Dr. Earl W. Evans, U.S. Department of Energy, Pittsburgh Energy Technology Center, P.O. Box 10940, Pittsburgh, PA 15236. Telephone: (412)892-5709.

COMMENTS AND RESPONSES FROM THE PUBLIC HEARING ON THE DRAFT EIS FOR THE PROPOSED HEALY CLEAN COAL PROJECT TRI-VALLEY COMMUNITY CENTER HEALY, ALASKA

December 7, 1992

COMMENTS AND RESPONSES
FROM THE PUBLIC HEARING
ON THE DRAFT EIS FOR THE
PROPOSED HEALY CLEAN COAL PROJECT
TRI-VALLEY COMMUNITY CENTER
HEALY, ALASKA

December 7, 1992

NOTE: For the purpose of coding comments and ease of cross-referencing between documents and other comments, the Healy transcript has been coded "H/T-__."

Commenter: Rick Brewer, Mayor, Denali Borough, P.O. Box 3140, Anderson, AK 99744

Comment H/T-1, pp. 9-10:

"One of the things that we've noticed in the impact study just briefly is that the contribution that the Borough is required to make to education, which I believe is stated in here on page 3-48 as being 35 percent required by state law. I believe that's incorrect, according to that statement as to what we've been at least told and informed of by the state. Actually, that's a four mill equivalent of all real and personal property located within the Denali Borough, which when that all comes down to bottom dollars is roughly about $278,000 a year, which would, I believe at this time, be less than 10 percent of the budget of the school district."

Response:

The text in Sect. 3.8.5 of the EIS has been changed to reflect these corrections submitted in the letter from Rick Brewer (Letter No. 63).

Commenter: Joseph E. Usibelli, Jr., P.O. Box 1000, Healy, AK 99743

Comment H/T-2, pp. 10-12:

Comments noted.

Commenter: Jan St. Peters, P.O. Box 323, Healy, AK 99743

Comment H/T-3, pp. 12-15:

"One is there's references to the landfill being used to haul off debris and construction, materials, et cetera, and I was hoping maybe Rick would address that. But it was my understanding that as of March that we—that's the deadline for our permit on the landfill right now, and the future of our landfill is sort of up in the air. So that's something that's going to have be addressed with this construction project."

Response:

The discussion of waste management and landfills has been expanded in Sect. 4.1.10 of the EIS. See response to Comment 45-6.

Comment H/T-4, pp. 13-14:

"Another comment I had is there's a letter here from the Department of the Interior, Office of Environmental Project Review. . . . They were understanding the Department of Energy might fund demonstration projects and then possibly replace natural gas projects with coal technology. And their opinion was that a coal-fired power plant could increase air emissions by as much a 1,000 percent and should not be funded. Rather, that federal funding should be limited to coal-fired plants that are already in existence. And in my haste, I left part of my notes at home but I—you know, the technology here is supposedly, according to your data, reduces the nitrous oxide and sulfur dioxide emissions, doesn't eliminate them, and as far as carbon dioxide, I've heard statistics that is generating four times the amount of carbon dioxide as say natural gas, a greenhouse gas. So, I definitely have concerns about greenhouse gases."

Response:

DOE's CCT Program will take the best and most promising of the advanced coal-based technologies and demonstrate their technical, environmental, and economic performance to the point where the private sector can introduce the technologies into the commercial marketplace. During the commercialization phase, the utilities will ultimately decide whether to use clean coal technologies, and if so, whether to replace existing natural gas-fired units, replace existing coal-fired units, or to build new clean coal technology facilities. Some of the CCT demonstration projects involve retrofitting existing coal-fired units, some involve retrofitting existing units that use other fuel sources, and some (like the proposed HCCP) involve building new facilities. While clean coal technologies may generate more air emissions than natural gas-fired facilities, the goal of the CCT Program is to demonstrate technologies that are more energy efficient and reliable, and achieve substantial reductions in emissions as compared with existing coal technologies. Many of the CCT projects are expected to require less coal to generate a given amount of electricity and thus would produce less CO_2 than conventional coal technologies.

Comment H/T-5, p. 14:

"And on a another economic point, I was reading an article that Gary Newman had about the project. And one of the points he brings up is taxes that might be very possibly be levied against emissions of carbon dioxide, technologies using that, and what impact will that have on our community in the future with the Clean Air Act. Will we actually have an economic disadvantage because of the technology that we're developing here and spending all this money on."

Response:

Although the concept of taxing CO_2 emissions has been mentioned as a possibility in the future, the concept is speculation from which a prediction cannot be made regarding the probability of its eventual implementation. Any type of energy tax will cause the cost of electricity to increase. However, it is not expected that Healy will experience a disadvantage due to an energy tax on the primary fuel.

Commenter: Ron Dane, Box 108, Cantwell

Comment H/T-6, pp. 15-16:

Comments noted.

Commenter: R. E. (Richard) Stickle, Chairman of Golden Valley Member Advisory Committee, Post Office Box 10, Healy, AK

Comment H/T-7, pp. 16-18:

Comments noted.

Commenter: Steve Carwile, Box 374, Healy, AK

Comment H/T-8, p. 18:

"I wonder with all the work and money that's going into this effort why the demonstration period is limited to one year. I suspect there'll be a lot of bugs, personnel, equipment, functioning, systems, whatever, that would ask for a longer period of experimentation to make sure that the coal gets burned cleaner than it might have in the past."

Response:

DOE is considering extending the demonstration period beyond one year.

Comment H/T-9, p. 18:

"And also, in the—I would like to see in the final EIS or subsequent volumes to this representation of the effects using the PLUVUE II model discussed in the DEIS but discounted out of hand because no one has documented that they've been in the park and have been adversely effected by air pollution. I think that's a red herring as far as supporting the case that PLUVUE II or PLUVUE I doesn't work in this case."

Response:

The EIS has been modified to include a side-by-side comparison and interpretation of PLUVUE I and PLUVUE II results.

Commenter: Sandy Kogl, Box 1, Denali Park, Mile 224 Parks Highway

Comment H/T-10, p. 19

" . . . I have to go on record as opposing the building of a new clean fire coal burning plant in that I don't think bigger is always necessarily better."

Response:

Comment noted.

Comment H/T-11, p. 19:

"And I think that our energies would be better spent in developing alternative energy sources and dedicated towards energy conservation rather than doubling, essentially tripling the energy output from this plant and creating cheaper power which therefore is easier to use, et cetera, et cetera, et cetera. So I guess I come from the standpoint of less is better and energy conservation. I don't think there is at this point or in the near future a demonstrated need for tripling the energy output."

Response:

See response to Comment 76-12.

Comment H/T-12, p. 19:

"I think not all of the environmental concerns have been adequately addressed. I think we talk about well, we'll meet this level, we won't exceed this level of degradation of either air quality, visibility, impairment or water quality. But in my opinion any degradation is too much. I think there is already too much and we've seen too many examples of if you get a little degradation here and little there, the cumulative effects are more than we should be dealing with."

Response:

The EIS includes an evaluation of cumulative effects, especially for cumulative air quality impacts resulting from the simultaneous operation of the HCCP and Healy Unit No. 1.

Commenter: Bill James, Box 357, Healy, AK

Comment H/T-13, p. 20:

Comments noted.

Commenter: Linda Franklin, Denali Citizens Council, P.O. Box 78, Denali Park, AK 99755

Comment H/T-14, p. 21:

"At this time we are neither supporting or opposing this project but obviously because of its proximity to the national park we are concerned about the environmental impacts, especially ambient air quality and visibility. But we also received our DEIS very late and we haven't had time to go over it very well, and we are an all volunteer group. So the scientific jargon is a little hard to get through."

Response:

DOE believes that the EIS provides a comprehensive assessment of potential impacts from the proposed HCCP. The deadline for comments was extended from January 5, 1993 to January 20, 1993.

Commenter: Michael Mark, Post Office Box 15, Healy, AK (Representing the Chamber of Commerce and the Tri-Valley Volunteer Fire Department)

Comment H/T-15, p. 21:

"The other one, now getting to the fire department, is the landfill here currently is run by the fire department. And we have a renewal process that we/re going through with the state now on the renewal of our dump application, landfill. And there's some glitches in it and we/re trying to work with the borough. And we still have an application on file. And the dump is still open. How long depends on what other glitches as government agencies go that we have to jump through."

Response:

Comment noted.

Comment H-T-16, p. 22:

"On the map that you people are using for the park in your stuff, you filed this originally in the Federal Register. You might refer to the same document and get the map that's filed for the Park Service in the Federal Register, which would be the legal point to start instead of one donated or offered to you. And that's on page 45,185 is the page number and that's in the September 30th, 1992 register."

Response:

DOE has obtained a copy of the black and white map of DNPP that appears in the *Federal Register* on September 30, 1992. Because the map appears almost identical to the color map already in the EIS, DOE will keep a copy of the former map as supporting information rather than include it in the EIS.

Commenter: Courtney Stewart, Post Office Box 385, Healy, AK 99743

Comment H/T-17, p. 24:

"And I would say that between coal power and wind power, which is another industry that could very well be developed here. I mean we've got more wind than anywhere else. That we're in an excellent position to provide clean power for the rest of the state for a very long time. And that these things should be looked into."

Response:

See response to Comment 1-2.

Commenter: Jenasy Jenson, P.O. Box 3102A, Healy, AK

Comment H/T-18, pp 24-25:

"As a resident of Ferry, I feel that the lack of the ice bridge will impact the people that live on the other side of the bridge, of the Nenana River. We depend on the ice bridge to move large things across every year. There are quite a few miners that live in that area and they take large equipment across. . . . And there is proposed development of the mines in that area. And I think that is an impact that definitely needs to be addressed further."

Response:

The socioeconomic impacts of ice-free water near the village of Ferry attributable to the combined thermal discharge of Healy Unit No. 1 and HCCP are adequately assessed in Sect. 4.1.8.5. When the ice bridge is not available during the winter, it would be inconvenient and expensive for residents and local mining operations to transport supplies and equipment to Ferry by railroad whose existing bridge offers the only other means of direct access.

Comment H/T-19, p. 25:

"But your data in here for the schools is incorrect. We are already over capacity. A lot of people have moved to the area in anticipation of jobs. And you talk about most of the jobs will be people that come in from outside. Well, the school experienced about 40 new students this year, far in excess of what we were projecting as far as growth. And we're anticipating continued growth from, you know, what we're seeing right now. We are over capacity in the school right now. We are using the lunch room. We are using the shop. There is no more classroom space. If anyone's been in the classrooms at Tri-Valley they're packed. The kids are really packed in there. We don't have room for new teachers that we need to hire. And so it definitely is going to impact the school if we continue to get the kind of growth and we'll need additional classroom space. And it sort of glossed over that."

Response:

Sections 3.8.5, 4.1.8.5, and 4.2.8.5 of the EIS have been revised to reflect new information submitted in the letter from John Novak (Letter No. 23).

Comment H/T-20, p. 26:

" . . . I am still very involved with the mental health organization here. They're at capacity right now. And I think that a large construction camp will impact our community and will impact the medical, the emergency services, and the mental health services. I think that was kind of glossed over in the impact."

Response:

Sections 3.8.5, 4.1.8.5, and 4.2.8.5 of the EIS have been revised to reflect new information concerning medical, emergency, and mental health services submitted by Barbara Price (Letter No. 58), and John Winklmann (Letter No. 59).

Comment H/T-21, p. 26:

"People have already addressed the landfill. You know, that's an issue—that was one of the resources that they were—you were talking about here is who will take the stuff to the landfill. We don't even know if we're going to have a landfill."

Response:

See response to Comment 45-6.

Comment H/T-22, pp. 26-27:

"We recently lost our state trooper. You know, our volunteer fire department and our emergency services are at capacity. And so I think all these things are things that, you know, will need to be addressed and I don't—just quickly looking through this document, I don't think they've really been addressed. And I don't see where the money is going to come from. Our state is losing revenues right now from the oil. I don't know where the solutions are coming. . . . "

Response:

Sections 4.1.8.5 and 4.2.8.5 discuss the potential impacts of the HCCP on police and fire protection.

Commenter: Kim Heacox, Box 126 Denali Park, AK 99755

Comment H/T-23, pp. 28-29:

"I have one concern and that is the politicization of the regulatory process. . . . This worries me because I think that no matter how many linear regression do or chi squares or hypotheses or null hypotheses, no matter how good your science is it can be politicized. And the regulations that exist today can be changes via a Hickel Administration, via a Clinton Administration or a Bush Administration."

Response:

Comment noted.

Comment H/T-24, p. 31:

"I just want to go on record as saying that you have to—that I wish there could be some very careful language written into this that concrete parameters are established for the emissions and all the other environmental possible pollutants, et cetera that could come from this."

Response:

The EIS analyzes several scenarios for air emissions. If successful, the demonstration is expected to emit at very low rates that are the target objectives. However, a higher emission level is also analyzed for both the "permitted case" and the "HCCP retrofit case" in Sect. 5. The emission levels are identical for these latter two cases and represent the upper bounds for emissions which could occur if the HCCP does not achieve its target emission objectives. The EIS also evaluates expected discharges for liquid effluents and solid wastes. Standards and limits for HCCP emissions and discharges would be established as part of the permitting process. Also, see responses to Comments 76-1 and 21-1.

Commenter: A. E. (Trey) Acteson, Box 109, Healy, AK 99755

Comment H/T-25, p. 31:

"Also I think another concern here of some people that has an effect on how they form an opinion about this power plant is if it's built under union contract, and I haven't heard much comment on that tonight."

Response:

Comment noted.

Comment H/T-26, p. 32:

"Also, I'm also concerned on what kind of effects the new change in the political structure is going to have on how things are set up, as far as EPA regulations, and limitations that are set also. You know, and what kind of effect is that going to have on the clean coal technology processes. You know, is Gore going to come in and say, you know, no, we can't do that anymore and going to cut funding to all programs? I'm not really familiar with exactly how they're all funded, but maybe somebody could reiterate on that a little bit too."

Response:

The most recent amendments to the Clean Air Act were passed in 1990 and they established deadlines (1995 and 2000) for utilities to meet the amendments through either reducing emissions or through emissions trading. Because utilities have already started planning how they will meet the CAA Amendments, it is unlikely that the regulations would be changed. Therefore, the HCCP would not become obsolete with the passing of new regulations.

Clean Coal Round III funds were appropriated by Congress under Public Law 100-446 in September of 1988 and cannot be rescinded without another public law.

U.S. DEPARTMENT OF ENERGY

PROPOSED HEALY CLEAN COAL PROJECT

PUBLIC SCOPING MEETING

Held at

JOY SCHOOL

FAIRBANKS, ALASKA

December 9, 1992

7:05 p.m.

MARY JOHNSON — FAIRBANKS COURT REPORTING
711 GAFFNEY ROAD • FAIRBANKS, ALASKA 99701 • (907) 451-0284 / 452-8520

ROY L. EIGUREN, Moderator Hearing Officer

PUBLIC SPEAKERS

MIKE EASTMAN
BERNIE KARL
STAN RYBACHEK
FRED BROWN
PATRICK SHIER
BERT SHARP
RALPH MALONE
JAY QUACKENBUSH
MICHAEL KELLY
CLARK MILNE
J. VANDERFORD
DAVE LACIE
DAVID STANNARD
MATTHEW TULLAR
GARY NEWMAN

PROCEEDINGS

MR. EIGUREN: Good evening, ladies and gentlemen. My name, once again, is Roy Eiguren. I'm the public hearings officer for this particular proceeding. I would like now to formally open the record for the review of the Draft Environmental Impact Statement relative to the United States Department of Energy's proposed Healy Clean Coal Project. This proceeding is officially designated as the Fairbanks, Alaska Public Hearing on the Department of Energy Document DOE EIS 0186, held on the 9th day of December 1992 and commencing at 7 p.m. in the evening.

At this point I would like to introduce the members of the public hearings panel that are here. These are members of the Department of Energy who have worked on this particular project. Their purpose in being here is actually two-fold: One, they're here to listen to your comment, and two, they're here to ask clarifying questions of the commenters that would like to comment at this particular point. And so I'll go ahead and introduce the members of the panel.

First I'd call Mr. Elmer Holt. Elmer is with the Headquarters Division of the Office of NEPA Oversight in Washington, D.C. Mr. Steve Ferguson who is with the Office of General Council, Department of Energy, at Headquarters in Washington, D.C. Next is Jerry Pell who is with the Clean Coal Program. He's Environmental Liaison with the Department at Headquarters in Washington, D.C. Next is Tom Ruppel who is the Senior

Environmental Lead for this particular project. Tom is with DOE at Pittsburgh. And finally, the Project Coordinator, Mr. Steve Heintz.

I'd also like to note for the record that the senior departmental official here from the Department is Mr. Mike Eastman. Mike is here in the audience. He is the senior department official responsible for this particular project.

As I'd mentioned, I am an independent hearings officer. I don't take a position in this particular proceeding. I'm not an advocate for or against the Department's position. My sole purpose is to make sure that everybody has an equal and fair opportunity to comment on the record relative to the particular subject matter of this proceeding.

The issue that is the subject of this proceeding is the Department of Energy's proposal to demonstrate a clean coal project facility at one of two locations in Alaska. One, adjacent to the existing 25 megawatt Healy Unit Number 1 on a site about four miles north/northwest of the Denali National Park and Preserve, or an alternative site located about five miles north/northwest of the proposed site. Both of these sites are designated as an alternative under consideration in the Draft Environmental Impact Statement. The third and final alternative under consideration in the Draft Environmental Impact Statement is the no-action alternative, which would be a departmental decision not to build and demonstrate such a

facility.

To put this hearing in perspective, it's important that all of you understand the key elements of the federal law that requires the Department of Energy's final decision in this matter be preceded by a comprehensive review of the environmental factors associated with each of the alternatives under consideration. The National Environmental Policy Act of 1969, which is generally known as NEPA, requires that all federal agencies develop procedures that ensure that quote, "environmental amenities or values are given appropriate consideration in federal government decision making along with technical considerations." This law also requires that quote, "recommendations for major federal actions significantly affecting the quality of the human environment" be first preceded by the development and completion of an environmental impact statement, or an EIS as it's commonly known, that fully and carefully examines the potential environmental impacts of the proposed federal action.

This particular proceeding was triggered by a notice of intent to prepare the Draft Environmental Impact Statement and hold public scoping meetings, which were held earlier in 1990 here in the State of Alaska. Publication of the initial notice of intent was made on October 5th, 1990. Scoping meetings were held in Healy, Alaska on October 22nd, 1990, here in Fairbanks on October 23rd of the same year, and in Anchorage on October

24th of 1990.

As a result of the scoping process, an EIS implementation plan was developed to define the scope of the DEIS, provide further guidance for preparing the environmental document itself. A copy of that particular plan is available for public inspection in various public reading rooms. As a result of the scoping meetings, a number of issues were identified by the Department of Energy and a great many of those are going to be discussed here this evening. There's a variety of issues addressed in the Draft Environmental Impact Statement, in the workshop that we're going to hold a little bit later on. Several departmental representatives will talk about the specific issues in more detail for you.

I'd like to indicate that the preparation of environmental impact statement and the review process that governs it is governed by specific federal regulations are established by the Council on Environmental Quality, which is an agency within the executive office of the President of the United States. In addition to that, the Department of Energy has its own implementing guidelines for these types of proceedings. The Council on Environmental Quality Regulations are found in 40 Federal Regulations Part 1500 through 1508. The Federal Register notices as well as the DOE regulations that provide for this particular proceeding were previously marked by me as Exhibit Number 1 and will be introduced into the formal record of the

proceeding.

(Exhibit Number 1 introduced)

These particular regulations and guidelines state that upon request of a lead agency, which in this case is the Department of Energy, any other federal agency that has jurisdiction by law shall also be a cooperating agency in the preparation of the Environmental Impact Statement. These regulations add that any other federal agency that has special expertise with respect to any environmental issue which should be addressed in the EIS may be a cooperating agency upon request of the lead agency. In this particular proceeding, four federal agencies have been designated as cooperating agencies. They have provided text as well as additional information for the record. The four agencies designated as cooperating are: the United States Department of Agriculture, Rural Electrification Administration; the U.S. Department of the Army, Corps of Engineers; the U.S. Department of the Interior, National Park Service; and the U.S. Environmental Protection Agency.

The relevant regulations also require that after preparing a Draft Environmental Impact Statement and before preparing the final Environmental Impact Statement a federal agency must first obtain the comments of one, any federal agency that has jurisdiction by law or special expertise with respect to any environmental impact, and two, request the comments of appropriate state and local agencies which develop and enforce individu-

al standards, Indian tribes, and the public, with a particular obligation to affirmatively solicit comments from persons or organizations who may be interested or affected by the proposed federal decision.

In addition to that, regulations of the Department of Energy do require that there at least be one public hearing on each Draft Environmental Impact Statement. Accordingly, today's and the other public hearings being held in this series are being held pursuant to these regulations to receive public, Indian tribe and governmental comment on the various issues that are identified in the Draft Environmental Impact Statement.

I'd like to note for the record that the notice for these particular proceedings, which were in the newspaper as well as the Federal Register, have been marked as Exhibit 2 and have been included in the official record.

(Exhibit Number 2 is introduced)

Public comment on this Draft Environmental Impact Statement will be received through this and the subsequent hearing that will be held in Anchorage tomorrow. A prior hearing was held two days ago in Healy. Written comment, which receives the same weight and consideration by the Department in the proceeding, may be submitted by the public to me tonight for inclusion in the record or may be mailed directly to the Department of Energy to Dr. Earl Evans. Dr. Evans is here. At an address that we can provide to you back at the registration table. All of the

oral and written comments will be compiled into a comprehensive record that will be considered in the Department in making its final decision on how to proceed.

Just a couple quick notes relative to how we're going to conduct the proceeding this evening. Everybody and anybody who would like to comment will be given the opportunity to do so. Everything that is said during the public hearing portion of this proceeding is being recorded by the court reporter and will go into a transcript that will be used by the Department in making a final decision, as I'd mentioned.

After reviewing the entire record in this particular proceeding, the Department of Energy has a number of options available to it as to how to proceed. It may choose to modify, supplement or reissue the Draft Environmental Impact Statement prior to issuing a final EIS. It also may choose to issue the Draft Environmental Impact Statement as the final EIS without modification. Finally, a record of decision will identify the environmentally preferred alternative chosen by the Department, along with any practical means to avoid or minimize environmental harm from the alternative that is selected. The Department, as a matter of federal law, cannot proceed with its proposed action in the record of decision until a minimum of 30 days has passed from the date of issuance of the final Environmental Impact Statement.

Under current schedules, the Department plans to issue a

final EIS and a record of decision later this spring. So as I'd mentioned, the comment period for this particular proceeding will remain open through the 5th of January. Oral and written comments receive the same weight. So if for whatever reason you can't comment this evening, would like to submit additional written comment, please do so by January 5th, 1993. To the extent possible, the Department will consider any written comment received after that date. Sometime in early spring the Department will provide a notice of availability of the final Environmental Impact Statement. That will be published in the Federal Register. Then following that, sometime in the late spring, the Department will issue its record of decision on whether to proceed with the Healy Clean Coal Project and publish its proposed action in the Federal Register.

To govern the conduct of this particular proceeding, we have a number of brief fairly simple guidelines that are published out in the back of the room. I'll go through those with you very briefly right now. Those of you that would like to testify at this particular point will need to have registered at the back of the room. I will take the commentors in the order within which you arrived and signed in. If there are any public officials here, however, we would be glad to take them first. Everyone has five minutes within which to comment on the record. We would request that you would come up here to this particular podium for two reasons: One, to address your

comments to the hearing panel, and secondly, our court reporting system uses a microphone system and so the mike for the court reporter is up here.

So when I call your name, I'd request that you come forward, give us your name and address for the record. If you're speaking on behalf of an organization, please identify the name of the organization and then we'll go ahead and begin timing you. At the end of four minutes a little green light goes on. At the end of five minutes a red light goes on. When the red light goes on, I'd ask that you start to bring your comments to closure. I won't cut you off immediately but under significant penalty you will go past -- no, we'll go ahead and allow you to go a little past five minutes.

Any questions about the proceeding itself or the procedures that we're going to use? If not, then I'll go ahead and ask for the list of commentors. Just to make everyone very clear as to what we're proposing to do, is those of you that would like to comment at this point. These are the two individuals that would like to comment at this point. Then, if we'd like, we'll go ahead and go into the workshop format and then resume the public hearing to complete the receipt of any comment.

We have two individuals at this point who have requested to speak. The first is Mr. Gary Newman.

MR. NEWMAN: I'd be happy to wait.

MR. EIGUREN: Okay. The second is Mr. J. Quakenbush.

MR. QUAKENBUSH: I'll be glad to wait until after.

MR. EIGUREN: Okay.

MR. KARL: I'd like to comment now.

MR. EIGUREN: Okay. Why don't we do this. Those of you that would like to comment at this point, we'll just have you come forward, give us your name and address for the record. You've got five minutes for comment.

MR. KARL: I don't think I can finish in five but I'll try.

MR. EIGUREN: All right.

BERNIE KARL: My name is Bernie Karl, K-a-r-l. I live at 105 Foran Circle, Fairbanks, Alaska, 99710. Ladies and gentlemen, thank you for the opportunity to comment this evening. First of all, I'd like to compliment the Department of Energy on the superb job that you've done to this point on your clean coal project. I wholly support the project. I think it is good for everyone. It's the best bang for the buck that all the citizens are going to get. When you can take waste coal and do a long-term contract on it benefits all of us. It's the first time I think the little guy gets treated square. And I compliment you. F/T-1

And I compliment the mine for working in doing a long-term contract so this can all happen. Very seldom, very seldom does the trickle-down economics work. This is one thing that's going to trickle down and I'm going to see it in my billfold, and so is everyone else in the community. It's long term. When you

look at coal as being the largest reserve that Alaska has, and truly that the United States and the world has, your technology is needed. It's needed sorely and it's needed now. It's not needed later. The work that you will do now will be good for many, many generations into the future. It's the best deal we have going for energy. If people want to really be conscious and you -- even if you were an environmentalist, you would say that this has to be right. I think that you'll find out that 99 percent of all Alaskans are truly environmentalists, environmentalists at heart. We don't want anybody to screw up our land or screw up our country. We don't want outsiders to come up here and give us a bunch of nonsense. We love our place. We love our world around here. We know that the only thing that's going to make us exist up here is reasonable energy costs, reasonable energy. Nothing can happen without reasonable energy. You have put together a program collectively between the utilities, the mine and yourselves that will be good for this entire state. And I think that with the technology that you will receive from this project, you're going to help the rest of the United States. We now have a problem with the ozone. We have a problem with pollution. I think you're working towards that and you're working at a very rapid rate. And I for one compliment all of the people that have worked on this project to get it this far. Thank you. I appreciate your time.

MR. EIGUREN: Thank you. Is there anyone else who would

like to comment at this point before we go into the workshop? Let me stress, everyone will have a chance to comment at some point during the evening. If you'd like to do it now, please step forward. May I have your name and address for the record, sir.

STAN RYBACHEK: Thank you. My name is Stan Rybachek. I'm from North Pole, Alaska. And I'd like to speak in support of the project. I think it's a very good project. I've been hearing about it now for a couple of years. I compliment the Department of Energy on taking the initiative to work with Usibelli Coal in moving forward with this project. I think it's very good for the nation and I think it's very good for Alaska. I think it will diversify our energy needs. We have lots of coal in Alaska. It's all very suitable for clean coal generation. And I think it will greatly benefit the state and the nation. F/T-2

I think it's a wise thing to do an individual study like this before we go into it like they did with the oxyfuel in Fairbanks. I don't know if you heard about this fiasco up here, but they mandated that we burn this oxygenated fuel and there was no studies done in the cold area on that fuel. And I think it's really turning into a disaster that's not really well thought out. This is very much in contrast to that. I think it's very well put together and it will be a great asset to the nature now and in the future. Thank you very much.

MR. EIGUREN: Thank you, sir. We have eight individuals who have signed up to testify in addition to the two that just commented. The eight of you that are going to comment, would you mind waiting to comment until about 9 or so? What we're going to do is have a workshop. And what we're proposing to do with the workshop is simply give you more of a background on both the technology as well as the project as well as the DEIS and have a chance to ask the Department questions.

Again, if you want to comment now, we'd love to have you, that's fine. Yes, sir.

FRED BROWN: Well, I have two young children at home, one is three and one is less than one, and I'm not sure what my night holds for me yet. So I'll go ahead and make my comments now. F/T-3

MR. EIGUREN: We need your name and address for the record.

FRED BROWN: My name is Fred Brown. I'm an attorney licensed in Oregon and Alaska. I am a hearing officer for the workers' compensation board but this evening I'm here to speak on behalf of an organization called the Alaska Business Development Services. The organization's stated purpose is to facilitate businesses, especially in rural areas or depressed areas, in the creation of jobs and to provide long-term economic growth.

I plan to submit written testimony but I want to speak here tonight just briefly in the interest of time to say that we

wholeheartedly support the project here as described and anything that you can do to help create jobs in rural areas, especially as described here, in basically an economically benign atmosphere, we wholeheartedly support. Thank you again for the work you're doing.

MR. EIGUREN: Thank you. Anyone else like to comment at this point? Okay. Yes, sir. And we'd ask for your name and address for the record.

PATRICK SHIER: My name is Patrick Shier. I'm a 35-year resident here in Fairbanks. My address is 112 Mary Leigh, Fairbanks, Alaska, 99701. And likewise, I wasn't aware that we were going to do this at the end and my time is already spoken for later tonight so I'll make my comments now and also submit written testimony. F/T-4

I'm here on behalf of Alaska Business Development Services as well. I'm an auditor here in Fairbanks. As I mentioned, I'm a 35-year resident. And the stated purpose of our organization is to do what we can to see that projects that existing or new businesses are contemplating can come to fruition, particularly if they create jobs. And we see this project as a way to not only increase the supply of available electricity in our area and the railbelt area but also to make new jobs and new technology. Alaska has the opportunity here to show that this is not a bad place to work out some problems that otherwise haven't been addressed elsewhere. This demonstration project

seems like the ideal location for it, next to an existing plant, next to a supply of coal that whose expected life will be expanded by the use of that waste coal in this technology. We're looking forward also to any spinoff benefits that we may see in this economy, in the Healy area as well as in Fairbanks from this project, both in construction and the continuing operation.

So we applaud the work that's been done so far. We've read the draft statement and we've seen some of the other comments from some of the other groups in support of this project. And we can concur wholeheartedly that it should continue and go forward. Thank you.

MR. EIGUREN: Thank you very much. Would anyone else like to comment at this point? Feel free to do so if you have another obligation or you're going to need to leave early. It's not a problem. If not then, what we'll go ahead and do I will recess the public hearing at this particular point and we'll move into the workshop, as we've styled it.

(Off record)

(On record)

MR. EIGUREN: The date is December 9, 1992 in Fairbanks, Alaska. Once again, my name is Roy Eiguren. I am the public hearings officer for this and the other hearings being held in Alaska on this particular Department of Energy Draft Environmental Impact Statement, which relates to the Department's proposed

courses of actions relative to the Healy Clean Coal Project. As I'd mentioned prior to going in recess, this particular public hearing is being held pursuant to the National Environmental Policy Act, which is federal legislation that requires that there be a comprehensive environmental analysis of all federal actions that significantly affect the human environment.

As I'd mentioned prior to going into recess, it was the Department's intention to have a two-part program here this evening. We started by having a formal public hearing on the Draft Environmental Impact Statement at approximately 7:22 local time. We went into recess after having heard comment from four members of the public. We went to the recess for the purpose of conducting the second part of this evening's program, which was a workshop or a town hall meeting on particular issues associated with both the project as well as the Draft Environmental Impact Statement.

And I would like to note for the record formally that from that time until now we have been in a workshop where members of the Department of Energy responded to specific questions posed to them by members of the public who are here at this public hearing tonight.

What we'd like to do now, ladies and gentlemen, at this point is go ahead and resume the receipt of comment from members of the public on the Draft Environmental Impact Statement. As I'd mentioned earlier, the guidelines, the procedures that we're

following for this as well as all of the other hearings being held in Alaska, fairly simple. Everybody and anybody who would like to comment on the record has the opportunity to do so. We would simply ask that if you want to comment that you sign in at the back of the room and they will so notify me that you intend to comment. Everyone has five minutes within which to comment. I will be the keeper of the time. At four minutes time elapsed a green light will go on here at the podium. At five minutes a red light goes on. If you go past five minutes the podium explodes. The rules also provide that members -- or excuse me, elected public officials or individuals representing organizations will have the opportunity to comment first. So we'll be taking their comments and then we'll go ahead and receive comments from individuals who are representing themselves here this evening.

As I'd mentioned, oral comment will receive the same weight as written comment in the record. So if you do have written comments with you that you would like to submit in addition to your oral comment, please leave those written comments with me. I'll mark them as an exhibit and include those in the record. If you have written comment that you would like to make after tonight's hearing, you may mail them to the Department of Energy, and we have an address for you in the back of the room that we can give to you. I'd like to have those comments by the close of comment in this particular proceeding, which is January

5th, 1993. To the extent practical, any comments received after January 5th will be also considered in the final decision making.

I'd also like to note for the record that we have representatives from two organizations that are involved with this particular project, as mentioned during the workshop. Joe Usibelli, Jr., who is the president of Usibelli Coal Mine Company, which provide coal for this particular project if it's built is here. We'd note his presence in the audience. He did comment earlier at our hearing in Healy. And also Mr. Mike Kelly who is the general manager of the Golden Valley Electrical Association, which would be the organization that would market the output of this particular project is here and will be commenting for the record.

So with that, I would ask if anyone has any questions about the procedures at this point. If not, we'll go ahead and begin receipt of comment. As I'd mentioned earlier, we'd request that you would step forward so that we can -- to the podium so that we can get your comment for the court reporter who needs to use this particular microphone up here. We'd ask that you address your comments to the members of the DOE hearings panel. They're here to receive your comment. And they also have the right to ask any clarifying questions they might have at the conclusion of your comment.

So with that, I'll call for our first commentor, and that's

the Honorable Bert Sharp who is currently a member of the House of Representatives of the State of Alaska and I understand is a senator-elect.

REPRESENTATIVE BERT SHARP: Thank you. I don't think you'll need the five-minute time, I hope, limit. But I just wanted to offer a few comments on a little legislative institutional memory on this project, if I may. There's been positive state involvement and support now through two governors and four years of legislative deliberations. And as you well know, major commitments, financial commitments, by legislative authorization of direct $20-25 million of general funds towards the project and authorization for ADA bonding to participate in the project and be the owner of the project. F/T-5

Now, I think this is an opportunity to participate in the advancement of technology that could benefit not only our state but the United States and the rest of the world, in general, as far as energy sources and the utilization of a fuel that is now in lower regard, as far as environmental concerns. And I think anything we can do to enhance the utilization of these vast reserves will bode well for future generations.

This project does offer the possibility, as we all know, of significantly cleaner environmental results in utilizing of coal as a fuel and low quality coal, as Mr. Usibelli earlier stated. I believe it also provides a balanced blend for interior railbelt Alaska of generating sources, which is an economic

long-term benefit to tens of thousands of people presently and into the future.

And I would just say that the joint commitment of the federal DOE, other federal agencies, the State of Alaska, and utilities, plus private enterprise is quite an accomplishment towards driving for the same agenda and goal, and I would hope that this deliberation that has been seemingly slow to some people is producing a sense of accomplishing a good project and a sound project for the future. Thank you.

MR. EIGUREN: Thank you. I'd next call Ralph Malone, representing the Fairbanks North Star Borough.

RALPH MALONE: Thank you. I appreciate the opportunity to make a few comments on behalf of the administration of the Fairbanks North Star Borough. Alaska and especially the Interior needs to diversify our economic base. Adequate supplies of electric energy are necessary in order to facilitate almost any potential industrial or value-added resource processing. F/T-6

Currently we've got a gold mine, I'm sure you'll hear about that. It's in the permitting processes. That gold mine will have a demand for up to 35 megawatts of electricity. It will provide employment opportunities for 200 to 275 people. This is important to our interior region.

Also, the Fairbanks area is a carbon monoxide non-attainment area. This has necessitated implementation of vehicle

emissions and maintenance inspection programs and required the use of oxygenated fuels at great expense and substantial public controversy. This proposal which would generate needed electrical power at a remote location may help the Fairbanks air quality problem by reducing stationary source emissions and at least may prevent further increases due to that source. And we think that is a very positive benefit to this location.

The proposed location is already the site of a power plant. The addition of a second plant in conjunction with GVEA Number 1 does not, in the administration's opinion, result in a degradation of the area aesthetically. The EIS mentions the proximity of the proposed site to the Denali National Park and Preserve. However, the specific sighting of the first alternative places the plant in an area where it is visually screened from most vantage points by topographic features. To my knowledge, it will not be visible from any road within the Denali National Park and Preserve. I think that was also mentioned in the EIS discussion earlier.

Also, the Fairbanks area has a skilled labor force available. Construction of this project will be a significant benefit to local building trades workers and provide additional long-term employment opportunities for Alaskan citizens in the Healy Tri-Valley area and throughout the railbelt. This project is also an opportunity to prove and improve the technology available for burning coal. Lessons learned here will benefit

large segments of the country that rely on coal-fired electrical generation. Our population growth and our lifestyles are driving up demand for electrical energy all over the country. Coal is one of the best alternatives or most plentiful alternative fuels that we have, but it has undesirable environmental impacts. This project is designed to explore technologies for reducing sulfa and nitrogen oxides and thus mitigating these undesirable environmental impacts.

Operational advantages for the Healy Clean Coal Project over similar sized conventional plant is the use of waste coal for up to one-half of its requirements and air emissions which are expected to be less than half of a conventional plant of similar size.

In summary, the Fairbanks North Star Borough believes that the potential adverse environmental impacts of the proposed Healy Clean Coal Project are negligible and that the potential benefits to the citizens of the Fairbanks North Star Borough are very great and offset any potential adverse impacts many times over. Thank you.

MR. EIGUREN: Thank you, sir. And just for purposes of the record, Mr. Malone, we have your address as Box 71267, Fairbanks?

MR. MALONE: That's correct.

MR. EIGUREN: Thank you. I'd next call Jay Quakenbush on behalf of the International Brotherhood of Electrical Workers. F/T-7

JAY QUAKENBUSH: Thank you for coming. A key concern of mine and the people I represent through the International Brotherhood of Electrical Workers is the employment opportunities that come with a construction project such as the Healy Clean Coal Project. I'd like to reference a table 4.1.10 in the November '92 EIS on page 4-43. It describes the direct construction jobs. And I know you talked about it in your presentation. And I'd like to bring that into perspective to what it means to people here in the Interior.

Taking the first year of 1993 and the 60 construction jobs that are projected, it's very rare that a one particular construction job will employ 60 construction workers in a particular year. And I can relate that size of a job closely to something like a K-Mart store, which the Fairbanks area views as a large project. With 210 and 230 projected construction jobs respectively in 1994 and '95, that equates, in my eyes, about eight major construction projects in three years' time. And I would like to say that the money earned by construction workers on that Healy Clean Coal Project would filter not only into the Interior but throughout the State of Alaska. Also the money saved on the electric bills would also be a major contribution to the economy of the Interior.

On a different subject, I have no financial ties or personal relationships with anyone at Usibelli Coal Mine. I have witnessed their operation for extended periods of time on

many different occasions. And I view their company as a first-class business from the top to the bottom. It seems fitting to me that a company, an Alaskan company, who cares deeply about the environment and the people who work for them will benefit from a project like the clean coal project that you're proposing.

And in closing, you're right, all Alaskans admire and enjoy the beauty of our state. Also, a skilled craftsman also takes great pride in his work. The work and technology involved with the Healy Clean Coal Project would give any craftsman a reason to be proud. I think all Alaskans and all Americans would look highly on a project that would use an available natural resource in a safe and efficient manner. I hope the construction workers of Alaska get an opportunity to be a part of this new technology. Thank you.

MR. EIGUREN: Thank you. Sir, for the purpose of the record, I have your address as Box 82391, Fairbanks.

MR. QUAKENBUSH: Correct.

MR. EIGUREN: Thank you. I would next call Johnny L. Napier on behalf of Meet, Incorporated. Apparently he's not here. I will pass him over and call his name once again later. Next call Michael Kelly, on behalf of Golden Valley Electrical Association..

MICHAEL KELLY: Thank you, Mr. Hearing Officer. The Healy Clean Coal plant, as has been laid out before the public here F/T-8

tonight, is a joint venture among several agencies and cooperating entities. And in my respects the project is almost too good to be true. There has not been a significant base load plant brought on in the United States, that I know of or can point to, that would not have at the time it's brought on a significant rate impact on the utility where it was placed. By a combination of federal and state cooperation and cooperation with the coal mine and the utility, you've managed to pull that off. You've placed the project where not only will it not cause a negative impact to anybody but will have no rate impact when it comes on and will have a lower rate -- lower rates will result from the project over the long term.

This project has value to Golden Valley as a large base load generator with higher reliability than the gas turbine technology. This is something we sorely need by the year 2007. All of the resources that we presently have on line, and we haven't built a generating facility in 15 years, 17 years now. Everything will be retired or have to be repowered by 2007. So this is a resource that we can use.

Most of the generation in the railbelt is gas-fired, over 70 percent of it. This will give us fuel diversification into the coal resource, which is a resource that is considerably under-utilized for power generation in the railbelt power grid. At the same time that it does that, it will be the cleanest coal burning plant in the world and will also be burning what is now

a waste product that has to be returned to the pit and buried.

As you have heard, it will result in not only construction but long-term maintenance and operation jobs. There's been quite often a reference to a negative impact on South Central Alaska. The statement has been made that the rate payers in Anchorage will be paying higher rates because we will purchase less energy from Anchorage after the plant comes on line. Originally when the Alaska Public Utilities Commission deliberated relative to this project, the Fort Knox mine, a 35 megawatt facility that will be fed from this, from our power grid and from this new plant, was only a hope. It's gone in the last year from a hope to an absolute -- nearly an absolute certainty that Amax will build the plant. They have told us that they will, and in fact, we are very close to having a final agreement with them that they will purchase power from Golden Valley. They will use approximately 35 of the 50 megawatts of that plant so the economics that were favorable towards the project when we submitted our plan to the Alaska Public Utilities Commission have only improved dramatically. The rate impact on the South Central utility has virtually disappeared. I won't read the letter but I have sent a letter from our board chairman and myself to the board chairman and manager of Chugach Electric Association that essentially tells them that at no point in the future does Golden Valley intend to purchase less energy from Chugach Electric than we purchase today. That's because of the

mine. There would have originally been a decrease in the amount of power that we purchased and then a gradual increase in the power that we purchase from Chugach. With the mine on line, by the time it comes on line we will actually need about 10 megawatts more of purchases from Chugach over a large period of the year than we currently require. So the South Central negative impact has completely disappeared and we have conveyed that to Chugach Electric Association.

This project has already jumped several of the hurdles. As you mentioned, we're a couple of years into the process. It has been approved by APUC and we are in the Draft Environmental Impact State. I feel very positive about the project.

We'd like at this time to mention a couple of things that came up in regard to testimony that I heard. And that is on the limestone sources, there are two limestone sources known to us, one a currently operating mine in the Cantwell area, and the other a source in the Livengood area.

As to gas conversion, should Usibelli Coal Mine develop a coal gasification project or process five years, 10 years from now, if Joe makes the price right I'll pull those old burners out and stick new gas burners in and we'll be on our way.

I think that we -- one thing I'd like to mention about the model that I think was implied but certainly you can't say. The thing's a Kansas type flatland model. If you've looked at the terrain, and you certainly have, that's as far from Kansas

flatland as you can get, with those mountains. I flew a Cessna 180 through there yesterday morning and you never go through there without getting quite a ride. And I got one yesterday.

I firmly believe that this plant will -- that no plant or human or animal within the park will ever know whether this plant is on or off. Thank you very much.

MR. EIGUREN: Thank you. Mr. Kelly, for the purpose of the record, we have your address as 1028 Aurora Drive, Fairbanks.

MR. KELLY: Yes, sir.

MR. EIGUREN: Thank you. Our next commentor is Clark Milne. We have your address as 1119? F/T-9

CLARK MILNE: Coppet Street. Thank you. I'm glad to have the opportunity to comment. I'm just here as an individual. I'm a Registered Civil Engineer. Have lived in Fairbanks most of the 17 years I've been in Alaska. And I've worked in a number of venues in Alaska as a civil engineer and a registered engineer. I'm currently working for the DOT. So I really don't have any involvement in the industry or any personal involvement in this other than one interesting facet, and that was when I did my master's thesis 15 years ago it was on economic -- providing economic power supplies to the Tanana Valley through the year 2000. So I've been waiting for this almost as long as Mike Kelly and GVEA. That at least peaked my interest and I've watched these kind of affairs. I've worked as -- part of my time as an environmental consultant. I'm an engineering

manager. And I feel that in Alaska and in Fairbanks this power will be needed. I feel that Fairbanks and the north as a frontier and we need to grow, we need to grow both to serve Alaska and to serve the United States. It is easy to complain that gee, there are unknowns and there are problems that may be created, but I believe that we have to be more foreseen than that.

I think that as a demonstration project I think it's a marvelous possibility, an opportunity to actually work with the federal government. There are a lot of times where people complain in Fairbanks and in Alaska about the federal government. There are definitely instances, some of them quite recent, where there is reason to complain. I'm glad to see that this is probably at least as far on the other side of that coin. The Department of Energy seems to have done its best to become acclimated and understand what Alaska and northern Alaska is about. If we can be what was called a technology showcase, then I think that should definitely be good for all involved; Healy, Fairbanks, Alaska and the United States.

I personally think it would be useful to have less reliance on oil and gas for providing power. Alaska is quite coal rich and I think we're going to have to become used to this technology. And if it can't be done right, if it can't be done well, we ought to figure that out now and not wait another 30 or 40 or 50 years. I think it's quite impressive and quite valuable that

we'll be able to use the waste coal, the tops and bottoms of seams and that, and it not only makes things more effective for Usibelli, which may end up bringing down rates for other people purchasing their coal but environmentally as one aspect surely, instead of having that waste and used as cover or thrown away, if it can be utilized, that's a major environmental benefit.

All in all, the various things that were described and are described in the DIS I think show a minimal environmental effect. I think that the sulfur capture by the FCM that was described should work quite well. And along those lines, there are a number of spinoff industries that can be created from this that, indeed, overall, when this energy is available it will serve things like the mine and it will also serve -- it will have possibly a limestone mine, have the slag handling. At the moment you're talking about disposing of it. I know that there's some interest on using the slag since it is vitrified and there is no other substance like that really available, unless we want to go up on volcanos.

The economies of scale and the proximity to Healy Unit Number 1 I think will be quite useful, and that's why the proposed site I think is indeed significantly better than the alternative site.

I think that the visible plume concern with the results of what the actual observations have shown, it is a conservative modeling and significant concern about visible plume I think is

spurious.

I'm pleased to see that the state has had quite significant involvement. As you showed, we've got 110 million that we're intending to put in as well as the involvement already by DOE. And I think it's impressive to see that the emissions are going to be as small as they are. By that I mean the existing power plant, which at Healy, the emissions as were shown are going to be a third to a half of that or twice the power generation.

Last two comments. One, I'd also like to comment that I think for over 20 years Usibelli has been a good neighbor. They have sent power to Fairbanks, sent coal, and it has burned here. Now they're sending it up on the line. I think that knowing that the Usibellis are involved is a very positive aspect and I think they try to strive to serve Alaska. And in general, as a closure, I'd like to say that it's easy to complain and shoot down anything that's new. I think that in this instance Alaska ought to be as far seen as it's going to need to be in the future and consider moving ahead. This project is surely going to be good for all involved in Healy, Fairbanks, Alaska and the United States.

MR. EIGUREN: Thank you. I would note for the record the last two commentors have spoken to the issue of the need for power, and I will note for the record it's the Department's position that the issue of need for power is determined by the Alaska Public Utilities Commission and is beyond the scope of

this particular proceeding. Our next scheduled commentor is J. Vanderford. Ms. Vanderford, I have your address as Post Office Box 10587, Fairbanks.

J. VANDERFORD: It is.

MR. EIGUREN: Thank you. Please proceed.

MS. VANDERFORD: I have very little to add to the other comments that have already been made. I'd like to thank everybody that's had any part in planning for this excellent project. And I'd like to thank the Usibellis for having a very nice mine. I had a chance to see it when I was at the University of Alaska a few years ago. It's almost like a park in itself. F/T-10

And the last thing I would mention is that since it's so often suggested that pretty soon we'll all need to use electric vehicles, that we need some way to have enough electricity to use them. And that's not going to come from just nowhere. And that's all I have to say.

MR. EIGUREN: Thank you. Next scheduled commentor is Dave Lacey. Mr. Lacey, I have your address as Post Office Box 81765, Fairbanks.

DAVE LACEY: Correct. Well, I hate to be the canary in the coal mine, so to speak, on this. But I and among a lot of people in the world feel that coal burning is a fundamental threat to life on the planet. And as we know, the Rio conference dealt with that recently. I can't believe that we're so F/T-11

out of step with that. And I question things on this level. Also I saw President-elect Clinton on television last night and he mentioned the budget deficit as one of the three main problems to long-term economic health and viability of this country. And you know, on one hand, theoretically as Mike Kelly said, my electric bill isn't going to go up necessarily, or possibly not going to go up as a result of this project but on the other hand, you know, the money's coming out of my other pocket because these big state and federal subsidies for this project that are going to benefit, you know, TRW apparently. Maybe now this Amax with this Fort Knox mine, they're going to come out of my other pocket. And just like a lot of these projects, a few big people benefit and then the rest of us, you know, hope there's going to be a little trickle down effect that we'll get, maybe our utility bills won't go up or something. You know, obviously this project is pork barrel, you know, and obviously we all know Senator Byrd, you know. He's from West Virginia and he can get these kind of monies appropriated and we know the past administration and past 12 years of Republican administration has favored coal as opposed to alternative technologies and things. And of course, it went -- you know, Mr. Bush went down to the Rio conference and played down the effect of CO2 pollution and the greenhouse effect worldwide.

I feel that we haven't been done enough also here as far as conservation here in Fairbanks. I think GVEA could immediately

F/T-12

offer an edict and say everyone had to cut consumption by 15 percent. And if that wasn't done, then the amount that you consumed over your normal bill over that -- if you don't cut by 15 percent, you'd have to pay two times for that. We can easily cut that and conserve that much here in Fairbanks, you know. In case of an emergency obviously we could conserve a lot more. So really, conservation has only been given a token approach here.

It's kind of interesting, just a historical thing. King Edward the First, he issued the first environmental edict against coal in 1307. And of course because of the lobbying power or whatever of clean coal, you know, CO2 emissions were kept out of the 1990 Clean Air Act. It's interesting in Senator Gore's book, Earth in the Balance, he warns of the dangers of burning carbon 27 times. I just feel that, you know, this is poor industrial policy. ADA is supposed to -- as an industrial policy, supposed to create jobs here in Alaska and we all know that more jobs, you know, would be created by conservation methods and retrofitting homes and doing things here in Fairbanks than would be created there. I don't understand. Plus the potential dangers to the tourism industry by industrialization at Denali. I have a document here put out by the Fairbanks Convention and Visitors Bureau that states that 76 percent of visitors to Fairbanks also visit Denali. You know, Fairbanks basically has the tourism industry of its size because of our proximity to Denali. You know, I hate to I mean see the

F/T-13

F/T-14

goose that's laying the golden egg for Fairbanks economically destroyed. Here's a recent issue here too for the record from Cliff Rousell, FCVB, Visitor industry brightens economy, talking of I think something like $51 million added to the Fairbanks economy by the visitors' industry. So, it's a big industry and as a result of Denali being here. And I don't feel that the EIS has seriously considered the socioeconomic impacts to the visitor industry sufficiently.

And also here, the 512,000 tons per year of CO2, obviously at some point, you know, there needs to be a decision made on that and we need to face that and not try to hide that, that that's an environmental impact from this plant. And even though it's hard to determine the synergistic impacts of something like this, the things like arctic haze and things like that, you know, and the fact that in the 20 years they've been studying song birds here in Alaska is something like 80 to 50 percent of them, the population is declined, you know. So something is obviously wrong environmentally worldwide and, you know, we're going to have to face up to it and start, you know, making some tough decisions here sooner and later. And this is I'm afraid is business as usual, pork barrel politics is where it's at.

F/T-15

MR. EIGUREN: Sir, I'm going to have to ask you to wrap it up. Your time has elapsed.

MR. LACEY: Oh, I didn't hear the little buzzer.

MR. EIGUREN: The red light went on.

MR. LACEY: Oh, is that what that is. Oh, sorry. I thought there was a buzzer.

MR. EIGUREN: Buzzzzzz.

MR. LACEY: I didn't hear that either. Okay. Well, I'm kind of hard of hearing. Well, then that's pretty much it. I guess I would just wrap it up here briefly by saying "air pollution is increasing worldwide as a result of increasing population and increasing use of technology. These two factors have also brought about the continuous striving for economic growth and resulting land use pressures that have left most of the world developed and polluted. A few areas remain that are fairly untrampled by man. More and more countries are seeking to preserve some of these areas in their pristine state as national treasures. The air quality in these areas is also an important part of these resources and needs to be maintained in its pristine condition also. This is a challenge as air pollutants are known to travel great distances and invade the air regions of remote areas. Man's effort to prevent degradation of these areas are of paramount importance. All exposures of man and other living things to air pollution almost certainly involve some degree of biological risk. Survival of the species is at stake." Thank you.

F/T-16

F/T-17

MR. EIGUREN: Thank you. Mr. Lacey, did you have any documents you'd like to submit as exhibits for the record?

MR. LACEY: Yeah, I'll give it to you.

MR. EIGUREN: Okay. We can do it at the end of the hearing. Thank you, sir. Our next scheduled commentor is David Stannard. Mr. Stannard, I have your address as 1009 O'Connor, Fairbanks.

DAVID STANNARD: Yes. Just almost across the street. I really am pleased to be here and listen to this whole discussion. I'm especially pleased that I'm in the school that my two boys went to grammar school in and I really enjoy being here.

I can't say that I have any firm opinion as to the wisdom of going ahead with this project. I can see very clearly that this is a tremendous increase in the quality of plant production of electricity from coal. I don't think there's any question about that and I think you folks are doing really advanced demonstration work in that sense. That's a short-term view of it. That's the way we Americans are used to behaving as we deal in the short term and we get very active and do it.

Unfortunately, what we do is so successful that in the long run what's happening is we are on a trajectory that more and more requires more and more lead time in order to arrive at our objectives. And so, I'd like to speak just for a moment to the long range concerns, and I've done this a little bit off the record there. My anxieties, and I'm quite anxious, are not that this isn't a good project but that we'll, as usual, be behind this technological curve and we'll find ourselves -- we're moving into an age. I think there's little question about it.

Your own DOE has a five-year plan, '93 to '97, that I think anyone's interested in the future economy of this globe would be interested to see this resume, this report.

What I would like to speak to is that in the preparation of your final report that you take care to exercise liaison with the other sub agencies of the DOE, in particular the Office of Fossil Fuels, that you're a part of, Fossil Energy. I believe that this region, because Interior Alaska, North Slope Alaska, that we are in a region which could serve the nation very well in the long term economy. We're moving, as I say, the Europeans and the Japanese are well into development of a hydrogen technology. And that is where it's all headed for the reasons of the climate changes that are going on and so forth. F/T-18

Alaska here, Fairbanks in particular, we're about to get one of the few supercomputers in the nation. We've got heavy wind up on the North Slope. We've got -- there's more oil, the known oil deposits in Alaska, the biggest in the nation, are the Oognoo (ph), West Sac, heavy oils and sands that are up there. And to make them economic and extractable, we need hydrogen for that or natural gas. We got big natural gas resources up there. So we've got a big -- and we've got a big -- we got the Geophysical Institute. We've got a big research facility here. Here's a coal plant that's down in the valley. They're all the elements required for major research and development activity here. So I would hope that you would take care to exercise

liaison with your other agencies in relation to coal gasification, in relation to the five-year hydrogen development plan, especially since our President-elect and his energy advisors and economic advisors are about to move on the question of CO2 generation, introduce a carbon tax, which is highly recommended at this point through the President-elect. It just came out today, or yesterday in the Wall Street Journal, which incidentally suggests a five-year increase from $6.00 to $30 per ton of coal, as a carbon tax. I wonder how that affects your final report, if at all.

But what I would hope is that -- yes, I see that's coming. Okay. What I would hope is that you do get coordinant with your agency and the other elements in the agency, especially in relation to this five-year hydrogen development plan. Fuel cell development, hydrogen storage, hydrogen production and so forth, how that relates to the use of coal, so that in your report you go beyond the immediate demonstration, technology advance that you truly are engaged in and you pin that to the plans of the future and our present -- that is our coming administration and their policies so that we have some continuity of development and Fairbanks isn't left in the backwash as usual, trying to live some kind of old-fashioned world when the world's already somewhere else. That's my main concern.

MR. EIGUREN: Thank you. Next commentor is Matthew Tullar. Mr. Tullar, for the record I have your address as 1223 Ninth

Avenue, Fairbanks.

MATTHEW TULLAR: That's correct.

MR. EIGUREN: Thank you.

MR. TULLAR: Yeah. I'm here representing myself and my wife. We live downtown Fairbanks. We're homeowners. And we're interested in intelligent use of resources. We're also interested in improved environmental considerations, especially by federal and state organizations. And I see that this report that you've produced looks pretty good. I want to go on the record as positively in favor of this project. But, I do understand the concerns of the previous speakers when they talk about their concerns. One gentleman was concerned about coal burning being bad. These things make sense. I think this is a step-by-step process. I think we're moving in the right direction with this type of project, with this type of data that you've collected in your study. I feel particularly concerned, I recently had a lung collapse and I also live downtown in the thick of it -- in the thick of the pollution problem here in Fairbanks. I hear in the news that California is regulating two percent of auto makers sales have to be in zero emission cars; we're talking electric cars, by current technology standards. I see the same -- we're going to have to move to the same type of thing in Fairbanks, some such thing. I'm not saying anything exact. But, anyway, I just want to go on record as supporting your study and supporting this project. Thank you.

F/T-19

MR. EIGUREN: Thank you. We have one final commentor scheduled at this point. He represents an organization and by his request he asked to go last. But, before I call Gary, I once again call Johnny Napier. Is Mr. Napier here? He did sign in and ask to comment. Apparently he is not here so I note for the record we've called three times and he has not responded so we assume he will not be commenting. So, with that our final commentor is Gary Newman, who is president of the Alaska Federation for Community Self Reliance. Mr. Newman, I have your address as 1083 Esro Road, Fairbanks.

MR. NEWMAN: That's correct. Thank you. I'm very happy to be able to be here. I've participated in this process since the inception and had a number of comments on scoping. I'll try to keep my comments to the IS and suggestions for improving it. I won't promise, but I'll try. This DOE draft EIS I think is a pretty detailed book with some really nice color photos. It's been two years in the making. It covers a lot of ground. There are some areas I would like to offer comment on. I've tried to be organized with it. First, related to the different scenarios we talked about in the EIS. You're basically looking at three different scenarios; building in the currently proposed location, building in another location a few miles away, and no build. It failed to examine other alternatives to no build which might have a lesser impact for the Healy area as stated in page 2-30. Specifically, it did not analyze the option of wind

F/T-20

power in Healy, which is a well recognized resource in the area, and something which has not been done to date by any party involved in this project. Some of the rationales for not including alternatives is there was no other known fuel source in the area, and I would say that wind is definitely a fuel source in Healy. I would very much be interested in pursuing the data that was accumulated as part of the study to encourage this a little bit more. The draft EIS basically discounts other alternatives. I believe that since amongst its many charges, again, coordinating with other agencies the way an earlier speaker mentioned, the DOE is charged with promoting cleaner methods of providing electricity amongst other charges, not just implementing coal technology. I think, as such, it should have been investigated in this particular case, and in the EIS. Since the experimental technology is designed primarily for retrofit applications in this particular proposal, it's curious that none of the participants, nor the draft EIS, investigates repowering of the existing Healy 1 plant. I think such a change would have saved tens of millions, if not in excess of 100 million dollars, of government expenditure, which I think is no small change. Also, the technology -- excuse me, the scenario of a conventional plant, should the experimental technology fail, was addressed in 5-10 and indicated that any further mitigation from the degradation over successful experimental combustion technology isn't likely. I don't understand the

F/T-21

F/T-22

statement that emissions were estimated to be the same as a no build scenario because if you have a conventional plant, you're, again, emitting conventional quantities of pollutants. I would also reinforce that the consideration of retro-fitting better technology onto Healy 1 is a moot point, which is brought up in the draft EIS. GVEA, as the owner of Healy 1, has stated that contributing more than 20 percent of the cost for construction of experimental coal plant is not cost effective for them and was unwilling to pay for more than roughly that 20 percent. So, if the technology fails and the experimental plan is retro-fitted back to a conventional plan, there will be no further mitigation by the project participants, in my belief. I surmise that it would probably be pulling teeth to get the technology providers to retro-fit the plant in any case, despite what the agreements are. Addressing socioeconomic impacts, the EIS correctly points out there will be a cost to local and state governments from the influx of temporary construction as it will exceed the capacity of the schools and other services, but fails to quantify that cost to assist in balancing out the difference gained in tax base, what little that is. Plus, the resulting bust once the construction is complete. You can't nearly double the population of a community, as noted in 4-38 and 4-41, for a year or two and not create a major impact on infrastructure, or lack thereof. To make a valid comparison of trade-offs, I think a more comprehensive approach toward a cost benefit analysis,

F/T-23

F/T-24

F/T-25

which would quantify and address mitigating and anticipated impacts, should have been performed. It is done to some degree and I've tried to consolidate this into something that I could see. But, the data is scattered and incomplete. I'm only on page 2. And an example is like a landfill, if that's going to be obsolete earlier. It's extremely expensive to construct a new landfill. Those costs weren't shown in here. The construction camp I thought was a great idea toward mitigation. It would help in some degrees, but not completely. I would like to suggest one, that the construction camp be heated by the warm effluent that's normally discharged into the Nenana River from Healy 1, thus reducing the ice fog and other carbon-based pollutants from heating such a large camp. I've seen lots of North Slope camps, and I also find that they're known for their lack of Arctic design. I think that, also, downstream when they become open on the market, when their use is done, they also continue to impact fuel usage just for heating. The draft EIS notes there's no police for a boom community -- what do you want me to do?

F/T-26

F/T-27

F/T-28

MR. EIGUREN: What I would suggest you do, Mr. Newman, is I will give you a couple more minutes to just hit the outline areas you want to cover. And then if you would submit the balance in writing for the record, that would most useful.

MR. NEWMAN: Okay. If there's no police, except on the site of the construction camp, that isn't really where you need

the security. You need it to keep folks in line after they've gone to town, particularly when they've got their paychecks. The impact of traffic usage, I think is inadequately stated and addressed. It's stated there will be minor impact to roads, yet with up to double the population and heavy construction items being transported along the roads, although some by railroad. I think you can expect a lot of degradation in the Healy roads. I think this cost should have been estimated. I'll skip an anecdote here. The EIS discussed, at length, a difference that there was between DOE and the NPS, National Park Service, on a measurement of air quality and how to estimate it. I would be interested to see in the final EIS what the NPS's final position is on that. The last really major item in terms of air pollution, again, addresses carbon dioxide. Basically, I think this report pans it and I think what you need to do is take a look at what the no build situation is on the CO2 end of it, take a look at what the wind power end of it would be on the impact of CO2, and give us something that we can actually balance out. I think it's an important enough issue, and with a new administration, it's something that you may be asked to look at anyway come March. I think the statement under needs there, I have addressed this informally already, but I think on the need to be a little less partisan because you're involved in more than just promoting coal. DOE is supposed to involved in clean energy, et cetera. Lastly, DOE didn't address the

F/T-29

F/T-30

F/T-31

F/T-32

economic issues or do a cost benefit analysis, particularly those related to external environmental costs and basically saying that the APUC, Alaska Public Utilities Commission, had already done so. Unfortunately, the APUC chose not to consider those environmental externalities, therefore, despite the tens of millions of dollars that are spent on the EIS and all the regulatory permits and hearings, there is no agency that can make a valid comparison between the costs of the project to the environment, and the benefits. I think this is the largest failings of all the agencies thus far, and I'm sure it's mirrored with the other projects statewide. I feel that both DOE and APUC will have abrogated their responsibility to the public interest if you don't do this. Again, we're the ones that helped fund those agencies. Rather than summarize, I'll just let this go and I really do appreciate the opportunity to testify. F/T-33

MR. EIGUREN: We would love to have your written text, or a written comment.

MR. NEWMAN: I need to edit it slightly because of some things that have happened, so.....

MR. EIGUREN: We'll have you mail it in by the 15th.

MR. NEWMAN: Either that or I'll provide it to you tomorrow, if you're not already gone. Thank you.

MR. EIGUREN: Thank you. At this point that concludes the list of individuals who have registered to comment. I would

ask, is there anyone in the audience who has not commented that would like the opportunity to do so at this time? If not, then I'll bring to closure by saying that the record, as I've mentioned before, of this particular proceeding remains open until January 5th, 1993. If you do have written comment you would like to submit, please mail it to an address that we can provide to you back at the registration table. On behalf of myself, as well as all the members of the hearing panel up here, we thank you for your attendance and we appreciate this. It was an excellent meeting. I would now like to formally close the record. It's now approximately 9:55 local time. We will now formally the December 9th, 1992, Fairbanks, Alaska, public hearing on the DIES for the Healy Clean Coal Project. Thank you and good night.

(Off record - 9:55 p.m.)

* * *

END OF PROCEEDINGS

* * *

C E R T I F I C A T E

UNITED STATES OF AMERICA)
) ss.
STATE OF ALASKA)

I, Lynn Reynolds, Notary Public in and for the State of Alaska, residing at Fairbanks, Alaska, and electronic reporter for Mary Johnson-Fairbanks Court Reporting, do hereby certify:

That the annexed and foregoing transcript of the Public Scoping Meeting for the Healy Clean Coal Project was taken before Mary L. Johnson on the 9th day of December, 1992, beginning at the hour of 7:05 p.m., at Joy School in Fairbanks, Alaska;

That this transcript, as heretofore annexed, is a true and correct transcription of the proceedings had, taken by Mary L. Johnson electronically and thereafter transcribed by me to the best of my knowledge and ability.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal this 22nd day of December, 1992.

Lynn Reynolds
Notary Public in and for Alaska
My commission expires: 9-20-93

TRANSCRIPT
FAIRBANKS, ALASKA

EXHIBIT NO. 1

The Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508) and the Department of Energy, National Environmental Policy Act Part II; Implementing Procedures and Guidelines Revocation; Final Rule and Notice (10 CFR 1021) are incorporated by reference in the transcript.

These two documents, which together are about 85 pages in length, are publicly available at most libraries or may be obtained from Dr. Earl W. Evans, U.S. Department of Energy, Pittsburgh Energy Technology Center, P.O. Box 10940, Pittsburgh, PA 15236. Telephone: (412)892-5709.

The Federal Register public meeting notice is provided.

11-20-92
Vol. 57 No. 226
Pages 54877-54994

federal register

Friday
November 20, 1992

Briefings on How To Use the Federal Register
For information on briefings in Washington, DC, and Albuquerque, NM, see announcement on the inside cover of this issue.

Department of the Army

Office of the Secretary; Record of Decision (ROD) for the Development of the Armed Forces Recreation Center (AFRC) at Fort DeRussy, Waikiki, HI

AGENCY: U.S. Army, DOD.

ACTION: Notice of availability.

SUMMARY: The Army proponent for the proposed action is the U.S. Army Community and Family Support Center, Alexandria, VA, which directs the operation of the Hale Koa Hotel at Fort DeRussy. Full authority and responsibility for overall development of Fort DeRussy as an installation lies with U.S. Army Support Command, Hawaii.

In March 1988, at the direction of Congress, the Secretary of the Army prepared a Master Plan for the AFRC at Fort DeRussy. The plan recommended the relocation of some U.S. Army Reserve units to Fort Shafter and the construction of new hotel and recreation facilities at Fort DeRussy. Studies showed a large demand for hotel accommodations in addition to the existing Hale Koa Hotel. To enhance the morale and recreation needs of the active and retired military community and to maximize recreational open space for shared use by the military and civilian communities, the plan recommended a proposed action.

The Army published a Notice of Intent to prepare a Draft Environmental Impact Statement (DEIS) in the Federal Register on January 23, 1989. Scoping meetings were held for governmental agencies on February 16, 1989, and for the public February 22, 1989. The NOA of the DEIS was published by the U.S. Environmental Protection Agency in the Federal Register on January 19, 1990. A public hearing was held on February 8, 1990. Comments at the public hearing and in letters commenting on the DEIS have been considered in preparing the Final Environmental Impact Statement (FEIS).

The NOA of the FEIS was published in the Federal Register on March 6, 1992, and in The Bulletin of the (Hawaii) Office of Environmental Quality Control on March 8, 1992. The public comment period ended on April 5, 1992; no adverse comments were received.

The Department of the Army announces the ROD for development of the AFRC, Fort DeRussy, Waikiki, HI, is available.

Under the recommended action, the U.S. Army would construct a hotel tower with up to 400 rooms to augment the existing Hale Koa Hotel; construct a single level, bermedover minimum 350-stall parking structure and a three level, landscaped minimum 1,300-stall parking structure; relocate utilities; and provide extensive landscaping and recreational facilities. Kalia Road, which crosses the Army post, would be realigned; its present intersection with Saratoga Road would be retained, and it would remain a two-lane road.

To provide space for construction of the new hotel tower and other facilities, some buildings now used by U.S. Army Reserve units will be demolished. The impact of these buildings being demolished and the U.S. Army Reserve units leaving Fort DeRussy are addressed in the FEIS. Construction of new U.S. Army Reserve facilities at Fort Shafter has been addressed in a separate Environmental Assessment.

Under the "turn-key" design-construction contracting process, supplemental National Environmental Policy Act documents may be prepared after contract award to address any significant changes from the recommended action or significant changes in environmental impacts.

A NOA of the ROD will also be published in the Bulletin of the (Hawaii) Office of Environmental Quality Control.

Lewis D. Walker,

Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health), OASA (IL&E).

[FR Doc. 92-28283 Filed 11-19-92; 8:45 am]

BILLING CODE 3710-08-M

DEPARTMENT OF ENERGY

Notice of Availability of Draft Environmental Impact Statement and Public Hearings for the Proposed Healy (Alaska) Clean Coal Project (HCCP)

AGENCY: U.S. Department of Energy (DOE).

ACTION: Notice of Availability of Draft Environmental Impact Statement (DEIS) to assess the environmental effects of the construction and operation of the proposed Healy Clean Coal Project (HCCP), a new 50 Megawatt-electric (MWe) coal-fired power generating facility at Healy, Alaska, and conduct public hearings on the DEIS.

SUMMARY: The Department of Energy (DOE) announces the availability of the HCCP DEIS (DOE/EIS-0166). As one of the proposals selected under Round III of the Clean Coal Technology (CCT) Program, the HCCP would demonstrate the combined removal of sulfur dioxide, oxides of nitrogen, and particulate matter from a 50-MWe power plant using innovative integration of advanced combustion and flue gas cleanup technologies. The proposed action is the cost-shared Federal funding of the project by DOE of about $104 million (about 48% of the total cost of approximately $215 million), to demonstrate the economic viability and environmental acceptability of the technologies. The two technologies to be demonstrated are the TRW Applied Technologies Division (TRW) entrained combustion system, and the Joy Technologies, Inc./Niro Atomizer (Joy), spray dryer absorber.

INVITATION TO COMMENT AND DATES: DOE invites comments on the DEIS from all interested parties. Written comments or suggestions regarding the adequacy, accuracy, and completeness of the DEIS will be considered in preparing the final EIS and should be postmarked by January 5, 1993. Written comments postmarked after that date will be considered to the degree practicable.

DOE will also hold three public hearings at which agencies, organizations, and the general public are invited to present oral comments or suggestions. Locations, dates, and times for the public hearings are provided in the section of this notice entitled "PUBLIC HEARINGS." Written and oral comments will be given equal weight and will be considered in preparing the final EIS. Requests for copies of the draft and/or final EIS, or questions concerning the project, should be sent to Dr. Earl W. Evans at the address noted below.

ADDRESSES: Written comments on the DEIS should be postmarked by January 5, 1993, for incorporation into the public hearing record. Oral comments will be accepted at the public hearings. Written comments, requests to speak at the hearings, or questions concerning the HCCP, should be directed to: Dr. Earl W. Evans, Environmental Coordinator, HCCP, Mail Stop 922L, Pittsburgh Energy Technology Center, U.S. Department of Energy, P.O. Box 10940, Pittsburgh PA 15236, Telephone: (412) 892-6709. If you request to speak, please indicate at which hearing(s). Envelopes should be labeled "HCCP Draft EIS."

Individuals desiring to speak at a hearing should notify the DOE Environmental Coordinator for the HCCP at the above address not later than November 30, 1992, so that DOE may arrange a schedule for presentations.

FOR FURTHER INFORMATION CONTACT: For general information on the EIS process and other matters related to the National Environmental Policy Act (NEPA), please contact Ms. Carol M.

Borgstrom, Director, Office of NEPA - Oversight (EH-25), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington DC 20585. Tel. (202) 586-4600 or (800) 472-2756.

SUPPLEMENTARY INFORMATION:

Background and Need for the Proposed Action

DOE proposes to provide cost-shared funding support for the construction and operation of a new 50-MWe (nominal electrical output) coal-fired power plant at Healy, Alaska, to demonstrate two clean coal technologies. The HCCP was proposed by the Alaska Industrial Development and Export Authority (AIDEA), a State agency, and selected by DOE for negotiation of a Cooperative Agreement for financial assistance by the CCT Program. The HCCP would demonstrate the combined removal of sulfur dioxide (SO_2), oxides of nitrogen (NO_x), and particulate matter (PM) using innovative combustion and flue gas cleanup technologies. After a 1-year demonstration period, anticipated to conclude in 1997, the facility would enter commercial operation. The HCCP would be located in Healy, Alaska, approximately 100 miles southwest of Fairbanks and 250 miles north of Anchorage. The facility would be built adjacent to the existing 25-MWe Healy Unit No. 1 conventional pulverized coal unit owned and operated by Golden Valley Electric Association (GVEA), Inc., in a rural setting along the Nenana River. The proposed site is located about four miles north of the nearest border of Denali National Park and Preserve (DNPP).

On September 27, 1988, Public Law No. 100-446, "An Act Making Appropriations for the Department of the Interior and Related Agencies for the Fiscal Year Ending September 30, 1989, and for Other Purposes," was signed into law. Among other things, the Act provided funding to DOE to cost-share the design, construction, and operation of CCT projects that demonstrate the feasibility of technologies capable of achieving significant reductions in the emissions of sulfur dioxide and/or the oxides of nitrogen from existing facilities to minimize environmental impacts such as transboundary and interstate pollution, and/or providing for future energy needs in an environmentally acceptable manner.

On May 1, 1989, DOE issued Program Opportunity Notice Number DE-PS01-89FE61825 for Round III of the CCT program, soliciting proposals to conduct cost-shared CCT projects to demonstrate innovative, energy-efficient clean coal technologies that are capable of being commercialized in the 1990s. The Healy Clean Coal Project was one of the 13 projects selected from among the 48 proposals received.

EIS Preparation

The draft EIS has been prepared in accordance with Section 102(2)(C) of NEPA, as implemented in regulations promulgated by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500-1508) and by DOE's regulations for compliance with NEPA (57 FR 15122, April 24, 1992). In accordance with NEPA, DOE determined that providing cost-shared funding for the HCCP constitutes a major Federal action that may significantly affect the quality of the human environment. Therefore, DOE has prepared a DEIS to assess the potential impacts on the human and natural environment of the proposed action and reasonable alternatives.

A Notice of Intent (NOI) to prepare the EIS and hold public scoping meetings in Healy, Fairbanks, and Anchorage, Alaska, was published by DOE in the Federal Register on October 5, 1990 (55 FR 40912). The NOI invited oral and written comments and suggestions on the proposed scope of the EIS, including environmental issues and alternatives, and invited public participation in the NEPA process. As a result of the scoping process, 111 comments were received that assisted in identifying major issues that have been analyzed in depth in the DEIS as well as those issues that are minor or have been evaluated and dismissed from further consideration in the DEIS. Further, an EIS Implementation Plan was developed to define the scope and provide further guidance for preparing the EIS.

The DEIS considers the proposed action, the no-action alternative (including scenarios that reasonably could be expected to result as a consequence of the no-action alternative), and an alternative site located about four miles north-northwest of the proposed site. Other alternatives have been considered and dismissed from further evaluation. Impacts to atmospheric resources (including air quality and visibility), surface water, groundwater, and ecological and socioeconomic resources from construction and operation of the HCCP are analyzed. Special consideration is given to the potential impacts to DNPP. Impacts resulting from three reasonably foreseeable outcomes of the demonstration are also analyzed.

The DEIS provides as much information as possible at this stage of the project development regarding the potential environmental impacts of the proposed construction and operation of the HCCP at the proposed site and at an alternative site.

Floodplain/Wetlands Notification

Pursuant to Executive Order 11988, Floodplain Management, Order 11990, Protection of Wetlands, and DOE's Procedures for Compliance with Floodplains/Wetlands Environmental Review Requirements (10 CFR part 1022), DOE hereby provides notice that the construction and operation of the proposed HCCP may impact surface waters at the proposed and alternative sites. Identified areas at each of the two sites are as follows:

Healy Unit No. 1 Proposed Site

No permanent intrusion on the floodplain or loss of wetlands would occur. There would be increased thermal discharge to the Nenana River.

Alternative Site four miles north

A total of 22 acres of wetland could be disturbed by construction, of which 2 acres currently supports wetland botanical and zoological life. There would be increased thermal discharge to the Nenana River.

The potential environmental impacts of site selection on these surface waters and adjacent floodplain and wetland areas are discussed in Chapter 4 of the DEIS. Any comments regarding the proposed action on floodplains and wetlands may be submitted to DOE in accordance with procedures describe below.

Comment Procedures:

Availability of Draft EIS

Copies of the DEIS are being distributed to organizations, environmental groups, and individuals known to be interested in or affected by the proposed project. Additional copies of the document may be obtained by contacting DOE as provided in the section of this notice entitled ADDRESSES.

Copies of the DEIS and major documents referenced in the DEIS are available for inspection at the locations given below:

(1) U.S. Department of Energy, Freedom of Information Reading Room, room 1E-190, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585

(2) Rocky Flats Area Office, c/o Front Range Community College, 3645 West 112th Avenue, Westminster, CO 80030

(3) Alaska Power Administration, suite 2B, 2770 Sherwood Lane, Juneau, AK 99801

(4) Tri-Valley Community School Library, P.O. Box 400, Healy, AK 99743
(5) Z.J. Loussac Library, 3600 Denali Street, Anchorage, AK 99503
(6) Fairbanks North Star Borough Library, 1215 Cowles Street, Fairbanks, AK 99701

Written Comments.

Interested parties are invited to provide comments on the content of the DEIS to DOE as provided in the section of this notice entitled **ADDRESSES**. Envelopes should be labeled "HCCP Draft EIS." Comments should be postmarked no later than January 5, 1993, to ensure consideration in preparing the final EIS. Comments postmarked after January 5, 1993, will be considered to the extent practicable.

Public Hearings:

Procedures

The public is invited to provide comments in person on the DEIS to DOE at the scheduled public hearings. The purpose of the hearings is to receive substantive comments related to the DEIS, rather than to receive either general endorsements or denouncements of the proposed project. The hearings will not be of a judicial or evidentiary nature. Advance registration for presentation of oral comments at the hearings will be accepted up to one week prior to the hearing date by telephone or by mail at the office listed in the **ADDRESSES** section above. Envelopes should be labeled "HCCP Hearings." Requests to speak at a specific time will be honored, if possible. Registrants are allowed only to register themselves to speak and must confirm the time they are scheduled to speak at the registration desk the day of the hearing. Persons who have not registered in advance may register to speak when they arrive at the hearings to the extent that time is available. To ensure that as many persons as possible have the opportunity to present comments, 5 minutes will be allotted to each speaker. Persons presenting comments at the hearings are requested to provide DOE with written copies of their comments at the hearing, if possible.

Hearing Schedules and Locations

Public hearings will be held at the following locations, times, and dates, weather permitting, or will be rescheduled as appropriate. A "hotline" telephone number, 907-451-4179, will be available to announce changes, if any:

1. *Date:* Monday, December 7, 1992.
   Time: 7 p.m.
   Place: Tri-Valley Community Center, Mile 249 Parks Highway, P.O. Box 146, Healy, Alaska 99743.
2. *Date:* Wednesday, December 9, 1992.
   Time: 7 p.m.
   Place: Joy Elementary School Gymnasium, 24 Margaret Street, Fairbanks, Alaska 99701.
3. *Date:* Thursday, December 10, 1992.
   Time: 7 p.m.
   Place: Z.J. Loussac Library Theater Facility room, 3600 Denali Street, Anchorage, Alaska 99503.

Conduct of Hearings

DOE has established basic rules and procedures for conducting the hearings. Rules needed for the orderly conduct of the hearings will be announced by the presiding officer at the start of the hearings. Clarifying questions regarding statements made at the hearings may be asked only by DOE personnel conducting the hearings. There will be no cross-examination of persons presenting statements. A transcript of the hearings will be prepared, and the entire record of each hearing, including the transcript, will be placed on file by DOE for inspection at the public locations given above in the **COMMENT PROCEDURES** section.

Signed in Washington, DC, this 17th day of November 1992, for the United States Department of Energy.

Peter N. Brush,

Principal Deputy Assistant Secretary, Environment, Safety and Health

[FR Doc. 92-28274 Filed 11-19-92; 8:45 am]

BILLING CODE 6450-01-M

Notice of Grant Award to Howard University

AGENCY: Department of Energy.

ACTION: Notice of noncompetitive financial assistance award.

SUMMARY: The U.S. Department of Energy (DOE), pursuant to the DOE Financial Assistance Rules, 10 CFR 600.7, is announcing its intention to award a grant to Howard University for continuing research efforts in support of the Biological and Chemical Technologies Research (BCTR) program at DOE. The BCTR program seeks to improve operations and decrease energy use in the chemical and petrochemical industries.

ADDRESSES: Questions regarding this announcement may be addressed to the U.S. Department of Energy, NREL Area Office, 1617 Cole Blvd., Golden, Colorado 80401. Attention: John W. Meeker, Contract Specialist. The Contracting Officer is Paul K. Kearns.

SUPPLEMENTARY INFORMATION: Howard University has been conducting research for a number of years to develop genetic engineering techniques to enhance the capability of fungi/bacteria to degrade lignocellulose to simpler materials. Successful completion of this research would advance the goal of converting biomass to useful chemicals and other products. A detailed understanding of the processes that control the reactivity and specificity of enzymatic reactions within the fungi/bacteria will provide the knowledge needed to exploit these reactions for technological applications.

DOE has performed a review in accordance with 10 CFR 600.7 and has determined that the activity to be funded is necessary to satisfactorily complete the current research. DOE funding for this grant is estimated at $51,000 and the anticipated period of performance is twelve (12) months.

Issued in Chicago, Illinois on October 30, 1992.

Timothy S. Crawford,

Assistant Manager for Administration.

[FR Doc. 92-28280 Filed 11-19-92; 8:45 am]

BILLING CODE 6450-01-M

Federal Energy Regulatory Commission

[Docket Nos. ER93-93-000, et al.]

Baltimore Gas & Electric Co., et al.; Electric Rate, Small Power Production, and Interlocking Directorate Filings

Take notice that the following filings have been made with the Commission:

1. Baltimore Gas and Electric Co.

[Docket No. ER93-93-000]

November 10, 1992.

Take notice that on October 30, 1992, Baltimore Gas & Electric Company (BG&E) tendered for filing as an initial rate schedule an agreement (the Agreement) between Long Island Lighting Company (LILCO) and BG&E. The Agreement provides for the sale by BG&E of energy from its system (system energy) to LILCO on a daily, weekly or monthly basis (a transaction). BG&E states that the timing of the transactions cannot be accurately estimated but that the energy will be provided by BG&E to LILCO at a negotiated agreed upon rate which the parties will enter into prior to each transaction when it is economical for each to do so. LILCO will pay an Energy Reservation Charge to BG&E for each transaction in an amount equal to the megawatthours of system energy reserved for LILCO by BG&E during a transaction multiplied by an Energy

TRANSCRIPT
FAIRBANKS, ALASKA

EXHIBIT NO. 2

The newspaper announcements pertaining to the public meeting are provided as Exhibit No. 2.

AFFIDAVIT OF PUBLICATION

USN<. 1:93- LEGAL NO. 47257-3

UNITED STATES OF AMERICA
STATE OF ALASKA
FOURTH DISTRICT
} SS.

Before me, the undersigned, a notary public, this day personally appeared MARGARET BURLEY, who, being first duly sworn, according to law, says that he/she is an Advertising Clerk of the Fairbanks Daily News-Miner, a newspaper published at Fairbanks, in said Fourth District and State, and that the advertisement, of which the annexed is a true copy, was published in said paper on the following day(s),

11/22/92

, and that the rate charged thereon is not in excess of the rate charged private individuals, with the usual discounts.

Margaret Burley

Subscribed and sworn to before me this 30TH day of NOVEMBER, 19 92

Barbara A Carter
Notary Public in and for the State of Alaska.

My commission expires APRIL 30,1995

FORM NO A007

AFFIDAVIT OF PUBLICATION

JOSNK. 1-93+ LEGAL NO. 47267-C

UNITED STATES OF AMERICA
STATE OF ALASKA } SS.
FOURTH DISTRICT

Reproduced from best available copy

47267 Legal
(6450-01)
U S DEPARTMENT OF ENERGY
Notice of Availability of Draft Environmental Impact Statement and Public Hearings for the Proposed Healy (Alaska) Clean Coal Project (HCCP)

AGENCY U.S. Department of Energy

ACTION Notice of Availability of Draft Environmental Impact Statement to assess the environmental effects of the construction and operation of the proposed Healy Clean Coal Project, a new 50 Megawatt-electric coal-fired power generating facility at Healy, Alaska, and conduct public hearings on the DEIS.

SUMMARY: The DOE announces the availability of the HCCP DEIS (DOE/EIS-0186). As one of the proposals selected under Round III of the Clean Coal Technology Program, the HCCP would demonstrate the combined removal of sulfur dioxide, oxides of nitrogen, and particulate matter from a 50-MWe power plant using innovative integration of advanced combustion and the flue gas cleanup technologies. The proposed action is the cost-shared federal funding of the project by DOE of about $104 million (about 48 percent of the total cost of approximately $245 million), to demonstrate the economic viability and environmental acceptability of the technologies. The two technologies to be demonstrated are the TRW Applied Technologies Division (TRW) entrained combustion system, and the Joy Technologies, Inc./Nitro Atomizer (Joy), spray dryer absorber.

INVITATION TO COMMENT AND DATES: DOE invites comments on the DEIS from all interested parties. Written comments or suggestions regarding the adequacy, accuracy, and completeness of the DEIS will be considered in preparing the final EIS and should be postmarked by January 5, 1993. Written comments postmarked after that date will be considered to the degree practicable.

DOE will also hold three public hearings at which agencies, organizations, and the general public are invited to present oral comments or suggestions. Locations, dates, and times for the public hearings are provided in the section of this notice entitled "PUBLIC HEARINGS." Written and oral comments will be given equal weight and will be considered in preparing the final EIS. Requests for copies of the draft and/or final EIS, or questions concerning the project, should be sent to Dr. Earl W. Evans at the address noted below.

ADDRESS: Written comments on the DEIS should be postmarked by January 5, 1993, for incorporation into the public hearing record. Oral comments will be accepted at the public hearings. Written comments, requests to speak at the hearings, or questions concerning the HCCP, should be directed to: Dr. Earl W. Evans, Environmental Coordinator, HCCP, Mail Stop 920L, Pittsburgh Energy Technology Center, U.S. Department of Energy, P.O. Box 10940, Pittsburgh, PA 15236, Telephone: (412)892-5709.

If you request to speak, please indicate at which hearing(s).

Envelopes should be labeled "HCCP Draft EIS."

Individuals desiring to speak at a hearing should notify the DOE Environmental Coordinator for the HCCP at the above address not later than November 30, 1992, so that DOE may arrange a schedule for presentations.

FOR FURTHER INFORMATION CONTACT: For general information on the EIS process and other matters related to the National Environmental Policy Act, please contact: Ms. Carol M. Borgstrom, Director, Office of NEPA Oversight (EH-25), U.S. Department of Energy, 1000 Independence Avenue, S.W., Washington D.C. 20585, Tel. (202)586-4600 or (800)472-2756.

SUPPLEMENTARY INFORMATION:

Background and Need for the Proposed Action. DOE proposes to provide cost-shared funding support for the construction and operation of a new 50-MWe (nominal electrical output) coal-fired power plant at Healy, Alaska, to demonstrate two clean coal technologies. The HCCP was proposed by the Alaska Industrial Development and Export Authority (AIDEA), a State agency, and selected by DOE for negotiation of a Cooperative Agreement for financial assistance by the CCT Program. The HCCP would demonstrate the combined removal of sulfur dioxide (SO2), oxides of nitrogen (NO2) and particulate matter using innovative combustion and flue gas cleanup technologies. After a 1-year demonstration period, anticipated to conclude in 1997, the facility would enter commercial operation. The HCCP would located in Healy, Alaska, approximately 100 miles southwest of Fairbanks and 250 miles north of Anchorage. The facility would be built adjacent to the existing 25-MWe Healy Unit No. 1 conventional pulverized coal unit owned and operated by Golden Valley Electric Association Inc., in a rural setting along the Nenana River. The proposed site is located about four miles north of the nearest border of Denali National Park and Preserve.

On September 27, 1988, Public Law No. 100-446, "An Act Making Appropriations for the Department of the Interior and Related Agencies for the Fiscal Year Ending September 30, 1989, and for Other Purposes," was signed into law. Among other things, the Act provided funding to DOE to cost-share the design, construction, and operation of CCT projects that demonstate the feasibility of technologies capable of achieving significant reductions in the emissions of sulfur dioxide and/or the oxides of nitrogen from existing facilities to minimize environmental impacts such as transboundary and interstate pollution, and/or providing for future energy needs in an environmentally acceptable manner.

On May 1, 1989, DOE issued Program Opportunity Notice No. DE-PS01-89FE61825 for Round III of the CCT program, soliciting proposals to conduct cost-shared CCT projects to demonstrate innovative, energy-efficient, clean coal technologies that are capable of being commercialized in the 1990s. The Healy Clean Coal Project was one of the 13 projects selected from among the 48 proposals received.

EIS Preparation. The draft EIS has been prepared in accordance with Section 102(2)(C) of NEPA, as implemented in regulations promulgated by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500-1508) and by DOE's regulations for compliance with NEPA (47 FR 15122, April 24, 1992). In accordance with NEPA, DOE determined that providing cost-shared funding for the HCCP constitutes a major federal action that may significantly affect the quality of the human environment. Therefore, DOE has prepared a DEIS to assess the potential impacts on the human and natural environment of the proposed action and reasonable alternatives.

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The DEIS considers the proposed action, the no-action alternative (including scenarios that reasonably could be expected to result as a consequence of the no-action alternative), and an alternative site located about four miles north-northwest of the proposed site. Other alternatives have been considered and dismissed from further evaluation. Impacts to atmospheric resources (including air quality and visibility), surface water, groundwater, and ecological and socioeconomic resources from construction and operation of the HCCP are analyzed. Special consideration is given to the potential impacts to DNPP. Impacts resulting from three reasonably foreseeable outcomes of the demonstration are also analyzed.

The DEIS has as much information as possible at this stage of the project development regarding the potential environmental impacts of the proposed construction and operation of the HCCP at the proposed site and at an alternative site.

Floodplain/Wetlands Notification. Pursuant to Executive Order 11988, Floodplain Management, Order 11990, Protection of Wetlands, and DOE's Procedures for Compliance with Floodplains/Wetlands Environmental Review Requirements (10 CFR 1022), DOE hereby provides notice that the construction and operation of the proposed HCCP may impact surface waters at the proposed and alternative sites. Identified areas at each of the two sites are as follows:

Healy Unit No. 1 Proposed Site

No permanent intrusion on the floodplain or loss of wetlands would occur. There would be increased thermal discharge to the Nenana River.

Alternative Site four miles north

A total of 22 acres of wetlands could be disturbed by construction, on which 2 acres currently supports wetland botanical and zoological life. There would be increased thermal discharge to the Nenana River.

The potential environmental impacts of site selection on these surface waters and adjacent floodplain and wetland area are discussed in Chapter 4 of the DEIS. Any comments regarding the proposed action on floodplains and wetlands may be submitted to DOE in accordance with procedures described below.

COMMENTS PROCEDURES:

Availability of Draft EIS. Copies of the DEIS are being distributed to organizations, environmental groups, and individuals known to be interested in or affected by the proposed project. Additional copies of the document may be obtained by contacting DOE as provided in the section of this notice entitled "ADDRESS."

Copies of the DEIS and major documents referenced in the DEIS are available for inspection at the location given below:

(1) U.S. Department of Energy, Freedom of Information Reading Room, Room 1E-190, Forestal Building, 1000 Independence Avenue, S.W., Washington, D.C. 20585.

(2) Rocky Flats Area Office, c/o Front Range Community College, 3645 West 112th Avenue, Westminster, CO 80030

(3) Alaska Power Administration, Suite 2B, 2770 Sherwood Lane, Juneau, AK 99801

(4) Tri-Valley Community School Library, P.O. Box 400, Healy, AK 99743

(5) Z.J. Loussac Library, 3600 Denali Street, Anchorage, AK 99503

(6) Noel Wien Library, 1215 Cowles Street, Fairbanks, AK 99701

Written Comments. Interested parties are invited to provide comments on the content of the DEIS to DOE as provided in the section of this notice entitled "ADDRESS." Envelopes should be labeled "HCCP Draft EIS." Comments should be postmarked no later than January 5, 1993, to ensure consideration in preparing the final EIS. Comments postmarked after January 5, 1993, will be considered to the extent practicable.

PUBLIC HEARINGS:

Procedures: The public is invited to provide comments in person on the DEIS to DOE at the scheduled public hearings. The purpose of the hearings is to receive substantive comments related to the DEIS, rather than to receive either general endorsements or denouncements of the proposed project. The hearings will not be of a judicial or evidentiary nature. Advance registration for presentation of oral comments at the hearings will be accepted up to one week prior to the hearing date by telephone or by mail at the office listed in the "ADDRESS" section above. Envelopes should be labeled "HCCP Hearings." Requests to speak at a specific time will be honored, if possible. Registrants are allowed only to register themselves to speak and must confirm the time they are scheduled to speak at the registration desk the day of the hearing. Persons who have not registered in advance may register to speak when they arrive at the hearings to the extent that time is available. To ensure that as many persons as possible have the opportunity to present comments, 5 minutes will be allotted to each speaker. Persons presenting comments at the hearings are requested to provice DOE with written copies of their comments at the hearing, if possible.

Hearing Schedules and Locations: Public hearings will be held at the following locations, times, and dates, weather permitting, or will be rescheduled as appropriate. A "hotline" telephone no. (907)451-4179, will be available to announce changes, if any:

1 DATE: Monday, December 7, 1992
TIME: 7:00 p.m.
PLACE: Tri-Valley Community Center, Mile 249 Parks Highway, P.O. Box 146, Healy, Alaska 99743

2. DATE: Wednesday, December 9, 1992
TIME: 7:00 p.m.
PLACE: Joy Elementary School Gymnasium, 24 Margaret Street, Fairbanks, Alaska 99701

3. DATE: Thursday, December 10, 1992
TIME: 7:00 p.m.
PLACE: Z.J. Loussac Library Theater Facility Room, 3600 Denali Street, Anchorage, Alaska 99503

Conduct of Hearings: DOE has established basic rules and procedures for conducting the hearings. Rules needed for the orderly conduct of the hearings will be announced by the presiding officer at the start of the hearings. Clarifying questions regarding statements made at the hearings may be asked only by DOE personnel conducting the hearings. There will be no cross-examinations of persons presenting statements. A transcript of the hearings will be prepared, and the entire record of each hearing, including the transcript, will be placed on file by DOE for inspection at the public locations given above in the "COMMENT PROCEDURES" section.

Signed in Washington, D.C., this 17th day of November, 1992, for the United States Department of Energy.

Peter N. Brush
Principal Deputy Assistant Secretary, Environment, Safety and Health

PUBLISH: November 22, 1992

The U.S. Department of Energy (D.O.E.)

Will Hold A

PUBLIC HEARING TONIGHT!

WEDNESDAY, DEC. 9

7 P.M.

To receive comments from the public concerning the contents of the draft environmental impact statement for the Healy clean coal project. A power plant proposed to be built in Healy.

The hearing will be held at

JOY ELEMENTARY SCHOOL GYMNASIUM

In addition, written comments can be sent by January 5, 1993 to:

Dr. Earl W. Evans
Environmental Coordinator, HCCP
P.O. Box 10940, MS-920-L
Pittsburgh Energy Technology Center
Pittsburgh, PA 15236

COMMENTS AND RESPONSES FROM THE PUBLIC HEARING ON THE DRAFT EIS FOR THE PROPOSED HEALY CLEAN COAL PROJECT

JOY SCHOOL
FAIRBANKS, ALASKA

December 9, 1992

COMMENTS AND RESPONSES
FROM THE PUBLIC HEARING
ON THE DRAFT EIS FOR THE
PROPOSED HEALY CLEAN COAL PROJECT
JOY SCHOOL
FAIRBANKS, ALASKA

December 9, 1992

NOTE: For the purpose of coding comments and ease of cross-referencing between documents and other comments, the Fairbanks transcript has been coded "F/T-__."

Commenter: Bernie Karl, 105 Foran Circle, Fairbanks, AK 99710

Comment F/T-1, pp. 57-58:

Comments noted.

Commenter: Stan Rybachek, North Pole, AK

Comment F/T-2, p. 59:

Comments noted.

Commenter: Fred Brown, representing Alaska Business Development Services, address not given.

Comment F/T-3, pp. 60-61:

Comments noted.

Commenter: Patrick Shier, 112 Mary Leigh, Fairbanks, AK 99701

Comment F/T-4, pp. 61-62:

Comments noted.

Commenter: Bert Sharp, Representative, House of Representatives, State of Alaska

Comment F/T-5, pp. 66-67:

Comments noted.

Commenter: Ralph Malone, Box 71267, Fairbanks, AK (representing the administration of the Fairbanks North Star Borough)

Comment F/T-6, pp. 67-69:

Comments noted.

Commenter: Jay Quakenbush, Box 82391, Fairbanks, AK (representing International Brotherhood of Electrical Workers)

Comment F/T-7, pp. 69-71:

Comments noted.

Commenter: Michael Kelly, 1028 Aurora Drive, Fairbanks, AK

Comment F/T-8, pp. 71-75:

Comments noted.

Commenter: Clark Milne, 1119 Coppet Street, Fairbanks, AK

Comment F/T-9, pp. 75-78:

Comments noted.

Commenter: J. Vanderford, Post Office Box 10587, Fairbanks, AK

Comment F/T-10, p. 79:

Comments noted.

Commenter: Dave Lacey, Post Office Box 81765, Fairbanks, AK

Comment F/T-11, pp. 79-83:

"Well, I hate to be the canary in the coal mine, so to speak, on this. But I and among a lot of people in the world feel that coal burning is a fundamental threat to life on the planet. And as we know, the Rio conference dealt with that recently. I can't believe that we're so out of step with that. And I question things on this level. Also I saw President-elect Clinton on television last night and he mentioned the budget deficit as one of the three main problems to long-term economic health and viability of this country. And you know, on one hand, theoretically as Mike Kelly said, my electric bill isn't going to go up necessarily, or possibly not going to go up as a result of this project but on the other hand, you know, the money's coming out of my other pocket because these big state and federal subsidies for this project that are going to benefit, you know, TRW apparently.

Maybe now this Amax with this Fort Knox mine, they're going to come out of my other pocket. And just like a lot of these projects, a few big people benefit and then the rest of us, you know, hope there's going to be a little trickle down effect that we'll get, maybe our utility bills won't go up or something. You know, obviously this project is pork barrel. . . ."

Response:

Coal will remain part of the U.S. energy strategy in the future and the Clean Coal Technology Program and the HCCP project would help to develop coal utilization technologies that lessen the environmental impacts of burning coal.

Also, see response to Comment 35-2.

Comment F/T-12, pp. 80-81:

"I feel that we haven't been done enough also here as far as conservation here in Fairbanks. I think GVEA could immediately offer an edict and say everyone had to cut consumption by 15 percent. And if that wasn't done, then the amount that you consumed over your normal bill over that—if you don't cut by 15 percent, you'd have to pay two times for that. We can easily cut that and conserve that much here in Fairbanks, you know. In case of an emergency obviously we could conserve a lot more. So really, conservation has only been given a token approach here."

Response:

Conservation is outside the scope of the EIS because it does not address the goal of the project which is to demonstrate a clean coal technology. The Integrated Resource Plan submitted to the APUC by GVEA evaluated conservation. See response to Comment 76-12.

Comment F/T-13, p. 81:

"And of course because of the lobbying power or whatever of clean coal, you know, CO_2 emissions were kept out of the 1990 Clean Air Act. It's interesting in Senator Gore's book, *Earth in the Balance*, he warns of the dangers of burning carbon 27 times. I just feel that, you know, this is poor industrial policy. ADA is supposed to—as an industrial policy, supposed to create jobs here in Alaska and we all know that more jobs, you know, would be created by conservation methods and retrofitting homes and doing things here in Fairbanks than would be created there."

Response:

The potential consequences of CO_2 emissions are discussed in response to Comment 1-6. In terms of industrial policy, the HCCP would create jobs. However, AIDEA's industrial policy is outside DOE's purview. Conservation is evaluated in the Integrated Resource Plan submitted by GVEA to the APUC. See response to Comment 21-4 for discussion on the need for power.

Comment F/T-14, pp. 81-82:

"Plus the potential dangers to the tourism industry by industrialization at Denali. I have a document here put out by the Fairbanks Convention and Visitors Bureau that states that

76 percent of visitors to Fairbanks also visit Denali. You know, Fairbanks basically has the tourism industry of its size because of our proximity to Denali. You know, I hate to I mean see the goose that's laying the golden egg for Fairbanks economically destroyed. Here's a recent issue here too for the record from Cliff Rousell, FCVB, Visitor industry brightens economy, talking of I think something like $51 million added to the Fairbanks economy by the visitors' industry. So, it's a big industry and as a result of Denali being here. And I don't feel that the EIS has seriously considered the socioeconomic impacts to the visitor industry sufficiently."

Response:

Comment noted. DOE believes that the EIS addresses adequately socioeconomic impacts to the visitor industry.

Comment F/T-15, p. 82:

"And also here, the 512,000 tons per year of CO_2, obviously at some point, you know, there needs to be a decision made on that and we need to face that and not try to hide that, that that's an environmental impact from this plant. And even though it's hard to determine the synergistic impacts of something like this, the things like arctic haze and things like that, you know, and the fact that in the 20 years they've been studying song birds here in Alaska is something like 80 to 50 percent of them, the population is declined, you know. So something is obviously wrong environmentally worldwide and, you know, we're going to have to face up to it and start, you know, making some tough decisions here sooner and later."

Response:

The source of the figures for declines of Alaskan songbirds is unspecified so the nature of the declines is unknown. Recent declines of temperate and subarctic songbirds have been attributed to declines in habitat availability, particularly wintering habitat, rather than to CO_2-induced climate change. See: Terborgh, J. 1989. *Where Have All the Birds Gone?* Princeton University Press, Princeton, NJ. Of course, if significant climate change occurred in the future, birds and most other nonhuman and human organisms could be significantly affected.

Comment F/T-16, p. 83:

" . . . air pollution is increasing worldwide as a result of increasing population and increasing use of technology. These two factors have also brought about the continuous striving for economic growth and resulting land use pressures that have left most of the world developed and polluted. A few areas remain that are fairly untrampled by man. More and more countries are seeking to preserve some of these areas in their pristine state as national treasures."

Response:

Comments noted.

Comment F/T-17, p. 83

"The air quality in these areas is also an important part of these resources and needs to be maintained in its pristine condition also. This is a challenge as air pollutants are known

to travel great distances and invade the air regions of remote areas. Man's effort to prevent degradation of these areas are of paramount importance. All exposures of man and other living things to air pollution almost certainly involve some degree of biological risk. Survival of the species is at stake."

Response:

Comments noted. DOE believes that the EIS addresses air quality impacts adequately.

Commenter: David Stannard, 1009 O'Connor, Fairbanks, AK

Comment F/T-18, pp: 85-86:

"What I would like to speak to is that in the preparation of your final report that you take care to exercise liaison with the other sub agencies of the DOE, in particular the Office of Fossil Fuels, that you're a part of, Fossil Energy. . . . So I would hope that you would take care to exercise liaison with your other agencies in relation to coal gasification, in relation to the five-year hydrogen development plan, especially since our President-elect and his energy advisors and economic advisors are about to move on the question of CO_2 generation, introduce a carbon tax, which is highly recommended at this point through the President-elect. It just came out today, or yesterday in the Wall Street Journal, which incidentally suggests a five-year increase from $6.00 to $30 per ton of coal, as a carbon tax. I wonder how that affects your final report, if at all.

. . . What I would hope is that you do get coordinant with your agency and the other elements in the agency, especially in relation to this five-year hydrogen development plan. Fuel cell development, hydrogen storage, hydrogen production and so forth, how that relates to the use of coal, so that in your report you go beyond the immediate demonstration, technology advance that you truly are engaged in and you pin that to the plans of the future and our present—that is our coming administration and their policies so that we have some continuity of development and Fairbanks isn't left in the backwash as usual. . . ."

Response:

Coal gasification projects are part of the Clean Coal Technology Program. However, AIDEA did not submit a coal gasification project for DOE to consider, but rather the HCCP technology; an innovative, environmentally responsive coal utilization technology. Other sources of energy, such as hydrogen, are outside the scope of this EIS because they do not address the goal of this project.

See response to Comment H/T-5 regarding carbon taxes.

The HCCP, if successfully demonstrated, should help coal-fired utilities burn coal more cleanly. Coal will remain a part of the energy mix in the future so the HCCP plays an important role in the continuity of energy development in the United States.

Commenter: Matthew Tullar, 1223 Ninth Avenue, Fairbanks, AK

Comment F/T-19, p. 87:

Comments noted.

Commenter: Gary Newman, President, Alaska Federation for Community Self Reliance, 1083 Esro Road, Fairbanks, AK

Comment F/T-20, pp. 88-89:

"It failed to examine other alternatives to no build which might have a lesser impact for the Healy area as stated in page 2-30. Specifically, it did not analyze the option of wind power in Healy, which is a well recognized resource in the area, and something which has not been done to date by any party involved in this project. Some of the rationales for not including alternatives is there was no other known fuel source in the area, and I would say that wind is definitely a fuel source in Healy."

Response:

See response to Comment 27-1.

Comment F/T-21, p. 89:

"The draft EIS basically discounts other alternatives. I believe that since amongst its many charges, again, coordinating with other agencies the way an earlier speaker mentioned, the DOE is charged with promoting cleaner methods of providing electricity amongst other charges, not just implementing coal technology. I think, as such, it should have been investigated in this particular case, and in the EIS."

Response:

See response to Comment 27-1.

Comment F/T-22, p. 89

"Since the experimental technology is designed primarily for retrofit applications in this particular proposal, it's curious that none of the participants, nor the draft EIS, investigates repowering of the existing Healy 1 plant. I think such a change would have saved tens of millions, if not in excess of 100 million dollars, of government expenditure, which I think is no small change. Also, the technology—excuse me, the scenario of a conventional plant, should the experimental technology fail, was addressed in 5-10 and indicated that any further mitigation from the degradation over successful experimental combustion technology isn't likely."

Response:

See responses to Comments 74-7 and 76-1.

Comment F/T-23, p. 89-90:

"I don't understand the statement that emissions were estimated to be the same as a no build scenario because if you have a conventional plant, you're again, emitting conventional quantities of pollutants."

Response:

See response to Comment 27-3. The EIS analyzes several scenarios. If successful, the demonstration is expected to emit at very low rates that are the target objectives. However, a higher emission level is also analyzed for both the "permitted case" and the "retrofit case" in Sect. 5. The emission levels are identical for these latter two cases and

represent the upper bounds for emissions which could occur if the HCCP does not achieve its target emission objectives and either enters commercial operations at the "permit emission rate" or is retrofitted to more conventional combustion technology. Likewise, the scenario for the "retrofit case" is almost identical to the scenario described as a no-action alternative (because DOE would not provide cost-shared funding) in which a conventional coal-fired power plant with emissions at the "permit emission rate" would be built at Healy by the project participants (Sect. 2.2.1). In summary, the latter three scenarios would all emit at the "permit emission rate."

Comment F/T-24, p. 90:

"I would also reinforce that the consideration of retrofitting better technology onto Healy 1 is a moot point, which is brought up in the draft EIS. GVEA, as the owner of Healy 1, has stated that contribution more than 20 percent of the cost for construction of experimental coal plant is not cost effective for them and was unwilling to pay for more than roughly that 20 percent. So, if the technology fails and the experimental plant is retrofitted back to a conventional plant, there will be no further mitigation by the project participants, in my belief. I surmise that it would probably be pulling teeth to get the technology providers to retrofit the plant in any case, despite what the agreements are."

Response:

See response to Comment 76-1.

Comment F/T-25, pp. 90-91:

"Addressing socioeconomic impacts, the EIS correctly points out there will be a cost to local and state governments from the influx of temporary construction as it will exceed the capacity of the schools and other services, but fails to quantify that cost to assist in balancing out the difference gained in tax base, what little that is. Plus, the resulting bust once the construction is complete. You can't nearly double the population of a community, as noted in 4-38 and 4-41, for a year or two and not create a major impact on infrastructure, or lack thereof. To make a valid comparison of trade-offs, I think a more comprehensive approach toward a cost benefit analysis, which would quantify and address mitigating and anticipated impacts, would have been performed. It is done to some degree and I've tried to consolidate this into something that I could see. But, the data is scattered and incomplete. I'm only on page 2."

Response:

See response to Comment 27-5.

Comment F/T-26, p. 91:

"And an example is like a landfill, if that's going to be obsolete earlier. It's extremely expensive to construct a new landfill. Those costs weren't shown in here."

Response:

See response to Comment 27-6.

Comment F/T-27, p. 91:

"The construction camp I thought was a great idea toward mitigation. It would help in some degrees, but not completely. I would like to suggest one, that the construction camp be heated by the warm effluent that's normally discharged into the Nenana River from Healy 1, thus reducing the ice fog and other carbon-based pollutants from heating such a large camp. . . . I think that, also, downstream when they become open on the market, when their use is done, they also continue to impact fuel usage just for heating."

Response:

See response to Comment 27-8.

Comment F/T-28, pp. 91-92:

"The draft EIS notes there's no police for a boom community—what do you want me to do? . . . If there's no police, except on the site of the construction camp, that isn't really where you need the security. You need it to keep folks in line after they've gone to town, particularly when they've got their paychecks."

Response:

The participant would only provide security for the construction camp. The town of Healy would continue to be protected by two state troopers, one from Nenana and one from Cantwell. It is expected that the increase in population due to the HCCP would not overburden the state troopers.

Comment F/T-29, p. 92:

"The impact of traffic usage, I think is inadequately stated and addressed. It's stated there will be minor impact to roads, yet with up to double the population and heavy construction items being transported along the roads, although some by railroad. I think you can expect a lot of degradation in the Healy roads. I think this cost should have been estimated."

Response:

Section 4.1.8.5 discusses potential impacts to traffic usage in the Healy vicinity. It is expected that traffic impacts, and impacts to the local road system, would be minor for two reasons. First, the additional traffic created would be, for the most part, in the project area and would not impact traffic on the Park's highway or in Healy. Second, heavy construction items would be delivered infrequently (less than two material deliveries daily). Because roads in the Healy area are also exposed to heavy tourist traffic and the effects of extremely cold temperatures, it is not possible to estimate the HCCP's contribution to this damage.

Comment F/T-30, p. 92:

"The EIS discussed, at length, a difference that there was between DOE and the NPS, National Park Service, on a measurement of air quality and how to estimate it. I would be interested to see in the final EIS what the NPS's final position is on that."

Response:

See response to Comment 27-18.

Comment F/T-31, p. 92:

"The last really major item in terms of air pollution, again, addresses carbon dioxide. Basically, I think this report pans it and I think what you need to do is take a look at what the no build situation is on the CO_2 end of it, take a look at what the wind power end of it would be on the impact of CO_2, and give us something that we can actually balance out. I think it's an important enough issue, and with a new administration, it's something that you may be asked to look at anyway come March."

Response:

See response to Comment 1-6.

Comment F/T-32, p. 92:

"I think the statement under needs there, I have addressed this informally already, but I think on the need to be a little less partisan because you're involved in more than just promoting coal. DOE is supposed to involved in clean energy, et cetera."

Response:

See response to Comment 27-25.

Comment F/T-33, pp. 92-93

"Lastly, DOE didn't address the economic issues or do a cost benefit analysis, particularly those related to external environmental costs and basically saying that the APUC, Alaska Public Utilities Commission, had already done so. Unfortunately, the APUC chose not to consider those environmental externalities, therefore, despite the tens of millions of dollars that are spent on the EIS and all the regulatory permits and hearings, there is no agency that can make a valid comparison between the costs of the project to the environment, and the benefits. I think this is the largest failings of all the agencies thus far, and I'm sure it's mirrored with the other projects statewide. I feel that both DOE and APUC will have abrogated their responsibility to the public interest if you don't do this."

Response:

See response to Comment 27-26.

U.S. DEPARTMENT OF ENERGY

PROPOSED HEALY CLEAN COAL PROJECT

PUBLIC SCOPING MEETING

Held at

LOUSSAC LIBRARY

WILLA MARSTON THEATER

December 10, 1992

7:00 o'clock p.m.

ROY EIGUREN, HEARING OFFICER

PANEL:

ELMER HOLT, NEPA
STEVE FERGUSON, DOE
DR. JERRY PELL, DOE
DON KUHLE, CORPS OF ENGINEERS
TOM RUPPEL, ENVIRONMENTAL COORDINATOR
STEVE HEINTZ, PROJECT DIRECTOR

KRON ASSOCIATES
Court Reporting
1113 W. Fireweed Lane, Suite 200
Anchorage, Alaska 99503
(907) 276-3554

TABLE OF CONTENTS

HEARING EXHIBITS

P R O C E E D I N G S

HEARING OFFICER EIGUREN: Okay. We've now just formally opened the record. What I'd like to do is just briefly outline what it is that we're going to be doing this evening by way of the public hearing and also introduce our hearings panel that's here.

As I had mentioned earlier, my name is Roy Eiguren. I am the hearings officer for this and the other public hearings that have been held throughout the week here in the State of Alaska. These hearings are held to receive public and governmental agency comment on the draft environmental impact statement for the proposed demonstration by the Alaska Industrial Development and Export Authority of a Clean Coal Project demonstrating novel technologies using a new 50 megawatt coal fired power generating facility known as the Healy Clean Coal Project.

As I had mentioned, I am the hearing officer for this as well as the prior public hearings that were held earlier this week, on December the 7th, Monday, in Healy, and yesterday, December 9th, in Fairbanks.

With me in the front of the room are members of the Department of Energy and the Army Corps of Engineers Hearing Panel. I will introduce these gentlemen at this particular point. To my far left, your far right is Mr. Elmer Holt. He is with the Office of NEPA Compliance with the United

States Department of Energy, Washington, D.C.

Next to him is Mr. Steve Ferguson. Steve is with the General Counsel's Office, the Department of Energy in Washington, D.C.

Next to him is Dr. Jerry Pell who is with the Clean Coal Technology Program, of the Department of Energy back in Washington, D.C.

Next to him is Don Kuhle, who is with the Army Corps of Engineers. And he is a part of a cooperating agency which I'll describe in a moment.

Next to him is Tom Ruppel. Tom is the Environmental Coordinator for this particular project. And finally, our project director is Steve Heintz.

And I would note for the record that the senior DOE official here is Mike Eastman, who is out in the audience. He is responsible for this particular program overall.

To put this hearing in perspective, it's important that you understand the key elements of the federal law that requires that the Department of Energy's final decision in this matter be preceded by a comprehensive review of the environmental factors associated with each of the alternatives that are being considered by the Department.

The National Environmental Policy Act of 1969, generally known as NEPA, requires that all federal agencies develop procedures that insure environmental amenities or

values are given appropriate consideration in federal government decisionmaking, along with technical considerations.

This law also requires that recommendations for major federal actions significantly affecting the quality of the human environment be first proceeded by the development and completion of an environmental impact statement that fully and carefully examines the potential environmental impact to the proposed federal action.

This NEPA process is triggered by a Notice of Intent, which is a notice of intent to prepare a draft environmental impact statement and hold public scoping meeting. The initial notice of intent in this particular proceeding was published in the Federal Register of the United States on October 5th, 1990. The publication of this notice then triggered the public scoping meeting process that was held earlier. A scoping meeting was held in Healy, Alaska, on October 22nd, 1990; in Fairbanks on October 23rd, 1990; and in Anchorage on -- here in Anchorage on October 24th, 1990.

As a result of the scoping meetings, the department defined the scope of the draft environmental impact statement and identified the particular issues that would be contained in it.

The specific detailed analyses that are contained in the draft environmental statement, all of the environmental

issues that are at issue here, will be discussed in a workshop format or the workshop portion of our program later this evening.

The preparation of the environmental impact statement and its review process was governed by an extensive series of federal regulations established by the Council On Environmental Quality, or CEQ, which is an agency within the Executive Office of the President of the United States, as well as there Department of Energy regulations that also govern this process.

The Council On Environmental Quality Regulations are found at 40 Federal Regulations Part 1500 through 1508. The Department of Energy Regulations are found at 57 Federal Register 15122. These regulations have been previously marked by me as Exhibit Number 1 and have been introduced into the official record of this particular proceeding.

These regulations require that upon the request of the lead agency, which here is the Department of Energy, any other federal agency that has jurisdiction by law shall be a cooperating agency in the preparation of the EIS.

The regulations add that any other federal agency that has special expertise with respect to any environmental issue which should be addressed in the EIS, may be a cooperating agency upon request of the lead agency.

Four agencies have been designated as cooperating,

agencies in this particular process. Texts has been contributed by them as well as additional information. The four agencies designated as cooperating are: United States Department of Agriculture, Rural Electrification Administration; U.S. Department of the Army, Corps of Engineers; U.S. Department of the Interior, National Park Service; and the U.S. Environmental Protection Agency.

The relevant CEQ regulations require that after preparing a draft environmental impact statement and before preparing the final environmental impact statement, a federal agency must first obtain the comments of one, any federal agency which has jurisdiction by law or special expertise with respect to any environmental impact, and two, request the comments of appropriate state and local agencies, which develop and enforce environmental standards; also receive comment from Indian tribes and the public.

There is an affirmative obligation to solicit comments from persons or organizations who may be interested or effected by a proposed federal decision. The Department of Energy's own regulations require that at least one public meeting or hearing be held for every departmental EIS that is written.

Accordingly, today's and the prior public hearings that are being held pursuant to this regulations are to receive public, Indian tribe, and governmental comment on

the various issues identified in the draft environmental impact statement.

Notice for these public hearings was provided in the Federal Register on November 20th. In addition to that, additional public notice was provided through publication in various newspapers throughout the State of Alaska about these particular hearings.

The Federal Register notice as well as the notices in the newspapers have been marked as Exhibit 2 by me and have been included in the official record.

Now, I'd like to briefly explain the procedures that we followed in all the public hearings. Public comment is welcome from anyone that would like to comment. Oral comment will receive the same weight as written comment. So if you do have written comments with you, you may leave them with me as the Hearings Officer. I will include those in the record.

If you have written comments that you would like to provide to the Department before the close of the comment period, you may do so by mailing them to Dr. Earl Evans. Dr. Evans is here in the audience. We have his address back at the registration table. You can mail your comments directly to him. As I have mentioned, oral and written comment receives the same weight, the same consideration in this particular record.

All of the comments will be compiled into a comprehensive record that will be considered by the Department in making a final decision on how to proceed on this particular project.

The CEQ regulations that I had mentioned earlier provide that comments on an environmental impact statement or on a proposed action shall be as specific as possible, and may address the adequacy of the statement or the merits or the alternatives or both.

Accordingly, that's really what you should be talking about here. However, what we're doing is allowing people to comment on anything they feel relevant concerning this particular issue.

Upon the close of comment, the Department will review the entire record in the proceeding. The Department then has the following options: it may chose to modify, supplement or reissue a draft environment impact statement. It may also choose to issue the draft as it is in final form without modification.

A record of decision will identify the environmentally preferred alternative that's chosen by the Department along with any practical means to avoid or minimize environmental harm from the alternative that is selected.

The Department as a matter of federal regulation, cannot proceed with it's proposed action until the record of

des- -- in the record of decision until a minimum of 30 days has passed from the date of issuance of the final EIS.

The current schedules the Department plans to proceeds is follows: as I mentioned, the close of comment period is on January 5th, 1993. We would ask that if you do have written comment, please send it to the Department by that date. To the extent that comment is received past January 5th, we'll include it in the record and consider it to the extent practical.

A decision will be made in the early spring as to how to proceed by way of either supplementing, modifying, revising the impact statement. And then sometime mid to late spring, a notice of availability of the final environmental impact statement will be published in the Federal Register.

At that time the Department will then issue a record of decision on whether to proceed with the Healy Clean Coal Project or not to, and public that record of decision or notice of the record of decision in the Federal Register. That currently is contemplated for late spring.

At this point we'll now go ahead and begin receiving comment from those individuals that have signed up to comment here this evening. The rules are very, very simple. Everybody has five minutes within which to offer their comment.

Because this is a recorded proceeding and we're developing a formal public record, we're going to have to ask that you would give your comment from up here at the podium so that the Court Reporter can pick it up. Or if you'd like, Madam Reporter, I'm sorry. I'm told that this one will not pick it up for the Court Reporter. So we'll have to have you come to the podium.

Oh, I'm told, okay excuse me. I stand corrected. It's your option, you may either come up here to deliver your comment or you may deliver it from there.

As I mentioned, everybody has five minutes. We would first ask that you would give us your name and address for the record and then go ahead and begin your comment.

MR. McKEE: My name is Charles McKee. My address is 7800 DeBarr Road, Space 63, Anchorage, Alaska, 99504.

HEARING OFFICER EIGUREN: Thank you.

MR. McKEE: M-c K-e-e.

HEARING OFFICER EIGUREN: Go ahead and proceed, thank you, sir.

PUBLIC COMMENT OF CHARLES McKEE

Mr. McKEE: I'm against the project not so much as for environmental reasons as you indicate, but fundamentally, you're -- it's -- it does cause environmental damage because of the scholars that were quoted in the Journal of -- I have read that the Japanese said that the doubling plan, which is

A/T-1

the money that you're intending to use to build this generating plan causes environmental degradation on itself.

You've got interest paid and we're cutting our corners to pay just interest on the money borrowed. I'm here. And my position is a citizen. And I am fighting for the United States Treasury, if you can believe that.

I have a case that nobody wants to help me pursue in the US Claims Court pertaining to whether we use -- go back to using our United States currency, our own money or maintaining this monopoly of private currency that we currently are being enslaved by. And I allude to the four trillion dollar debt.

I know how to burn the coal a lot hotter and actually produce diamonds. But that, in fact, would come against DeBeers (ph). I have another project in mind that would be much larger than the project and develop much more energy right off here in Turnagain Arm and Knik Arm and move a lot of material on top of all that.

Another question is mental health claims. You have to take that into consideration. And I've been active in that pursuit. I have requested from the Treasury of Currency, the Comptroller of the Treasury five billions dollars. 2.2 of that would go to redeem the mental health assets.

A/T-2

There's still another question of Fort Knox, and the gold aspect that I've -- looking at. We have a need for the

treasury to be redeemed also. We haven't had gold in there for 30 years. We need to go back to the gold standard and the silver standard and then a greenback dollar, which is United States legal tender issue.

I know this all sounds real kinda foreign because we've lived with this for such a long time that it almost sounds archaic.

I come with my opinion from a book by Robert A. Caro (ph), "The Power Broker" is the title of it. He won the Pulitzer Prize for this book. And it's about Robert Moses, of all people, the power broker and the fall of New York. the public authority is what he designed. And it was in conjunction with the Federal Reserve Board. And they amassed so much influence and power you might as well call it an organized Mafia, because indeed, they had more influence than the President of the United States and got us into this four trillion dollar deficit to begin with.

I, for one, would like to see electricity be free. I have the copy right on -- the math for energy process right here. And I'll give that to you. And as recently, this will show just how far energy goes.

We have Tuesday, December the 8th, 1992, Anchorage Daily News page D-3, this Dr. Anne Young. She talks about trying to figure out genetic cause of the Huntington's disease. And she discloses that energy is the focal point

of our body. So if you -- and I've talked with physicists and I mention this. If you have a focus of concentration on a situation, you can figure out the solution to your dilemma. Thank you.

HEARING OFFICER EIGUREN: Madam Reporter, we'll mark for the purposes of the record these two documents as Exhibits Number 4 and 5 from the first commenter.

(Hearing Exhibits 4 and 5 marked for identification)

HEARING OFFICER EIGUREN: Once again, Ladies and Gentlemen, we're in the formal public hearing portion of this evening's program. As I had mentioned earlier, we planned to make sure that everybody that would like to comment on the record will have the opportunity to do so.

It would be our intent, however, to go into recess for about 90 minutes or so for a workshop presentation on the project. So if there's anybody else in the room at this time due to a time constraint, would prefer to comment at this point, we'd be glad to receive your comment.

If not, Madam Reporter, I would note for the record it's 7:20 local time. We will go into recess and reconvene in approximately 90 minutes.

(Off record - 7:20 p.m.)

(On record - 8:55 p.m.)

HEARING OFFICER EIGUREN: Approximately 8:55 local

time. And we will formally resume our public hearing being held in Anchorage, Alaska on December 10th, 1992. The purpose of which is to receive comment from members of the public as well as government agencies on the draft environmental impact statement prepared by the Department of Energy for its proposed Healy Clean Coal Project.

Again, my name is Roy Eiguren. I'm the hearings officer. I'm an attorney in private practice that's been retained by the Department for the sole and exclusive purpose of serving as the moderator/hearings officer for this and the other hearings held in Alaska this week on this particular project. My job is to make sure that everybody has a fair and equal opportunity to go on the record with their comments relative to this particular draft environmental impact statement.

I'll just briefly, once again, we have our hearings panel to my left, to your right, who are members of both -- esteem members of both the Department of Energy as well as the Army Corps of Engineers, which is a cooperating agency with the Department. They are here to listen to your testimony and they have the right to ask clarifying questions of your testimony if they feel that's necessary to do so.

We have eight individuals who have registered to comment this evening. I will call them in the order within

which they signed in to speak this evening.

We would ask that when you -- when I call your name, to either come up to the front here to the podium, or come down to the mike down here on the floor. Give us your name, address for the record. And if you are speaking on behalf of an organization, please identify the name of the organization.

Everyone has five minutes within which to comment. We're trying to make sure that everybody has a fair opportunity to comment on the record. So we are observing the five minute rule. When four minutes elapses of your time, the green light will go on up here at the podium. Five minutes, the red light goes on. When the red light goes on, I would request that you would start bringing your comments to closure.

As I had mentioned earlier, written comment also receives the same weight, the same consideration in this particular record. So if you do have written comments with you this evening, I would appreciate receiving those. I will include those in the record as a formal exhibit.

Everything that is being said here is being recorded by the Court Reporter so that we have a full and complete transcript of the comments.

As I had mentioned, the Department will close the comment period in this proceeding on January 5th, 1993. So

if you do not comment tonight and would like to submit written comment for the record, please do so by mailing it to the Department at an address that we can provide to you at the back of the room.

So with that, we'll no go ahead and begin the receipt of comment from members of the public as well as governmental agencies who are here. Our first commenter is Grant Walther. Grant Walther? I'll call his name again later. Mike Tate.

PUBLIC TESTIMONY OF MICHAEL TATE

MR. TATE: Yes, my name is Michael Tate. I'm a resident of Anchorage, P.O. Box 142395, 99514. And I want to put my support behind this project. A/T-3

I feel that this is something that Alaska needs both for the economic benefits and for the technology benefits. We can't rely on the oil industries forever. We need to develop other resources to support this. This is a good shot in the arm for the people of Healy also. Make it short and sweet. That's all I have to say.

HEARING OFFICER EIGUREN: Okay. I would next call Carl Portman.

PUBLIC TESTIMONY OF CARL PORTMAN

MR. PORTMAN: Good evening. I am Carl Portman. I am the communications director for the Resource Development Council here in Anchorage at 121 West Fireweed Lane, Suite A/T-4

250.

The Resource Development Council is a private non-profit economic development organization representing Alaska's basic industries and local communities. Our membership also includes individuals, Native corporations, organizations labor and small business.

RDC has reviewed the draft environmental impact statement for the Healy Clean Coal Project and found it to be adequate in scope. But outside the scope of the DEIS there will be a number of benefit resulting from the project such as jobs, availability of reliable low cost power.

Like most other projects involving the development or the use of a natural resource, the Healy proposal does have its opponents. Some people object to the plant's proximity to Denali National Park, although there is already a coal fired facility near Healy a few miles from the park.

With 90% of the nation's national wildlife refuges and 70% of its national park lands, it is difficult to develop a resource or build a production facility in Alaska that is not adjacent to or near a conservation system unit (ph). Moreover, the coal field near Healy have been mined since 1918.

While the DOE has done a thorough job analyzing the potential environmental impacts, the computer models use -- measure the visibility impacts in Denali National Park are

questionable. The computer models predict a plume generated by the HCCP would be visible from the eastern edges of the park for zero to eight hours a year. A plume from the existing coal fired facility would be visible from inside the park for zero to 27 hours a year, according to the computer projections.

In reality, however, as mentioned here earlier this evening, there has been no verification of such a plume as cameras and observers within the park have failed to detect a plume from the existing plant.

Given that the modeling appears to overstate the impacts from the existing plant, we can only assume that the stated potential, although small, for any visibility impacts from a new facility is questionable.

With the highly advanced coal burning technology, the plant should yield very little visible emissions. If any plume is visible, it will probably occur during the winter months when few visitors are present in the park.

The bottom line is that the new plant will have no negative impact on the environment. It could be the cleanest coal fired facility of its size in the world.

RDC urges the Department of Energy to move forward with this project. Power sales have grown steadily over the past ten years, and demand for electricity in interior Alaska is likely to skyrocket as major new mining projects

come on line.

The AMEX Gold, Fort Knox development near Fairbanks will itself increase Golden Valley Electric Association's normal load by almost 50%. There is a very real likelihood that other major hardrock gold properties will be developed in the Fairbanks area, each requiring further increments of electrical power. In addition, proposed Native corporation chipboard plants utilizing interior timber resources will add an additional load.

The positive potential for the project both for Alaska and the nation are very clear and substantial while the potential negative impacts are highly speculative and negligible. RDC commends the Department of Energy for its thoroughness in the DEIS process. And again we thank you for the opportunity to comment.

HEARING OFFICER EIGUREN: Our next commentor is Marc Langland.

PUBLIC TESTIMONY OF MARC LANGLAND

My name is Mark Langland, 9620 Springhill Drive, Anchorage, 99507. Speaking for myself, I have some familiarity with the project. I sat on Usibelli Coal Mine's board. I'm also a banker. A/T-5

And I think of all the projects in some 27 years of banking, I haven't seen one that quite meets all of the standards that this one does. And not only in the economic

benefits that it presents, but also from the environmental impacts side of it.

We have an existing coal mine, existing power plant, and an existing power grid system that certainly is all in place to accommodate the new project. So I think as you look not only to the current benefits it might give, but also to the future benefits of additional coal that we could be mining in Alaska, not only through the Healy Project but also from across the Inlet here.

So I think as you look at it as a whole concept of coal being as a power generation for Alaska but also for the Far East, come out of Alaska, I think this gives us a very good advantage to be competitive in the world.

So it will not only provide immediate employment, but also future employment in the plant, but also in future mining activities for additional coal. So I think it has an awful lot of benefits for a project like this with a combination of state ownership, federal funding, and private money; that being generated from Usibelli and Golden Valley, makes a very good project. So I would certainly support the project and hopefully you would move forward aggressively to completion. Thank you.

HEARING OFFICER EIGUREN: The next commentor is Steven Borell.

PUBLIC TESTIMONY OF STEVEN BORELL

MR. BORELL: My name is Steve Borell. I am the executive director -- excuse me, at 501 West Northern Lights Boulevard, Anchorage, Alaska 99503. I'm the director -- executive director of the Alaska Miner's Association and testifying on behalf of the Association. A/T-6

Thank you for this opportunity to comment on this very important project. Most Alaskans are very pleased and even proud the Department of Energy has selected the Healy Clean Coal Project to be one of their very few special projects for participation by the Department.

Golden Valley Electric, the Alaska Industrial Development Export Authority, and Usibelli Coal Mine are excellent corporate citizens. And Alaskans are pleased that these have joined together in this project.

In the fall of 1990 I attended and testified at the scoping meeting for this draft EIS. At that time I urged the Department of Energy to speed ahead with all dispatch and complete this draft EIS in the most thorough and expeditious manner possible. It appears that you have, indeed, done just this. And I commend you for it.

Once we have reviewed the entire document we will be submitting written comments. At this time I'd like to make some general comments.

Excuse me, first, it appears the draft EIS for the proposed project has effectively addressed all the points

required by law and that the draft EIS is complete. The draft EIS also appears to have evaluated the project in sufficient depth to assure that all pertinent issues have been thoroughly accounted for and addressed.

Regarding the issues raised by the National Park Service, and I notice there were many in the draft EIS, your document addresses these effectively, and has even gone beyond the call of duty to scientifically answer the various questions presented.

I would remind the Department of Energy that in 1980 the Alaska National Interest for Conservation of Lands Act, known as ANILCA, added several million acres to the then existing Denali National Park with the result that Denali National Park and preserve now contains more than six million acres and is considered by many to be the crown jewel of the national park system.

One of the arguments in 1980 for increasing the park to such a very large was to provide a buffer within the designated park lands for the core highest value lands within the park. This was done. And the Denali National Park and Preserve area now already includes this buffer.

This built-in buffer of the park was meant to and will fully accommodate any concerns for visual effects of projects such as the Healy Clean Coal Project.

ANILCA also included a recognition by the Congress

that there was no need for further federal land set-asides in Alaska, and that the remaining lands; federal, state, and private; private being primarily native lands, would be available for economic development.

Denali National Park is indeed a magnificent park. But it's sheer size is often not possible for us to fathom. To place it into perspective, with a total of more than six million acres, Denali National Park and Preserve is larger than eight of the 50 states that make up this country.

Now, for some -- regarding some of the human environment issues. Future economic stability of our nation depends on economical and clean energy. This project contains sufficient benefit for both the immediate future and the distant future.

For the immediate future, excuse me, it will provide jobs and electricity to the railbelt intertie area of Alaska, both of which are needed, especially the jobs. Because of overbearing regulations and anti-development pressures, many jobs in Alaska have been forced out of the United States and into countries having less -- having more reasonable regulations and policies. The jobs that this project will produce are therefore badly needed at this time.

For the distant future, we believe that this project will make for cleaner long term energy and will provide

added value for all Alaskan subsuminous coals. This will mean that more jobs will be created within the State of Alaska providing this very low sulphur very clean coal energy for users throughout the Pacific Rim, thereby improving the environment in both Alaska and elsewhere.

For all these reasons we support and urge completion of this -- of the final draft EIS and the development of the project. Thank you.

HEARING OFFICER EIGUREN: Thank you. The next commentor is Peter Van Tuyn. I may have mispronounced that, I apologize.

MR. VAN TUYN: That's okay. Everyone has since kindergarten.

PUBLIC TESTIMONY OF PETER VAN TUYN

MR. VAN TUYN: The last name is Van Tuyn.

HEARING OFFICER EIGUREN: Van Tuyn. Could you just.....

MR. VAN TUYN: I'm an attorney with .....

HEARING OFFICER EIGUREN: Could I have the spelling for the record, sir?

MR. VAN TUYN: Sure. It's V-a-n Capital T-u-y-n.

HEARING OFFICER EIGUREN: Thank you.

MR. VAN TUYN: I'm an attorney with Trustees For Alaska, 725 Christenson Drive, Suite 4, Anchorage, 99501.

HEARING OFFICER EIGUREN: Thank you.

MR. VAN TUYN: First, I'd just like to say thank you very much for coming down to Anchorage today and we certainly appreciate you being here, or I certainly appreciate it, and appreciate your candor as well as the discussions we've here tonight. It's definitely not gone unnoticed.

I will be submitting more specific comments before January 5th or by January 5th. And I'll just give a general overview of some of the broader concerns that Trustees has.

In a broader perspective, we're concerned that the scope of the EIS is too narrow. We've had discussions about this informally, but our point being that alternatives other than no action and coal technology should be considered here. There's ample opportunity for other resource -- energy resources to be utilized in this area. A/T-7

More specifically about the EIS and within the scope as you've defined it, the CO_2 issue we feel should be addressed as well. It's -- despite the fact that you have stated in our informal presentation tonight that the policy is not jelled to the point where CO_2 should be considered. We feel otherwise and that CO_2 emissions should be taken into account in the EIS process. And technology should be developed to control those emissions as well. A/T-8

The other issue that concerns us is the limestone issue. Where does it come from? DOE has stated that their A/T-9

involvement in the project is only one year. Because the limestone that would be used within that one year is not commercially -- is not of a commercial -- a volume to be commercially obtainable, the effects of mining that limestone or getting that limestone to the site are not considered. And our position is that it's reasonably foreseeable by DOE that this project is going to last a lot longer than one year, and therefore the source of the limestone as a cumulative effect issue well over the project should be considered.

Once again, I'd just -- I'll say, thank you for coming in and we'll give you more specific comments before January 5th. Thank you.

HEARING OFFICER EIGUREN: Thank you very much. The next scheduled commentor is Joanne Daniele -- Darnell? Sorry. Excuse me. I apologize. Joanne Darnell.

PUBLIC TESTIMONY OF JOANN DARNELL

MS. DARNELL: Hi, I'm just Joan Darnell.

HEARING OFFICER EIGUREN: Oh, okay.

MS. DARNELL: I'm with the National Park Service, Chief of Environmental Quality for the Alaska Region. And the address there is 2525 Gambel Street, Anchorage, Alaska 99503.

HEARING OFFICER EIGUREN: Thank you.

MS. DARNELL: And I'm making comments on behalf of the

Agency here tonight.

We appreciate the opportunity to participate as a cooperating agency in this EIS and to comment at this public meeting. We'll be making written comments on the draft EIS concerning the potential impacts of Department of Energy's Healy project at Denali, which is also a Class I area under the Clean Air Act.

NPS is the federal land manager of this Class I area. And is required under the Clean Air Act to protect the air quality related values. We're concerned at this point in time about the EIS schedule and the amount of time allowed for commenting on the draft EIS.

We note that you've allowed apparently longer than the 45 days called for in the DOE regulations for public comment period, but also note that this is shorter than a 60 day review period, which is quite common for this kind of an EIS, and especially for one that's quite technical and complex. A/T-10

I'm not making technical comments at this point in time. Those will follow in our written statement. So we feel that an extension of the public review period is warranted and that it would be reasonable considering the short review time allowed and the -- there's three holidays during this review period also. Thank you.

HEARING OFFICER EIGUREN: Thank you. I must confess,

I'm going to have difficulty with this name. Is it May Geiko -- Grisco, I'm sorry. Let me have the spelling of the last name for the record, please.

PUBLIC TESTIMONY OF MARY GRISCO

MS. GRISCO: Sure. It's probably because you can't read my handwriting. My name is Mary Grisco, G-r-i-s-c-o, like the shortening with a G. I'm the Alaska Regional Director for National Parks and Conservation Association. The mailing address is Post Office Box 202045, Anchorage, 99520.

For those who may not know, National Parks and Conservation Association is the only national non-profit citizens group that focuses on park concerns, mainly national park concerns. We have a national membership of about 300,000. There's over 2,300 of our members living here in Alaska.

We also appreciate your time tonight. I also will just offer some brief comments and then submit more substantial and substantive comments to the written record.

We also have serious concerns about this proposed project and concerns about the inadequacy of what we see as the scope and conclusions of the draft. A/T-11

We agree with the former speaker that the comment period needs to be extended. This is a highly technical document. And while it's easy to say that we want more jobs A/T-12

in Alaska it does take a lot of time to go back and look at all the studies for this proposed project. We also note that there are holidays in that time. So even Agency people are not available five days a week.

This proposed project, as you pointed out so nicely is less than four miles from Denali National Park. Denali is a Class I airspace, including the buffers. So from the boundaries in it is Class I. That means it's held to the highest standard in terms of visibility degradation.

We are also concerned about the location choices. If the concerns for the consumer were taken into account, why was not a location closer to Fairbanks taken into account? A/T-13

It may be out of the scope of this DEIS, I'm not sure, but the Mental Health Lands Trust Settlement has tied up some of these lands. And I think that's an issue that needs to be solved. A/T-14

We're concerned about the visibility modeling. Putting a camera in place for less than twelve months and then trying to model from that is not easy given the meteorological changes that we have in this state. A/T-15

We're also concerned about the acid rain deposits on the fauna and flora in the area and certainly within the Park. And we're not sure those are addressed adequately within the EIS. A/T-16

It's of interest, just in terms of how this is all

presented that there are other cooperating agencies, and yet only one is represented on the panel tonight. And so I'm just curious why National Park Service, EPA and the REA were not part of the panel. A/T-17

And I also agree with one of the former speakers about the limestone. That is part of the cumulative effect of this project. And yet, it's not even included. And I would think under the DEQ regulations that all cumulative effects need to be included. With that I'll thank you again. A/T-18

HEARING OFFICER EIGUREN: The next commentor is Dr. John Sims.

PUBLIC TESTIMONY OF DR. JOHN SIMS

MR. SIMS: Thank you. For the record, my name is John Sims. My residential address is 1935 Swallow Drive, Fairbanks, 99709. My source of employment is with the Usibelli Coal Mine. My function, Vice President of Marketing. A/T-19

I also, as added credentials reference the fact that I'm a director of the American Coal Association, Coal Foundation, and also on the boards of the Coal Exporters Association.

My association of this project goes back to it's very origins. I was one of two people from the Usibelli team that met with TRW in Los Angeles about three and a half years ago. From that early beginning, the project matured to its

present status.

Regarding the draft EIS, I've read it. And I personally rate it as being well prepared, comprehensive. In reading that EIS, I think any reasonable citizen would develop a feeling that considerable effort in the preparation of the EIS has been given to evaluate stated issues and concerns raised by the National Park Service. In my view the draft EIS allays those concerns.

On the visibility issue, I believe that correct conclusions have been drawn. On the one hand we have mathematical computer modeling versus a record over a period of time albeit a year or so of direct observation.

I'm one of those people who in the simplicity of life believe that seeing truly is believing. And if in fact the photographic record shows no evidence of any discernible plume from the Healy Number One Plant, I think that is a very telling case regarding computer modeling as being extremely conservative in terms of oversizing the possible plume formation.

Regarding the emissions from the plant, again, done or evaluated in terms of actual measured emissions from the Healy One Plant and calculated emissions from the tests that have been done and the technology that will relate to the Healy Clean Coal Project. Those emissions in totality are extremely minor. Now, we'll get back to that little issue a

little bit later.

There's one thing about this project that I would think most people with any sense of feelings toward conservation, I think, would certainly identify with. And that is the utilization of a product, waste coal, which will make up about 50% of the feedstock for the plant, the fuel for the plant, which otherwise constitutes an unsalable product to Usibelli's present market.

The project, as it's clearly enunciated in the EIS, provides economic benefits, provides quality jobs during construction and over the long term. Benefits, I think, certainly can be characterized as outweighing the modest stress that may impact education and other social services in the area.

As a person involved in this project, and involved in the direction that this project is leading us, I would like to reference what I would term the bigger picture in terms of potential benefits beyond the successful demonstration of the TRW technology at Healy. The TRW slagging combuster technology is extremely compact. The important factor which decides efficiency considerations and pollution abatement characteristics of this technology, may render it very attractive for repowering aging coal fired and oil fired utility in industrial boilers.

TRW portrays the technology as the least cost

conversion option for such plants. The potential market for the technology is very, very large. I'll just say that in the country of Japan alone, there's something like 17,000 megawatts of oil fired capacity due for retirement or life extension over the next ten to fifteen years.

The technology is an ideal match for Alaska's subsuminous coals. The potential exists to package the technology with fuel supply. The strategy, which is successful, may build critical mass in Alaska's coal industry and benefit our economy.

The Healy Clean Coal Project as it moves forward will increasingly attract national and international attention. What it truly represents, the best of American technology meeting the high objectives of the Clean Coal Technology Program and matched to the utilization of an abundant Alaskan energy resource. Thank you very much.

HEARING OFFICER EIGUREN: Thank you. The next commentor is Mike Kelly.

PUBLIC TESTIMONY OF MIKE KELLY

MR. KELLY: I would again like to thank the panel for making themselves available in three communities that will be impacted by the Healy project. And would like to commend the Department of Energy and Stone and Webster Engineering and Oakridge National Labs on the completion of very exhaustive EIS.

I would also encourage you to listen to the comments that you've gathered in the three communities and appropriately respond to them, because they are the concerns of the citizens that, a least a portion of which, we serve as a utility. So I think that we very much would encourage that you would answer in the process of making the EIS final, these concerns that have been brought forward.

The DEC permits for the project are on track. And as I understand it, the hearings will take place in early 1993. The Alaska Public Utilities Commission process is essentially complete, although there has been a challenge of the decision to approve the power sales agreement between AIDEA and Golden Valley.

We're very excited about this 50 megawatt base load project that will burn a product which hitherto has had to be buried back in the pit and of less than zero value, actually a cost item to this waste coal plant. We see it as something that will be actually creating a new product in the Healy Valley. And our consumers will definitely benefit from that product.

The synergism among the participants, the State, the federal and private concerns, has -- is creating a plant that will be brought on line with absolutely zero rate impact in the short term. Anybody that's associated with the utility business knows that it's unprecedented. You

don't bring a new plant on line without having some sort of a negative rate impact. But in this case, the citizens of Alaska will see no near term rate impact from the project. And over the long term will see lower rates because of the project.

I'd like to mention that there has been some reference to the air quality values of the park. And I think you have adequately responded that the air quality related values; all of the requirements of the Clean Air Act and the amendments are satisfied.

In the area of visibility, having been associated with this area, at least in a business sense, for some 25 years now, and having received absolutely no indication that anyone has ever seen any impact from the existing coal plant, I would like you to consider that evidence very heavily when evaluating your unarguably flat land model.

That is a -- there are high mixing zone characteristics of that area which we think make your model super, ultra conservative; and that the observation of the 25 years that we've operated in the area, where no one has ever observed any impact whatsoever in visibility should be heavily considered, and is a very important element when you're considering National Park Service concerns. A/T-20

The limestone question that has come up, just a brief comment there that we have. One operator that is extremely

interested in supplying our needs for limestone, and we have one other area that could be a potential supplier. So we have two areas with more than sufficient reserves, and one small operator that is actually, although very small at the present time, is actually in operation.

I'd like to mention one thing that's, I think, of particular interest to the consumers in the Anchorage area, and that is that when the plant was originally conceived and the case or the power sales agreement was brought before the Alaska Public Utilities Commission, one of the concerns was that the current power sales from Anchorage to Fairbanks would decrease, resulting in some rate impact on the Anchorage consumer.

And that is something that although the sales agreement was approved notwithstanding that concern, something has happened that I think positively influences the plant. And that is that the Ft. Knox mine in Fairbanks has gone from somewhat of a dream to something very much closer to reality, since AMEX is taking over. And AMEX wants Golden Valley to serve that 35 megawatt project.

I'd just like to make the short comment that when we do serve the project, the 35 megawatt energy needs of that project will insure, and we have communicated this to the board president and manager of Chugach Electric, that Golden Valley will never use less energy from Chugach than they now

use. So the concern there, we're happy to report to our sister utility, Chugach, and their ratepayers, has pretty much gone away.

I will mention one thing, and that is that the intertie between Anchorage -- or between Healy and Fairbanks needs to be upgraded to fully optimize the transfers between Anchorage and Fairbanks to include the new plant. Thank you very much for the opportunity to comment.

HEARING OFFICER EIGUREN: Thank you. Mr. Kelly, just for the record, you are the General Manager of Golden Valley Electrical Association. I need the address for the record.

MR. KELLY: That is correct.

HEARING OFFICER EIGUREN: I have that as 1028 Aurora Drive, Fairbanks.

MR. KELLY: Yes, sir.

HEARING OFFICER EIGUREN: Thank you. Our next commentor is Rick Schikora.

PUBLIC TESTIMONY OF RICK SCHIKORA

A/T-21

MR. SCHIKORA: Good evening. I'm Rick Schikora, S-c-h-i-k-o-r-a, 1416 Gillam Way, Fairbanks, Alaska. I'm an elected director at Golden Valley Electric. I'm here more to speak for myself than I am for Golden Valley this evening.

I was born and raised in Fairbanks some 41 years ago. And I want to tell you a little about, I guess, some of my

experiences since 1971 when I learned how to fly. I'm a private pilot, and have some 3,500 hours, all private, no commercial. I've been flying mostly in the Interior for the last 21 years.

I want to tell you that the winds in the Healy area are out of the south, blowing to the north and away from the park. When I fly in the Healy area, east and west of there, both inside and outside of the park, I have noticed no visibility impairment from the present plant.

I've been impressed with the Usibelli reclamation procedures since my early college days when I flew down to watch them do some aerial reseeding and some of their other reclamation, long before they were required to be doing so.

I think that the use of the waste coal can be beneficial from an environmental standpoint. Not only is there a possibility that -- or a probability that waste coal from coal dug up for the Healy Two would be used, but also some waste coal that would be dug from coal from run-of-the-mill coal for the Healy One project that's already in place could be used. And that coal is dug up and energy in the form of fuel oil, and gas, and that kind of stuff is used in that digging and that -- burning that coal would make that valuable.

The area -- the Healy area, mountains and valleys, and the direct impact area of Healy mining are not easily

differentiated from one another from the air. I've flown over many times. I have a habit of every once in a while taking a tourist for a flight, somebody I don't even know, don't know where they're from or any of that. I just take them around and show them some different areas.

I've flown them over the Healy area and over the Usibelli mine. And they didn't even notice it was going on. There's coal seams up and upon the ground in several different places, and they really don't know that you're flying over an active mine.

There's enough sheep in the Healy area from the reclamation work done at Usibelli, that the Alaska Department of Fish and Game has even closed the sheep area there, so that it's not hunted.

I want to say that from Fairbanks on many days of the year, we can see Mt. McKinley. And I don't see that changing at all with the Healy Two project.

Some may believe, I guess, because I've been president of the Chamber of Commerce in Fairbanks and a number of other things, that I'm only pro-development. That's not true. I'm an environmentalist also.

And I want to tell you, I see lots of benefits from the clean coal technology and what that can provide. I fully expect that it can decrease the haze problems that I've seen in flying outside of the State of Alaska. And I

think it can do that without increasing any haze problems in Alaska.

I went down to San Diego for a meeting earlier this year, I guess about a month ago, a little over a month ago. I had an opportunity to visit TRW site in Capistrano. I was impressed with the research that they're doing and the interests that those folks have in the environment.

And I'd like to tell you that I like the economics from this long term project for Fairbanks. I think that having a stable base load for Golden Valley with the coal as the fuel source is a good idea and where we're not tied to burning natural gas, which comes from the Anchorage area. I think that natural gas in the future may be much better used in keeping the already low Anchorage utilities well for a long time.

And I do appreciate the opportunity to speak with you folks tonight. And I've been to all three meetings. And I know that it's been a grueling schedule for you. And I appreciate that. Thank you.

HEARING OFFICER EIGUREN: Thank you. I'll next call Matt Groskie. If we could have the spelling of your last name for the record, as well as your address and the group that you represent?

PUBLIC TESTIMONY OF MATT GROSKIE

MR. GROSKIE: Sure. My name is Matt Groskie, M-a-t-t A/T-22

G-r-o-s-k-i-e. My address is 440 Kayak Drive, Anchorage, Alaska 99515. I'm the business manager of the Ironworkers Union, Secretary-Treasurer of the Western Alaska Building Trades and Secretary-Treasurer of the Alaska Skilled Crafts Council.

I've been associated with this project for about three years. I initially became aware of it back in Washington, D.C., in discussions with some people from Stone and Webster.

One of the things that they stressed as we talked was the environmental aspects of the technology used, and that this was a new technology and it would be compatible with feelings of the people of the State of Alaska; that this was something that you could actually produce power with clean coal.

I originally grew up in Illinois, so I've seen a lot of coal generation, some of it's clean and some of it isn't. The -- I'm not really here to speak -- I'm not an engineer. I'm not really here to speak on the finer points of the technology. My position would be that it provides jobs for Alaska. It looks towards the future. And it generates power with a clean technology. I'd like you to look favorably on that project.

HEARING OFFICER EIGUREN: Thank you very much. I'll next call Tom Evans. Sir, we ask for the spelling of your

name, your address and the group that you represent.

PUBLIC TESTIMONY OF TOM EVANS

MR. EVANS: Tom Evans, E-v-a-n-s, 1689 C Street, Suite 202. I'm with Alaska AFL-CIO. A/T-23

HEARING OFFICER EIGUREN: Thank you.

MR. EVANS: We envision this project to be a project that would realize some benefits not on a short term but on a long term basis in the infrastructure of Alaska. The soundness of the environmental impact statement as viewed tonight and in other hearings makes this a very viable project. And we would like to see this project go forward -- projects like this go forward.

While the membership of the unions in the State of Alaska makes up 34% of the working people today, which is 55,000 people. We are also 21% of the population with our families. And we're looking with great interest to the project and what's being done. And feel that a delay would be a disservice to the people of Alaska.

And one question for the panel, when -- or is there any other project considered as like in the State of Alaska, and where would that be. Thank you.

HEARING OFFICER EIGUREN: Thank you, Mr. Evans. Once again, I would call the name of the person I had called earlier and did not get a response. Grant Walther. Sir, if we'd get the spelling of your name and your address, as well

as the organization you represent.

PUBLIC TESTIMONY OF GRANT WALTHER

A/T-24

MR. WALTHER: My name is Grant Walther. My mailing address is P.O. Box 102418, Anchorage, Alaska, 99510. I'm a documentary film maker, Mammoth Productions.

During the last three years I've been in the Delta Junction area doing preliminary work to shoot a documentary on archeological site that dates back to about 11,000 years, at the very lowest levels. And around -- approximately around 10,000, little hearthstones were found that date around that time, carbon dating. And so I just thought it would be kind of interesting for the committee to know -- the panel here to know about that.

The process of burning oxidizing fuel in the Interior is an ancient tradition, the purpose of creating energy. So if we're going to burn more coal today, burn coal instead of wood, coal is actually a fossilized form of plant life, is it not? And are we not continuing the human tradition in the interior part of Alaska. I thought that might be just a different side.

Personally, as an Alaskan, I've just lived here since 1953. And I've worked in most areas of the state, worked on the pipeline as a welder helper. I've commercial fished in Bristol Bay and Kodiak. And I've worked in the Arctic in other jobs.

I feel it's important that this state has an economic base which provides work for Alaskans as well as income for the state. The dilemma that we find ourselves in with oil is essentially most of the resource is shipped out of state. And very little of that money is -- from that resource actually contributes to the work process here.

And one of the things -- to me, one of the most attractive parts about this project, the Healy Project, is that we have the potential and the possibility of having electric power which would be available here in the state, which can create what I would like to call as, quote -- apostrophe marks around this, quote, "clean energy, clean industry". I mean, no industry is totally clean. But cleaner types of industry.

And we could -- this -- and when we think about our proximity to Asia, I mean, we look in the long range, in the far future. We could well be a Silicon Valley or whatever might be future types of industries that would relate to light industry. And products can be flown as easily from the interior of Alaska to Japan and China, Korea, and so forth, as they can from California, or say from Massachusetts, in fact, are we not somewhat closer.

So in the long range, I see the possibility of work and employment and light industry here in this state being generated by this Healy Project and the offshoot of the

energy which it might -- which it will create if it is taken. Of course, and there's the sale of the coal product itself to Asia, which would provide more funds for the State of Alaska directly and indirectly. Thank you.

HEARING OFFICER EIGUREN: That completes the list of individuals who have registered to comment this evening. I would ask, is there anyone in the audience who has not commented that would like the opportunity to do so? We would be more than glad to receive your comment at this point.

If not, I'd like to indicate that we have been on the road so to speak, since Monday. This concludes about approximately ten hours of both public hearing as well as workshop sessions. I must say that in my many years of experience in conducting these sorts of meetings, I think these are perhaps some of the best NEPA meetings and hearings I've been a party to.

On behalf of Mike Eastman, the senior departmental official, as well as the members of the hearing panel, we thank you for your attention and your attendance. We thank you all for your very thoughtful and articulate comments.

I would once again remind you that the record of this proceeding will remain open through January 5th, 1993 unless it's extended. The current plan calls -- or at least the current schedule calls for a final EIS and a record of

decision to be issued in this particular proceeding, sometime mid to late spring of 1993.

Again, I think you for your attention and your participation. And with that, at approximately 9:45 p.m. local time, I will formally close the record at this, the December 10th, 1992, hearing on the Draft Environmental Impact Statement for the Healy Clean Coal Project in Anchorage, Alaska. Thank you and good night.

(Off record)

****END OF PROCEEDINGS****

I certify that the foregoing is a correct transcript from the electronic sound recording of the proceedings in the above-entitled matter.

Brenda Gay

My Commission Expires: 10/29/96

TRANSCRIPT
ANCHORAGE, ALASKA

EXHIBIT NO. 1

The Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508) and the Department of Energy, National Environmental Policy Act Part II; Implementing Procedures and Guidelines Revocation; Final Rule and Notice (10 CFR 1021) are incorporated by reference in the transcript.

These two documents, which together are about 85 pages in length, are publicly available at most libraries or may be obtained from Dr. Earl W. Evans, U.S. Department of Energy, Pittsburgh Energy Technology Center, P.O. Box 10940, Pittsburgh, PA 15236. Telephone: (412)892-5709.

TRANSCRIPT
ANCHORAGE, ALASKA

EXHIBIT NO. 2

The Federal Register notice and newspaper announcements pertaining to the public meeting are provided as Exhibit No. 2.

11-20-92
Vol. 57 No. 225
Pages 54677-54894

federal register

Friday
November 20, 1992

Briefings on How To Use the Federal Register
For information on *briefings in Washington, DC, and Albuquerque, NM*, see announcement on the inside cover of this issue.

Department of the Army

Office of the Secretary; Record of Decision (ROD) for the Development of the Armed Forces Recreation Center (AFRC) at Fort DeRussy, Waikiki, HI

AGENCY: U.S. Army, DOD.

ACTION: Notice of availability.

SUMMARY: The Army proponent for the proposed action is the U.S. Army Community and Family Support Center, Alexandria, VA, which directs the operation of the Hale Koa Hotel at Fort DeRussy. Full authority and responsibility for overall development of Fort DeRussy as an installation lies with U.S. Army Support Command, Hawaii.

In March 1988, at the direction of Congress, the Secretary of the Army prepared a Master Plan for the AFRC at Fort DeRussy. The plan recommended the relocation of some U.S. Army Reserve units to Fort Shafter and the construction of new hotel and recreation facilities at Fort DeRussy. Studies showed a large demand for hotel accommodations in addition to the existing Hale Koa Hotel. To enhance the morale and recreation needs of the active and retired military community and to maximize recreational open space for shared use by the military and civilian communities, the plan recommended a proposed action.

The Army published a Notice of Intent to prepare a Draft Environmental Impact Statement (DEIS) in the Federal Register on January 23, 1989. Scoping meetings were held for governmental agencies on February 16, 1989, and for the public February 22, 1989. The NOA of the DEIS was published by the U.S. Environmental Protection Agency in the Federal Register on January 19, 1990. A public hearing was held on February 8, 1990. Comments at the public hearing and in letters commenting on the DEIS have been considered in preparing the Final Environmental Impact Statement (FEIS).

The NOA of the FEIS was published in the Federal Register on March 6, 1992, and in The Bulletin of the (Hawaii) Office of Environmental Quality Control on March 8, 1992. The public comment period ended on April 5, 1992; no adverse comments were received.

The Department of the Army announces the ROD for development of the AFRC, Fort DeRussy, Waikiki, HI, is available.

Under the recommended action, the U.S. Army would construct a hotel tower with up to 400 rooms to augment the existing Hale Koa Hotel; construct a single level, bermedover minimum 350-stall parking structure and a three level, landscaped minimum 1,300-stall parking structure; relocate utilities; and provide extensive landscaping and recreational facilities. Kalia Road, which crosses the Army post, would be realigned; its present intersection with Saratoga Road would be retained, and it would remain a two-lane road.

To provide space for construction of the new hotel tower and other facilities, some buildings now used by U.S. Army Reserve units will be demolished. The impact of these buildings being demolished and the U.S. Army Reserve units leaving Fort DeRussy are addressed in the FEIS. Construction of new U.S. Army Reserve facilities at Fort Shafter has been addressed in a separate Environmental Assessment.

Under the "turn-key" design-construction contracting process, supplemental National Environmental Policy Act documents may be prepared after contract award to address any significant changes from the recommended action or significant changes in environmental impacts.

A NOA of the ROD will also be published in the Bulletin of the (Hawaii) Office of Environmental Quality Control.

Lewis D. Walker,

Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health), OASA (I,L&E).

[FR Doc. 92-28283 Filed 11-19-92; 8:45 am]

BILLING CODE 3710-08-M

DEPARTMENT OF ENERGY

Notice of Availability of Draft Environmental Impact Statement and Public Hearings for the Proposed Healy (Alaska) Clean Coal Project (HCCP)

AGENCY: U.S. Department of Energy (DOE).

ACTION: Notice of Availability of Draft Environmental Impact Statement (DEIS) to assess the environmental effects of the construction and operation of the proposed Healy Clean Coal Project (HCCP), a new 50 Megawatt-electric (MWe) coal-fired power generating facility at Healy, Alaska, and conduct public hearings on the DEIS.

SUMMARY: The Department of Energy (DOE) announces the availability of the HCCP DEIS (DOE/EIS-0186). As one of the proposals selected under Round III of the Clean Coal Technology (CCT) Program, the HCCP would demonstrate the combined removal of sulfur dioxide, oxides of nitrogen, and particulate matter from a 50-MWe power plant using innovative integration of advanced combustion and flue gas cleanup technologies. The proposed action is the cost-shared Federal funding of the project by DOE of about $108 million (about 48% of the total cost of approximately $215 million), to demonstrate the economic viability and environmental acceptability of the technologies. The two technologies to be demonstrated are the TRW Applied Technologies Division (TRW) entrained combustion system, and the Joy Technologies, Inc./Niro Atomizer (Joy), spray dryer absorber.

INVITATION TO COMMENT AND DATES: DOE invites comments on the DEIS from all interested parties. Written comments or suggestions regarding the adequacy, accuracy, and completeness of the DEIS will be considered in preparing the final EIS and should be postmarked by January 5, 1993. Written comments postmarked after that date will be considered to the degree practicable.

DOE will also hold three public hearings at which agencies, organizations, and the general public are invited to present oral comments or suggestions. Locations, dates, and times for the public hearings are provided in the section of this notice entitled "PUBLIC HEARINGS." Written and oral comments will be given equal weight and will be considered in preparing the final EIS. Requests for copies of the draft and/or final EIS, or questions concerning the project, should be sent to Dr. Earl W. Evans at the address noted below.

ADDRESSES: Written comments on the DEIS should be postmarked by January 5, 1993, for incorporation into the public hearing record. Oral comments will be accepted at the public hearings. Written comments, requests to speak at the hearings, or questions concerning the HCCP, should be directed to: Dr. Earl W. Evans, Environmental Coordinator, HCCP, Mail Stop 922L, Pittsburgh Energy Technology Center, U.S. Department of Energy, P.O. Box 10940, Pittsburgh PA 15236, Telephone: (412) 892-6709. If you request to speak, please indicate at which hearing(s). Envelopes should be labeled "HCCP Draft EIS."

Individuals desiring to speak at a hearing should notify the DOE Environmental Coordinator for the HCCP at the above address not later than November 30, 1992, so that DOE may arrange a schedule for presentations.

FOR FURTHER INFORMATION CONTACT: For general information on the EIS process and other matters related to the National Environmental Policy Act (NEPA), please contact Ms. Carol M.

Borgstrom, Director, Office of NEPA Oversight (EH-25), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington DC 20585. Tel. (202) 586-4600 or (800) 472-2756.

SUPPLEMENTARY INFORMATION:

Background and Need for the Proposed Action

DOE proposes to provide cost-shared funding support for the construction and operation of a new 50-MWe (nominal electrical output) coal-fired power plant at Healy, Alaska, to demonstrate two clean coal technologies. The HCCP was proposed by the Alaska Industrial Development and Export Authority (AIDEA), a State agency, and selected by DOE for negotiation of a Cooperative Agreement for financial assistance by the CCT Program. The HCCP would demonstrate the combined removal of sulfur dioxide (SO_2), oxides of nitrogen (NO_x), and particulate matter (PM) using innovative combustion and flue gas cleanup technologies. After a 1-year demonstration period, anticipated to conclude in 1997, the facility would enter commercial operation. The HCCP would be located in Healy, Alaska, approximately 100 miles southwest of Fairbanks and 250 miles north of Anchorage. The facility would be built adjacent to the existing 25-MWe Healy Unit No. 1 conventional pulverized coal unit owned and operated by Golden Valley Electric Association (GVEA), Inc., in a rural setting along the Nenana River. The proposed site is located about four miles north of the nearest border of Denali National Park and Preserve (DNPP).

On September 27, 1988, Public Law No. 100-446, "An Act Making Appropriations for the Department of the Interior and Related Agencies for the Fiscal Year Ending September 30, 1989, and for Other Purposes," was signed into law. Among other things, the Act provided funding to DOE to cost-share the design, construction, and operation of CCT projects that demonstrate the feasibility of technologies capable of achieving significant reductions in the emissions of sulfur dioxide and/or the oxides of nitrogen from existing facilities to minimize environmental impacts such as transboundary and interstate pollution, and/or providing for future energy needs in an environmentally acceptable manner.

On May 1, 1989, DOE issued Program Opportunity Notice Number DE-PS01-89FE61825 for Round III of the CCT program, soliciting proposals to conduct cost-shared CCT projects to demonstrate innovative, energy-efficient clean coal technologies that are capable of being commercialized in the 1990s. The Healy Clean Coal Project was one of the 13 projects selected from among the 48 proposals received.

EIS Preparation

The draft EIS has been prepared in accordance with Section 102(2)(C) of NEPA, as implemented in regulations promulgated by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500-1508) and by DOE's regulations for compliance with NEPA (57 FR 15122, April 24, 1992). In accordance with NEPA, DOE determined that providing cost-shared funding for the HCCP constitutes a major Federal action that may significantly affect the quality of the human environment. Therefore, DOE has prepared a DEIS to assess the potential impacts on the human and natural environment of the proposed action and reasonable alternatives.

A Notice of Intent (NOI) to prepare the EIS and hold public scoping meetings in Healy, Fairbanks, and Anchorage, Alaska, was published by DOE in the Federal Register on October 5, 1990 (55 FR 40912). The NOI invited oral and written comments and suggestions on the proposed scope of the EIS, including environmental issues and alternatives, and invited public participation in the NEPA process. As a result of the scoping process, 111 comments were received that assisted in identifying major issues that have been analyzed in depth in the DEIS as well as those issues that are minor or have been evaluated and dismissed from further consideration in the DEIS. Further, an EIS Implementation Plan was developed to define the scope and provide further guidance for preparing the EIS.

The DEIS considers the proposed action, the no-action alternative (including scenarios that reasonably could be expected to result as a consequence of the no-action alternative), and an alternative site located about four miles north-northwest of the proposed site. Other alternatives have been considered and dismissed from further evaluation. Impacts to atmospheric resources (including air quality and visibility), surface water, groundwater, and ecological and socioeconomic resources from construction and operation of the HCCP are analyzed. Special consideration is given to the potential impacts to DNPP. Impacts resulting from three reasonably foreseeable outcomes of the demonstration are also analyzed.

The DEIS provides as much information as possible at this stage of the project development regarding the potential environmental impacts of the proposed construction and operation of the HCCP at the proposed site and at an alternative site.

Floodplain/Wetlands Notification

Pursuant to Executive Order 11988, Floodplain Management, Order 11990, Protection of Wetlands, and DOE's Procedures for Compliance with Floodplains/Wetlands Environmental Review Requirements (10 CFR part 1022), DOE hereby provides notice that the construction and operation of the proposed HCCP may impact surface waters at the proposed and alternative sites. Identified areas at each of the two sites are as follows:

Healy Unit No. 1 Proposed Site

No permanent intrusion on the floodplain or loss of wetlands would occur. There would be increased thermal discharge to the Nenana River.

Alternative Site four miles north

A total of 22 acres of wetland could be disturbed by construction, of which 2 acres currently supports wetland botanical and zoological life. There would be increased thermal discharge to the Nenana River.

The potential environmental impacts of site selection on these surface waters and adjacent floodplain and wetland areas are discussed in Chapter 4 of the DEIS. Any comments regarding the proposed action on floodplains and wetlands may be submitted to DOE in accordance with procedures describe below.

Comment Procedures:

Availability of Draft EIS

Copies of the DEIS are being distributed to organizations, environmental groups, and individuals known to be interested in or affected by the proposed project. Additional copies of the document may be obtained by contacting DOE as provided in the section of this notice entitled ADDRESSES.

Copies of the DEIS and major documents referenced in the DEIS are available for inspection at the locations given below:

(1) U.S. Department of Energy, Freedom of Information Reading Room, room 1E-190, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585

(2) Rocky Flats Area Office, c/o Front Range Community College, 3645 West 112th Avenue, Westminster, CO 80030

(3) Alaska Power Administration, suite 2B, 2770 Sherwood Lane, Juneau, AK 99801

(4) Tri-Valley Community School Library, P.O. Box 400, Healy, AK 99743
(5) Z.J. Loussac Library, 3600 Denali Street, Anchorage, AK 99503
(6) Fairbanks North Star Borough Library, 1215 Cowles Street, Fairbanks, AK 99701

Written Comments.

Interested parties are invited to provide comments on the content of the DEIS to DOE as provided in the section of this notice entitled **ADDRESSES**. Envelopes should be labeled "HCCP Draft EIS." Comments should be postmarked no later than January 5, 1993, to ensure consideration in preparing the final EIS. Comments postmarked after January 5, 1993, will be considered to the extent practicable.

Public Hearings:

Procedures

The public is invited to provide comments in person on the DEIS to DOE at the scheduled public hearings. The purpose of the hearings is to receive substantive comments related to the DEIS, rather than to receive either general endorsements or denouncements of the proposed project. The hearings will not be of a judicial or evidentiary nature. Advance registration for presentation of oral comments at the hearings will be accepted up to one week prior to the hearing date by telephone or by mail at the office listed in the **ADDRESSES** section above. Envelopes should be labeled "HCCP Hearings." Requests to speak at a specific time will be honored, if possible. Registrants are allowed only to register themselves to speak and must confirm the time they are scheduled to speak at the registration desk the day of the hearing. Persons who have not registered in advance may register to speak when they arrive at the hearings to the extent that time is available. To ensure that as many persons as possible have the opportunity to present comments, 5 minutes will be allotted to each speaker. Persons presenting comments at the hearings are requested to provide DOE with written copies of their comments at the hearing, if possible.

Hearing Schedules and Locations

Public hearings will be held at the following locations, times, and dates, weather permitting, or will be rescheduled as appropriate. A "hotline" telephone number, 907-451-4179, will be available to announce changes, if any:

1. *Date:* Monday, December 7, 1992.
   Time: 7 p.m.
   Place: Tri-Valley Community Center, Mile 248 Parks Highway, P.O. Box 146, Healy, Alaska 99743.
2. *Date:* Wednesday, December 9, 1992.
   Time: 7 p.m.
   Place: Joy Elementary School Gymnasium, 24 Margaret Street, Fairbanks, Alaska 99701.
3. *Date:* Thursday, December 10, 1992.
   Time: 7 p.m.
   Place: Z.J. Loussac Library Theater Facility room, 3600 Denali Street, Anchorage, Alaska 99503.

Conduct of Hearings

DOE has established basic rules and procedures for conducting the hearings. Rules needed for the orderly conduct of the hearings will be announced by the presiding officer at the start of the hearings. Clarifying questions regarding statements made at the hearings may be asked only by DOE personnel conducting the hearings. There will be no cross-examination of persons presenting statements. A transcript of the hearings will be prepared, and the entire record of each hearing, including the transcript, will be placed on file by DOE for inspection at the public locations given above in the **COMMENT PROCEDURES** section.

Signed in Washington, DC, this 17th day of November 1992, for the United States Department of Energy.

Peter N. Brush,

Principal Deputy Assistant Secretary, Environment, Safety and Health

[FR Doc. 92-28274 Filed 11-19-92; 8:45 am]

BILLING CODE 6450-01-M

Notice of Grant Award to Howard University

AGENCY: Department of Energy.

ACTION: Notice of noncompetitive financial assistance award.

SUMMARY: The U.S. Department of Energy (DOE), pursuant to the DOE Financial Assistance Rules, 10 CFR 600.7, is announcing its intention to award a grant to Howard University for continuing research efforts in support of the Biological and Chemical Technologies Research (BCTR) program at DOE. The BCTR program seeks to improve operations and decrease energy use in the chemical and petrochemical industries.

ADDRESSES: Questions regarding this announcement may be addressed to the U.S. Department of Energy, NREL Area Office, 1617 Cole Blvd., Golden, Colorado 80401, Attention: John W. Meeker, Contract Specialist. The Contracting Officer is Paul K. Kearns.

SUPPLEMENTARY INFORMATION: Howard University has been conducting research for a number of years to develop genetic engineering techniques to enhance the capability of fungi/bacteria to degrade lignocellulose to simpler materials. Successful completion of this research would advance the goal of converting biomass to useful chemicals and other products. A detailed understanding of the processes that control the reactivity and specificity of enzymatic reactions within the fungi/bacteria will provide the knowledge needed to exploit these reactions for technological applications.

DOE has performed a review in accordance with 10 CFR 600.7 and has determined that the activity to be funded is necessary to satisfactorily complete the current research. DOE funding for this grant is estimated at $51,000 and the anticipated period of performance is twelve (12) months.

Issued in Chicago, Illinois on October 30, 1992.

Timothy S. Crawford,

Assistant Manager for Administration.

[FR Doc. 92-28280 Filed 11-19-92; 8:45 am]

BILLING CODE 6450-01-M

Federal Energy Regulatory Commission

[Docket Nos. ER93-93-000, et al.]

Baltimore Gas & Electric Co., et al.; Electric Rate, Small Power Production, and Interlocking Directorate Filings

Take notice that the following filings have been made with the Commission:

1. Baltimore Gas and Electric Co.

[Docket No. ER93-93-000]

November 10, 1992.

Take notice that on October 30, 1992, Baltimore Gas & Electric Company (BG&E) tendered for filing as an initial rate schedule an agreement (the Agreement) between Long Island Lighting Company (LILCO) and BG&E. The Agreement provides for the sale by BG&E of energy from its system (system energy) to LILCO on a daily, weekly or monthly basis (a transaction). BG&E states that the timing of the transactions cannot be accurately estimated but that the energy will be provided by BG&E to LILCO at a negotiated agreed upon rate which the parties will enter into prior to each transaction when it is economical for each to do so. LILCO will pay an Energy Reservation Charge to BG&E for each transaction in an amount equal to the megawatthours of system energy reserved for LILCO by BG&E during a transaction multiplied by an Energy

AFFIDAVIT OF PUBLICATION

STATE OF ALASKA,)
THIRD JUDICIAL DISTRICT.)

Eva M. Kaufmann

being first duly sworn on oath deposes and says that he/she is an advertising representative of the Anchorage Daily News, a daily newspaper. That said newspaper has been approved by the Third Judicial Court, Anchorage, Alaska, and it now and has been published in the English language continually as a daily newspaper in Anchorage, Alaska, and it is now and during all said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the annexed is a copy of an advertisement as it was published in regular issues (and not in supplemental form) of said newspaper on

Nov. 22, 1992

and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is not in excess of the rate charged private individuals.

signed

Subscribed and sworn to before me this 25 day of November 1992

Notary Public in and for the State of Alaska. Third Division Anchorage, Alaska
MY COMMISSION EXPIRES

MY COMMISSION EXPIRES JULY 24, 1996 19

(6450-01)
U.S. Department of Energy

Notice of Availability of Draft Environmental Impact Statement and Public Hearing for the Proposed Healy (Alaska) Clean Coal Project (HCCP)

AGENCY: U.S. Department of Energy (DOE)

ACTION: Notice of Availability of Draft Environmental Impact Statement (DEIS) to assess the environmental effects of the construction and operation of the proposed Healy Clean Coal Project (HCCP), a new 50 Megawatt electric (MWe) coal-fired power generating facility at Healy, Alaska, and conduct public hearings on the DEIS.

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INVITATION TO COMMENT AND DATES: DOE invites comments on the DEIS from all interested parties. Written comments or suggestions regarding the adequacy, accuracy, and completeness of the DEIS will be considered in preparing the final EIS and should be postmarked by January 5, 1993. Written comments postmarked after that date will be considered to the degree practicable.

DOE will also hold three public meetings at which agencies, organizations, and the general public are invited to present oral comments or suggestions. Locations, dates, and times for the public meetings are provided in the section of this notice entitled "PUBLIC HEARINGS." Written and oral comments will be given equal weight and will be considered in preparing the HCCP EIS. Requests for copies of the draft and/or final EIS, or questions concerning the project, should be sent to Dr. Earl W. Evans at the address noted below.

ADDRESS: Written comments on the DEIS should be postmarked by January 5, 1993, for incorporation into the public hearing record. Oral comments will be accepted at the public hearings. Written comments, requests for copies of the EIS, or questions concerning the HCCP, should be directed to:

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 9B36
Pittsburgh Energy Technology Center
U.S. Department of Energy
P.O. Box [illegible]
Pittsburgh, PA [illegible]
Telephone: (412) [illegible]

If you request to speak, please indicate at which hearing(s). Envelopes should be labeled "HCCP Draft EIS."

Individuals desiring to speak at a hearing should notify the DOE Environmental Coordinator for the HCCP at the above address not later than September 28, 1992, so that DOE may arrange a schedule for presentations.

FOR FURTHER INFORMATION CONTACT: For general information on the EIS process and other matters related to the National Environmental Policy Act (NEPA), please contact:

Ms. Carol M. Borgstrom
Director, Office of NEPA Oversight (EH-25)
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585
Tel. (202) 586-4600 or (800) 472-2756

SUPPLEMENTARY INFORMATION: Background and Need for the Proposed Action: DOE participates in programs to provide cost shared funding support for the construction and operation of a new 50-MWe (nominal) electrical output coal-fired power plant at Healy, Alaska, to demonstrate two clean coal technologies. The HCCP was proposed by the Alaska Industrial Development and Export Authority (AIDEA), a State agency, and selected by DOE for negotiation of a Cooperative Agreement for financial assistance by the CCT Program. The HCCP would demonstrate the combined removal of sulfur dioxides (SO2), oxides of nitrogen (NOx), and particulate matter (PM) using innovative combustion and flue gas cleanup technologies. After a 1 year demonstration period, anticipated to conclude in 1997, the facility would enter commercial operation. The HCCP would be located in Healy, Alaska, approximately 100 miles southwest of Fairbanks and 250 miles north of Anchorage. The facility would be built adjacent to the existing 25 MWe Healy Unit No. 1 conventional pulverized coal unit owned and operated by Golden Valley Electric Association (GVEA), Inc., in a rural setting along the Nenana River. The proposed site is located about four miles north of the nearest border of Denali National Park and Preserve (DNPP).

On September 27, 1988, Public Law No. 100-446, "An Act Making Appropriations for the Department of the Interior and Related Agencies for the Fiscal Year Ending September 30, 1989, and for Other Purposes," was signed into law. Among other things, the Act provided funding to DOE to cost share the design, construction, and operation of CCT projects that demonstrate the feasibility of technologies capable of achieving significant reductions in the emissions of sulfur dioxide and/or the oxides of nitrogen from existing facilities to minimize environmental impacts such as transboundary and interstate pollution, and/or providing for future energy needs in an environmentally acceptable manner.

On May 1, 1989, DOE issued Program Opportunity Notice Number DE-PS01-89-FE61802 for Round III of the CCT program, soliciting proposals to conduct cost-shared CCT projects to demonstrate innovative, energy-efficient, clean coal technologies that are capable of being commercialized in the 1990s. The Healy Clean Coal Project was one of the 13 projects selected from among the 41 proposals received.

EIS Preparation: The draft EIS has been prepared in accordance with Section 102(2)(C) of NEPA, as implemented in regulations promulgated by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500-1508) and by DOE's regulations for compliance with NEPA (57 FR 15122, April 24, 1992) in accordance with NEPA, DOE determined that providing cost-shared funding for the HCCP constitutes a major Federal action that may significantly affect the quality of the human environment. Therefore, DOE has prepared a DEIS to assess the potential impacts on the human and natural environments of the proposed action and reasonable alternatives.

A Notice of Intent (NOI) to prepare the EIS and hold public scoping meetings in Healy, Fairbanks, and Anchorage, Alaska, was published by DOE in the Federal Register on October 5, 1990 (55 FR 40712). The NOI invited oral and written comments and suggestions on the proposed scope of the EIS, including environmental issues and alternatives, and invited public participation in the NEPA process. As a result of the scoping process, 111 comments were received that assisted in identifying major issues that have been analyzed in depth in the DEIS as well as those issues that are minor or have been evaluated and dismissed from further consideration in the DEIS. Further, an EIS Implementation Plan was developed to define the scope and provide further guidance for preparing the EIS.

The DEIS considers the proposed action, the no action alternative (including scenarios that reasonably could be expected to result as a consequence of the no action alternative), and an alternative site located about four miles north northwest of the proposed site. Other alternatives have been considered and dismissed from further evaluation. Impacts to atmospheric resources (including air quality and visibility), surface water, groundwater and ecological and socioeconomic resources from construction and operation of the HCCP are analyzed. Special consideration is given to the potential impacts to DNPP. Impacts resulting from three reasonably foreseeable outcomes of the demonstration are also analyzed.

The DEIS provides as much information as possible at this stage of the project development regarding the potential environmental impacts of the proposed construction and operation of the HCCP at the proposed site and at an alternative site.

Floodplain/Wetlands Notice: Pursuant to Executive Order 11988, Floodplain Management, Order 11990, Protection of Wetlands, and DOE's Procedures for Compliance with Floodplains/Wetlands Environmental Review Requirements (10 CFR 1022), DOE hereby provides notice that the construction and operation of the proposed HCCP may impact surface waters at the proposed and alternative sites. Identified areas at each of the two sites are as follows:

Healy Unit No. 1 Proposed Site
No permanent intrusion on the floodplain or loss of wetlands would occur. There would be increased thermal discharge to the Nenana River.

Alternative Site four miles north
A total of 22 acres of wetland could be disturbed by construction, of which 2 acres currently supports wetland botanical and zoological life. There would be increased thermal discharge to the Nenana River.

The potential environmental impacts of site selection on these surface waters and adjacent floodplain and wetland areas are discussed in Chapter 4 of the DEIS. Any comments regarding the proposed action on floodplains and wetlands may be submitted to DOE in accordance with procedures described below.

COMMENT PROCEDURES:

Availability of Draft EIS: Copies of the DEIS are being distributed to organizations, environmental groups, and individuals known to be interested in or affected by the proposed project. Additional copies of the document may be obtained by contacting DOE as provided in the section of this notice entitled "ADDRESS."

Copies of the DEIS and major documents referenced in the DEIS are available for inspection at the locations given below:

(1) U.S. Department of Energy, Freedom of Information Reading Room Room 1E-190, Forrestal Building, 1000 Independence Avenue, S.W., Washington, DC 20585
(2) Rocky Flats Area Office, C/O Front Range Community College, 3645 West 112th Avenue, Westminster, CO 80030
(3) Alaska Power Administration, Suite 3B, 2770 Sherwood Lane, Juneau, AK 99801
(4) Tri-Valley Community School Library, P.O. Box 400, Healy, AK 99743
(5) Z.J. Loussac Library, 3600 Denali Street, Anchorage, AK 99503
(6) Fairbanks North Star Borough Library, 1215 Cowles Street, Fairbanks, AK 99701

Written Comments: Interested parties are invited to provide comments on the content of the DEIS to DOE as provided in the section of this notice entitled "ADDRESS." Envelopes should be labeled "HCCP Draft EIS." Comments should be postmarked no later than January 5, 1993, to ensure consideration in preparing the final EIS. Comments postmarked after January 5, 1993, will be considered to the extent practicable.

PUBLIC HEARINGS:

Procedures: The public is invited to provide comments in person at the DEIS to DOE at the scheduled public hearings. The purpose of the hearings is to receive substantive comments relative to the DEIS rather than to receive either general endorsements or announcements of the proposed project. The hearings will not be of a judicial or evidentiary nature. Advance registration for presentation of oral comments at the hearings will be accepted up to one week prior to the hearing date by letter, phone or by mail of the office listed in the "ADDRESS:" section above. Envelopes should be labeled "HCCP Hearings." Requests to speak at a specific time will be honored if possible. Registrants are allowed only to register themselves to speak and must confirm the time they are scheduled to speak at the registration desk the day of the hearing. Persons who have not registered in advance may register to speak when they arrive at the hearings to the extent that time is available. To ensure that as many persons as possible have the opportunity to present comments, 5 minutes will be allotted to each speaker. Persons presenting comments at the hearings are requested to provide DOE with written copies of their comments at the hearing, if possible.

Hearing Schedules and Locations: Public hearings will be held at the following locations, times, and dates, weather permitting, or will be rescheduled as appropriate. A "hotline" telephone number (907 451-4795) will be available to announce changes, if any.

1. DATE: Monday, December 7, 1992
TIME: 7:00 p.m.
PLACE: Tri-Valley Community Center
Mile 349 Parks Highway
P.O. Box 148
Healy, Alaska 99743

2. DATE: Wednesday, December 9, 1992
TIME: 7:00 p.m.
PLACE: Joy Elementary School Gymnasium
24 Margaret Street
Fairbanks, Alaska 99701

3. DATE: Thursday, December 10, 1992
TIME: 7:00 p.m.
PLACE: Z.J. Loussac Library, Theater Facility Room
3600 Denali Street
Anchorage, Alaska 99503

Conduct of Hearings: DOE has established basic rules and procedures for conducting the hearings. Rules necessary for the orderly conduct of the hearings will be announced by the presiding officer at the start of the hearings. Clarifying questions regarding statements made at the hearings may be asked only by DOE personnel conducting the hearings. There will be no cross-examination of persons presenting statements. A transcript of the hearings will be prepared, and the entire record of each hearing, including the transcript, will be placed on file by DOE for inspection at the public locations given above and in the "COMMENT PROCEDURES" section.

Signed in Washington, D.C. this 17th day of November 1992, for the United States Department of Energy.

/s/ Peter N. Brush
Principal Deputy Assistant Secretary Environmental Safety and Health

Publ. November 22, 1992

The U.S. Department of Energy (D.O.E.)
Will Hold A

PUBLIC HEARING TONIGHT!

THURSDAY, DEC. 10

7:00 P.M.

TO RECEIVE COMMENT FROM THE PUBLIC CONCERNING THE CONTENTS OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE HEALY CLEAN COAL PROJECT, A POWER PLANT PROPOSED TO BE BUILT IN HEALY

THE HEARING WILL BE HELD AT:

Z. J. LOUSSAC PUBLIC LIBRARY
WILDA MARSTON THEATER

IN ADDITION, WRITTEN COMMENTS CAN BE SENT BY JANUARY 5, 1993 TO:

DR. EARL W. EVANS, ENVIRONMENTAL COORDINATOR, HCCP
P.O. BOX 10940, MS-920-L
PITTSBURGH ENERGY TECHNOLOGY CENTER
PITTSBURGH, PA 15236

TRANSCRIPT
ANCHORAGE, ALASKA

EXHIBIT NO. 3

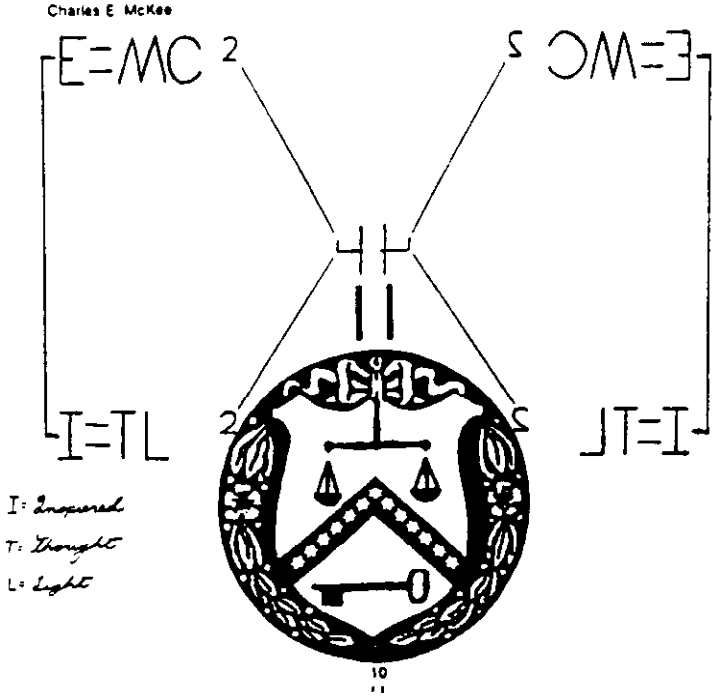
Exhibit No. 3 was not announced or referenced in the transcript; Exhibit Nos. 4 and 5 should have been Nos. 3 and 4.

TRANSCRIPT
ANCHORAGE, ALASKA

EXHIBIT NO. 4

Mathematic formula (figure) provided by Charles E. McKee.

DEPOSITION EXHIBIT
4 - 12/10/92
Healy Clean Coal



DEPOSITION EXHIBIT
#4 - 12/10/92
Healy Clean Coal

TRANSCRIPT
ANCHORAGE, ALASKA

EXHIBIT NO. 5

Charles E. McKee provided a newspaper article entitled "Huntington's clues come from unlikely places."

DEPOSITION EXHIBIT

HEALTH

Huntington's clues come from unlikely places

By SANDRA BLAKESLEE
The New York Times

ANAHEIM, Calif. — Based on clues from stumbling cows, sugar cane mold and the unusual genetics of a constituent that supplies power to every cell of the human body, neuroscientists say they are closer to solving the puzzle of Huntington's disease.

People have been hunting for the gene that causes Huntington's since 1983, said Dr. Anne Young, a Harvard University neuroscientist and a leading expert on degenerative brain diseases.

It now looks as though the gene may be involved with mitochondria, cell constituents that make energy and drive life processes.

"It's a real promising lead," Young said in describing the research at the annual meeting of the Society of Neuroscience held here.

"It's too soon to promise anything to patients," she said, "but we may be able to treat the disease with drugs and vitamins. There is the potential that very safe medications could be tested in humans within the next year."

Huntington's, perhaps best known as the malady that killed folk singer Woody Guthrie, slowly destroys a brain area that helps regulate movement and cognition.

Victims develop jerky movements and severe personality disorder. Children stand a 50 percent chance of inheriting the fatal disease from an afflicted parent.

Genetic testing of families strongly suggests that the defective gene that causes Huntington's lies near the tip of chromosome 4 in the cell nucleus.

Frustrated by their inability to find this gene, researchers recently began exploring the genetics of mitochondria, free floating bodies in cytoplasm with their own DNA and genetic code separate from the nucleus, Young said. This DNA is passed exclusively through the mother's eggs, with no contribution from the male.

The primary job of the mitochondria is to crank out energy-rich molecules that fuel all of the body's chemical and physical reactions.

Dr. Walter Koroshetz, associate director of the Massachusetts General Hospital's Huntington's Disease Clinic, recently examined 18 of his patients with a machine that measures the activity of brain chemicals.

MICHAEL TWEED / The New York Times

Dr. Walter Koroshetz, left, and Dr. Anne Young are narrowing in on the cause.

Although he could not reach the cells normally affected in Huntington's — found in two golf ball-size structures deep in the brain — he found that nearby cells, closer to the surface, had four times the normal amount of lactic acid.

Lactic acid is made when cells are under stress, Koroshetz said at a news conference. It is produced when there is a flaw in energy metabolism. The sickest patients, he said, had the highest lactic acid levels.

This suggests, the researchers said, that there could be a problem in the electron transport chain, a method used by the mitochondria to use oxygen for creating chemical energy.

Foodstuffs enter the mitochondria and are broken down through a series of oxygen-dependent steps that release electrons. The electrons flow, like a waterfall encountering paddle wheels, along the inner membrane of each mitochondrion.

As the paddle wheels turn along this path — called complexes one through five — the electron energy is converted into a substance called adenosine triphosphate, or ATP.

This substance is the body's energy currency, Koroshetz said. It flows out of mitochondria in all directions, wherever work needs to be done. About half of the energy is used to pump ions out of cells to keep the nervous system working, he said.

But if mitochondria are not working well, not enough energy will be made and lactic acid builds up, Koroshetz said. Cells then die.

Mitochondria have a special form of DNA arranged in 37 genes that keep the paddle wheels moving, Young said. But the cell nucleus makes a couple of hundred genes that make proteins, which also help run the mitochondrial energy factory, she said. A defect in one of those nuclear genes could upset mitochondrial function.

This makes sense clinically, Young said. As symptoms begin, Huntington's patients rapidly lose weight. They need 4,000 to 6,000 calories a day to stay alive, she said, suggesting their energy metabolism is awry.

The idea also makes genetic sense. The pattern of inheritance suggests that Huntington's is caused by a dominant gene in the cell nucleus. Fathers and mothers pass it on to half of their children.

But children who get the disease from their fathers tend to get sick years earlier than children who inherit it from their mothers. The mother's mitochondrial DNA may have evolved some protective factors that delay disease onset, Young said.

Gene hunters have isolated an area on chromosome 4 where the defective nuclear DNA most likely resides, Young said. Of an estimated 100 genes in the region, there are 15 prime candidates "that people have right now in their freezers," she said, adding, "They need ideas to test."

Neuroscientists are providing leads, she said, based on brain-imaging techniques and clues from two unusual diseases in humans and animals.

People who eat moldy sugar cane in China sometimes develop symptoms similar to Huntington's, Young said.

Their bodies tremble and they become demented. In America, she continued, ranchers do not like to let their cows eat hay after a rain because they sometimes get a disease called the staggers. It is caused by hay mold.

The mold contains a compound, 3-nitropropionic acid, that inhibits an enzyme in complex two of the electron transport train, said Dr. Flint Beal, a neurologist also on the Harvard team who is studying an animal model of Huntington's disease.

Rats given the compound develop holes in the same brain region, the striatum, affecting Huntington's patients, Beal said.

Since this compound should damage mitochondria throughout the body, Beal has been studying why the striatum might be more vulnerable. It is a very energy-intense area, he said.

When harmed, the tissue is particularly prone to damage from one of the body's excitatory substances called glutamate. Glutamate may accelerate damage in compromised striatal cells, Beal said.

191

COMMENTS AND RESPONSES FROM THE PUBLIC HEARING ON THE DRAFT EIS FOR THE PROPOSED HEALY CLEAN COAL PROJECT LOUSSAC LIBRARY, WILLA MARSTON THEATER ANCHORAGE, ALASKA

December 10, 1992

COMMENTS AND RESPONSES
FROM THE PUBLIC HEARING
ON THE DRAFT EIS FOR THE
PROPOSED HEALY CLEAN COAL PROJECT
LOUSSAC LIBRARY, WILLA MARSTON THEATER
ANCHORAGE, ALASKA

December 10, 1992

NOTE: For the purpose of coding comments and ease of cross-referencing between documents and other comments, the Anchorage transcript has been coded "A/T-__."

Commenter: Charles McKee, 7800 DeBarr Road, Space 63, Anchorage, AK 99504

Comment A/T-1, p. 125:

"I'm against the project not so much as for environmental reasons as you indicate, but fundamentally, you're—it's—it does cause environmental damage because of the scholars that were quoted in the Journal of—I have read that the Japanese said that the doubling plan, which is the money that you're to use to build this generating plan [*sic*] causes environmental degradation on itself.

I have a case that nobody wants to help me pursue in the US Claims Court pertaining to whether we use—go back to using our United States currency, our own money or maintaining this monopoly of private currency that we currently are being enslaved by. And I allude to the four trillion dollar debt."

Response:

Monetary policy is outside the scope of this EIS.

Comment A/T-2, p. 126:

"Another question is mental health claims. You have to take that into consideration. And I've been active in that pursuit. I have requested from the Treasury of Currency, the Comptroller of the Treasure five billions dollars. 2.2 of that would go to redeem the mental health assets."

Response:

Comment noted.

Commenter: Michael Tate, P.O. Box 142514, Anchorage, AK 99514

Comment A/T-3, p. 131:

Comments noted.

Commenter: Carl Portman, Communications Director for the Resource Development Council, 121 West Fireweed Lane, Suite 250

Comment A/T-4, pp. 131-134:

Comments noted.

Commenter: Marc Langland, 9620 Springhill Drive, Anchorage, AK 99507

Comment A/T-5, pp. 134-135:

Comments noted.

Commenter: Steve Borell, Executive Director, Alaska Miner's Association, 501 West Northern Lights Boulevard, Anchorage, AK 99503

Comment A/T-6, pp. 136-139:

Comments noted.

Commenter: Peter Van Tuyn, Trustees for Alaska, 725 Christenson Drive, Suite 4, Anchorage, - AK 99501

Comment A/T-7, p. 140:

"In a broader perspective, we're concerned that the scope of the EIS is too narrow. We've had discussions about this informally, but our point being that alternatives other than no action and coal technology should be considered here. There's ample opportunity for other resources—energy resources to be utilized in this area."

Response:

See responses to Comments 1-2 and 76-4.

Comment A/T-8, p. 140:

"More specifically about the EIS and within the scope as you've defined it, the CO_2 issue we feel should be addressed as well. It's—despite the fact that you have stated in our informal presentation tonight that the policy is not jelled to the point where CO_2 should be considered. We feel otherwise and that CO_2 emissions should be taken into account in the EIS process. And technology should be developed to control those emissions as well."

Response:

The discussion on potential global climate change in Sect. 4.1.2.2 has been expanded to further address the potential contribution of the proposed HCCP's CO_2 emissions. The discussion includes a comparison of the HCCP's CO_2 emissions with emissions from U.S. and global fossil fuel combustion, and with conventional and other clean coal technologies. CO_2 emissions from the three commercial scenarios are discussed in expanded text in Sects. 5.1, 5.2, and 5.3 of the EIS.

Comment A/T-9, pp. 140-141:

"The other issue that concerns us is the limestone issue. Where does it come from? DOE has stated that their involvement in the project is only one year. Because the limestone that would be used within that one year is not commercially—is not of a commercial—a volume to be commercially obtainable, the effects of mining that limestone or getting that limestone to the site are not considered. And our position is that it's reasonably foreseeable by DOE that this project is going to last a lot longer than one year, and therefore the source of the limestone as a cumulative effect issue well over the project should be considered."

Response:

See response to Comment 1-4.

Commenter: Joan Darnell, National Park Service, Chief of Environmental Quality for the Alaska Region, 2525 Gambel Street, Anchorage, AK 99503

Comment A/T-10, p. 142:

"We're concerned at this point in time about the EIS schedule and the amount of time allowed for commenting on the draft EIS.

We note that you've allowed apparently longer than the 45 days called for in the DOE regulations for public comment period, but also note that this is shorter than a 60 day review period, which is quite common for this kind of an EIS, and especially for one that's quite technical and complex."

Response:

The deadline for comments originally was January 5, 1993. In response to several requests, DOE extended the deadline by 15 days to January 20, 1993. Comments received after January 20 have been considered to the extent practicable.

Commenter: Mary Grisco, Alaska Regional Director for National Parks and Conservation Association, Post Office Box 202045, Anchorage, AK 99520

Comment A/T-11, p. 143:

"We also have serious concerns about this proposed project and concerns about the inadequacy of what we see as the scope and conclusions of the draft."

Response:

DOE believes that the EIS provides a comprehensive assessment of potential impacts from the proposed HCCP, and that the scope and conclusions of the EIS are sound. See responses to Comments 1-2 and 76-4.

Comment A/T-12, pp. 143-144:

"We agree with the former speaker that the comment period needs to be extended. This is a highly technical document. And while it's easy to say that we want more jobs in Alaska it does take a lot of time to go back and look at all the studies for this proposed project."

Response:

See response to Comment A/T-10.

Comment A/T-13, p. 144:

"We are also concerned about the location choices. If the concerns for the consumer were taken into account, why was not a location closer to Fairbanks taken into account?"

Response:

See responses to Comments 21-2 and 76-12.

Comment A/T-14, p. 144:

"It may be out of the scope of this DEIS, I'm not sure, but the Mental Health Lands Trust Settlement has tied up some of these lands. And I think that's an issue that needs to be solved."

Response:

Comment noted. See Letters 10 and 52.

Comment A/T-15, p. 144:

"We're concerned about the visibility modeling. Putting a camera in place for less than twelve months and then trying to model from that is not easy given the meteorological changes that we have in this state."

Response:

See response to Comment 21-1.

Comment A/T-16, p. 144:

"We're also concerned about the acid rain deposits on the fauna and flora in the area and certainly within the Park. And we're not sure those are addressed adequately within the EIS."

Response:

See response to Comment 45-4. The issue of acid rain effects on fauna and flora is treated adequately in Sect. 4.1.5 of the EIS.

Comment A/T-17, pp. 144-145:

"It's of interest, just in terms of how this is all presented that there are other cooperating agencies, and yet only one is represented on the panel tonight. And so I'm just curious why National Park Service, EPA and the REA were not part of the panel."

Response:

All cooperating agencies were requested to participate in the hearings as members of the panel.

Comment A/T-18, p. 145:

"And I also agree with one of the former speakers about the limestone. That is part of the cumulative effect of this project. And yet, it's not even included. And I would think under the [CEQ] regulations that all cumulative effects need to be included."

Response:

See response to Comment 1-4.

Commenter: John Sims, 1935 Swallow Drive, Fairbanks, AK 99709

Comment A/T-19, pp. 145-148:

Comments noted.

Commenter: Mike Kelly, General Manager, Golden Valley Electrical Association, 1028 Aurora Drive, Fairbanks, AK

Comment A/T-20, p. 150:

"In the area of visibility, . . . there are high mixing zone characteristics of that area which we think make your model super, ultra conservative; and that the observation of the 25 years that we've operated in the area, where no one has ever observed any impact whatsoever in visibility should be heavily considered, and is a very important element when you're considering National Park Service concerns."

Response:

DOE agrees that the visibility modeling is conservative (forming an upper bound of expected impacts) because there have been no reported sightings from or within DNPP by observers or operating camera equipment of a visible plume from Unit No. 1, even though the computer models predict that a visible plume from Unit No. 1 should be perceived 1 to 6 h/year. Also, see response to Comment 21-1.

Commenter: Rick Schikora, 1416 Gillam Way, Fairbanks, AK

Comment A/T-21, p. 152:

Comments noted.

Commenter: Matt Groskie, 440 Kayak Drive, Anchorage, AK 99515

Comment A/T-22, pp. 155-156:

Comments noted.

Commenter: Tom Evans, Alaska AFL-CIO, 1689 C Street Suite 202, (did not state city)

Comment A/T-23, p. 157:

Comments noted.

Commenter: Grant Walther, P.O. Box 102418, Anchorage, AK 99510

Comment A/T-24, pp. 158-160:

Comments noted.

PART 2

WRITTEN COMMENTS
AND
RESPONSES

Letter No. 1

Reproduced from copy submitted

Arctic Audubon Society
Box 82098
Fairbanks AK 99708

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Box 10940, MS-9200-L
Pittsburgh Energy Technology Center
Pittsburgh, PA 15236

November 30, 1992

Dear Dr. Evans,

This letter is our preliminary response to you regarding the Healy Clean Coal Project Draft EIS. The letter accompanying the DEIS does not mention a deadline for comments, but the Fairbanks newspaper reported it to be November 30. We request that the deadline be extended at least one month. A copy was not sent to our group, so I had to request a copy which arrived on Nov. 23. It is available to me for comment only on a family trip to New Hampshire and Colorado for Thanksgiving. The DEIS took two years to write, and is detailed, so we request that the public have sufficient time to study it properly and make thoughtful responses. 1-1

On first reading, the DEIS appears to contain excellent depth of study and care with the subjects addressed. However, the DEIS avoids the primary environmental issues associated with the Healy Clean Coal Project; the high cost of prolonging the burning of a dirty fossil fuel, and proper consideration of reasonable alternatives. 1-2

Three local environmental issues were not considered fully. First, it is stated that this coal-fired plant will require only 4 acres of strip mining each year. That may be so, but the amount of land disrupted by coal mining is far greater than just the area of the pit. The total impact of coal mining includes roads, power lines, equipment sites, administrative and living sites, garbage, power for the mine, and so forth. The present Healy Coal mine infrastructure occupies a huge footprint that is several orders of magnitude larger than the pit size. 1-3

Second, the HCCP would require significant amounts of lime, so a limestone mine would have to be opened or expanded somewhere, possibly nearby Denali National Park. What would be the source of this lime? What would the impacts of it be including increased fossil fuel use? 1-4

And third, what if the experiment of burning coal "cleanly" fails to be economically viable in a decade or so? What would the environmental impacts be if the operators decide to abandon parts of the process because it "isn't economically justified" in their view? After all, GVEA's primary goal is to keep the cost of power to their member as low as possible. 1-5

The issue of CO2 buildup in the atmosphere is not taken seriously in this DEIS. The proposal is to build a power plant that would inject about 500,000 tons of CO2 per year into the air. While this may appear to be a small number by comparison with national and global totals, as the DEIS attempts, it is not a small number. Using another perspective, approximately 50,000 people would be served by the power plant, which is about 10 tons of CO2 per capita each year for just the electricity component of their energy needs. We must strive for much smaller numbers than this. 1-6

A possible environmental effect of further climate alteration could be the displacement of the existing ecosystem of interior Alaska with one from farther south. The DEIS analyses smoke plume visibility for a few miles, but ignores the larger important issue of global ecosystem disruption, which this could be a contributor. The Earth must have a better model than this if major ecosystem disruption (and human disruption) is to be avoided. We urge that procrastination in solving this issue not be a part of current government activity. At the least, an EIS should present well-known methods available to change our energy supply from polluting fossil fuels to truly clean energy even if it would require congressional reauthorization of the money to accomplish it. 1-7 1-8

The EIS process is the primary place in the planning process where an unbiased public and federal examination of alternatives can be made. This DEIS largely avoids the subject of alternatives. Several real alternatives are available that would eliminate acid rain and fly ash from the generation of electricity with coal. The most obvious solution to the problem is to simply replace coal with a cleaner energy source. Sources worth considering include natural gas, wind, pumped hydropower, biomass wastes, and solar. The most interesting situation would be to develop a hybrid system that utilizes several of these. 1-9 1-10

I asked GVEA what they would do if this federal money were not available. The GVEA manager replied that they would build a natural gas-fired plant either near Anchorage, or near Fairbanks if a pipeline were constructed to Fairbanks. The CO2 from natural gas is only 45 percent of that from coal for the same electricity, and acid emission are low. If fossil fuels are to part of the energy mix in the future, natural gas is the cleanest. However, it is not necessary to use fossil fuels at all, which would largely eliminate even CO2 loading of the atmosphere. 1-11

A number of sites exist in the current power grid area where wind power is abundant. These areas include Murphy Dome, Delta Junction, which has greater wind in winter than summer, Healy, Cantwell, Palmer, and all higher elevation areas along the intertie. A dispersed system of windfarms could provide nearly continuous wind power into a grid. Excellent progress is being made internationally for manufacture of robust and economical wind turbines. Federal investment in this field for both research as well as demonstration projects would further stimulate this renewable energy field. We need a state-of-the-art demonstration of wind power in Alaska much more than a demonstration of coal burning. 1-12

Pumped hydropower is being developed at several sites in the nation for the purpose of storing electricity as well as generating some new power. This creates "dispatchable" wind and solar power. A pumped hydropower site allows storage of excess wind power for use when demand requires its use. For example, the Eklutna Power Project could be retrofitted to produce about 10 times the peaking power that it now does, if it also had a pumping facility to refill Eklutna Lake every time the wind howled through the Knik River valley nearby. 1-13

A program to install solar panels in the grid along with wind turbines could also be started. While the initial cost might appear high, the maintenance would be nil, so they would pay for themselves. Solar systems are modular and easily moved, so could be installed throughout the 1-14

system wherever an engineer felt they would most useful. Solar panels can be expected to operate indefinitely, which is a characteristic that we should be interested in for our nation's energy future.

Waste wood burning would also be a useful source of energy in Alaska. Waste wood is available continually in the trash stream. Additional wood could be made available if roadside, railroad, agricultural clearing, and power line vegetation trimmings were chipped and hauled to power plants. This is already done in numerous progressive communities in the nation, but could be extended to Alaska where regrowth is considered a "problem" but ought to be viewed as a "resource". If a power plant is needed in Healy after renewable power were put on-line, such a plant ought to rely primarily on waste wood. Coal should serve as only an emergency back-up fuel. 1-15

Finally, I would like to discuss the cost of the project. Normally, an environmentally correct power plant costs only a fraction of that proposed for the HCCP. We constantly hear about a growing national debt and other economic troubles. If these are serious economic problems, which certainly is the national consensus at this time, the HCCP should be recognized as one that cannot be justified economically. It costs almost three times the normal value for a power plant. If such a large sum is to be spent in the name of decreasing pollution, then it should be spent on renewable energy, including any hybrid grid systems required to make them available on demand. 1-16

If federal energy money cannot be spent on the most desirable long-term energy supply of the nation, it should be used to repay the national debt. We cannot support waste of federal money, especially when it is being used to prolong the polluting energy policy of the past that should be replaced with the energy of the future that is clean. 1-17

We ask that EPA take a leadership role in our nation's energy future by using the EIS process as originally intended, to explore freely with the public in the quest for environmentally superior directions for federal expenditures.

Sincerely,

Larry Mayo

Larry Mayo
President

Letter No. 1
Larry Mayo, President, Arctic Audubon Society, Box 82098, Fairbanks, AK 99708

Comment 1-1:
" . . . deadline for comments, but the Fairbanks newspaper reported it to be November 30. We request that the deadline be extended at least one month."

Response:
The deadline for comments originally was January 5, 1993. In response to several requests, DOE extended the deadline by 15 days to January 20, 1993. Comments received after January 20 have been considered to the extent practicable.

Comment 1-2:
"The DEIS avoids the primary environmental issues associated with the Healy Clean Coal Project; the high cost of prolonging the burning of a dirty fossil fuel, and proper consideration of reasonable alternatives."

Response:
DOE believes that the EIS adequately addresses the reasonable alternatives to the proposed action. As discussed in Sect. 2.2, the purpose of and need for the proposed federal action define the bounds of its reasonable alternatives. Congress established the CCT Program with a specific purpose—to demonstrate the commercial viability of technologies which use coal in more environmentally benign ways than conventional coal-plants. Some energy legislation, such as the recently enacted National Energy Policy Act of 1992, addresses broad policy issues and questions concerning energy choices. In contrast, the CCT legislation has a narrow focus in directing DOE to demonstrate clean coal technologies. Other technologies which cannot serve to carry out the goal of the CCT Program legislation (e.g., natural gas, wind power, conservation) are not relevant to DOE's decision of whether to provide cost-shared funding support for the HCCP, and therefore are not reasonable alternatives for this EIS.

Moreover, each of the CCT projects selected for partial funding is unique in that it was selected to fulfill a particular program need, (i.e., a specific technology or combination of technologies). The HCCP was selected to demonstrate a promising combination of combustion and flue gas cleanup technologies. AIDEA's application was the only proposal for demonstration of this combination. Other projects proposing to demonstrate other technology are not alternatives to the HCCP. The only way in which DOE could consider other projects offering comparable benefits to the program would be to decide not to fund the HCCP and to solicit for additional proposals. In the context of DOE's proposal to fund the HCCP, this alternative is considered to the extent practicable under the no-action alternative. The possible results of a new solicitation are totally speculative. All that can be said is that the impacts of the HCCP would not occur. (It is reasonably foreseeable, however, that a conventional coal plant might be built on the site without Federal funding, as discussed in Sect. 2.2.1.)

Congress not only prescribed a narrow goal for the CCT Program, but also directed DOE to use a process to accomplish that goal that would result in a minimal role for the federal government. Instead of requiring government ownership of demonstration projects, Congress provided for cost-sharing in projects sponsored by other parties, with provision

for eventual repayment of the public funds invested. Therefore, rather than being responsible for the siting, construction and operation of the projects, DOE has been placed in the more limited role of evaluating applications by project sponsors to determine if they meet the CCT program's goals. It is well established that an agency should take into account the needs and goals of the applicant in determining the scope of the EIS for the applicant's project. When an applicant's needs and goals are factored into the deliberations, a narrower scope of alternatives may emerge than would be the case if the agency is the proprietor, charged with full decision-making responsibilities for the project. AIDEA and GVEA's project siting evaluation process, as described in Sect. 2.2.2, concluded that only the proposed site and the alternative site near the UMC coal mine are economically feasible, and thus are the only alternatives that meet AIDEA and GVEA's needs. DOE has independently reviewed AIDEA and GVEA's project siting evaluation process, and has concluded that it reasonably focuses the alternatives to be considered in this EIS because there are no other sites that meet both DOE's purposes and the applicant's purposes.

Comment 1-3:
"Three local environmental issues were not considered fully. First, it is stated that this coal-fired plant will require only 4 acres of strip mining each year. That may be so, but the amount of land disrupted by coal mining is far greater than just the area of the pit. The present Healy Coal mine infrastructure occupies a huge footprint that is several orders of magnitude larger than the pit size."

Response:
The footprint of the Usibelli Coal Mine active mining pit would exist whether the HCCP proceeds or not. Therefore, the HCCP impact is a very small increment of the total annual mining which presently occurs.

Comment 1-4:
"Second, the HCCP would require significant amounts of lime, so a limestone mine would have to be opened or expanded somewhere, possible nearby Denali National Park. What would be the source of this lime? What would the impacts of it be including increased fossil fuel use?"

Response:
Limestone formations exist in Alaska, but the pulverized limestone required by the HCCP is not produced by any current mining operations in Alaska. As a result, it would be shipped during the demonstration from the contiguous 48 states via barge to Anchorage, then transported to Healy by truck or rail. For commercial operation following the demonstration, the necessary equipment for producing pulverized limestone could be installed at a potential source such as the existing mine located in Cantwell, about 30 miles south of the HCCP proposed site. Another potential source is an inactive mine located about 150 miles north of Healy, between Fairbanks and Livengood. Other sources within Alaska also are possible. Total limestone consumption would be about 224,000 tons over the 40-year expected operating life of the HCCP.

If the demonstration is successful, a pulverizer is expected to be installed at the selected Alaska mining location to meet the HCCP's requirement. If the demonstration is

unsuccessful, the HCCP would be converted to a facility with a dry scrubber using lime rather than pulverized limestone. The same sources could be used to obtain the lime if, instead of a pulverizer, a kiln were installed to convert the limestone to lime. Because of the uncertainty associated with the actual site that would be selected to obtain limestone during commercial operation, potential impacts resulting from limestone mining operations are not specifically evaluated but are expected to be minor.

The discussion of limestone use has been expanded in Sects. 2.1.6.4 and 5.1 of the EIS.

Comment 1-5:
"And, third, what if the experiment of burning coal 'cleanly' fails to be economically viable in a decade or so? What would the environmental impacts be if the operators decide to abandon parts of the process because it 'isn't economically justified,' in their view?"

Response:
The operator of the HCCP cannot operate the plant above permitted emission levels, even if, for any reason, it becomes uneconomical to operate parts of the process. Therefore, the environmental impacts of this scenario would be the same as those of the "permitted case" discussed in Sect. 5.2 and the "retrofit case" discussed in Sect. 5.3. Environmental impacts of dismantling part of the HCCP are addressed in Sect. 5.3.

Comment 1-6:
"The issue of CO_2 buildup in the atmosphere is not taken seriously in this DEIS. The proposal is to build a power plant that would inject about 500,000 tons of CO_2 per year into the air. While this may appear to be a small number by comparison with national and global totals, as the DEIS attempts, it is not a small number."

Response:
The potential consequences (including changes in CO_2 emissions) of widespread commercialization of each of 22 successfully demonstrated clean coal technologies in the year 2010 were addressed in the programmatic EIS for the CCT Program (DOE/EIS-0146). As part of the overall strategy for compliance with NEPA that was developed for the CCT Program, the EIS for the proposed HCCP tiers to the programmatic EIS to eliminate repetitive discussion of the same issues. The discussion in the HCCP EIS on potential global climate change in Sect. 4.1.2.2 has been expanded to further address the potential contribution of the proposed HCCP's CO_2 emissions.

Comment 1-7:
"A possible environmental effect of further climate alteration could be the displacement of the existing ecosystem of interior Alaska with one from farther south. The DEIS analyses smoke plume visibility for a few miles, but ignores the larger important issue of global ecosystem disruption, which this could be a contributor."

Response:
A discussion of potential change in the global climate is provided in the EIS in Sect. 4.1.2.2. It is not possible to quantify the HCCP's potential contribution to global ecosystem disruption beyond the analysis provided in the EIS which states that HCCP emissions would only be about 0.002% of global fossil fuel combustion. It is expected that the HCCP's contribution to global ecosystem disruption would be extremely small.

Comment 1-8:
"The Earth must have a better model than this if major ecosystem disruption (and human disruption) is to be avoided. We urge that procrastination in solving this issue not be a part of current government activity. At the least, an EIS should present well-known methods available to change our energy supply from polluting fossil fuels to truly clean energy even if it would require congressional reauthorization of the money to accomplish it."

Response:
The intent of this EIS is to evaluate the potential impacts of a particular action, and it is not appropriate to discuss methods to change the national energy supply.

Comment 1-9:
"This DEIS largely avoids the subject of alternatives. Several real alternatives are available that would eliminate acid rain and fly ash from the generation of electricity with coal."

Response:
See response to Comment 1-2.

Comment 1-10:
"Sources worth considering include natural gas, wind, pumped hydropower, biomass wastes, and solar. The most interesting situation would be to develop a hybrid system that utilizes several of these."

Response:
These sources of energy (natural gas, wind, pumped hydropower, biomass wastes, conservation, and solar) are being developed by DOE in other programs. Funds appropriated by Congress for the CCT program cannot be used to support other program areas. Gas turbines, wind, solar, and waste-to-energy were included in the Integrated Resource Plan (IRP) submitted to the APUC in their consideration of the need for power. Gas turbines were dismissed because natural gas is not available in the Fairbanks area. Wind power was dismissed because of (1) the lack of sites with demonstrated wind resources and (2) insufficient experience in the harsh environment at high latitudes. Demand-side programs for residential and commercial energy efficiency (conservation) were considered in the IRP but were not found to be the least-cost option. Solar energy was dismissed because of (1) the lack of sites with solar exposure and (2) the availability of energy during GVEA's winter peak periods of electrical demand. Waste-to-energy was not evaluated for several reasons: (1) the possibility of insufficient waste resources to provide a firm fuel source over the project life, (2) uncertain associated costs, and

(3) siting and permitting of the facilities. The Clean Coal Technology Program is only responsible for the development of coal-fired technologies, and therefore, these other fuel sources are not reasonable alternatives to this project because they do not fulfill the goal of the program. The EIS discusses alternative technologies in Sect. 2.2.3.1. See response to Comment 1-2 for a discussion of alternatives and Sect. 1.6 of the EIS for alternatives beyond the scope of the EIS.

Comment 1-11:
"If fossil fuels are to be part of the energy mix in the future, natural gas is the cleanest. However, it is not necessary to use fossil fuels at all, which would largely eliminate even CO_2 loading of the atmosphere."

Response:
The EIS discusses alternatives in Sect. 2.2. The no-action alternative, which is included in the analyses, would result if DOE does not provide cost-shared funding support for the HCCP.

Comment 1-12:
"Excellent progress is being made internationally for manufacture of robust and economical wind turbines. Federal investment in this field for both research as well as demonstration projects would further stimulate this renewable energy field. We need a state-of-the-art demonstration of wind power in Alaska much more than a demonstration of coal burning."

Response:
See response to Comment 1-10.

Comment 1-13:
"Pumped hydropower is being developed at several sites in the nation for the purpose of storing electricity as well as generating some new power. This creates 'dispatchable' wind and solar power. A pumped hydropower site allows storage of excess wind power for use when demand requires its use."

Response:
See response to Comment 1-10.

Comment 1-14:
"A program to install solar panels in the grid along with wind turbines could also be started. While the initial cost might appear high, the maintenance would be nil, so they would pay for themselves. Solar systems are modular and easily moved, so could be installed throughout the system wherever an engineer felt they would [be] most useful. Solar panels can be expected to operate indefinitely, which is a characteristic that we should be interested in for our nation's energy future."

Response:
See response to Comment 1-10.

Comment 1-15:
"Waste wood burning would also be a useful source of energy in Alaska. Waste wood is available continually in the trash stream. Additional wood could be made available if roadside, railroad, agricultural clearing, and power line vegetation trimmings were chipped and hauled to power plants. This is already done in numerous progressive communities in the nation, but could be extended to Alaska where regrowth is considered a 'problem' but ought to be viewed as a 'resource.' If a power plant is needed in Healy after renewable power were put on-line, such a plant ought to rely primarily on waste wood. Coal should serve as only an emergency back-up fuel."

Response:
See response to Comment 1-10.

Comment 1-16:
"We constantly hear about a growing national debt and other economic troubles. If these are serious economic problems, which certainly is the national consensus at this time, the HCCP should be recognized as one that cannot be justified economically. It costs almost three times the normal value for a power plant."

Response:
Part of the value of the HCCP would be derived from the economic and environmental benefits of future commercialization of the demonstrated technologies. APUC found the HCCP to be the lowest-cost alternative to satisfy GVEA's projected load-growth. See response to Comment 76-12 for information on the APUC evaluation and project selection. See response to Comment 35-2 for information about repayment plans. See response to Comment 45-5 for discussion on the benefits of the program.

Comment 1-17:
"If federal energy money cannot be spent on the most desirable long-term energy supply of the nation, it should be used to repay the national debt. We cannot support waste of federal money, especially when it is being used to prolong the polluting energy policy of the past that should be replaced with the energy of the future that is clean."

Response:
The goal of the Clean Coal Technology Program as established by Congress is to make available to the U.S. energy marketplace advanced and environmentally responsive technologies that will help alleviate pollution problems from coal utilization. Coal will be part of the future energy mix of the United States along with other fuel sources. Also, see response to Comment 1-10.

Letter No. 2

Reproduced from copy submitted

12'4'92

Dear Dr. Evans

I am 100% in favor of the Healy Clean Coal Project. We need JOBS and low cost power period. Let U.S. work together.

Jim Dore

J. DORE
11301 PYRAMID DR. #21
ANCHORAGE, AK 99516

Letter No. 2
J. Dore, 11301 Pyramid Dr. #21, Anchorage, AK 99516

Comments noted.

Letter No. 3

12/6/92

WEDBUSH MORGAN SECURITIES

907·561·5624
FAX 907·563·8372

ALLAN R. JOHNSTON
VICE PRESIDENT

Dear Dr. Evans

Please add me as a supporter of the Healy Clean Coal Project. America needs new technology for burning coal and Alaska is a great place to experiment.

Sincerely,

Allan R. Johnston

4300 B STREET, SUITE 105, ANCHORAGE, ALASKA 99503
MEMBER NEW YORK STOCK EXCHANGE AND OTHER PRINCIPAL EXCHANGES

Letter No. 3
Allan R. Johnston, Vice President, Wedbush Morgan Securities, 4300 B Street, Suite 105, Anchorage, AK 99503

Comments noted.

Letter No. 4

Reproduced from copy submitted

December 7, 1992
671 Echo Acres Rd.
Fairbanks, AK 99712

Dr. Earl W. Evans, Coordinator HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans:

As a long time resident of Fairbanks, Alaska, I wish to comment on the Healy Clean Coal Project. Recent compilation of the draft EIS has demonstrated the project can safely move ahead without degradation of the environment. Furthermore, coal is America's most abundant energy resource and we must learn to utilize it in the cleanest manner possible. I take a sense of pride in that this nation has the ability and the foresight to develop the technology that will be applied in this project. For the sake of the air we all breath, I hope by demonstrating this technology it will be readily accepted by other countries as well. Additionally, the Healy project provides an excellent opportunity to test this technology under arctic conditions.

The HCCP will establish an energy base of reasonably priced electrical power on which Alaska can diversify its present oil-based economy. Jobs and economic growth to support the people of Alaska will require electrical power. I feel this project is essential to Alaska as we see the looming depletion of the Prudhoe Bay oil reserves.

For the record please note that I am in no way affiliated with the Usibelli Coal Mine or any of its subcontractors. Thank you for the opportunity to add my support to this project.

Sincerely,

James C. Barker

Letter No. 4
James C. Barker, 671 Echo Acres Rd., Fairbanks, AK 99712

Comments noted.

Northrim Bank

Letter No. 5

Reproduced from copy submitted

December 8, 1992

Dr. Earl W. Evans
U. S. Department of Energy
Pittsburg Energy Technology Center
P. O. Box 10940
Pittsburg, PA 15236

RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
HEALY CLEAN COAL PROJECT (HCCP)

Dear Dr. Evans:

I have reviewed the DEIS for the HCCP and found it to be both adequate in scope and understandable in presentation. The discussions by the Department of Energy (DOE) lead to the conclusion that the project, as proposed, meets the requirements of the Clean Coal Technology Program, satifies the project objectives better than alternative sites and will result in negligible environmental impact. Though outside the scope of the DEIS, there will be subsidiary benefits resulting from DOE assistance in the project, such as jobs and availability of reliable low cost power, which are very positive aspects favoring the project.

DOE has done a thorough job of analyzing the potential environmental impacts, and visibility of the Denali Park appears to be the only environmental value with potential for measurable impact above prescribed standards. Given that the modeling obviously overestimates the impacts from the existing plant, the potential for any visibility impacts is questionable. In summary, since the reality of the visibility impacts is suspect and the predicted impacts are minor and primarily during the winter, when virtually no one is there to see them, the potential for visibility impacts should also be considered negligible.

The positive potential for the project, both for Alaska and the nation, are clear and substantial. The potential negative impacts to the environment are speculative and negligible. These conclusions are fully and adequately supported by the DEIS and I encourage DOE to move forward with funding and construction of the Healy Clean Coal Project.

Sincerely,

Marc Langland
President

maf

3111 C Street • P.O. Box 241489
Anchorage, Alaska 99524-1489
907/562-0062
FAX 907/562-1758 Member FDIC

Letter No. 5
Marc Langland, President, Northrim Bank, 3111 C Street, P.O. Box 241489, Anchorage, AK 99524-1489

Comments noted.

THE ALLIANCE

4220 'B' Street, Suite 200 • Anchorage, Alaska 99503-5911
Phone (907) 563-2226 • Fax (907) 561-8870

Letter No. 6

December 9, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
Post Office Box 10940
Pittsburgh, PA 15236-0940

Dear Dr. Evans:

Our organization has followed the progress of the Healy Clean Coal Project since its inception. We are most pleased, but not surprised, to see that the DEIS verifies that this project will not have any significant impact on the environment - even in the sensitive Denali Park area.

Our nation has long known that our dependence on foreign sources of energy puts us at an unacceptable risk. However, few actions have been taken to lessen this dependence. The HCCP is a major exception. Development of this technology and the joint public and private efforts to make it happen is, in our opinion, one of the few energy victories of the past two decades. This project will go a long way in making coal an acceptable alternate to imported oil.

The HCCP will bring many economic opportunities to Alaska's businesses and individuals. It is perhaps the most important economic stimulus planned for Interior Alaska. Availability of clean and reasonably priced power is the foundation of this area's expansion and diversification of its economic base. The plant itself will provide an economic boost due to the 200 plus construction jobs and 30 to 40 permanent jobs that it will create.

Our organization stands firmly in support of the Healy Clean Coal Project and hope that your department will take appropriate and timely actions to ensure this plant goes on line as soon as possible.

Sincerely yours,

William F. Webb
General Manager

Letter No. 6
William F. Webb, General Manager, The Alliance, 4220 B Street, Suite 200, Anchorage, AK 99503-5911

Comments noted.

GREEN ALASKA, INC.
Contractors License #A19270
125 W. Fifth Avenue • Anchorage, Alaska 99501-2521 U.S.A.
Telephone (907) 279-5456 • Telex: 090-25-231 • Facsimile (907) 258-7984

December 9, 1992

Letter No. 7

Reproduced from copy submitted

Dr. Earl W. Evans
Environmental Coordinator, HCCP
US Dept of Energy, PETC
PO Box 10940, Mail Stop 920L
Pittsburgh, PA 15236

Dear Dr. Evans:

I am corresponding to you in support of the Healy Clean Coal Project (HCCP) in Alaska.

It is my understanding that analysis of potential environmental impact estimates the plant will meet the National Ambient Air Quality Standards. However, a debate is raised over concerns that a plume may be perceived by visitors at Denali National Park under certain meteorological conditions, namely during the winter months.

I am amazed by the environmental guilt that comes forth to foil anything that might resemble development in the State of Alaska, irrespective if that development has merit and is of need. When one considers all the special interest groups with antidevelopment of Alaska as their main agenda under the cloak of environmentalist a question comes to mind: if their home state, during its development stage, had to comply with all the current regulations and debate would it have or could it have afforded to develop into the place it is today? I think a logical answer to that question is NO! Development of the Healy Project, a highway through Pittsburgh or an earthen dam in Anytown, USA has environmental risk. Obviously, a risk assessment must be undertaken to ensure the benefit to be received outweighs the environmental risk and determine if that risk can be minimized.

Alaska must be allowed to progress and develop on an environmentally sound basis. Electrical generation is needed as well as other infrastructure in order for the state to meet its energy and transportation needs. Alaska does not have the luxury of borrowing electrical power from a neighboring state's power grid like other Lower-48 states enjoy. Obviously, if we aren't capable of supplying our own electrical power we simply can't plug in the toaster! To foil the Healy Project on the basis of a plume which may or may not be seen at the Denali Visitors Center (in the winter, who would be there?) simply escapes logical common sense. To penalize many to benefit a few certainly does not support an argument to cancel the Healy Project.

Thank you for your consideration to our position in support of the Healy Clean Coal Project.

Very truly yours,

GREEN ALASKA COMPANY

Duane L. Langerman
Vice President - Area Manager

Letter No. 7

Duane L. Langerman, Vice President, Area Manager, Green Alaska, Inc., 125 W. Fifth Avenue, Anchorage, AK 99501-2521

Comments noted.

Letter No. 8

Reproduced from copy submitted

December 9, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Sir.

I would like to take this time to express my comments concerning to the construction of the Healy Clean Coal Project. As a 20 year Alaska state resident I have seen the good times along with the bad. If we are to experience continuous economical growth this project along with others like it is needed.

Alaska must start developing the rest of its natural resources. With the oil industry on the down swing we need new sources of income. The construction of a clean coal plant would help the whole state, with new jobs, competitively priced power and the desire to develop new coal sources. Alaska has numerous large coal fields that could be developed. This power plant would help with that development.

I have heard that the steam plume from this power plant may be noticeable by visitors to Mt. McKinley Park. I have been through the park numerous times, and I don't think a small steam plume on the horizon would destroy that wilderness experience. I enjoy the outdoors and what it has to offer, but I also must make a living to support my family.

Thank You

Michael L. Tate

Michael L. Tate
1805 Laura Circle
Anchorage, Alaska 99508

Letter No. 8
Michael L. Tate, 1805 Laura Circle, Anchorage, AK 99508

Comments noted.

Letter No. 9

December 9, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Sir.

I would like to take this time to express my comments concerning to the construction of the Healy Clean Coal Project. As a 20 year Alaska state resident I have seen the good times along with the bad. If we are to experience continuous economical growth this project along with others like it is needed.

Alaska must start developing the rest of its natural resources. With the oil industry on the down swing we need new sources of income. The construction of a clean coal plant would help the whole state, with new jobs, competitively priced power and the desire to develop new coal sources. Alaska has numerous large coal fields that could be developed. This power plant would help with that development.

I have heard that the steam plume from this power plant may be noticeable by visitors to Mt. McKinley Park. I have been through the park numerous times, and I don't think a small steam plume on the horizon would destroy that wilderness experience. I enjoy the outdoors and what it has to offer, but I also must make a living to support my family.

Thank You

Elizabeth B. Calloway

Elizabeth B. Calloway
P.O. Box 142395
Anchorage, Alaska 99514

Letter No. 9
Elizabeth B. Calloway, P.O. Box 142395, Anchorage, AK 99514

Comments noted.

ADVOCACY SERVICES OF ALASKA

615 East 82nd Suite 101
Anchorage, AK 99518
(907) 344-1002 T.D.D.
Toll Free 800-478-1234
Fax (907) 349-1002

230 South Franklin
Juneau, AK 99801
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250 Cushman, Suite 3A
Fairbanks, AK 99701
(907) 456-1070 T.D.D.
Fax (907) 456-1090

December 10, 1992

Letter No. 10

Reproduced from copy submitted

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans.

The purpose of this letter is to express support for the Healy Clean Coal Project (HCCP).

I represent plaintiffs in the Mental Health Lands Trust class action. There is currently a settlement before the court that would result in the Trust having ownership of the majority of the coal anticipated to be used for the HCCP. As a result, thousands of Alaskans with mental disabilities have a vested interest in seeing the HCCP go forward.

The first and most obvious reason for this is that revenue from the sale of the coal will be used directly for services provided to my clients. Whether it is respite care provided to a family with a child with a severe disability to enable them to remain together or inpatient care at the state psychiatric facility, these services are essential.

In addition, while my clients may not be directly employed in the project, the service economy jobs that they depend upon are directly tied to the health of the local economy as a whole. The HCCP will clearly have a major impact on the economy and increase the employment opportunities for my clients as well.

Finally, the development of technologies which mitigate and minimize environmental impacts will have an increasingly beneficial impact on the mental health of all citizens and should be supported whenever possible.

Thank you for this opportunity to comment on the HCCP.

Sincerely,

Jeffrey L. Jessee
Senior Attorney

Letter No. 10

Jeffrey L. Jessee, Senior Attorney, Advocacy Services of Alaska, 615 East 82nd, Suite 101, Anchorage, AK 99518

Comments noted.

Letter No. 11

Reproduced from copy submitted

CP

ZONGE ENGINEERING & RESEARCH ORGANIZATION

3322 EAST FORT LOWELL ROAD, TUCSON, ARIZONA 85716 U.S.A.

TELE. (602) 327-5501 FAX (602) 325-1588 TELEX 165532 CEERHO TUC

December 10, 1992

Zonge Engineering and Research, Inc.
4929 Palo Verde Drive
Fairbanks, AK 99709

Dr. Earl W. Evans, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans:

As a concerned citizen and also as a local geophysicist, I am writing in support of the Healy Clean Coal Project (HCCP).

I support the project for several reasons:

(1) Economic value to Alaskans (an estimated 235 jobs will be created).

(2) Using a natural state resource with an estimated 100 year supply, reducing the dependence on other energy resources.

(3) As a Fairbanks resident, the project is important to decrease the dependence on power supplied from Anchorage and will provide new base load power to the Interior which will hopefully prevent outages such as last September when the Chena Ridge/Chena Pump area lost power for a week.

(4) The new plant will be one of the cleanest burning plants in the world, will recycle waste coal and will meet the National Ambient Air Quality Standards and satisfy Prevention of Significant Deterioration requirements for their area.

Sincerely,

Pat Moore

Pat Moore
Geophysicist

Letter No. 11

Pat Moore, Geophysicist, Zonge Engineering and Research, Inc., 4929 Palo Verde Drive, Fairbanks, AK 99709

Comments noted.

PLACER DOME U.S. INC.
3631 SILVERADO WAY, SUITE H
ANCHORAGE, ALASKA 99518
(907) 561-2023
FAX (907) 561-2679

Letter No. 12

Reproduced from copy submitted

December 10, 1992

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans:

I am writing you to let you know that I support construction of the Healy Clean Coal project. The project will bring many new jobs to Alaska and will provide a clean source of energy for the rail-belt of Alaska. I urge you to support this project.

Thank you for your time and consideration of this matter.

Sincerely,

Rick Van Nieuwenhuyse
Alaska District Geologist

AGA/ADMIN/CORRESP/EVANSCOAL1.LTR

Letter No. 12

Rick Van Nieuwenhuyse, Alaska District Geologist, Placer Dome U.S. Inc, 5631 Silverado Way, Suite H, Anchorage, AK 99518

Comments noted.

HOBBS INDUSTRIES, INC.

Letter No. 13

December 10, 1992

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy
P.O. Box 10940
Pittsburgh, PA 15236

Re: Healy Clean Coal Project Public Hearings on DEIS
Sub: Written Comments of Support

Dear Mr. Evans

I would like to express my whole hearted support of the Healy Clean Coal Project as well as emphasize the many important social and economic benefits that this timely project represents to Alaskans, as follows:

1. The HCCP will likely be one of the cleanest coal burning plants in the world while providing reliable and competitively priced power to the Nothern Railbelt. Though the 50 megawatt HCCP plant is tiny compared with power plants of over 1000 megawatts commonly being operated outside, it will generate important economic benefits for Alaska.

2. Construction of the plant will create about 200 jobs. Another 35 permanent jobs will be created to operate and maintain the plant.

3. The State of Alaska, through matching funds and legislative support, has participated in the HCCP project because of its importance to Alaska's economy. The availability of clean and competitively priced power is fundamental to the expansion and diversification of the state's economic base.

4. Golden Valley Electric Association and the Alaska Public Utilities Commission believe HCCP is the best alternative for meeting the load growth and plant replacement problems confronting Interior Alaska.

5. The HCCP will reduce the Northern Railbelt's vulnerability to power interruptions over the intertie and provide the Interior with a new source of dedicated, base-load power. Currently, GVEA has no adequate, alternate source of power if for any reason production or intertie transmission from the

229 Whitney Road • Anchorage, Alaska 99501 • (907) 278-7283 • FAX 278-7448

Anchorage area is interrupted. Even now there are frequent periods when Chugach is unable to supply all the power GVEA requests. As Anchorage's electrical demand grows and some of their aging units are retired, the situation will worsen.

6. The additional generating capacity in Healy will provide emergency backup for the Anchorage area in the event of power interruptions from the Beluga plant.

7. The HCCP will increase the fuel diversification of the Railbelt power grid by using Healy coal which has a 100-year plus supply and a stable and competitive price history.

8. The new plant will conserve energy resources by burning waste coal which was previously a disposal burden and will demonstrate an innovative clean coal technology designed to significantly reduce emissions of sulfur dioxide and nitrogen oxides.

9. The successful demonstration of the HCCP technology will have national and international environmentl benefits. The new technology can be used to retrofit existing power plants at a much lower cost than to build new power plants or to rebuild major components of existing power plants. This will accelerate the process of enhancing the environmental performance of utilities.

10. The successful demonstration of the HCCP technology and its utilization by Pacific Rim utilities will expand the market for Alaska's enormous reserves of ultra-low sulfur subbitaminous coal. The technology has the potential to overcome the constraints of conventional combustion technologies and allow the use of lower energy Alaskan coal without resulting in a reduction in boiler energy output.

Please recognize and accept the reality that the social and economic benefits that Alaskans would realize from this project far outweigh the remotely possible visual environmental impact that the plant plume might have on Denali National Park under specific meteorlogical conditions.

Sincerely,

Randy Hobbs
President

Letter No. 13
Randy Hobbs, President, Hobbs Industries, Inc. 229 Whitney Road, Anchorage, AK 99501

Comments noted.

JIM CUCULLU
3370 Chaparral Circle
Anchorage, Alaska 99502

December 10, 1992

Letter No. 14

Dr. Earl W. Evans
Coordinator-HCCP
Mail Stop 9206
US Department of Energy, PETC
PO Box 10940
Pittsburgh, PA 15236

RE: Healy Clean Coal Project

Dear Dr. Evans,

As an interested 17 year Alaskan resident, I have followed the HCCP progress and would like to give you my comments on its potential impacts as I view it.

Alaska is largely dependent on oil for its economic survival, as is the U.S. In recent years, the threat of reduced oil revenues and jobs has been of great concern to most of us. If the state and the U.S. are to survive and grow in the future, we must begin to diversify our energy base and development, which includes coal, one of Alaska's most abundant natural resources.

The technology proposed in the HCCP once demonstrated and the transfered, will help us open markets in the Pacific Rim for Alaska's clean coal, as well as, U.S. manufactured equipment. This technology also promises to make efficient use of waste coals and other emerging alternative coal based fuels, such as Coal Water Fuels, thus offering a clean alternative to oil in many cases.

In addition, this project will create much needed technical training and employment for Alaskan residents, while providing a clean and stable energy supply to the northern rail belt power grid. This project will help strengthen, in my view, the United States' position as a world leader in the development of technologies to increase energy efficiency and enhance the environment by retrofitting out dated and inefficient power generation facilities with state of the art technology.

If you would like further comments regarding this project, please call or write me.

Sincerely,

Jim Cucullu
(907) 243-5685

Letter No. 14
Jim Cucullu, 3370 Chaparral Circle, Anchorage, AK 99502

Comments noted.

Letter No. 15

Reproduced from copy submitted

THE WILDERNESS SOCIETY

December 11, 1992

Dr. Earl W. Evans, Environmental Coordinator
HCCP, Mail Stop 920L
Pittsburgh Energy Technology Center
U.S. Department of Energy
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans:

The Wilderness Society would like to thank you for coming to Alaska for public hearings on the Healy Clean Coal Project. We appreciated the opportunity to discuss the project at the public hearing. We reiterate our concerns about the importance of maintaining the Class 1 Air Quality in Denali National Park and our belief that the energy alternatives should be discussed in the EIS. 15-1

We are pleased to see the Department strive toward reducing emissions from coal-fired plants, including the Healy Coal project. One question I failed to ask at the hearing is whether clean coal technology projects may be proposed for plants in Russia, particularly Far East Asia? 15-2 Most of the Arctic haze particulate that settles in the U.S. Arctic originates far beyond our borders. Additionally, is the Healy Clean Coal Project intended to boost the Alaska coal industry beyond the Healy region? For example, if this may spur development of the vast coal resources on the North Slope, we believe that this topic of cumulative habitat loss must be adequately addressed in the EIS. 15-3

Since we just received the technically complex Draft Environmental Impact Statement, we were unable to complete our review prior to the hearing. Therefore, we request an extension of 30 days for written comments. The three holidays during the present comment period have greatly inhibited our opportunity to comment. 15-4

Again, we thank your team for coming to Alaska.

Sincerely,

Pamela A. Miller
Asst. Regional Director

ALASKA REGION
430 WEST 7TH AVENUE, ANCHORAGE, AK 99501
TEL. (907) 272-9453 FAX (907) 274-4145

Letter No. 15

Pamela A. Miller, Assistant Regional Director, The Wilderness Society, Alaska Region, 430 West 7th Avenue, Anchorage, AK 99501

Comment 15-1:
"We reiterate our concerns about the importance of maintaining the Class 1 Air Quality in Denali National Park and our belief that the energy alternatives should be discussed in the EIS."

Response:
DOE shares the Wilderness Society's concern for protecting the air quality in DNPP. Air dispersion modeling that has been performed for DNPP and is presented in the EIS indicates that PSD Class I increments (standards) would not be exceeded as a result of HCCP operation. Stringent PSD Class I increments apply to areas such as DNPP where almost no deterioration of air quality is allowed. Energy alternatives outside the scope of this EIS have been discussed in Sect. 2.2. Also, see response to Comment 1-10.

Comment 15-2:
"One question I failed to ask at the hearing is whether clean coal technology projects may be proposed for plants in Russia, particularly Far East Asia? Most of the haze particulate that settles in the U.S. Arctic originates far beyond our borders."

Response:
One of the objectives of the Clean Coal Technology Program is to increase U.S. competitiveness in the international marketplace for the export of coal utilization and environmental control technologies. Foreign consumers would be attracted to proven technologies such as those demonstrated in this program (Sect. 1.3.1.3 of the Clean Coal Technology Demonstration Program Programmatic EIS). Through another program, DOE is presently involved with reducing emissions at a coal-fired power plant in Poland and will solicit other coal-retrofitting technology projects to improve efficiency and reduce emissions. Reductions of emissions in Eastern Europe may lessen the effects of particulate haze in the U.S. Arctic.

Comment 15-3:
"Is the Healy Clean Coal Project intended to boost the Alaska coal industry beyond the Healy region? For example, if this may spur development of the vast coal resources on the North Slope, we believe that this topic of cumulative habitat loss must be adequately addressed in the EIS."

Response:
The intent of the Clean Coal Technology Program is to demonstrate a number of advanced, more efficient, reliable, and environmentally responsive coal utilization and environmental control technologies. The HCCP is not intended to boost the Alaska coal industry or spur development in the North Slope. The impacts of coal mining at the Usibelli Coal Mine Poker Flats mine are discussed in Sect. 4.1.5.

Comment 15-4:
"We request an extension of 30 days for written comments. The three holidays during the present comment period have greatly inhibited our opportunity to comment."

Response:
See response to Comment 1-1.

Letter No. 16

Reproduced from copy submitted

PO Box 202045
Anchorage, AK 99520
December 11, 1992

Dr. Earl W. Evans
Environmental Coordinator
Healy Clean Coal Project
PO Box 10940, MS-920-L
Pittsburgh Energy Technology Center
Pittsburgh, PA 15236

Dear Dr. Evans,

I am writing on behalf of the National Parks and Conservation Association (NPCA), the only national nonprofit citizens organization that focuses on park concerns. Our 300,000 members nationally, including over 2,300 in Alaska, promote the public understanding, preservation and protection of our nation's national park system through diverse activities. We appreciate the opportunity to comment on the Draft Environmental Impact Statement for the Healy Clean Coal Project.

As I stated in my testimony before the panel in Anchorage last night (the 10th), we ask the the comment period be extended for at least 30 days. This proposed project is highly technical; studies and proposed modeling require close scrutiny. There are several holidays (Thanksgiving, Chanukkah, Christmas and New Year's) during the comment period. The cooperating agencies need adequate time for review and commenting. 16-1

We have several concerns about this proposed project and will be submitting substantive comments.

Thank you,

Mary Grisco
Alaska Regional Director

Letter No. 16
Mary Grisco, Alaska Regional Director, National Parks, P.O. Box 202045, Anchorage, AK 99520

Comment 16-1:
" . . . we ask the comment period be extended for at least 30 days. This proposed project is highly technical; studies and proposed modeling require close scrutiny."

Response:
See response to Comment 1-1.

James L Cloud
P.O. Box 201014
Anchorage, Ak. 99520

Letter No. 17

December 11, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Re: Healy Clean Coal Project

Dear Dr. Evans:

I am a concerned citizen of the state of Alaska residing in Anchorage, Alaska. As a banker for the past 16 years I believe I have an appreciation for the social and economic needs of Alaskans and their communities.

The Healy Clean Coal Project is an excellent choice for demonstrating new technologies for burning coal for energy requirements in a manner that greatly reduces air pollution commonly associated with coal burning utilities. The project makes sense for the long terms needs of Alaskans and will not measurably effect the nearby park lands.

Successful demonstration of the HCCP technology will have tremendous national and international environmental benefits by bringing into use a less polluting manner of meeting power requirements of people all over the world. It definitely could be a win - win project.

Undoubtedly, you will receive comments against the project from opponents claiming the project's location in the "proximity" of Denali National Park endangers the "wilderness values" of the park. These comments are perpetual and most commonly come from the same groups of individuals exhibiting an insatiable appetite for park and wilderness land. You could locate the project on the moon and it would elicit the same comments.

HCCP is a well thought out project with great implications for Alaska an the world's need for cleaner energy generation. The power generation will be a needed component to Alaska's rail belt energy supply and the National Park Service can boast it is using electricity for it's park operations generated from clean burning native coal.

Thank you for taking my comments.

Best regards,

James L. Cloud
(907) 265-2816

Letter No. 17
James L. Cloud, P.O. Box 201014, Anchorage, AK 99520

Comments noted.

Fairbanks Industrial Development Corporation

Letter No. 18

Reproduced from copy submitted

December 11, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail stop 920L
U.S. Department of Energy, PETC
Post Office Box 10940
Pittsburgh, PA 15236

SUBJECT: Written Comments - Healy Clean Coal Project (HCCP)

Dear Dr. Evans:

Given my interest and involvement in economic development for Interior Alaska, I will confine my comments to the project's economic impact and benefits as the same relate to the Draft Environmental Impact Statement (DEIS).

The DEIS properly and adequately addresses economic impacts and benefits in the immediate vicinity of Healy, Alaska - the location of the proposed project. However, I suggest that the benefits of the project extend well beyond the Healy area, specifically to support major developments planned and anticipated in the Fairbanks area.

One of these is the Fort Knox mine, a large disseminated, bulk-tonnage gold deposit, located 15 miles north of Fairbanks. This project is in the late development stage, with permit applications having been filed as well as a detailed Environmental Assessment. Construction is planned to commence in 1993, with completion scheduled for 1995. When operational, the mine will require 35 megawatts of power, 85% of the capacity of the HCCP alone. The life of the mine is expected to be a minimum of 16 years, with proven and probable reserves of some 3.2 million ounces of gold. The mine will employ 250 persons full-time, year around, with annual estimated cash flow into our community of $60-70 million. The importance of the HCCP to this development is clear.

515 Seventh Avenue, Suite 320, Fairbanks, Alaska 99701 (907) 452-2185 Fax: (907) 456-1896

In addition, I and others have been working for some time to encourage the local development of a major, large-scale forest industry. With 205 million board feet of commercial timber available annually from the Tanana Valley State Forest and adjacent State lands alone (on a sustained yield basis), and the reduction in the resource available from the Pacific Northwest, we have seen a significant increase in the interest of wood products companies in our area. Several have already made proposals which would involve substantial investments - $50 to 500 million. Within the next two years we expect to develop one or more proposals acceptable to us, and though it is premature to anticipate the power requirements for any such project, it is clear that the power needs would be substantial, even considering the possibility of a co-generation facility being included in the project.

As a consequence of these two large projects, it is a certainty that the power requirements will not only use the available output of the HCCP, but will exceed such output. Therefore, it is absolutely essential that this project be approved and go forward. I also suggest that the DEIS be amended to reflect the certain impact of the Fort Knox mine, if not also the forest industry development. 18-1

Yours very truly,

Ronald L.Ricketts
Executive Director

RLR/lpm

Letter No. 18
Ronald L. Ricketts, Executive Director, Fairbanks Industrial Development Corporation, 515 Seventh Avenue, Suite 320, Fairbanks, AK 99701

Comment 18-1:
"I also suggest that the DEIS be amended to reflect the certain impact of the Fort Knox mine, if not also the forest industry development."

Response:
The cumulative impacts section (Sect. 6) of the EIS has been expanded to include a discussion of the proposed Fort Knox Mine. The nature and intent of the comment on the effects of the proposed HCCP on development of the forest industry could not be estimated.

December 18, 1992

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Letter No. 19

RE: Healy Clean Coal Project

Dear Dr. Evans,

I support the construction at Healy, Alaska of a 50 megawatt power plant utilizing Clean Coal Technology. Energy demands in the northern Alaska Railbelt have been growing. Between 1981 and 1991, Golden Valley Electric Association's (GVEA) demand increased 38%, the number of customer services increased over 50%, and kilowatt-hour sales increased 60%. The Fort Knox mining project near Fairbanks, which could begin production in the mid-1990's, will add 30 to 35 megawatts to GVEA's peak demand. Growth of the northern Alaska Railbelt's regional economy is dependent upon construction of additional dedicated, base-load generating capacity so that reliance on interruptable, surplus power obtained from the Cook Inlet region is reduced.

The analysis of potential environmental impacts of this project shows that the plant will meet National Ambient Air Quality Standards and will easily satisfy Prevention of Significant Deterioration requirements for the stringent Class I area in adjacent Denali National Park. The main environmental objection to this plant appears to be the "visibility" issue or the fear that, under certain weather conditions, the plume from the plant will be visible from the visitor center in Denali National Park.

Computer simulation studies indicate that when both plants are operated simultaneously, plumes would be visible for only a maximum of 31 hours per year. The same model predicts that the plume from the existing plant should be visible for a maximum of 27 hours per year. However, a special camera, set up last January at the Denali NP visitor center, has yet to detect any plumes from the existing plant. Neither have there been any reported sightings of a plume from the existing plant by a human observer. Thus, the risk of these two coal-fired plants producing a plume that is visible in Denali NP appears to be very small.

The successful demonstration of the Healy Clean Coal Project (HCCP) will have national and international environmental benefits. The new technology can be retrofitted to existing plants at a very reasonable cost; thus, the reduction sulfur dioxide and nitrogen oxide emissions by electrical utilities would be accelerated.

Finally, the successful demonstration of the HCCP would expand the market for Alaska's enormous reserves of ultra-low sulfur, sub-bituminous coal. This technology has the potential to overcome the constraints of conventional combustion technology and allow the use of lower energy Alaska coal without reducing boiler energy output.

Sincerely,

John Rishel

John Rishel
1505 Atkinson Dr.
Anchorage, AK 99504

Letter No. 19
John Rishel, 1505 Atkinson Drive, Anchorage, AK 99504

Comments noted.

EARL H. BEISTLINE
Mine Consultant

P.O. Box 80148
Fairbanks, AK 99708

Telephone (907) 479-6240

Letter No. 20

Reproduced from copy submitted

December 11, 1992

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
US Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15326

Dear Dr. Evans:

Congratulations to the Department of Energy (DOE) and cooperating agencies for the extensive and encompassing topics included in the Draft Environmental Impact Statement for the Proposed Healy Clean Coal project (HCCP) (DOE/EIS-0186) November, 1992.

The following comments are offered on the HCCP Draft Environmental Statement. These are based on my being a lifelong Alaskan, Dean Emeritus, School of Mineral Engineering, University of Alaska, Fairbanks and having familiarity with the Healy area and the location of the present Golden Valley Electric Association Healy Power Plant.

Important to the State's and Nation's economy and standard of living of their residents is the development and utilization of natural energy resources in an environmentally sound manner.

The HCCP is outstanding in its concept of utilizing "waste coal" to demonstrate and test novel technologies intended for the removal of sulfur dioxide, nitrogen oxides and particulate matter using innovative combustion and flue gas cleanup technologies. This project can well result in more completely using coal resources, stimulating basic and secondary service industries thus providing jobs, producing income to the State, assuring the availability of electric power for residents and industry and with full consideration for mankind's place as part of the environment.

Accordingly, I enthusiastically and emphatically endorse the "Proposed Action" for the construction and operation of an integrated system and a new 50KW power plant as stated on page 2-1 of the EIS Healy Clean Coal project and that the new facility location be built adjacent to the existing 25-MW Healy Unit No. 1.

This project is truly a step forward and upward for the benefit of mankind. Thank you for the opportunity to comment on this important Department of Energy's "Draft Environmental Impact Statement for the Proposed Healy Clean Coal project (DOE/EIS-1086)".

Sincerely,

Earl H. Beistline

EHB/jl

Letter No. 20
Earl H. Beistline, Mine Consultant, P.O. Box 80148, Fairbanks, AK 99708

Comments noted.

Dr. Earl W. Evans
Environ Coordinator, HCCP
Box 10940, MS 920L
Pittsburgh Energy Tech Cntr.
Pittsburgh, PA 15236

5 December, '92
Box 83715
Fairbanks, Alaska
99708

Letter No. 21

Doctor Evans.

Please accept my comments for the record, re. HCCP; DOE/EIS-0186.

I reviewed the manuscript and am concerned about reduced air and quality in the Healy / Denali Park regions, as well as in a larger, more dispersed region in times when air movement is active. 21-1

Though I encourage new technologies for more efficient, less-polluting combustion of fossil fules, I must strongly object to the HCCP in this area for various reasons. Firstly, it's too close to Denali Park, a pristine monument which the country -- and the world -- looks up in its eyes as one of the most wild, intact ecosystems in subarctic regions. Secondly, the full benefits of conservation have not been fully promoted or realized by users/customers of electrical power. Thirdly, there already exists a generating facility in the area. And lastly, I feel this is yet another example of big expenditures on high technology to promote increases in usage. My feeling is that time, resources and energy should be put into methods and incentives to reduce waste and consumption of energy usage. 21-2 21-3 21-4 21-5

I disagree with statements (p. 4-75) that, "except for isolated areas of high elevation"... activities would not be visible from DNPP, and that plume and particulates "are not likely to result in major impacts" because areas in DNPP are not commonly visited. As far as I'm concerned, any decrease 21-6

in air/water quality in DNPP and it's larger boarder areas, is NOT ACCEPTABLE!

I've seen colorful promotional sweatshirts with Healy Clean Coal logo - a depiction of the new facility and Golden Valley Electrical Co-Op's name in bright gold letters, as a PR ploy. I was angered by the assumption/presumption that this project is a given; that it will occur, regardless of opposition or critical questioning. I think you should be aware of this. 21-7

Another problem I have is the assumption that population growth and corresponding increases in demand for resources (inc: electricity) is inherently good, beneficial and progressive. I question the fundamental premise behind this line of thinking. 21-8

My feeling is that regardless of public opinion, this plant will be built. Regardless of potential damage to the immediate + larger areas, this plant will be built. Regardless of GVEA and other utility company energy conservation programs, this plant will be built. This saddens and angers me deeply. 21-9

I strongly oppose construction of The Healy "Clean" Coal Plant. For the record I wanted to express my feelings to you. Thanks for your time and attention. Sincerely, John D. Lyle JOHN D. LYLE

Letter No. 21
John D. Lyle, Box 83715, Fairbanks, AK 99708

Comment 21-1:
" . . . am concerned about reduced air and quality in the Healy/Denali Park regions, as well as in a larger, more dispersed region in times when air movement is active."

Response:
The results of air dispersion modeling that DOE has performed for HCCP emissions indicate that no standards, including PSD Class I increments, would be exceeded as a result of HCCP operation. Stringent PSD Class I increments apply to areas such as DNPP where almost any deterioration of air quality is undesirable and little or no major industrial development would be allowed. Visibility impairment at the DNPP Visitor Access Center from NO_2 emissions is predicted by computer models to occur during less than 1% of the daytime hours per year. This estimate is believed to be conservative (forming an upper bound of expected impacts) because there have been no reported sightings from or within DNPP by observers or operating camera equipment of a visible plume from Unit No. 1, even though computer modeling predicts that a plume from Unit No. 1 should be visible 1 to 6 h/year. During meteorological conditions with strong winds and/or vigorous mixing, maximum concentrations within the center of the plume would be reduced from those experienced at other times. While pollutants may be carried further and dispersed more during the former conditions, the maximum ground-level concentrations would be reduced at many locations because emissions would be diluted over a larger area. In response to concerns that the emissions from Unit No. 1 and the HCCP would impact visibility at DNPP, an agreement was reached by DOI, DOE, AIDEA, and GVEA to mitigate the emissions from Unit No. 1. See response to Comment 76-1.

Comment 21-2:
"Though I encourage new technologies for more efficient, less-polluting combustion of fossil fuels, I must strongly object to the HCCP in this area for various reasons. Firstly, it's too close to Denali Park, a pristine monument which the country—and the world—holds up in its eyes as one of the most wild, intact ecosystems in subarctic regions."

Response:
See response to Comment 1-2 for alternatives. Section 2.2.2 of the EIS has been expanded to include the studies that have been performed regarding the feasibility of siting coal-fired power plants in various locations in the Alaska Railbelt.

Comment 21-3:
"Secondly, the full benefits of conservation have not been fully promoted or realized by users/customers of electrical power."

Response:
Conservation efforts are being employed around the country by many utilities; however, this does not address the goal of demonstrating the HCCP and is therefore not a

reasonable alternative to be discussed in the EIS. Conservation measures were evaluated by the APUC in the Integrated Resource Plan submitted by GVEA.

Comment 21-4:
"Thirdly, there already exists a generating facility in the area."

Response:
Section 1.4.2 of the EIS has been added to discuss the APUC's determination of the need for power. DOE independently reviewed the APUC's conclusions and found them to be reasonable. See response to Comment 76-12.

Comment 21-5:
"And lastly, I feel this is yet another example of big expenditures on high technology to promote increases in usage. My feeling is that time, resources and energy should be put into methods and incentives to reduce waste and consumption of energy usage."

Response:
Conservation was evaluated in the Integrated Resource Plan submitted to the APUC by GVEA. See response to Comment 1-10.

Comment 21-6:
"I disagree with statements (p. 4-75) that, 'except for isolated areas of high elevation' . . . activities would not be visible from DNPP, and that plume and particulates 'are not likely to result in major impacts' because areas in DNPP are not commonly visited."

Response:
Figure 4.3.1 indicates the areas within DNPP from which a 315-ft stack (the tallest physical structure) at the HCCP proposed site might be observed. Two areas are identified: an area along the boundary to the southwest of the site and another area along the boundary to the northwest of the site. Potential perception of construction activities would be limited to these two areas. Because most construction activities would occur at lower heights, these two areas form an upper bound of the locations from which construction activities might be observed. It is estimated that a plume of condensed water vapor from the HCCP stack occasionally would extend for about 3 or 4 miles downwind. This plume could be observed from the same two areas in DNPP and from adjacent areas of slightly lower elevation (because of plume rise from the stack). Because these areas are rarely visited by people in DNPP, major impacts are not expected from the perception of construction activities or the observation of the stack and its condensed water vapor plume. Under extremely cold (less than $-20°F$) and stable meteorological conditions, an ice plume from the HCCP may be visible within DNPP in the Nenana River Gorge north of the Visitor Access Center. However, visitor use of DNPP during the winter is virtually zero. Sections 4.1.1 and 4.3.1 of the EIS have been modified to incorporate this response. Section 4.3.2.3 discusses potential visibility impairment within DNPP from NO_x emissions from the HCCP, and Sect. 4.3.2.4 discusses regional haze.

Comment 21-7:
Comment pertaining to promotional sweatshirts as PR ploy. "I was angered by the assumption/presumption that this project is a given, that it will occur, regardless of opposition or critical questioning. I think you should be aware of this."

Response:
A decision has not yet been made regarding the construction and operation of the proposed HCCP. Following the final EIS, DOE will issue a Record of Decision (ROD) documenting which alternative is selected and how environmental considerations were factored into the decision.

Comment 21-8:
"Another problem I have is the assumption that population growth and corresponding increases in demand for resources (inc. electricity) is inherently good, beneficial and progressive. I question the fundamental premise behind this line of thinking."

Response:
The EIS does not state that population growth and corresponding increases in demand are good, beneficial, or progressive. To the contrary, Sects. 4.1.8, 4.2.8, 5.1, 5.2, and 5.3 indicate that population growth would have adverse impacts on the project area.

Comment 21-9:
"My feeling is that regardless of public opinion, this plant *will* be built regardless of potential damage to the immediate and larger areas, this plant *will* be built regardless of GVEA and other utility company energy conservation programs this plant *will* be built. This saddens and angers me deeply."

Response:
A decision has not yet been made regarding the funding of the construction and operation of the proposed HCCP. This will be part of the ROD which would be issued following the EIS.

Dave Lacey
P.O. Box 81765
College, AK 99708-1765

Letter No. 22

Reproduced from copy submitted

December 12, 1992

Dr. Earl W. Evans
Environmental Coordinator
HCCP

Dr. Evans,

I am writing to give further comments on the DEIS for the HCCP. As I stated at the public hearing in Fairbanks, I am concerned that there was no perspective added to the 512,000 tons/yr. of CO_2 that the HCCP will dump into the atmosphere. Something this important is given such a facile analysis. Neither you nor the APUC are considering it. I feel that a murderer is getting away on a technicality. This is the perfect crime. Everything is all wrapped up in a clean little package. There is nothing we can do about it. Alaska has lots of natural gas reserves that are much cleaner to burn now than coal. It is my understanding that natural gas generation plants are half as expensive to construct. Demand side management and conservation have never been seriously tried by GVEA as they have been able to feed at the public trough gorging on the pork. Alternatives need to be evaluated. 22-1

Tourism is a billion dollar industry in Alaska. Denali is the cornerstone of the tourism industry in Alaska. It is one of the world's great wilderness areas. We export wilderness in Alaska. It receives another facile socioeconomic analysis in the DEIS. The construction will bring impacts: more hunting, traffic, vandalism, etc. Item: more hunting means more calls for predator controls which impacts wolves which impacts tourism. Tourism is a large part image. What impression does the plume give as visitors arrive in the Denali area. The impressions that this will bring need to be studied in the EIS. Industrialization near Denali's entrance is bad enough despite what the reality of the damage is. A survey of tourists' perceptions is needed for this analysis. This a terrible example of a Stalinesque industrial policy. It is short-sighted. Some industries are being subsidized in a budget deficit creating manner causing great damage to other industries and to the economic health of the country in general. We have to begin to treat Alaska as something other than a large construction camp. 22-2 22-3 22-4

Heavy metal pollution in the Nenana River eventually reaches the Tanana River, an important subsistence and commercial fishery. These impacts have been glossed over and need to be examined in detail in the EIS. 22-5

Thank you for this opportunity to give my opinions.

In service,

Visitor industry brightens economy

GUEST OPINION

Cliff Rousell

Economists predict the visitor industry will be the largest worldwide industry by the turn of the century—just eight years away. Tourism is already our second-largest private sector industry here in Fairbanks; we are in a prime position to ride the wave to create an economically healthy future for Fairbanks. This is a future based on a truly renewable resource—the visitor.

Last year these splendid renewable resources, whether they arrived in the family station wagon or through a deluxe tour package, poured over $37 million into the Fairbanks economy for tours, transportation, lodging, souvenirs, food, beverages, and other direct personal expenses. Our Interior visitor industry members reported making a $79 million investment in the Interior region during 1990, and they have made additional investments in property and operating equipment totaling over $25 million in the last two years.

Over 2,000 full-time jobs are created directly by tourism in Fairbanks. Of course, this number swells during the summer months, still our prime tourist season. The Golden Heart is annually transfused with a payroll in the $34 million range.

The staff and board members of the Fairbanks Convention and Visitors Bureau have been working hard during the past year to continue to improve this economic picture. The goals of the FCVB have been reexamined and new overall goal developed by our nine-member visitory industry-based board. This goal states that the FCVB will be "an organization which contributes to the economic well-being of the Fairbanks community by focusing its efforts on marketing Fairbanks to potential visitors."

It became plain that our vision for Fairbanks had to be one of a community which fosters the visitor industry by supporting the development of that industry year-round, and a community whose businesses provide a quality visitor experience. That may seem like chicken or egg stuff, but it has proven to be crucial to all our future planning.

Like all planning efforts, current business must go on while planting seeds for the future. Dropping the ball for even a year erodes our ability to capture as much of the market share as we can from other big picture marketing efforts, like those done by the Alaska Division of Tourism and the Alaska Tourism Marketing Council. Each year we face stiff competition to increase our marketing share in Alaska for those visitors attracted by cooperative efforts. It is our job to put the Fairbanks stamp on all Alaska destination marketing. I believe that our 15 percent increase in FCVB memberships from last year is strong evidence that our industry is realizing the importance of joint marketing efforts.

The 1992 year was great for tourism in Fairbanks. We experienced an 18 percent increase in visitors to the downtown Log Cabin Information Center. Inquiries generated from FCVB marketing efforts have already broken last year's record high—up 8 percent by August. The FCVB provided services for 66 meetings and conventions which accounted for almost 8,000 visitors. New conventions sold by FCVB staff this year reach far into 1995, giving us a solid base for on-going convention sales. Significant increases in the independent travel market and a growing, vital winter season show the success of our focused marketing efforts.

Activities by the FCVB generated articles in over 40 different newspapers and magazines across the country and the world by June 1992. We reached other markets by advertising in over 30 publications and attending trade shows where representatives of Fairbanks talked to hundreds of thousands of people. The FCVB made 431 sales calls, 32 sales presentations, and eight formal bid presentations on behalf of Destination Fairbanks. Hotel/motel receipts have grown every year since 1987, and are already up 8 percent from 1991. This can be tied directly to joint efforts with the FCVB.

Seemingly simple things, like the remodeling of the downtown Log Cabin, and a stunning 89 percent increase in volunteer time donated to the FCVB all point to the increasing pride Fairbanks is taking in developing the visitor industry. We are literally hosts to the world.

We cannot afford to stop or slow down the process at this point. Momentum is vital if we are to continue to create a visitors' industry that will provide ever-growing benefits into Fairbanks' next century. The FCVB board of directors and I are excited about our future plans and look forward to sharing them throughout the community. The Interior can and with community support will become the world-famous destination its people and attractions deserve.

Cliff Rousell is executive director of the Fairbanks Convention and Visitors Bureau.

1992 ALASKA VISITORS ASSOCIATION FACT SHEET

The visitor business is Alaska's #1 growth industry.

Specifically, the visitor industry:

- Has the highest percentage of Alaska resident hire of all basic industry sectors, an **84% local Alaska hire;**
- Is the second largest private sector employer in Alaska surpassed only by the seafood industry. The industry employs **18,800** during the peak season and **13,500** people year-round;
- Affects the employment of more than **52,000** other people in the transportation, retail or service sectors. And, would most likely account for another 8,000 primary jobs if travel by Alaskans within Alaska had been calculated;
- Employs the most people in Southcentral (**7,256** jobs with a peak season total of 9,578). Southeast accounts for the second highest employment (**2,598** with a peak season total of **3,949**) and the Interior/Far North employment ranks third (**2,038** jobs with **2,975** during peak season);
- Generates **$244 million in annual payroll** (based on 1990 employment data);
- Generates **$1.1 billion in revenues** and spends an estimated **$590 million** on inventory, advertising, marketing and labor. An additional $260 million is paid out in taxes and other business-related expenses;
- Spends the most in **Southcentral** ($168 million in 1990), second highest amount in **Southeast** $56 million), third highest in **Interior/Far North** ($52 million) and $9 million in **Southwest** Alaska; and,
- Invests heavily in Alaska. Investments in Alaska are estimated to be **$448 million** in property and operating equipment. The industry investment in Alaska is expected to top half a billion dollars within the next few years.

Tourism brings $1.1 billion in revenues to Alaska.

Between 1989 and 1990, businesses generated $1.1 billion in revenues. Of this, approximately $822 million represented business spending, with the remaining $260 million going for taxes, payment to capital, and profits to business owners.

The total investment in Alaska's visitor industry is estimated at $448 million, not including an estimated $2 billion or more in cruiseship investments.

Tourism is a statewide industry.

In all of Alaska's regional economies, the tourism industry is a leading industry in the private sector. In the Southcentral and Interior/North regions, it ranks second, and in Southeast it ranks third. It is a growing factor in the Southwest and Arctic Alaska economy.

As the fastest growing industry in Alaska, tourism's future promise is a long-range economic force offering year-round employment to thousands of residents.

Fairbanks

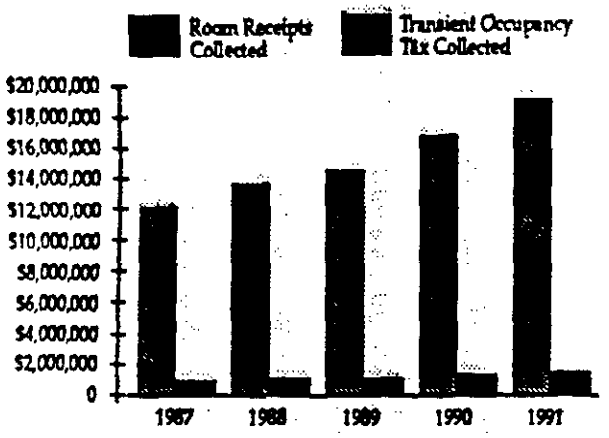
VISITOR PROFILE

FAIRBANKS CONVENTION & VISITORS BUREAU

Compiled by Dana Brockway & Associates

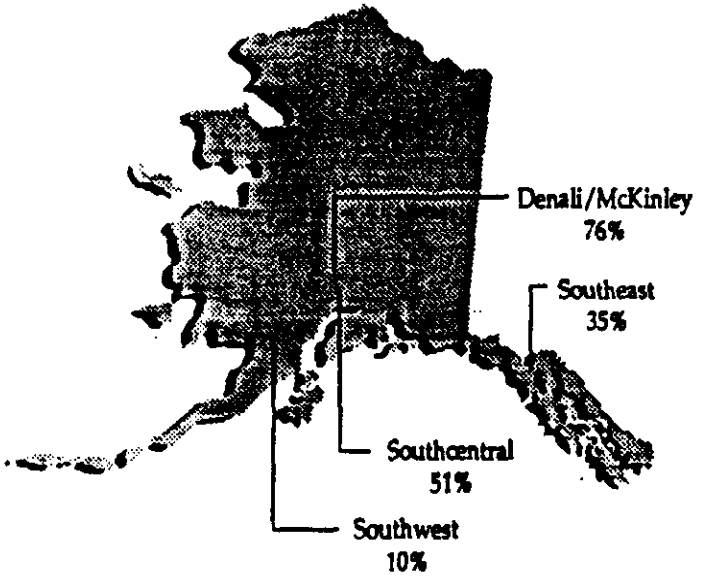
Tourism and Spending Are Growing

Hotel/Motel room receipts have grown every year since 1987. These receipts leverage an 8% transient occupancy tax, 70% of which funds the Fairbanks Convention & Visitors Bureau. A table appears below:

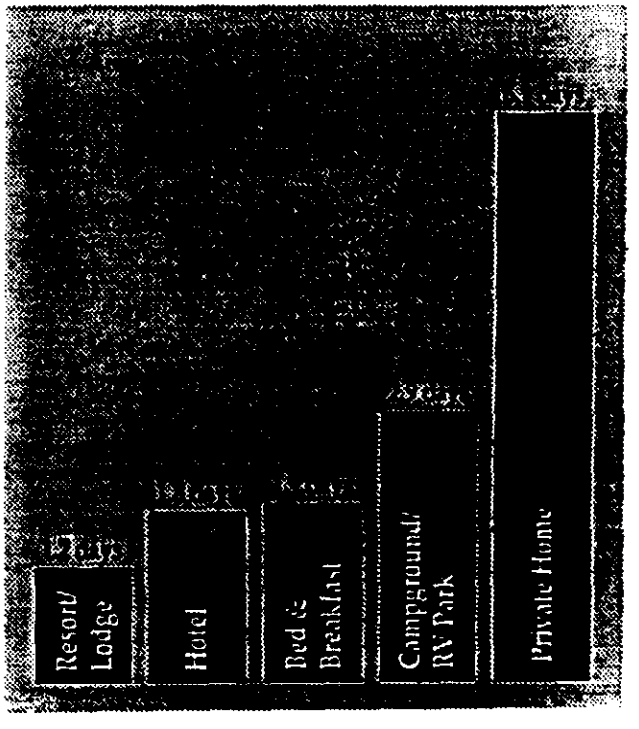


These are the top seven visitor attractions in the Fairbanks area.

Visitors to Fairbanks also visit other regions in Alaska during Summer.



Visitors to Fairbanks stay different lengths of time according to where they stay.



INTRODUCTION

Air pollution is increasing worldwide as a result of increasing population and increasing use of technology. These two factors have also brought about the continual striving for economic growth and the resulting land use pressures that have left most of the world developed and polluted. A few areas remain that are fairly untrammeled by man. More and more countries are seeking to preserve some of these areas in their pristine state as national treasures. The air quality in these areas is also an important part of these resources and needs to be maintained in its pristine condition also. This is a challenge as air pollutants are known to travel great distances and invade the air regions of remote areas. Man's efforts to prevent degradation of these areas are of paramount importance. All exposures of man and other living things to air pollution almost certainly involve some degree of biological risk. Survival of the species is at stake.

The concern for wilderness areas has arisen in the twentieth century out of an awareness by more and more people of the necessity to preserve some of the landscape in an undeveloped, pristine state. This concern of people reflects the spiritual, scientific, esoteric, material, aesthetic, recreational, natural and supportive values that wilderness embodies. Wilderness is the most natural ecosystem of the biosphere that supports life. It deserves equality with man on the planet.

In the United States, formal attempts at preserving wilderness probably began with the setting aside of Yellowstone Park in 1872 and continued through the Wilderness Act of 1964 and the Eastern Wilderness Preservation Act of 1974. Along the way, people like H.D. Thoreau, John Muir, and Teddy Roosevelt gave great impetus to the movement. The Antiquities Act and the BLM Organic Act are other ways in which wilderness may be formally designated. Also biosphere reserves have been established worldwide as part of the Man and the Biosphere Program of UNESCO. There are 33 Biosphere Reserves in the U.S. Part of their purpose is to aid in international cooperative effort in pollutant monitoring. This is being done to identify present baseline contaminent concentrations.[13] Of course the air in those regions unlike watersheds, is not definable in that the air cannot be completely isolated from adjacent regions or basins. Winds obviously don't observe political and geographic boundaries.

As part of the growing awareness of the effects of pollutants on health and on the environment, public clamor caused Congress to try to regulate the polluting of the air. This came about slowly in the 1960's with a series of clean air acts and amendments which dealt mostly with the health aspects of air pollution. These were culminated with the Clean Air Act Amendments passed in 1970, establishing ambient standards for major pollutants. According to regulations that followed, States were to classify clean air areas into three classes. Class III air was to be allowed to degrade to Federal ambient standards, while Class II air was to be allowed to degrade moderately and, Class I air was to be allowed no change from its status then. Non-deterioration was implied in the amendments of 1970. At the time, eighty percent of the country had air superior to minimum Federal health standards. These regulations seemed subservient to energy interests who could escape pollution control costs by moving to these clean air areas and fouling the air to the levels of the national standards. Industry and the Sierra Club sued to put these regulations aside and the administration stalled to exempt huge energy complexes in the West. This was resolved after a bloody fight with the passage of the Clean Air Act Amendments of 1977. This legislation included air as a national resource and sought to prevent significant deterioration and restore visibility in Class I areas. This is where wilderness air quality comes into the picture. Section 160 states, "purposes:

to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value." Section 162 reads, "upon the enactment of this part, all national wilderness areas which exceed 5,000 acres in size...which are in existence on the date of the enactment of the Clean Air Act Amendment of 1977 shall be Class I areas and may not be redesignated." Finally, Section 164 states, "the following areas may be redesignated only as Class I or II: an area which exceeds 10,000 acres in size and is a national monument, national primitive area, national preserve, national recreation area, national wild and scenic river, national wildlife refuge, national lakeshore or seashore, and a national park or national wilderness area established after the date of the enactment of this act which exceeds 10,000 acres in size."

These pieces of legislation were a step towards the goal of reducing air pollution. The provisions require that any new pollution source must install the best available control techniques for reducing air pollution emissions. Any new sources in polluted areas must make trade-offs with other sources in that area to insure that the air quality doesn't deteriorate. Its cheaper to prevent pollution than clean it up afterwards. The Prevention of Significant Deterioration Program not only serves to protect the wilderness ecosystem but also provides economic benefits to areas and industries

dependent on clean air and tourism. This program will also affect energy policy as Western States, where many Class I areas are, were becoming energy colonies for California and now the East Coast.

This law provides for a complicated waiver procedure for locating facilities near Class I areas---which eventually ends up on the President's desk.[3] The Clean Air Act doesn't deal with micropollutants or carcinogens nor are upper atmosphere problems (Greenhouse Effect, etc.) dealt with. SO_2 and particulate standards are the only ones established as far as preventing significant deterioration in Class I areas. (See table 1.) Unfortunately, there is a lack of knowledge of the chronic effects, synergistic effects; and threshold levels of air pollutants. Threshold levels are ambient concentrations below which it is assumed that no damage occurs to health. These, minus a margin of safety, became primary standards; thus at best wilderness seems to be in a precarious position as to air pollution effects.

One of the main tenants of the concept of wilderness is the preservation of the ecosystem in pristine condition. Air pollution is one of the leading accumulators of various toxic substances in the biosphere that is leading to complex changes in the structures and function of natural ecosystems. Air pollution can be considered a stress on the ecosystem like other natural or man caused stresses. This stress causes changes that are complex yet they follow in aggregate patterns that

are similar in many different ecosystems and are thusly predictable for wilderness. The patterns involve many changes: simplification of the structure of plant and animal communities, shifts in the ratio of gross primary production to respiration, and loss of part or all of the nutrient pool of the ecosystem. This pattern of changes in terrestrial plant communities follows the same in animal communities, but it isn't as obvious.[15] The ecological effects of air pollution correspond to the general "strategy of ecosystem development" from a successional viewpoint.[15] Pollutants that have a mutagenic effect impact man more than the rest of the ecosystem because they can be selected against much more quickly there. The ecosystem is affected more by pollutants that are chronic and cumulative in the long run.

The effects of chronic irradiation of a late successional oak-pine forest were studied by Woodwell for 7 years.[15] The stress was extreme but it was of use because the causal effects of stress (pollution) could be quantified at the ecosystem level, which is difficult to do, plus this has application to other forms of pollutant stress as the changes brought about follow other patterns from other types of pollution where the data are spotty. After 6 months' exposure to chronic irradiation from a ^{137}Cs source, five zones of modification emerged and became more established for the rest of the experiment. The zones were: (1) a central devastated zone, where exposures were >200 R/day and no higher plants survived, although certain mosses and lichens survived up to exposures

>1000 R/day; (2) a sedge zone, where one species survived and ultimately formed a continuous cover (>150 R/day); (3) a shrub zone in which 3 species survived (>40 R/day); (4) an oak zone, the pine was eliminated (>16 R/day); (5) oak-pine forest, (<2 R/day) where there was no change in the number of species, although small changes in rates of growth were measured at 1 R/day. These changes follow stress patterns in the ecosystem caused by exposure on mountains, salt spray, and water supply. Along these gradients is a comparable reduction in structure from forest to low-growing plants. This has to do with the effect the stress has on the plant's photosynthetic capacity which is reduced. A more complex plant with a larger "investment" in structure has a higher respiration rate and as the photosynthetic capacity is reduced by stress it enters into a negative energy balance as respiration stays the same. This can ultimately result in death or at least some form of impairment.

This simplication of the plant community and the resulting reduction of total standing organic matter and nutrient inventory has long-term effects on the ecosystem's life sustaining capacity. The experiment at Hubbard Brook Forest by Bormann,[15] where he destroyed the vegetation and observed the nutrient loss due to run-off and the resulting eutrophication of the streams, demonstrated this also. Animals are affected due to changes in size, rate of energy fixation, and species of the plant community. Animals depend upon plants for many things besides nutrients and energy. The most sensitive and affected species are the highly specialized ones such as the

obligate carnivore that is high in the trophic structure. The food chain concentrates toxins and the structure beneath these species is unstable. The generalist plant and animal species are favored such as "seral" plants, and gulls, rats, ravens, pigeons, etc.

This important study by Woodwell is shored up by evidence from other studies monitoring the effects of air pollution stress on the ecosystem. Obviously, our wilderness preservation is futile if air pollution kills the most sensitive members of the ecosystem.[7] We are aware of the fact that pollution operates on the time scale of succession and not evolution. We now get away from diversity in plants, birds, and fish in the ecosystem towards monotony. Stability is giving way to instability with regard to population sizes of small, rapidly reproducing organisms that compete with man. The world can no longer run itself but needs constant adjustments by man that just compound further adjustments needed. The wilderness in the world won't be with us much longer if this accelerating trend isn't reversed.

Designating wilderness in remote regions won't help. Studies and observations from all over the planet tell us that air pollutants are transferred from the major source areas to remote regions. Through the use of emission data, atmospheric dispersion models, and wind trajectories, we can determine the movement of pollutants. Acid rain, one of the most insidious of the air pollutants, has been monitored in remote areas of

Norway far from its origins in the industrial complexes of Central Europe. A recent study from California indicates that Yellow Pine and mixed conifer forests are impacted to elevations up to 3100 meters from sources 120 kilometers away.[14] We know little about the biological effects of organic micropollutants distributed over large areas by long range aerial transport. These are no doubt present in the wilderness ecosystem also. An ERDA sponsored DaVinci II balloon followed a stream of NO_x and SO_x pollutants beneath an inversion layer from St. Louis to western Indiana.[6] There was little improvement in the quality of air over that route.

It is hard to quantify wilderness damage in economic terms in order to do any benefit cost analysis. There are some estimates that, in the West, tourism is an eight billion - dollar business.[1] A Department of the Interior study on the Kaiparowits project in Utah-Arizona said development would reduce visitors by 1.5%. Extrapolating this to the whole West, if the air quality was severely damaged, could result in losses of 100 million dollars yearly easily.

CONCLUSION

The one evidence of man, that the moon-orbiting astronauts saw from space, was the plume from the four corners coal-fired power generating plant. This is near many valuable wilderness areas. The energy crisis is bringing new demands on the coal, uranium, and oil shale that is in the West where many of our wilderness areas are; that now we are even legally bound to protect from air pollution. Obviously, the profit has to be removed from pollution or we are in danger of losing some of our biggest and most spectacular living things that exist at the top of our wilderness ecosystems. Evidence shows that they will be the first to go. Species such as the redwood, sequoia, sahuaro cactus, grizzley bear, eagle, etc., will be lost forever. How could future generations forgive us when countries like Germany enjoy our same standard of living yet at one half of our per capita energy consumption? This energy consumption, firing the affluent use of technology, is endangering our wilderness most of all. If, as Dylan said in the 60's that "a hard rain is gonna fall," how much further behind the wilderness's demise will be man's?

Letter No. 22
Dave Lacey, P.O. Box 81766, College, AK 99708-1765

Comment 22-1:
"I am concerned that there was no perspective added to the 512,000 tons/yr of CO_2 that the HCCP will dump into the atmosphere. Something this important is given such a facile analysis. Neither you nor the APUC are considering it. I feel that a murderer is getting away on a technicality. This is the perfect crime. Everything is all wrapped up in a clean little package. There is nothing we can do about it. Alaska has lots of natural gas reserves that are much cleaner to burn now than coal. It is my understanding that natural gas generation plants are half as expensive to construct. Demand side management and conservation have never been seriously tried by GVEA as they have been able to feed at the public trough gorging on the pork. Alternatives need to be evaluated."

Response:
See response to Comment 1-6 for a discussion on CO_2 emissions. Also see response to Comment 76-12 for a discussion of the need for power, and response to Comment 1-10 for a discussion about alternative energy sources (including conservation and demand-side management).

Comment 22-2:
"We export wilderness in Alaska. It receives another facile socioeconomic analysis in the DEIS. The construction will bring impacts; more hunting, traffic, vandalism, etc. Item: more hunting means more calls for predator controls which impacts wolves which impacts tourism."

Response:
The EIS discusses potential increases in traffic in Sect. 4.1.8.5. There is no clear relationship between increased hunting and impacts to tourism, and such an analysis is beyond the scope of the EIS.

Comment 22-3:
"Tourism is a large part image. What impression does the plume give as visitors arrive in the Denali area. The impressions that this will bring need to be studied in the EIS."

Response:
The EIS discusses potential aesthetic and visibility impairment impacts to DNPP in Sects. 4.3.1 and 4.3.2, respectively. It would be highly unlikely that plumes from the HCCP would have an impact on tourism.

Comment 22-4:
"Industrialization near Denali's entrance is bad enough despite what the reality of the damage is. A survey of tourists' perceptions is needed for this analysis. This [is] a terrible example of a Stalinesque industrial policy. It is short-sighted. Some industries are being subsidized in a budget deficit creating manner causing great damage to other industries

and to the economic health of the country in general. We have to begin to treat Alaska as something other than a large construction camp."

Response:
The EIS discusses potential impacts to tourism in Sects. 4.1.1, 4.1.2, and 4.1.8.6.

Comment 22-5:
"Heavy metal pollution in the Nenana River eventually reaches the Tanana River, an important subsistence and commercial fishery. These impacts have been glossed over and need to be examined in detail in the EIS."

Response:
All HCCP discharges entering the Nenana River, both during construction and operation, would be regulated by the U.S. Environmental Protection Agency (EPA) under a National Pollutant Discharge Elimination System (NPDES) permit (see Table 7.2.1 of the EIS). Operation could not proceed until the issuance of the NPDES permit, and all noncompliances would be reported to EPA. Heavy metal concentrations that would occur in the Tanana River downstream from the HCCP would be less than the NPDES-permitted levels because of the dilution that would occur between the HCCP outfall(s) and the confluence of the Nenana and Tanana rivers.

As shown in Sects. 4.1.3.2 and 4.1.5.2, pollutants generated by the proposed project (including heavy metals) would have little or no effect on water quality and aquatic communities of the Nenana River. Hence, no adverse effects on the Tanana River or its fishery are expected.

DENALI BOROUGH SCHOOL DISTRICT

Letter No. 23

Reproduced from copy submitted

December 14, 1992

Dr. Earl W. Evans, Environmental Coordinator
Healy Clean Coal Project
Mail Stop 9201
Pittsburg Energy Technology Center
U.S. Department of Energy
PO Box 10940
Pittsburg, PA 15238

Dear Dr. Evans:

RE: Draft Environmental Impact Statement, Healy Clean Coal Project

I have had an opportunity to review the draft Environmental Impact Statement for the Healy Clean Coal Project and I would like to address specifically some of the information regarding the school in Healy and the Denali Borough School District (formerly the Railbelt School District).

It appears that most of your information on the community and socio-economics is fairly current, except in the case of the schools you use enrollment figures from October, 1990. Table 3.8.6 (page 3-48) would be more accurate using October, 1992 statistics. I have reconstructed the table as follows: 23-1

School	*1992-93 Enrollment*	*Building Capacity*	*Teachers/Aides*	*Projected 1995-96 Enrollment*
Anderson	118	160	9/2	135
Cantwell	29	60	3/1	33
Healy (Tri-Valley)	217	165	16/2	285
Correspondence	2			
Totals	366			453

P.O. Box 280 • Healy, Alaska • 99743•(907) 683-2278 • FAX (907) 683-2514
John Novak, Superintendent

When comparing the figures in the draft EIS, you should be able to see the numbers we are using are significantly different from what you have. We have begun the planning process for construction of a $8.625 million addition and remodel project at Tri-Valley School to mitigate both current overcrowding and to accommodate future projected growth.

Also on page 3-48 of the draft EIS, there appears to be some serious misinformation regarding the financial impact of the school district on the Denali Borough. The Borough is NOT required to contribute 35% of the prior year's cost of education. The Alaska Foundation Funding program for schools requires that the Borough contribute a minimum of 4 mils of its assessed property valuation. In the case of a newly formed borough school district, this will be phased in. For the Denali Borough School District, the Borough will be required to contribute the equivalent of 2 mils in 1994-95, 3 mils in 1995-96, and 4 mils in 1996-97 and beyond. The current assessed property valuation in the borough, as certified by the Alaska State Assessor, is $72,572,400. A 1 mil equivalent would be $72,572. While it can reasonably be expected this valuation will gradually increase, the current figure provides a good approximation for projecting future Borough contributions to the school district operating fund. Even at 450 students (projected for the 1995-96 school year), the Borough's contribution will be $217,716 (3 mils), or $484 per student. Contrary to the statement in the draft EIS, the Borough will <u>not</u> be <u>required</u> to make any contribution in 1993-94. The Borough can choose to provide additional support beyond the requirement, and boroughs in Alaska typically do contribute substantially beyond the minimal requirement. 23-2

On page 4-51 of the draft EIS, we again would like to correct some of the information. With the Healy Clean Coal Project, we are anticipating 306 students at Tri-Valley School during the 1996-97 school year. Assuming that approximately 22 of those are related to the demonstration project (your figures), then the enrollment projection without the project would be estimated at 284. The ten-year average school enrollment growth has been approximately 7.5% and has, in the past two years, seriously exceeded that rate.

Also on page 4-51, the financial impact is again misstated. In FY-97, the Denali Borough will be required to contribute the equivalent of 4 mils ($290,288 at the current assessed valuation) If the school district enrollment is 453 as projected, the per pupil contribution will be approximately $641. The greatest financial impact will result from the fact that the state's contribution will increase dramatically as student enrollment grows. Using the 1992-93 state funding levels (which can certainly be expected to rise over the next four years), Tri-Valley's projected enrollment increase would result in an additional $428,196 in state revenue to the school district in 1996-97. The total state revenue to the school district would of course, be offset by the Borough's $290,288 4 mil contribution. The Borough's contribution is not affected by the enrollment growth - only changes in the assessed valuation of property in the borough. These are really rough estimates, as the formula takes in additional factors, such as special education enrollments, vocational enrollments, etc.

I hope that this information will be helpful when you are finalizing the Environmental Impact Statement for the Healy Clean Coal Project. Please feel free to contact me if you have questions or concerns.

Sincerely yours,

John Novak

John Novak, Superintendent

cc: Mayor Rick Brewer, Denali Borough

Letter No. 23
John Novak, Superintendent, Denali Borough School District, P.O. Box 280, Healy, AK 99743

Information/data offered for use in the FEIS.

Maskell-Robbins
INCORPORATED

Letter No. 24

Reproduced from copy submitted

December 14, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Re. Healy Clean Coal Project.

Dear Sir;

The above referenced project has many positive aspects to the people and economy of Alaska. The beneficial effects will be felt far from the local area and it is assumed it will demonstrate the viability of Clean Coal to literally the whole world.

The state of Alaska must develop its basic industries (in environmentally acceptable ways) to support other growth industries important to the Alaskan economy and standard of living. We can't all work for the Park Service or in the tourist trade. The development of additional clean sources of energy will help create jobs and stability in the local economies.

Objections to the project seem to center around the possibility of a "plume" from the plant occurring only during certain rare meteorological conditions and being visible from the visitors center at Denali National Park. The obvious thought that comes to mind is 'how many visitors are there in the winter' and 'will the "plume" be visible only at times of extreme cold when the number of visitor days is very low'? Another question to consider would be 'how many visitors might be offended or adversely affected by the "plume" versus how many people (local or otherwise) will benefit?

I hope you will agree with my assessment of the facts and support this project.

Sincerely yours,

Ben Barclay, P.E.

CORPORATE OFFICE: 24113 56th AVENUE W., MOUNTLAKE TERRACE, WA 98043-5503 (206) 775-8600 FAX #(206) 775-3458 1-800-624-HDPE
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2120 S. GRAND, SANTA ANA, CA 92705 • 3435 E. PENNSYLVANIA ST., TUCSON, AZ 85714 • 1125 MEREDITH WAY, SPARKS, NV 89431

Letter No. 24
Ben Barclay, P.E., Maskell-Robbins, Inc., 524 W. International Airport Road #200, Anchorage, AK 99520

Comments noted.

Letter No. 25

Reproduced from copy submitted

December 15, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA., 15236

Re: Healy Clean Coal Project.

Dear Dr. Evans:

I support the Healy Clean Coal Project for the following reasons:

1. The State of Alaska, through matching funds and legislative support, has participated in the HCCP Project because of it's importance to Alaska's economy. The availability of clean and competitively priced power is fundemental to the expansion and diversification of our state's economic base.
2. Construction of the plant will create about 200 jobs. Another 35 permanent jobs will be created to operate and maintain the plant.
3. The additional generating capacity provided by this plant will provide emergency backup for the Anchorage area in the event of power interruptions from the Beluga Plant.

Sincerely,

Eugene R. Rutland

Eugene R. Rutland
1066 Badger Road
North Pole, Alaska 99705

Letter No. 25
Eugene R. Rutland, 1066 Badger Road, North Pole, AK 99765

Comments noted.

Letter No. 26

Reproduced from copy submitted

Dr. Richard C. Swainbank
PO BOX 81315
Fairbanks, AK 99708

December 15, 1992

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
PO BOX 10940
Pittsburgh, PA 15236

RE: Healy Clean Coal Project Draft Environmental Impact Statement

Dear Dr. Evans:

In 1981, the Council on Environmental Quality (CEQ) said, "even large complex energy projects would require only about 12 months for the completion of the entire EIS process." (Federal Register V46 No.55 p.18037). As projects go, the Healy Clean Coal Project (HCCP) is small, and should therefore require much less than 12 months if the CEQ was not trying to minimize the economic impact of the EIS process.

To my personal knowledge, the existing power plant at Healy has had no effect on the air quality of the National Park, and the proposed plant using the most modern and sophisticated technology will have even less. Disregarding the "Not In My Back Yard" Syndrome, clean coal technology could have an enormous effect in countries such as China, India and the former USSR, where coal is burned in almost medieval plants, and where coal will continue to be a staple of their energy sources for decades to come.

New or retrofitted generating plants in these coal-dependent areas could apply the Healy technology to improve the air quality both locally and globally. In those Pacific Rim countries which import coal, Alaskan coal could become competitive in plants designed specifically for its use.

Concerns that the Healy Clean Coal Project will significantly increase the amount of CO_2 and thus lead to global warming are nonsensical at best, particularly when the CO_2 derived from burning coal is compared to the vastly greater amount derived from natural sources such as forest fires or volcanic action.

Concerns that interior Alaska has sufficient power ignore the many interruptions of the intertie, and omit the need for the interior to progress from a seasonal economy based or low-wage services and tourism to a stable, year-round economy based on industry and manufacturing, with the attendant well-paid secure jobs.

In short, I favor the HCCP and find very persuasive the argument for building adjacent to the existing generating plant from the point of view of both the limitation of disturbance and the operational efficiency.

Sincerely,

Richard C. Swainbank

Richard C. Swainbank

Letter No. 26
Dr. Richard C. Swainbank, P.O. Box 81315, Fairbanks, AK 99708

Comments noted.

Gary C. Newman
Alaska Federation for
Community Self-Reliance
1083 Esro Road
Fairbanks, Alaska 99712
(907) 488-2001

Letter No. 27

Reproduced from copy submitted

December 16, 1992

Dr. Earl Evans, Environmental Coordinator
HCCP Mail Stop 920L
Pittsburg Energy Technology Center
U.S. Department of Energy
P.O. Box 10940
Pittsburgh, PA. 15236
(412) 892-5709

Dear Dr. Evans,

Attached for the record are my written comments regarding the EIS of the experimental coal project in Healy, Alaska.

Thank you for the opportunity to address my concerns on this project in person in Fairbanks and also in writing.

Sincerely,

Gary C. Newman
President

U.S. Department of Energy
Healy Clean Coal Project

Draft Environmental Impact Statement

Testimony of Gary C. Newman, President

Alaska Federation for Community Self-Reliance

December 9, 1992

The U.S Department of Energy's Environmental Impact Statement on the proposed experimental coal project in Healy is a detailed document with wonderful color photos. Two years in the making, it covers a lot of ground, but has some areas that invite comment.

I. THE SCENARIOS

The EIS looked at only three scenarios - build in the currently proposed location, build in another location up the valley a few miles, and no-build. It failed to examine other alternatives to no-build which might have a lesser impact for the Healy area (2-30). Specifically, it did not analyze the option of wind power in Healy, a well-recognized resource in the area and something which has not been done to date by any of the parties involved in this project. In fact, the EIS does comment on the wind resource at the site in the draft EIS page 3-19, but overlooks it as a resource. The draft EIS discounts any further alternatives (2- 30). Since, amongst its many charges, DOE is charged with promoting cleaner methods of providing electricity, not just implementing coal technology, this should have been investigated. 27-1

Since the experimental technology of this project is designed primarily for retrofit applications (1-1), it is curious that none of the participants nor the draft EIS investigates re- powering the existing Healy 1 plant. Such a change would have saved tens of millions, if not in excess of a hundred million dollars of government expenditure, no small change. 27-2

Also, the scenario of a conventional plant, should the experimental technology fail, was addressed (5-10 etc.), and indicates that any further mitigation from the degradation over a successful experimental combustion technology isn't likely. I don't understand the statement that emissions were estimated to be the same as a no build scenario (5-8). 27-3

I might reinforce that the consideration of retrofitting better technology onto Healy 1 (referred to as Unit 1 in the draft EIS) is a moot point. GVEA, as the owner of Healy 1, has stated that contributing more than 20% of the cost 27-4

for construction of the Experimental Coal Plant is not cost effective and was unwilling to pay for more than roughly 20% of the cost of experimental plant. If the technology fails and the experimental plant is retrofitted, there will be no further mitigation by the project participants. I'd surmise it would be pulling teeth to get the technology providers to retrofit the plant anyway.

II. SOCIO-ECONOMIC IMPACTS

The EIS correctly points out that there will be a cost to local/state government from the influx of temporary construction, as it will exceed the capacity of the schools and other services, but fails to quantify that cost to assist in balancing out the difference gained in the tax base, what little that is, plus the resulting bust, once construction is complete. One can't nearly double the population of a community (4-38, 4-41) for a year or two and not create a major impact on infrastructure or lack thereof. To make a valid comparison of trade-offs, a more comprehensive approach toward a cost-benefit analysis which would quantify and address mitigating anticipated impacts should have been performed. I have attempted to generate such information from what was provided in the draft EIS, but the data is scattered and incomplete. 27-5

For example, the draft EIS states that the waste generated by the increase in population will cause the borough landfill to become obsolete some years earlier. The EIS doesn't quantify the cost of a new landfill which is quite costly even with current environmental concerns and requirements, but merely implies that that a new landfill should not be a problem because there is ample space for that purpose. 27-6

If DOE asserts that it is not the place of the EIS to address such mitigation, I would note that the proposed construction camp, with accompanying minor medical and security, was mentioned a number of times as mitigating certain impacts. There are entire sections dealing with mitigation. 27-7

I believe the construction camp is a reasonable step in the right direction toward mitigation. I would like to suggest, as further mitigation, that the camp be heated by the warm effluent that is normally discharged into the Nenana River from Healy 1, thus reducing ice fog and other carbon based pollutants from heating such a large camp, an issue that I did not find addressed by the draft EIS. Temporary (or permanent) construction camps are noted for their lack of arctic design and construction. Their negative impact is long lasting, even once the camp is sold off after construction is complete. Check out the camps in Prudhoe Bay and the remains of TAPS construction camps which have degraded the housing stock all over the state. Assuming the typical lack of arctic design, I'd like to see them removed from the state following construction. 27-8 27-9

The draft EIS notes that there is no police protection in Healy, a serious lack

for a boom community. The addition of security on the plant site doesn't address the communities need for protection, since the police protection would typically be needed in the community of Healy, not on site. I don't believe the construction camp residents are going to be prohibited from "going to town". 27-10

The draft EIS estimates certain amounts of State of Alaska funding that would become available from an increase in population. However, by the time school enrollment for an influx of plant construction crew children could be certified, it would likely be too late or little to construct additional needed educational facilities. The same would hold true with per capita State of Alaska revenues that are based upon population. 27-11

Also, since there will be no increase in coal usage until completion of the plant, no additional borough income from severance tax will be generated until after the fact. The borough will also not be able to collect severance tax on coal that is imported from the Lower 48 for the first demonstration year of the plant. I would question the amount of local coal used for the demonstration year. 27-12

The impact to residents across the Nenana River in Healy was discussed, particularly from the warm effluent keeping the Nenana River open longer and preventing those folks from using the ice bridge to transport large items to their homes. To analyze the cost to Ferry residents, perhaps DOE should have analyzed the impact and cost of constructing an all-year bridge across the Nenana River, which would render the issue moot, albeit be more costly. 27-13

The impact of traffic usage is inadequately stated and addressed. It stated minor impacts to the roads, yet, with up to double the population and major heavy construction items being transported across the roads (some by railroad, I would assume), degradation of the Healy area roads can certainly be expected. The burden would fall upon the State Department of Transportation to maintain and upgrade. This cost should have been estimated. Of course traffic volume will be impacted. The safety of the Parks/Healy intersection, not particularly safe at present, would be further diminished. 27-14

It is anecdotal to note that, in order to create between 21 and 35 permanent jobs in the area, with project costs in excess of $200 million. Since the State of Alaska put up $25 million, they've helped to fund those jobs for roughly $1,000,000 each. This amount exceeds what a permanent worker will make over the life of the plant. Therefore, those who tout the great benefits of increased jobs must only be talking about short term construction jobs of a year or so. I'm sure they aren't talking about the $30 million that has already paid for Lower 48 attorneys and engineers, or for whatever the Lower 48 technology providers are getting paid. 27-15

Since construction costs for increased school and fire fighting capacities and the resulting construction impact of those construction costs (presumably at the same time as the Healy Experimental Coal Plant construction) are not considered, the draft EIS once again understates the impact to the community. 27-16

The final item related to socio-economic impact is that, even assuming additional infrastructure was fully funded by the additional revenue base to the Healy area local government, there is a long term operating cost that would be assumed from any increase in infrastructure. It is generally estimated to be 10% of construction cost. The draft EIS only discusses some of the short term impact, not the long term impact and resultant bust, of which Alaskans of 17 years residency or more are quite familiar. 27-17

III. NATIONAL PARK SERVICE CONCERNS

The EIS discusses at some length a difference that DOE and the National Park Service had over the method of measurement of air quality over Denali National Park (4-90, 4-93). DOE indicated they looked into the NPS concerns, but found the original DOE method more likely valid. Implied but not stated is that the NPS is still in disagreement. What is NPS's current position on this? Particularly as a participating agency, their comments need to be in the final EIS. 27-18

IV. CARBON DIOXIDE - GREENHOUSE GASES

One item of particular concern that was completely panned by DOE's EIS was the issue of carbon dioxide emissions. The issue was addressed by saying that carbon dioxide is not a regulated gas and that, in any case, estimated emissions would be a drop in the bucket compared to the total U.S. emissions. I am shocked at such cavalier approach to this, when we are looking at substantial economic and global impacts from the cumulative effect of many CO2 sources. 27-19
By DOE's logic the drop in the bucket analogy could be applied to comparing the cost of disposing of the U.S. cumulative nuclear waste to the national debt, but it would be no less valid. The failure to give CO2 impact "standing" in this EIS is an abrogation of DOE's responsibility to the public that it is charged with serving. In fact, the EIS makes a strong case for the need to develop methods to burn coal in such a manner "that does not impose further burdens on environmental quality" (1-5). At the same time, it identifies CO2 as an impediment to acceptance of coal as a future fuel. The final EIS should have looked at the comparative CO2 impacts from alternatives, such as the no-build and the wind power scenario. It wouldn't have been that difficult or costly. 27-20

The argument against including other alternate technologies is that such would not meet the goals of the Clean Coal Technology Program. Again, DOE is trusted with many goals toward a secure and safe energy future. The focus needs to be broad enough to allow policy and decision makers a full understanding of all the options, including the best ones, which may or may not be in just the narrow scope of the proposer's program. 27-21

Particularly with an incoming administration more interested in mitigating climate change that will also be making the decision on the funding of this project, DOE would be able to pre-empt delays and questions relating to climate change if they were already presented in the EIS. 27-22

V. NEED

I would take to task some of the statements under 1.4 Need (1-5) where we are looking to export our coal and technology because we have so much of it and want to sell it to other countries. If coal is DOE's answer to meeting our energy and economic needs, we are more in a world of hurt than I thought. Of all the fossil fuels we use, coal is the least environmentally sound, SOX and NOX reductions not withstanding. If all the environmental externalities of burning coal are considered, it would be more expensive than natural gas and begin to allow renewable energy to rival the same cost attractiveness. 27-23

I would say the likely best use of our coal technology would be in those areas where a conventional coal plant is likely to be built anyway, even if it is located in Poland or China. Exporting our coal to countries that are now using natural gas or renewable energy seems to be contrary to the world's best interest. It is perhaps difficult for the coal technology folks of DOE to see there may be better options than the kind of fuel they are charged with espousing, but in writing the statement of need, try to be more appreciative of other equal or better technologies. Coal is just one of our options, not the savior of our planet. 27-24

I understand of course that Congress, courtesy of Senator Byrd of West Virginia, has given DOE the charge to lead for cleaner coal burning technologies, but I wish DOE would have been so clearly partisan when it came to supporting renewable energy (not nuclear), conservation and weatherization, which have been treated like bastard step- children of DOE throughout the Reagan and Bush administrations. I would hope and expect that the Clinton administration will make some wholesale changes in how we perceive our energy future in this world. 27-25

VI. ECONOMIC ISSUES

Finally, DOE clearly did not address the economic issues (2-36) or do a cost/benefit analysis, particularly those that relate to environmental externalities, saying that the Alaska Public Utilities Commission had already done so. Unfortunately, the APUC chose to not consider environmental externalities in their deliberations. Therefore, despite the tens of millions of dollars that have been spent on the EIS and all the regulatory permits and hearings, there is no agency that can make a valid comparison between the cost of the project to the environment and the benefits. This is the largest failing of all the agencies on this project and, I'm sure is mirrored with other projects statewide. I feel that both the DOE and APUC have abrogated their responsibilities to the public interest, who fund their respective agencies. 27-26

VI. SUMMARY

To conclude, the draft EIS looks at a number of issues, but needs to:

1) investigate the alternative of wind generated electricity in Healy, plus the alternative of conventional coal fired technology; 27-27

2) clarify the cost/benefit to Healy local and state government from the project and the various alternatives; 27-28

3) include a statement from NPS of their current position on the measurement of air pollution over Denali National Park; 27-29

4) provide a mitigation analysis for the impact to Ferry residents from the experimental coal plants warm effluent, i.e. the cost and impact of a bridge across the Nenana River ; 27-30

5) provide an analysis of CO2 impact for the various alternatives, including item 1) above; 27-31

6) integrate the economic and environmental issues in the EIS. 27-32

7) moderate its statement of "need" to demonstrate an unbiased justification based upon the political reality of its purpose 27-33

By fully addressing the above 7 issues, DOE will go a long way to improve the validity of the EIS on the experimental coal project.

Gary C. Newman
Alaska Federation for
Community Self-Reliance
1083 Esro Road
Fairbanks, Alaska 99712
(907) 488-2001

Letter No. 27
Gary C. Newman, Alaska Federation for Community Self-Reliance, 1083 Esro Road, Fairbanks, AK 99712

Comment 27-1
"The EIS looked at only three scenarios—build in the currently proposed location, build in another location up the valley a few miles, and no-build. It failed to examine other alternatives to no-build which might have a lesser impact for the Healy area (2-30). Specifically, it did not analyze the option of wind power in Healy, a well-recognized resource in the area and something which has not been done to date by any of the parties involved in this project. In fact, the EIS does comment on the wind resource at the site in the draft EIS page 3-19, but overlooks it as a resource. The draft EIS discounts any further alternatives (2-30). Since, amongst its many charges, DOE is charged with promoting cleaner methods of providing electricity, not just implementing coal technology, this should have been investigated."

Response:
DOE believes an appropriate range of reasonable alternatives was analyzed. Other sources of energy are out of the scope of this EIS because the goal of the program is to demonstrate clean coal technologies. Neither wind power, nor any other source would be able to fulfill this goal. DOE is investigating such methods of providing power in other programs. Wind power was analyzed in the Integrated Resource Plan submitted by GVEA to the APUC.

Comment 27-2:
"Since the experimental technology of this project is designed primarily for retrofit applications (1-1), it is curious that none of the participants nor the draft EIS investigates re-powering the existing Healy 1 plant. Such a change would have saved tens of millions, if not in excess of a hundred million dollars of government expenditure, no small change."

Response:
See response to Comment 74-7.

Comment 27-3:
"Also, the scenario of a conventional plant, should the experimental technology fail, was addressed (5-10 etc.), and indicates that any further mitigation from the degradation over a successful experimental combustion technology isn't likely. I don't understand the statement that emissions were estimated to be the same as a no build scenario (5-8)."

Response:
The EIS analyzes several scenarios. In the case that the HCCP demonstration is unsuccessful, a higher emission level was analyzed for both the "permitted case" and the "retrofit case" in Sect. 5. The emission levels are identical for these latter two cases and present the upper bounds for emissions which could occur if the HCCP does not achieve its target emission objectives and either enters commercial operations at the "permit emission rate" or is retrofitted to more conventional combustion technology. Likewise, the scenario for the "retrofit case" is almost identical to the scenario described as a no-action alternative in which a conventional coal-fired power plant with emissions at the

"permit emission rate" would be built at Healy by the project participant (Sect. 2.2.1). In summary, the latter three scenarios would all emit at the "permit emission rate." See response to Comment 76-1 for discussion on mitigation.

Comment 27-4:
" . . . retrofitting better technology onto Healy 1 (referred to as Unit 1 in the draft EIS) is a moot point. GVEA, as the owner of Healy 1, has stated that contributing more than 20% of the cost for construction of the Experimental Coal Plant is not cost effective and was unwilling to pay for more than roughly 20% of the cost of experimental plant. If the technology fails and the experimental plant is retrofitted, there will be no further mitigation by the project participants. I'd surmise it would be pulling teeth to get the technology providers to retrofit the plant anyway."

Response:
See responses to Comments 27-3 and 76-1 for further discussion of mitigation.

Comment 27-5:
"The EIS correctly points out that there will be a cost to local/state government from the influx of temporary construction, as it will exceed the capacity of the schools and other services, but fails to quantify that cost to assist in balancing out the difference gained in the tax base, what little that is, plus the resulting bust, once construction is complete. One can't nearly double the population of a community (4-38, 4-41) for a year or two and not create a major impact on infrastructure or lack thereof. To make a valid comparison of trade-offs, a more comprehensive approach toward a cost-benefit analysis which would quantify and address mitigating anticipated impacts should have been performed. I have attempted to generate such information from what was provided in the draft EIS, but the data is scattered and incomplete."

Response:
The EIS quantifies the potential socioeconomic impacts of construction and operation to the extent possible in Sect. 4.1.8. The EIS cannot, however, quantify the impacts of a "bust" that may or may not occur in the future. This is especially true since the Healy/Denali area is subject yearly to a "boom-bust" in visitor usage. Also see response to Comment 27-26 for information regarding cost-benefit analysis.

Comment 27-6:
"For example, the draft EIS states that the waste generated by the increase in population will cause the borough landfill to become obsolete some years earlier. The EIS doesn't quantify the cost of a new landfill which is quite costly even with current environmental concerns and requirements, but merely implies that a new landfill should not be a problem because there is ample space for that purpose."

Response:
Section 4.1.8.5 states that "additional waste generated by workers living in Healy and Denali Park during HCCP construction would exacerbate the area's existing need for a new landfill." Because the area already needs a new landfill, the cost of a new landfill cannot be fully attributed to the HCCP.

Comment 27-7:
"If DOE asserts that it is not the place of the EIS to address such mitigation, I would note that the proposed construction camp, with accompanying minor medical and security, was mentioned a number of times as mitigating certain impacts. There are entire sections dealing with mitigation."

Response:
The EIS addresses mitigation for issues in which potential impacts have been identified and for which mitigation measures have been developed and agreed to by DOE and the project participant. See response to Comment 76-1 for further discussion on mitigation.

Comment 27-8:
"I believe the construction camp is a reasonable step in the right direction toward mitigation. I would like to suggest, as further mitigation, that the camp be heated by the warm effluent that is normally discharged into the Nenana River from Healy 1, thus reducing ice fog and other carbon based pollutants from heating such a large camp, an issue that I did not find addressed by the draft EIS."

Response:
The cost of the design and construction of a pipeline to supply warm effluent to the construction camp cannot be justified. The camp only would exist for several years which is an insufficient term to repay construction loan costs. In addition, the water is only heated a maximum of 27.5°F above its ambient temperature during the once-through cooling process. Maximum water temperature under optimal space heating conditions would be about 59°F during the winter and about 84°F during the summer. Thus, water temperatures would be inadequate for space heating in the construction camp.

Comment 27-9:
"Temporary (or permanent) construction camps are noted for their lack of arctic design and construction. Their negative impact is long lasting, even once the camp is sold off after construction is complete. Check out the camps in Prudhoe Bay and the remains of TAPS construction camps which have degraded the housing stock all over the state. Assuming the typical lack of arctic design, I'd like to see them removed from the state following construction."

Response:
The construction camp would be constructed for the arctic climate and would be dismantled when construction is completed.

Comment 27-10:
"The draft EIS notes that there is no police protection in Healy, a serious lack for a boom community. The addition of security on the plant site doesn't address the communities [*sic*] need for protection, since the police protection would typically be needed in the community of Healy, not on site."

Response:
Comment noted. It is anticipated that the Alaska State Troopers or the new Denali Borough would provide adequate police protection in the Healy area similar to the manner in which they now accommodate the annual summer tourism peak in the Denali/Healy area.

Comment 27-11:
"The draft EIS estimates certain amounts of State of Alaska funding that would become available from an increase in population. However, by the time school enrollment for an influx of plant construction crew children could be certified, it would likely be too late or little to construct additional needed educational facilities. The same would hold true with per capita State of Alaska revenues that are based upon population."

Response:
According to John Novak, Superintendent of the Denali Borough School District, the borough has "begun the planning process for construction of a $8.625 million addition and remodeling project at Tri-Valley School to mitigate both current overcrowding and to accommodate future projected growth." (Letter No. 23 from John Novak, Superintendent, Denali Borough School District, to Earl W. Evans, U.S. Department of Energy, December 14, 1992.) Thus, it is expected that additional educational facilities could be constructed by the Denali Borough School District in time to accommodate the influx of students associated with HCCP construction and operation. Sections 3.8.5, 4.1.8.5, and 4.2.8.5 of the EIS have been revised to reflect the new information.

Comment 27-12:
"Since there will be no increase in coal usage until completion of the plant, no additional borough income from severance tax will be generated until after the fact. The borough will also not be able to collect severance tax on coal that is imported from the Lower 48 for the first demonstration year of the plant. I would question the amount of local coal used for the demonstration year."

Response:
DOE believes the amount of local coal used during the demonstration is a reasonable estimate.

Comment 27-13:
"The impact to residents across the Nenana River in Healy was discussed. . . . To analyze the cost to Ferry residents, perhaps DOE should have analyzed the impact and cost of constructing an all-year bridge across the Nenana River, which would render the issue moot, albeit be more costly."

Response:
Based on the expected level of impact to the intermittent ice bridge across the Nenana River and the cost of constructing a new bridge, the construction of an all-year bridge across the Nenana River at Ferry is not considered to be a reasonably foreseeable mitigation measure and therefore is not discussed in the EIS.

Comment 27-14:
"The impact of traffic usage is inadequately stated and addressed. It stated minor impacts to the roads, yet, with up to double the population and major heavy construction items being transported across the roads (some by railroad, I would assume), degradation of the Healy area roads can certainly be expected. The burden would fall upon the State Department of Transportation to maintain and upgrade. This cost should have been estimated. Of course traffic volume will be impacted. The safety of the Parks/Healy intersection, not particularly safe at present, would be further diminished."

Response:
Section 4.1.8.5 discusses potential impacts to traffic usage in the Healy vicinity. It is expected that traffic impacts, and impacts to the local road system, would be minor for two reasons. First, the additional traffic created would be, for the most part, in the project area and would not impact traffic on the Parks Highway or in Healy. Second, heavy construction items would be delivered infrequently (less than two deliveries of material daily). Because roads in the Healy area are also exposed to heavy tourist traffic and the effects of extremely cold temperatures, it is not possible to estimate the HCCP's contribution to this damage.

Comment 27-15:
"It is anecdotal to note that, in order to create between 21 and 35 permanent jobs in the area, with project costs in excess of $200 million. Since the State of Alaska put up $25 million, they've helped to fund those jobs for roughly $1,000,000 each. This amount exceeds what a permanent worker will make over the life of the plant. Therefore, those - who tout the great benefits of increased jobs must only be talking about short term construction jobs of a year or so."

Response:
Sections 4.1.8.2 and 4.2.8.2 discuss employment that could result from the construction and operation of the HCCP.

Comment 27-16:
"Since construction costs for increased school and fire fighting capacities and the resulting construction impact of those construction costs . . . are not considered, the draft EIS once again understates the impact to the community."

Response:
The EIS does not attempt to include the costs of increased school capacity and fire-fighting capability because the costs cannot be attributed solely to the HCCP. As an example, the Railbelt Regional Educational Attendance Area projected in 1990 that Healy's Tri-Valley School would be nearing capacity by the 1995-96 school year. The Denali Borough was planning for capacity expansion at the school during 1992. Thus, the costs of expanding the Tri-Valley School's capacity cannot be attributed to HCCP construction or operation.

Comment 27-17:
" . . . assuming additional infrastructure was fully funded by the additional revenue base to the Healy area local government, there is a long term operating cost that would be assumed from any increase in infrastructure. It is generally estimated to be 10% of construction costs. The draft EIS only discusses some of the short term impact, not the long term impact and resultant bust . . . "

Response:
The EIS quantifies the potential socioeconomic impacts of construction and operation to the extent possible in Sect. 4.1.8. The EIS cannot, however, quantify the costs of infrastructure improvements that cannot be wholly or largely attributed to the HCCP, nor can it quantify the costs of a "bust" that may or may not occur in the future.

Comment 27-18:
"The EIS discusses at some length a difference that DOE and the National Park Service had over the method of measurement of air quality over Denali National Park (4-90, 4-93). DOE indicated they looked into the NPS concerns, but found the original DOE method more likely valid. Implied but not stated is that the NPS is still in disagreement. What is NPS's current position on this? Particularly as a participating agency, their comments need to be in the final EIS."

Response:
DOE and the NPS have differing views regarding potential impacts to air quality and visibility within DNPP (which have been defined through meetings and written communication). DOE has made every effort to ensure that the NPS position is included in the EIS. Joint discussions with DOI, DOE, AIDEA, and GVEA have led to an agreement regarding mitigation measures (see response to Comment 76-1). NPS comments are included in this volume as Letter No. 76.

Comment 27-19:
"One item . . . completely panned by DOE's EIS was the issue of carbon dioxide emissions. The issue was addressed by saying that carbon dioxide is not a regulated gas and that, in any case, estimated emissions would be a drop in the bucket compared to the total U.S. emissions. I am shocked at such a cavalier approach to this, when we are looking at substantial economic and global impacts from the cumulative effect of many CO_2 sources. . . . The failure to give CO_2 impact 'standing' in this EIS is an abrogation of DOE's responsibility to the public that it is charged with serving. In fact, the EIS makes a strong case for the need to develop methods to burn coal in such a manner 'that does not impose further burdens on environmental quality' (1-5). At the same time, it identifies CO_2 as an impediment to acceptance of coal as a future fuel."

Response:
The discussion on potential global climate change in Sect. 4.1.2.2 has been expanded to further address the potential influence of the proposed HCCP's CO_2 emissions. See response to Comment 1-6 for further discussion of CO_2 emissions.

Comment 27-20:
"The final EIS should have looked at the comparative CO_2 impacts from alternatives, such as the no-build and the wind power scenario."

Response:
Except for the "no-build scenario" in which CO_2 emissions would remain unchanged from baseline conditions, the CO_2 emissions from the alternatives or commercialization scenarios discussed in the EIS would not be appreciably different from one another. The text in Sects. 5.1, 5.2, and 5.3 has been revised to include this information. See response to Comment 1-6 for futher discussion of CO_2 emissions. As discussed in response to Comment 1-10, wind power is not a reasonably foreseeable alternative to the HCCP.

Comment 27-21:
"The argument against including other alternate technologies is that such would not meet the goals of the Clean Coal Technology Program. Again, DOE is trusted with many goals toward a secure and safe energy future. The focus needs to be broad enough to allow policy and decisionmakers a full understanding of all the options, including the best ones, which may or may not be in just the narrow scope of the proposer's program."

Response:
See response to Comment 1-2 for information regarding DOE's mission and alternatives.

Comment 27-22:
"Particularly with an incoming administration more interested in mitigating climate change that will also be making the decision on the funding of this project, DOE would be able to preempt delays and questions relating to climate change if they were already presented in the EIS."

Response:
The discussion on potential global climate change in Sect. 4.1.2.2 has been expanded to further address the potential influence of the proposed HCCP's CO_2 emissions. See response to Comment 1-6 for further discussion of CO_2 emissions.

Comment 27-23:
"I would take to task some of the statements under 1.4 Need (1-5) where we are looking to export our coal and technology because we have so much of it and want to sell it to other countries. If coal is DOE's answer to meeting our energy and economic needs, we are more in a world of hurt than I thought. Of all the fossil fuels we use, coal is the least environmentally sound, SO_x and NO_x reductions not withstanding. If all the environmental externalities of burning coal are considered, it would be more expensive than natural gas and begin to allow renewable energy to rival the same cost attractiveness."

Response:
The congressionally mandated purpose of the Clean Coal Technology Program is to develop technologies to utilize coal more cleanly and efficiently. Coal, natural gas, and renewable energies will play an important role in meeting future U.S. energy demands. The role of the Clean Coal Technology Program and its relationship to federal energy

policy is discussed in the Programmatic EIS. See Sect. 1.4 and response to Comment 1-2 on the decision before DOE and its implications for the scope of this EIS. See response to Comment 1-10 for information on alternative sources of energy. Also see response to Comment 76-12 for further discussion of environmental externalities. See response to Comment 15-2 for discussion of exporting clean coal technologies.

Comment 27-24:
"I would say the likely best use of our coal technology would be in those areas where a conventional coal plant is likely to be built anyway, even if it is located in Poland or China. Exporting our coal to countries that are now using natural gas or renewable energy seems to be contrary to the world's best interest. It is perhaps difficult for the coal technology folks of DOE to see there may be better options than the kind of fuel they are charged with espousing, but in writing the statement of need, try to be more appreciative of other equal or better technologies. Coal is just one of our options, not the savior of our planet."

Response:
See response to Comment 27-23.

Comment 27-25:
" . . . Congress, courtesy of Senator Byrd of West Virginia, has given DOE the charge to lead for cleaner coal burning technologies, but I wish DOE would have been so clearly - partisan when it came to supporting renewable energy (not nuclear), conservation and weatherization. . . . "

Response:
See response to Comment 27-23.

Comment 27-26:
"Finally, DOE clearly did not address the economic issues (2-36) or do a cost/benefit analysis, particularly those that relate to environmental externalities, saying that the Alaska Public Utilities Commission had already done so. Unfortunately, the APUC chose to not consider environmental externalities in their deliberations. Therefore, despite the tens of millions of dollars that have been spent on the EIS and all the regulatory permits and hearings, *there is no agency that can make a valid comparison between the cost of the project to the environment and the benefits.* This is the largest failing of all the agencies on this project and, I'm sure is mirrored with other projects statewide. I feel that both the DOE and APUC have abrogated their responsibilities to the public interest, who fund their respective agencies."

Response:
See responses to Comments 74-15 and 76-12.

The next seven comments were made as a summary to Mr. Newman's letter.

Comment 27-27:
"1) investigate the alternative of wind generated electricity in Healy, plus the alternative of conventional coal fired technology;"

Response:
See responses to Comments 27-1 and 27-3.

Comment 27-28:
"2) clarify the cost/benefit to Healy local and state government from the project and the various alternatives;"

Response:
See responses to Comments 27-5 and 27-26.

Comment 27-29:
"3) include a statement from NPS of their current position on the measurement of air pollution over Denali National Park."

Response:
See response to Comment 27-18.

Comment 27-30:
"4) provide a mitigation analysis for the impact to Ferry residents from the experimental coal plants warm effluent, i.e., the cost and impact of a bridge across the Nenana River;"

Response:
See response to Comment 27-13.

Comment 27-31:
"5) provide an analysis of CO_2 impact for the various alternatives, including item 1) above;"

Response:
See response to Comment 27-20.

Comment 27-32:
"6) integrate the economic and environmental issues in the EIS."

Response: DOE believes that the draft EIS comprehensively integrates economic and environmental issues.

Comment 27-33:
"7) moderate its statement of 'need' to demonstrate an unbiased justification based upon the political reality of its purpose."

Response:
See response to Comment 27-23.

THE TRIBUNAL
Archdiocese of Anchorage
225 CORDOVA STREET, BLDG. B
ANCHORAGE, ALASKA 99501

December 15, 1992

MAILING ADDRESS:
POST OFFICE BOX 2239
ANCHORAGE, ALASKA 99510

Letter No. 28

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Dept of Energy PETC
P.O. Box 10940
Pittsburgh, PA 15236

re: Healy Clean Coal Project

Dear Sirs:

I regret that I was unable to personally attend the public hearings which were held here in Anchorage on the evening of December 10th. However, I would like to offer written comment.

The HCCP is an exemplification of the innovative technology designed to conserve energy by burning waste coal yet significantly reducing possible emissions. This project would seem to be an example of the kind of technology which President elect Clinton was calling for in his campaign promises.

Moreover, successful use of this technology has the potential of providing national and international environmental technological benefits. Participation by the State of Alaska demonstrates the legislatures and the governor's concern for innovative, clean technology and clean, reasonably priced electrical power. During our time of economic recession, this project will provide significant economic benefit to the families and the economy of that area. The project will also have economic benefits for the State reaching beyond the Healy area.

Given all the potential benefits just cited and the potential for environmentally sound technological development, one wonders why the National Park Service and certain environmental groups --who profess to be interested in environmentally sound energy technologies--can be so adamantly opposed to this project. At some point one begins to understand they are against all resource development projects regardless of whether they are technologically sound.

Having been a Catholic priest in Alaska for some 25 years, I consider myself to have some knowledge of the needs of the people and the State of Alaska. I would encourage endorsement of this beneficial project.

Sincerely,

J. Michael Hornick

Rev. J. Michael Hornick

Letter No. 28

J. Michael Hornick, The Tribunal, Archdioces of Anchorage, 225 Cordova Street, Bldg. 8, Anchorage, AK 99501

Comments noted.

Letter No. 29

PUBLIC COMMENT

ON THE

HEALY CLEAN COAL PROJECT

U. S. DEPARTMENT OF ENERGY DEIS

Submitted by the

ALASKA STATE DISTRICT COUNCIL

OF LABORERS, LOCAL 942

Respectfully Submitted,

Joe J. Thomas
Business Manager

December 17, 1992
Fairbanks, Alaska

LABORERS' INTERNATIONAL UNION
of NORTH AMERICA, LOCAL 341
2501 Commercial Drive
Anchorage, Alaska 99501

I.

Introduction: The Alaska State District Council of Laborers represents over seven thousand people in the Alaskan workforce, with many residing near the planned site for the Healy Clean Coal Project. Due to our keen interest in this project and its positive benefits, (reviewed below), Alaska Laborers attended each DOE public hearing held in Healy, Fairbanks, and Anchorage.

Upon our full consideration of the HCCP Draft Environmental Impact Statement, the minor CO_2 and sulphur emissions contrasted with the environmental advances of this clean coal technology, and the major economic benefits for Alaskan working people and their families, we fully support this project and urge the DOE to proceed forward.

II.

Summary of Positive Attributes of the Healy Clean Coal Project. As the HCCP/DEIS and the Clean Coal Technology Program demonstrate the Healy Clean Coal Project offers the following positive attributes:

A). The project will advance the technologies of clean coal combustion through the test usage of TRW/Applied Technology Division and the Joy/Niro Atomizer. The removal of sulfur dioxide, nitrogen oxides, and particulates by these two technologies promises environmental progress in coal combustion for Alaska and the entire U. S..

B). Additional energy source bases (50 megawatts) for Alaska electrical power both present and future.

C). Direct economic benefits to Alaskan business, electricity comsumers, and Alaskan workers and their families. The DEIS projects 102 construction related jobs and 32 direct permanent jobs during the plant's 20 year operation period.

D). This innovative project further provides a major spinoff opportunity for Alaska to highlight its vast coal reserves to potential markets both in the U. S. and the Pacific Rim. Alaska holds some of the largest coal reserves in the world including the Usibelli field, Wishbone Hill, Beluga, Northern Alaska Coal Province and the Western Arctic Coal Field. The Western Arctic field, for example, holds an estimated three billion tons of high quality (volatile B-A bituminous) coal and is considered one of the cleanest low sulfur coals in the world. All efforts which promote the profile and marketing of these reserves, such as this project, also advance the national interest in offsetting the import/export trade deficit through Pacific Rim trade and in improving our U. S. economic growth.

III.

THE ALASKA LABORERS

URGE FULL CONSIDERATION OF

DEIS SOCIO/ECONOMIC ATTRIBUTES OF THIS PROJECT

As required by the National Environmental Impact Policy Act, the DEIS identifies the employment increases generated by the Healy Clean Coal Project. (102 construction jobs/32 Permanent Operational jobs). This employment growth provides major job and economic growth for the residents of Healy and other Alaskan people. In addition to these positive attributes of the project, we also urge full consideration of the high quality of the jobs created by this project.

We submit that the high qualitative attributes of the jobs created by the Healy project should also be fully considered. As employers Golden Valley Electric Association and the supplier, Usibelli Coal Co., provide superior employment under accepted labor relations standards including; premium health insurance coverage for employees and their dependents, retirement benefits, safety precautions, fair wage compensation, and fair employment practices.

These highly favorable attributes of the employment growth reviewed under the socio/economic factor of the DEIS, when acknowledged and fully considered, further demonstrate

the major benefits this project offers to Alaska and its positive impact under NEPA.

Accordingly, the Alaska State District Council of Laborers express their full support for this Healy Clean Coal Project and urge the DOE to proceed forward.

Letter No. 29

Joe J. Thomas, Business Manager, Submitted by the Alaska State District Council of Laborers, Local 942, Laborers' International Union of North America, Local 341, 2501 Commercial Drive, Anchorage, AK 99501

Comments noted.

12/17/92

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U. S. Department of Energy, PETC
P. O. Box 10940
Pittsburgh, PA 15236

Letter No. 30

Ref.: Healy Clean Coal Project

Dear Dr. Evans,

I am writing to encourage your favorable consideration for the HCCP. It seems that today no matter how environmentally sound any project is we have people coming forward telling us that the project will have a negative impact on our lives and our world. One thing most of us agree on is that we need power to survive in today's world. I believe the HCCP will supply power to Alaskan environmentally less harmful than any power we are using now and any other power that we can develop in the near future.

The technology that is been designed into the HCCP can be a guide to other areas as they seek alternative energy sources. All of us must balance our energy needs with our available resources and strive to minimize our impact on our environment. The HCCP will replace the use of oil fired generators, that use a commodity that has a much greater impact on our environment, both in its transportation and its consumption. The Healy area has a 100 year known supply of coal. The need to transport the coal is minimal due to the reserves proximity to the HCCP. The Environmental Impact Statements clearly demonstrates the significant positive environmental value of the project.

One issue that has been presented at the public hearing is that the HCCP may produce a visible cloud that could be seen from Denali National Park. I was in the air taxi business for 10 years in Alaska and even though I am no longer in that business I still fly my own plane frequently in Alaska each year. I have flown through Windy Pass, and over Healy, many more times than I can remember in all types of weather conditions. Because the Alaska Range is a very effective weather barrier and Windy Pass is one of the few low passes the range, the wind conditions over Healy are such that no cloud would ever be seen over the plant. The people who are using the argument are not familiar with the area and are looking for reasons why not to approve the project, rather than looking at whether the overall impact is more beneficial than what we have now, and the alternatives.

I urge your favorable consideration for this project. Most of us that live in Alaska are environmentally concerned and believe we can balance nature and human consumption. This project clearly is a step in that direction.

Sincerely,

James L. Dodson
1267 Skyline Drive
Fairbanks, Alaska 99709

Letter No. 30
James L. Dodson, 1267 Skyline Drive, Fairbanks, AK 99709

Comments noted.

DAVID W. ZECHNICH
101 W. BENSON BOULEVARD, SUITE 500
ANCHORAGE, ALASKA 99503

Letter No. 31

December 17, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 9201
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Mr. Evans:

I am writing this letter to support the Healy Clean Coal Project (HCCP). As the years have gone by, we humans, as a species, continue to learn, explore, grow and develop. Throughout history numerous and varied energy sources have been identified. All energy sources have their positive and negative attributes. All such sources have finite lives. It is essential we continue to experiment with and develop new technologies to improve and extend the quality of life. By developing these technologies and diversifying our ability to distribute energy we will continue to improve our lives and the chances our species will endure.

Such development needs to be balanced with various risks - this project seems to accomplish many balanced goals. A consortium (including public and private concerns) is supporting the project and the risks seem well balanced, although some interest groups have tossed a few emotional and non-substantive issues into the fray. Let me address a few of these.

My understanding is that the Healy Clean Coal Project is four miles from the buffer zone of Denali Park, one of the largest parks in the nation, and the buffer zone was established with projects like this one in mind. Some allege the project is too close to Denali Park; but, these allegations are a bit misleading. Also, some contend a vapor plume may be visible from Denali Park. Clouds are merely horizontal vapor plumes, which are quite natural. Not withstanding, no visual impact or vapor plume from the existing GVEA plant area or UCM area has been seen in any area of Denali Park, so it is unlikely one will occur from the new plant. Of course whatever risk exists that one could occur can certainly be reduced through due care. Such a risk should not obviate the many benefits which could result from the HCCP.

The president-elect has indicated managed economic growth is critical to our nation. This project will provide for well managed economic growth. Further, the project will assist in improving our nation's capacity for producing energy in an environmentally safe

manner. The plant is designed to conserve energy resources by utilizing what currently amounts to a non-usable by-product while extending available power. Additionally, the technologies utilized could serve as a model for enhancing environmental performance of coal-supplied power in critical population centers.

I hope this letter helps you conclude the HCCP is a worthwhile project and all appropriate approvals should be obtained.

Very truly yours,

David W. Zechnich

Letter No. 31
David W. Zechnich, 101 W. Benson Boulevard, Suite 500, Anchorage, AK 99503

Comments noted.

Tanana Valley Sportsmen's Association
INCORPORATED
P.O. Box 669 Fairbanks, Alaska 99707 Phone 479-3367

Letter No. 32

Reproduced from copy submitted

Earl W. Evans, Environmental Coordinator
Mail Stop 920L
U.S. Dept of Energy, PETC
Pittsburgh, PA 15236

December 18, 1992

Dear Dr. Evans,

Thank you for the opportunity to comment on the Healy Clean Coal Project. We support this project, and urge you to rapidly move forward in the approval process for the HCCP project.

The environmental record of the Usibelli Coal company is one which we, as fellow Alaskans are particularly proud. The Usibelli Coal company has had a clearly positive impact upon the wildlife resources, especially the ANILCA 810 subsistence resources, in the region surrounding the HCCP.

Selection of Usibelli to advance the technology by which we utilize the energy resources of this country is consistent with the historical record of the Usibelli Coal company, and clearly a wise choice for the U.S.

The Healy Clean Coal Project will be a very valuable contribution to the planet's utilization potential for energy resources. Development of an environmentally enhanced energy source is of importance to the U.S. It is also clear that the location of this study at Healy places it in a very central location on the Pacific Rim, close to many interested energy consumers in Russia, China, Korea, etc.

The potential for the Healy Clean Coal Technology to improve the relatively poor environmental utilization of coal in other Pacific Rim countries could have a far reaching, positive impact to the global environment. The utilization of Clean Coal technology in Russia has the potential of eliminating Industrial Air Pollution that moves across the Arctic and into the northern U.S. and Canada via arctic weather patterns.

We urge you to rapidly move forward in the approval process for this project.

Sincerely Yours,
Oliver Burris
Oliver Burris
President

Letter No. 32
Oliver Burris, President, Tanana Valley Sportsmen's Association, Inc., P.O. Box 669, Fairbanks, AK 99707

Comments noted.

CITIGOLD

Citigold Alaska, Inc.

Suite 101

2173 University Ave., South

Fairbanks, Alaska 99709

Telephone: (907) 474-2080

Fax: (907) 474-2082

Letter No. 33

Earl W. Evans, Environmental Coordinator
Mail Stop 920L
U.S. Dept of Energy, PETC
Pittsburgh, PA 15236

December 18, 1992

Dear Dr. Evans,

We appreciate the opportunity to comment on the Healy Clean Coal Project. We support this project.

The Healy Clean Coal Project will be a very valuable contribution to the planet's utilization potential for energy resources. Development of an environmentally enhanced energy source is of importance to the U.S. It is also clear that the location of this study at Healy places it in a very central location on the Pacific Rim, close to many interested energy consumers in Russia, China, Korea, etc.

The potential for the Healy Clean Coal Technology to improve the relatively poor environmental utilization of coal in other Pacific Rim countries could have a far reaching, positive impact to the global environment. The utilization of Clean Coal technology in Russia has the potential of eliminating Industrial Air Pollution that moves across the Arctic and into the northern U.S. and Canada via arctic weather patterns.

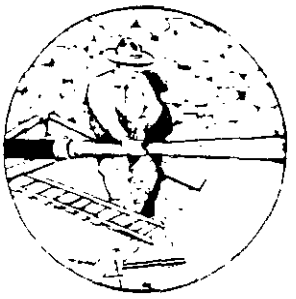
We urge you to rapidly move forward in the approval process for this project.

Sincerely Yours,,

Bruce Campbell

Letter No. 33
Bruce Campbell, Citigold, Citigold Alaska, Inc., Suite 101, 2173 University Ave., South, Fairbanks, AK 99709

Comments noted.



Letter No. 34

Reproduced from copy submitted

Placer Miners of Alaska

P O Box 82245 • Fairbanks, Alaska 99708

Earl W. Evans, Environmental Coordinator
Mail Stop 920L
U.S. Dept of Energy, PETC
Pittsburgh, PA 15236

December 18, 1992

Dear Dr. Evans,

Thank you for the opportunity to comment on the Healy Clean Coal Project. We support this project, and urge you to rapidly move forward in the approval process for the HCCP project.

The environmental record of the Usibelli Coal company is one which we, as fellow Alaskans are particularly proud. The Usibelli Coal company has had a clearly positive impact upon the wildlife resources, especially the ANILCA 810 subsistence resources, in the region surrounding the HCCP.

Selection of Usibelli to advance the technology by which we utilize the energy resources of this country is consistent with the historical record of the Usibelli Coal company, and clearly a wise choice for the U.S.

Sincerely Yours,

Bruce W. Campbell
Executive Board

Letter No. 34

Bruce W. Campbell, Executive Board, Placer Miners of Alaska, P.O. Box 82245, Fairbanks, AK 99708

Comments noted.

ALASKA SURVIVAL

Box 320 Talkeetna, Alaska 99676 (907) 733-1413

Letter No. 35

12/18/92

Earl Evans, Environmental Coordinator
Healy Clean Coal Project
P.O. Box 10940, MS-920-L
Pittsburgh Energy Technology Center
Pittsburgh, PA 15236

This is to request that the public comment period for the draft Environmental Impact Statement for the proposed Healy Clean Coal Project be extended for an additional sixty days. This is necessary we believe in order to give the appropriate agencies, such as the National Park Service, and the public additional time to consider all the complicated, technical issues involved. 35-1

It seems that the state and federal government are fast tracking this project in order for it to get built soon. Considering this project uses public monies, it has not been clearly explained what the benefits will be to the public. In the long run, how much is this going to cost the public? Is this not a subsidy from the public to expand a private business (Usibelli coal mine)? This may not be an appropriate use of federal public monies. 35-2

A major concern is an increase in air pollution. Denali National Park and Preserve's northern boundary is about 4 miles from the proposed project. This park has been designated a Biospheric Reserve as part of UNESCO's International Network of Biospheric Reserrves. These are among the world's premier natural areas of high scientific value. The park is a major source of tourism dollars for the state. Our community of Talkeetna, though 140 miles from the park, makes alot of money off of visitors to the park. This is at risk if the air quality deteriorates. We cannot afford to take that risk. 35-3

We hope that you take this into consideration and give us additional time to comment.

Becky Long

Becky Long

Letter No. 35
Becky Long, Alaska Survival, Box 320, Talkeetna, AK 99676

Comment 35-1
"This is to request that the public comment period for the draft Environmental Impact Statement for the proposed Healy Clean Coal Project be extended for an additional sixty days."

Response:
See response to Comment 1-1.

Comment 35-2
" . . . it has not been clearly explained what the benefits will be to the public. In the long run, how much is this going to cost the public? Is this not a subsidy from the public to expand a private business (Usibelli coal mine)? This may not be an appropriate use of federal public monies."

Response:
The demonstration of this technology could lead to successful commercialization of a technology that burns coal cleanly and efficiently. DOE would cost share the total cost of the project ($227 million) with AIDEA (DOE's share would be 48%). DOE's stated policy for the Clean Coal Technology projects is to recover an amount up to the government's contribution to the project. A repayment agreement is negotiated with each Clean Coal Technology participant and included in the Cooperative Agreement. Usibelli Coal Mine would supply coal to GVEA at market value.

Comment 35-3
"A major concern is an increase in air pollution. Denali National Park . . . is a major source of tourism dollars for the state. Our community of Talkeetna, though 140 miles from the park, makes a lot of money off of visitors to the park. This is at risk if the air quality deteriorates."

Response:
See responses to Comments 21-6 and 21-1.

Energy & Environmental Research Center

UNIVERSITY OF NORTH DAKOTA

15 North 23rd Street — Box 8213, University Station / Grand Forks, ND 58202-8213 / Phone (701) 777-5000 Fax. 777-5181

Letter No. 36

December 18, 1992

Dr. Earl W. Evans
Environmental Coordinator, HCCP
U.S. Department of Energy
Pittsburgh Energy Technology Center
626 Cochran Mill Road
P.O. Box 10940, Mail Stop 920L
Pittsburgh, PA 15236

Dear Dr. Evans:

I am writing this letter on the behalf of the Energy and Environmental Research Center (EERC) in support of the Healy Clean Coal Project (HCCP). The HCCP will generate 50 MWe of power for Alaska's Railbelt region while demonstrating TRW's slagging combustion and Joy's spray dryer absorber technology. Many people are aware that successful implementation of these technologies will yield one of the cleanest, most efficient coal-fired generating plants in the world.

However, many probably don't appreciate that the HCCP technology offers the potential for greatly expanding the range of coal fuels that can be used efficiently for power generation. Initially, the ultra-low-sulfur subbituminous coal from the Usibelli mine will be used, but the demonstration will feature the use of high-ash, waste Usibelli coal which has been a disposal nuisance. In addition, the TRW slagging combustor has been fired successfully with coal-water fuels (CWF). Since most of the ash is rejected as slag in the combustor downstream of the boiler, calculated deratings which have been impediments to the use of CWFs in oil-designed boilers will be minimal.

The EERC has developed a hydrothermal treatment process, often referred to as hot-water drying, to upgrade low-rank coals (LRCs) for CWF applications. This process has been used with Alaskan LRCs to produce an extremely low-sulfur, premium CWF for replacement of heavy fuel oil. Coupling HCCP technology with low-rank coal-water fuels (LRCWFs) offers a clean, low-cost life extension for thousands of oil-fired boilers as the drive to reduce dependency on costly imported oil continues. The magnitude of this potential market in 1990 amounted to over 200 million barrels of oil or the equivalent of about 80 million tons per year of LRCWF for the utility industry alone in Japan, Korea, and Taiwan.

If successful, HCCP technology using low-rank coals and/or low-rank coal-water fuels could lead to an improved standard of living around the world, while at the same time providing a cleaner environment. It will assist developing nations to use indigenous LRC

resources for clean power generation; provide oil importing nations a clean, low-cost alternative fuel from stable suppliers; and create an export market for the enormous reserves of U.S. low-sulfur, low-rank coals. HCCP technology, coupled with LRCs or LRCWFs, could become a cornerstone for implementing provisions of the Congressional Energy Security Act to transfer clean coal technologies to developing nations or those moving toward a market economy and in developing new markets for U.S. coal, equipment, and technologies.

In summary, we strongly support the Healy Clean Coal Project. If you have any questions, please feel free to contact me at (701) 777-5174 or by fax at (701) 777-5181.

Sincerely,

for Warrack G. Willson
Senior Research Advisor

WGW/jdg

Letter No. 36

Warrack G. Willson, Senior Research Advisor, Energy & Environmental Research Center, University of North Dakota, 15 North 23rd Street, Box 8213, University Station, Grand Forks, ND 58202-82213

Comments noted.

Letter No. 37

December 18, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
Pittsburgh, PA 15236

RE: Healy Clean Coal Project

Dear Dr. Evans:

I am writing this letter to support the Healy Clean Coal Project for the reasons noted below.

1. The HCCP will likely be one of the cleanest burning coal plants in the nation while providing reliable and competitively priced power to the Fairbanks area and its vicinity.

2. Construction of the plant will create at least 200 jobs which are much needed in the interior Alaska under the current economic condition. An additional thirty to forty permanent jobs will be created to operate and maintain the plant.

3. The successful demonstration of the HCCP project will have environmental benefits. The new technology developed through this project can be beneficial to other plants in the country.

4. The successful utilization of the new technology will encourage Pacific Rim countries to consider the Alaskan ultra-low sulfur subbituminous as the alternatives of their energy sources.

If you need additional information concerning the HCCP project, please feel free to contact me at (907)479-4979.

Sincerely,

Scott L. Huang, Ph.D.
400 Fairbanks St.
Fairbanks, AK 99709

Letter No. 37
Scott L. Huang, Ph.D., 400 Fairbanks Street, Fairbanks, AK 99709

Comments noted.

Kurt E. Martens, CPA
2501 Laird Circle
Anchorage, Alaska 99516
(907) 345-5302

Letter No. 38

December 18, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans:

I am writing to express my support for the Healy Clean Coal Project. As a lifelong Alaskan, I view this project as one of the most exciting and economically beneficial projects this state has been involved with in a number of years. Attending the December public hearing on the project in Anchorage reaffirmed this belief.

One of the most significant aspects of the project is that it will likely be one of the cleanest burning coal plants in the world and will help generate important economic benefits for Alaska. These benefits include nearly 200 construction jobs and subsequently 30 to 40 permanent positions at the plant.

In addition, I understand that the successful demonstration of the project's technology and its utilization by Pacific Rim utilities will expand the market for Alaska's enormous reserves of ultra-low sulfur, subbituminous coal. This is something that's beginning to become desperately needed in these economically trying times in Alaska.

The visual impacts noted in the impact statement and commented upon by certain opponents of the project at the December 10th hearing are, in my opinion, negligible. Not only is it questionable whether a plume would ever be noticeable from Denali Park, the visual impact of any plume would be so minor as to require a certain degree of concentration to notice it all.

Again, I enthusiastically embrace the idea of the project and pledge my full support.

Sincerely,

Kurt E. Martens, CPA

Letter No. 38
Kurt E. Martens, CPA, 2501 Laird Circle, Anchorage, AK 99516

Comments noted.

State of Alaska
Walter J. Hickel, Governor

Alaska Energy Authority
A Public Corporation

Letter No. 39

Reproduced from copy submitted

December 18, 1992

Dr. Earl W. Evans
U.S. Department of Energy
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, PA 15236

Subject: Comment on DEIS for Healy Clean Coal Project

Dear Dr. Evans:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement for the Proposed Healy Clean Coal Project ("DEIS"), issued by the U.S. Department of Energy in November 1992.

Although the Alaska Energy Authority does not have the resources available for detailed analysis of the environmental issues presented in the DEIS, I would like to express the strong support of this agency for the proposed Healy Clean Coal Project ("HCCP"). This support is based on the view that the environmental impacts described in the DEIS are acceptably low, and are far outweighed by the advantages of the project in terms of economic development and power supply.

These advantages are noted briefly in the DEIS. Regarding the potential impact of the project on future export of U.S. coal and coal technology, we concur with the view expressed on page 1-5 that actual demonstration of new technology using U.S. coal on a utility scale can be of significant value in overseas marketing efforts. We believe the HCCP project may be particularly helpful for future export of Alaska coal.

Regarding the potential impact of the project on the Alaska Railbelt electric supply system, we concur with the judgment of the Alaska Public Utilities Commission, reported on page 2-36,37 of the DEIS, that the HCCP as planned represents the lowest-cost alternative for Golden Valley Electric Association to meet its load growth. We further believe that construction of the project, coupled with a second transmission line proposed between Healy and Fairbanks, will greatly improve system reliability in the Fairbanks area.

Sincerely,

Ronald A. Garzini
Executive Director

P.O. Box 190869 701 East Tudor Road Anchorage, Alaska 99519-0869 (907) 561-7877 Fax: (907) 561-8584

cc: Alaska Energy Authority Board of Directors

Letter No. 39

Ronald A. Garzini, Executive Director, Alaska Energy Authority, P.O. Box 190869, 701 East Tudor Road, Anchorage, AK 99519-0869

Comments noted.

Greater Fairbanks Chamber of Commerce

709 Second Avenue
Fairbanks, Alaska 99701

907) 452-1105
FAX (907) 456-6968

December 21, 1992

Letter No. 40

Reproduced from copy submitted

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15326

Dear Dr. Evans:

On behalf of the Greater Fairbanks Chamber of Commerce, I would like to express support for the Proposed Action identified in the Draft Environmental Impact Statement (DEIS) for the Proposed Healy Clean Coal Project (DOE/EIS-0816).

The DEIS provides a thorough review of all possible environmental impacts and shows that the project will not only meet the National Ambient Air Quality Standards, but will easily satisfy Prevention of Significant Deterioration requirements for the Class I area in adjacent Denali National Park. The new plant will also conserve energy resources by burning waste coal and will demonstrate a new technology that will significantly reduce emissions of sulfur dioxide and nitrogen oxides.

The only environmental issue that seems to be of any concern is the possibility that, under a special set of conditions which only occur in winter months, there may be a barely perceptible plume visible at the entrance to the park. The computer model used predicts that this will happen for a few hours per year.

The computer model also predicts that there should be a plume visible from the existing plant. As there has apparently been none observed over the plant's 25 year operation nor from recent camera monitoring specifically looking for one, it appears that even this potential, but minor impact, has a negligible chance of occurring.

In addition to the exceptional environmental performance of the project, the socio-economic benefits of the project will be of enormous importance to the residents of Fairbanks and the Northern Railbelt.

Construction of the plant will create about 200 jobs. Another 35 permanent jobs will be created to expand coal production at Usibelli Coal Mine and to operate and maintain the plant. The availability of clean and competitively priced electrical power generated by the project will be of enormous benefit to the economy of the Northern Railbelt region.

While many of the other benefits of the project may not be directly relevant to the DEIS process, they are of great importance to the residents of Fairbanks and the State. The project provides the best alternative for meeting the load growth and plant replacement problems confronting our local utility and will reduce the Northern Railbelt's vulnerability to power interruptions. Additionally, the new generating capacity in Healy will provide emergency backup for the Anchorage area in the event of power interruptions. The project will also contribute to fuel diversification of the Railbelt power by using Healy coal which has a 100-year plus supply and a stable and competitive price history.

The successful demonstration of the new technology could also pioneer the expansion of markets for Alaska's enormous reserves of ultra-low sulfur, subbituminous coal. This would stimulate new activity in the state at a time when declining production from the Prudhoe Bay oil field threatens the state's economic well-being.

In conclusion, the Greater Fairbanks Chamber of Commerce believes that the Healy Clean Coal Project makes environmental and economic sense. We would urge the Department of Energy, through its Record of Decision, to support the Proposed Action and take all appropriate initiatives to ensure timely startup of the project.

Sincerely,

Pamela J. Held
Chair of the Board

PJH/jmjr.

Letter No. 40

Pamela J. Held, Chair of the Board, Greater Fairbanks Chamber of Commerce, 709 Second Avenue, Fairbanks, AK 99701

Comments noted.

(907) 474-7330
FAX (907) 474-6087

Office of The Dean

UNIVERSITY OF ALASKA FAIRBANKS

School of Engineering
539 Duckering Building • Fairbanks, Alaska 99775-0660

December 21, 1992

Letter No. 41

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P. O. Box 10940
Pittsburgh, PA 15236

Re: Support for the Healy Clean Coal Project

Dear Dr. Evans:

I support advancement of the Healy Clean Coal Project because:

(1) The successful demonstration of the Healy Clean Coal Project technology will have national and international environmental benefits. The new technology can be used to retrofit existing power plants at a much lower cost than to build new power plants or to rebuild major components of existing power plants. This will accelerate the process of enhancing the environmental performance of utilities.

(2) The new plant will conserve energy resources by burning waste coal which was previously a disposal burden and will demonstrate an innovative clean coal technology designed to significantly reduce emissions of sulfur dioxide and nitrogen oxides.

These two considerations alone offer sufficient justification for the project given the overall, world-wide improvements in air quality and energy conservation we expect to realize.

Sincerely,

Frank Williams, Dean
School of Engineering

Letter No. 41

Frank Williams, Dean, University of Alaska Fairbanks, School of Engineering, 539 Duckering Building, Fairbanks, AK 99775-0660

Comments noted.

Resource Development Council
for Alaska, Inc.

FOUNDED 1975

121 West Fireweed Lane, Suite 250, Anchorage, Alaska 99503-2035
Phone 907/276-0700 Fax 276-3887

Letter No. 42

Reproduced from copy submitted

December 23, 1992

Dr. Earl Evans
Department of Energy
Pittsburg Energy Technology Center
Box 10940
Pittsburg, PA 15236

Dear Dr. Evans:

The Resource Development Council (RDC) appreciates the opportunity to comment on the Healy Clean Coal Project (HCCP).

RDC is a private, non-profit, economic development organization representing Alaska's basic industries and local communities. Our membership also includes individuals, native corporations, organized labor and small business.

RDC has reviewed the Draft Environmental Impact Statement for the HCCP and found it to be adequate in scope. Though outside the scope of the DEIS, there will be a number of benefits resulting from the project, such as jobs and availability of reliable low cost power. It would also be one of the largest construction projects in Alaska this decade.

However, like most other projects involving the development or use of a natural resource, the Healy proposal does have its opponents. Some people object to the plant's proximity to Denali National Park, although there is already a coal-fired plant near Healy, a few miles from the Park.

With 90 percent of the nation's wildlife refuge lands and 70 percent of its national park lands, it is difficult to develop a resource or build a production facility in Alaska that is not adjacent to or near a conservation system unit.

Moreover, the coal fields near Healy have been mined since 1918.

While DOE has done a thorough job analyzing the potential environmental impacts, the computer models used to measure visibility impacts within Denali National Park are clearly ultra-conservative, overstating potential visibility impacts. The model failed to take into consideration local mountain terrain and high winds, blowing from the south away from the park.

The computer model predicts the HCCP would generate a plume visible from the eastern edges of the park for 0 to 8 hours a year. A plume from the existing coal-fired facility would be visible from inside the park for 1 to 27 hours a year, according to the computer modeling. In reality, however, there has been no reported sightings from or within Denali National Park by observers or operating cameras of a visible plume from the Healy plant. 42-1

The National Park Service has expressed concern over possible visibility and air quality impacts from the new plant. In addressing these concerns, the Department of Energy should consider local topography, mixing zone conditions and prevailing winds. Although the proposed project location is only a few miles from a Class I air zone, local conditions do set the Healy area apart from other areas of the nation where air quality and visibility impacts are a serious concern. 42-2

The bottom line is that the new plant will not have a negative impact on the environment. It could be the cleanest coal-fired facility of its size in the world.

RDC urges the Department of Energy to move forward with this project. Power sales have grown steadily over the past ten years and demand for electricity in Interior Alaska is likely to skyrocket as major new mining projects come on line. The AMAX Gold Fort Knox development near Fairbanks will itself increase Golden Valley Electric Association's normal load by almost 50%. There is a very real likelihood that other major hardrock gold properties will be developed in the Fairbanks area, each requiring further increments of electric power. In addition, proposed native corporation chip board plants utilizing Interior timber resources will add an additional load.

The positive potential for the project, both for Alaska and the nation, are clear and substantial while the potential negative impacts are

highly speculative and negligible. RDC commends the Department of Energy for its thoroughness in preparing the DEIS and addressing the issues. The Department should move forward with this project without delay.

Sincerely,

RESOURCE DEVELOPMENT COUNCIL
for Alaska, Inc.

Carl Portman
Communications Director

Letter No. 42
Carl Portman, Communications Director, Resource Development Council for Alaska, Inc. 121 West Fireweed Lane, Suite 250, Anchorage, AK 99503-2035

Comment 42-1
"While DOE has done a thorough job analyzing the potential environmental impacts, the computer models used to measure visibility impacts within Denali National Park are clearly ultra-conservative, overstating potential visibility impacts. The model failed to take into consideration local mountain terrain and high winds, blowing from the south away from the park.

The computer model predicts the HCCP would generate a plume visible from the eastern edges of the park for 0 to 8 hours a year. A plume from the existing coal-fired facility would be visible from inside the park for 1 to 27 hours a year, according to the computer modeling. In reality, however, there has been no reported sightings from or within Denali National Park by observers or operating cameras of a visible plume from the Healy plant."

Response:
DOE agrees that the estimates of potential visibility impacts within DNPP are conservative (forming an upper bound of expected impacts). However, wind speeds and directions were accounted for in the modeling.

Comment 42-2
"The National Park Service has expressed concern over possible visibility and air quality impacts from the new plant. In addressing these concerns, the Department of Energy should consider local topography, mixing zone conditions and prevailing winds."

Response:
The air dispersion modeling accounts for local topography, the height of the mixed layer, atmospheric stability, and wind direction and speed. Similarly, the visibility modeling accounts for all of these parameters except local topography, which presently is too complicated a factor to be incorporated into available visibility models.

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Letter No. 43

Reproduced from copy submitted

December 23, 1992

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
Post Office Box 10940
Pittsburg, Pennsylvania 15236

Dear Dr. Evans:

Please accept this letter as my support for the Healy Clean Coal Project.

I have been a resident of Fairbanks for 35 years, raised a family here and care very much about the future of our community and state.

In the past I have served my state as Commissioner of Administration and my community as its mayor. During my public service as well as a private business man, I am extremely sensitive to issues that impact our environment, thus my reason for writing this letter.

I have had the opportunity to review the Draft Environmental Impact Statement for the proposed Healy Clean Coal Project and I find subject report to be acceptable.

It appears from reading the report that the project makes good sense both from the standpoint of environmental impact as well as the projected economic results.

I urge your favorable consideration in supporting the proposed action and encourage the Department of Energy to take the necessary steps to ensure forward progress of the project.

Yours very truly,

B.B. Allen

Letter No. 43
B. B. Allen, Bill Allen & Sons Real Estate, P.O. Box 73765, Fairbanks, AK 99707

Comments noted.

Paul Atkinson
Post Office Box 176
Denali Park, Alaska 99755

Letter No. 44

Reproduced from copy submitted

25 December 1992

Dr. Earl W. Evans
U.S. Department of Energy
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, Pennsylvania 15236

Dear Sir:

This is to voice my opposition to the proposed Healy Clean Coal Project in Healy, Alaska.

As a resident of the Healy area, I firmly believe that an additional power plant would not be in the best interests of our community. Construction of the plant would result in a boom-and-bust economy for which we are not at all prepared. Our local school is currently overcrowded, our medical clinic is operating at full-capacity, and the status of our local landfill is very uncertain. Our nearest state troopers are miles away in Nenana and Cantwell; for all intents and purposes we have no local law enforcement protection. 44-1

The Nenana River Valley at Healy, even when separated from neighboring Denali National Park and considered on its own, is without question an area of incredible natural beauty. Already that beauty is blighted by the existing power plant. More smoke, no matter how clean we plan to scrub it or which way the winds blow it, can only further diminish the aesthetics of the area. 44-2

But looking even beyond Healy to the rest of Alaska and the rest of the world, I do not believe that an additional power plant is either desirable or necessary. Already, we are putting far too much carbon dioxide into the earth's atmosphere. I strongly feel that the solution to our continual energy crises lies in conservation and in alternative, non-polluting, renewable energies. We must get along with less fossil fuel-generated power, not more. 44-3

Sincerely,

Paul Atkinson

Letter No. 44
Paul Atkinson, P.O. Box 176, Denali Park, AK 99755

Comment 44-1
"Construction of the plant would result in a boom-and-bust economy for which we are not at all prepared. Our local school is currently overcrowded, our medical clinic is operating at full-capacity, and the status of our local landfill is very uncertain. Our nearest state troopers are miles away in Nenana and Cantwell; for all intents and purposes we have no local law enforcement protection."

Response:
Sections 4.1.8 and 4.2.8 address the socioeconomic impacts of the HCCP. In response to the draft EIS, the Denali Borough, the Denali Borough School District, the Railbelt Mental Health and Addictions Program, and the Healy Clinic have all indicated that construction and operation of the HCCP would not have significant adverse impacts on the services they provide.

Comment 44-2
"The Nenana River Valley at Healy . . . is without question an area of incredible natural beauty. Already that beauty is blighted by the existing power plant. More smoke, no matter how clean we plan to scrub it or which way the winds blow it, can only further diminish the aesthetics of the area."

Response:
The EIS discusses potential aesthetic and air quality impacts of the HCCP in Sects. 4.1.1, 4.1.2, 4.2.1, 4.2.2, 4.3.1, and 4.3.2. Although emissions would be more concentrated within the plume nearer the HCCP stack at Healy, most of the NO_x emissions would take the form of invisible NO, and would not be oxidized to NO_2 until traveling downwind away from Healy. See responses to Comments 21-6 and 21-1 for related discussions.

Comment 44-3:
"Already, we are putting far too much carbon dioxide into the earth's atmosphere. I strongly feel that the solution to our continual energy crises lies in conservation and in alternative, non-polluting, renewable energies."

Response:
Conservation and renewable energy play a role in meeting future U.S. energy demands. These alternatives are being addressed through other programs within DOE. See response to Comment 1-10 for further discussion of alternative sources of energy.

Denali Citizen's Council

P.O. Box 78, Denali Park, Alaska 99755

December 29, 1992

Letter No. 45

Reproduced from copy submitted

Dr. Earl W. Evans
U.S. Dept. of Energy
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans,

I attended the December public meeting in Healy concerning the DEIS for the proposed Healy Coal Project and also made some oral comments. First of all, I believe the deadline should be extended for these comments. This is based on the fact that people in the area as well as our organization received the DEIS the day of the hearing. I wrote for a copy as soon as I saw the address in the Daily New Miner (Fairbanks) as to where one could be obtained. So people did not have any opportunity to read the DEIS before attending the meeting to comment on it! Secondly, there were no advance notices put up in the community about the meeting. Usibelli Coal Mine put up a letter urging people to come and show their support. However, there was no official notice to the public from DOE and many people that I talked to the next day didn't even know about the meeting. Finally, the ensuing time to comment falls right amongst all the holidays. That makes it difficult also for people to thoroughly go through this inch thick volume. Despite all the above obstacles, I will bring up a few points that I believe should be considered. Officially, Denali Citizen's Council has not come out for or against the project. But we certainly have some concerns because our focus as an organization is preserving the quality of Denali National Park and that quality may be jeopardized by the proposed plant.

45-1

45-2

As you know, Denali National Park is a Class I national park, designated as such for the purpose of preserving the air quality of the park. We question whether sufficient research has been done to evaluate the impacts of the project to the park. There has been discussion about the PLUVUE I model and its ability to fully calculate fine particulate emissions in certain conditions. If the visibility model is flawed, then we are not receiving

45-3

accurate information as to the visibility of the plume and its effect on air quality. Also in question is the meteorological date used as input. This is in conflict with EPA guidelines. Additional concerns exist pertaining to the chemical composition of the plumes leading to acid deposits on plants and water. 45-4

The other component of the proposed plant is the questionable need. This is not proven technology. As stated at the public meeting, DOE will only be involved for one year in order to get the data they are looking for. The technology does not eliminate nitrous oxides and sulfur dioxides, only reduces them. The DEIS does not address the need or alternatives to this project. 45-5

Finally there is the question of waste management and disposal. The DEIS states that construction rubble and construction camp garbage and trash will be taken to the Healy landfill. The future of our landfill is quite uncertain since it is located on Mental Health lands and the lease may not be renewed. 45-6 The DEIS states that the existing fly ash ponds would be eliminated and the contaminate soils would be buried beneath new construction fill. New ash would be stored in silos and then trucked to UCM Poker Flats for disposal in a large, deep open-pit mine. That brings up concern about ground and water contamination. Water samples taken from drill sites (#6) showed a ph of 11.9. This was presumably from the leaching of fly ash. Phenol was found at another well site and it was questionable whether is was naturally occurring or a contaminant from the existing Healy Unit No. 1. 45-7 In reference to metal cleaning wastes that would result from cleaning the boilers and other equipment, the DEIS states that it would be collected in appropriate containers and transported off-site but no location had been identified. 45-8

There are perhaps many other points that I would bring up given time concerning the DEIS. I hope that DOE will consider at least a 30-day extension so that other agencies as well could sufficiently comment. Thank you for the opportunity to comment.

Sincerely,

Jan St. Peters

Jan St. Peters
Denali Citizen's Council

Letter No. 45
Jan St. Peters, Denali Citizen's Council, P.O. Box 78, Denali Park, AK 99755

Comment 45-1
" . . . I believe the deadline should be extended for these comments."

Response:
See response to Comment 1-1.

Comment 45-2
" . . . there were no advance notices put up in the community about the meeting. . . . there was no official notice to the public from DOE and many people that I talked to the next day didn't even know about the meeting."

Response:
A Notice of Availability (NOA) announcing the draft EIS and public hearings was published by DOE in the *Federal Register* and the Anchorage and Fairbanks newspapers. Block advertisements announcing the hearings were also placed in the Anchorage and Fairbanks newspapers. The NOA and EIS were sent to every television station, radio station, and publication with a news department in the region. A flyer announcing the public hearing at Healy was posted at several locations in Healy. Those people who wished to comment but were unaware of the public hearings had the opportunity to submit comments in writing up to January 20, 1993.

Comment 45-3
"We question whether sufficient research has been done to evaluate the impacts of the project to the park. There has been discussion about the PLUVUE I model and its ability to fully calculate fine particulate emissions in certain conditions. If the visibility model is flawed, then we are not receiving accurate information as to the visibility of the plume and its effect on air quality. Also in question is the meteorological date [*sic*] used as input. This is in conflict with EPA guidelines."

Response:
A comprehensive effort has been made to evaluate the impacts of the proposed HCCP on DNPP. Estimates of potential visibility impairment caused by the HCCP are believed to be conservative (forming an upper bound of expected impacts) because there have been no reported sightings from or within DNPP by observers or operating camera equipment of a visible plume from Unit No. 1, even though computer modeling predicts that a plume from Unit No. 1 should be visible 1 to 6 h/year. The meteorological data used as input were collected specifically for the proposed HCCP project after consultation with the Alaska Department of Environmental Conservation (ADEC) and the EPA. See response to Comment 21-1 for a related discussion.

Comment 45-4
"Additional concerns exist pertaining to the chemical composition of the plumes leading to acid deposits on plants and water."

Response:
Concerns pertaining to the effects of acid deposition on vegetation and surface water are addressed in detail in Sects. 4.1.2.2, 4.1.3.2, and 4.1.5.1 of the EIS.

Comment 45-5
"The other component of the proposed plant is the questionable need. This is not proven technology. As stated at the public meeting, DOE will only be involved for one year in order to get the data they are looking for. The technology does not eliminate nitrous oxides and sulfur dioxides, only reduces them. The DEIS does not address the need or alternatives to this project."

Response:
DOE is considering extending the demonstration for longer than one year to further prove the technology by gathering important technical and environmental performance data. DOE has determined that the HCCP fits the requirements of the Clean Coal Technology Program and is the only utility-sized advanced slagging combustion system being demonstrated within the program. The goal of the Clean Coal Technology Program as established by Congress is to make available to the U.S. energy marketplace advanced and environmentally responsive technologies that will help alleviate pollution problems from coal utilization.

Section 1.4 of the EIS has been expanded to further discuss the need for the project. See response to Comment 1-2 for further discussion of alternatives. The need for power is discussed in the response to Comment 76-12. See response to Comment 1-10 for further discussion on alternative sources of energy.

Comment 45-6
"Finally there is the question of waste management and disposal. The DEIS states that construction rubble and construction camp garbage and trash will be taken to the Healy landfill. The future of our landfill is quite uncertain since it is located on Mental Health lands and the lease may not be renewed."

Response:
The need for a new landfill is discussed in Sect. 4.1.8.5. If the need should arise, a new landfill for Healy would be identified and permitted by the State. HCCP construction rubble would be placed in whatever landfill is licensed to operate in Healy. The discussion of waste management and landfills has been expanded in Sect. 4.1.10 of the EIS.

Comment 45-7
"The DEIS states that the existing fly ash ponds would be eliminated and the contaminate [*sic*] soils would be buried beneath new construction fill. New ash would be stored in silos and then trucked to UCM Poker Flats for disposal in a large, deep open-pit mine. That brings up concern about ground and water contamination. Water samples taken from drill sites (#6) showed a pH of 11.9. This was presumable from the leaching of fly ash. Phenol was found at another well site and it was questionable whether it was naturally occurring or a contaminant from the existing Healy Unit No. 1."

Response:
Concerns regarding water contamination are addressed in the EIS. Table 3.4.1 indicates that the Healy Unit No. 1 operation has had little or no influence on groundwater quality. Elimination of fly ash ponds would further reduce impact potential. Pollutants to the Nenana River would be controlled under an NPDES permit to be obtained from EPA.

Pollutants from wastes disposed in the Usibelli Coal Mine, Inc. (UCM) Poker Flats surface mine would be highly unlikely to migrate to the Nenana River. The UCM mine is regulated by the Alaska Department of Natural Resources. Under those regulations, acid- and toxic-forming materials must be buried in the mine above the mine floor and below the rooting zone of plants to protect surface and groundwater and to protect the terrestrial ecosystem.

Comment 45-8
"In reference to metal cleaning wastes that would result from cleaning the boilers and other equipment, the DEIS states that it would be collected in appropriate containers and transported off-site but no location had been identified."

Response:
The location is yet to be determined. Hazardous waste would be placed in a licensed, approved, and permitted hazardous waste landfill; nonhazardous waste would be placed in the Healy landfill as described in the EIS.

P. O. Box 102267
Anchorage, AK 99510
December 29, 1992

Letter No. 46

Reproduced from copy submitted

HEALY CLEAN COAL PROJECT

Dr. Earl W. Evans
Department of Energy
Pittsburg Energy Technology Center
Box 10940
Pittsburg, PA 15236

Dear Dr. Evans:

I cannot believe there is opposition to the proposed coal-fixed power plant at Healy. At the time of every oil and gas lease sale and oil exploration or production permit application review the same opponents advocate the use of alternate energy sources as opposed to oil and gas exploration. it is obvious that they are not sincere citizens, but in fact simply do not wish to see any constructive and productive activities occur anywhere.

It is expected that the plant will yield little or no visible emissions from the smokestack. Even if visible emissions were to occur, it would likely be during the winter months when few visitors are in the park. Further, the project has the backing of the Department of Energy's clean coal technology program to test new technology that could solve the acid rain problem. It could be the cleanest coal-fired facility of its size in the world.

I urge you to proceed with approvals necessary for the project to go forward.

Sincerely,

E. H. PETE NELSON

EHN:bjs

A-P302

Letter No. 46
E. H. Pete Nelson, P.O. Box 102267, Anchorage, AK 99510

Comments noted.

Letter No. 47

Reproduced from copy submitted

PAUL & COMPANY
P.O. BOX 83102
FAIRBANKS, AK 99708

December 29, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans,

After reviewing the Draft Environmental Impact Statement for the Healy Clean Coal Project, I feel all stipulations have been met. In my opinion, all environmental concerns have been adequately addressed.

I support the Healy Clean Coal Project because it is economically viable, and is necessary for long term affordable power for the interior of Alaska.

Thank you for your attention.

Sincerely,

Paul G. Manuel

pm:jkp

Letter No. 47
Paul G. Manuel, Paul & Company, P.O. Box 83102, Fairbanks, AK 99708

Comments noted.

Letter No. 48

Reproduced from copy submitted

Joni Manuel
P.O. Box 83102
Fairbanks, AK 99708

December 30, 1992

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

RE: Healy Clean Coal Project

Dear Dr. Evans,

The Healy Clean Coal Project is important to the entire state of Alaska for many reasons. There are many social and economic benefits. The HCCP will increase fuel diversification of power generation for many Alaskans. Not only would we benefit by stable electric prices and less dependency on oil, the environmental advantages cannot be overlooked.

The new plant will conserve energy resources by burning waste coal and demonstrate innovative clean coal technology designed to significantly reduce emissions of sulfur dioxide and nitrogen oxides. Such demonstrations lead the way for enhancing the environmental performance of utilities in the future.

Please keep the above in mind when considering the approval of the project. I support the Healy Clean Coal Project, and hope that you will too.

Sincerely,

Joni K. Manuel

Joni K. Manuel

Letter No. 48
Joni K. Manuel, P.O. Box 83102, Fairbanks, AK 99708

Comments noted.

Letter No. 49

December 30, 1992

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

RE: Healy Clean Coal Project

Dear Dr. Evans:

I would like to present written testimony on behalf of the Healy Clean Coal Project.

I have resided in Alaska for the past 15 years. I have two grown sons which neither could find a promising profession here within Alaska. As we all are aware, Alaska is driven by revenues derived from the oil industry. Other than oil, tourism and fisheries, Alaska is a limited state for potential development.

I look upon the Healy Clean Coal Project as a movement to diversify the economy of Alaska and to provide economic development for it's residents.

I attended the public hearing in Fairbanks on December 9, 1992 and listened to all of the individuals both public and private expressing either their pros or cons relative to this undertaking. I personally find the Healy Clean Coal Project an exciting undertaking by all the principles involved specifically the State of Alaska and Golden Valley Electric could develop an additional energy source for the state. The Environmental impact statement in my opinion addresses reasonably and logically the impacts that will be felt in the Healy and Denali Park area. As I have studied this material it would seem to me the environmental impact to these areas will be minimized. I personally drive this highway many times each year and from the Parks Highway, you would simply not know that a power plant nor a producing coal mining operation is being operated within a close proximity.

I would urge this project be permitted that will allow the United States to develop a clean coal generating facility and help diversify the economy of the State of Alaska.

Dennis N. Brown

Mr. Dennis N. Brown
1311 Summit Drive
Fairbanks, AK 99712

Letter No. 49
Dennis M. Brown, Alaska resident (address unknown)

Comments noted.

BP EXPLORATION

BP Exploration (Alaska) Inc.
900 East Benson Boulevard
P.O. Box 196612
Anchorage, Alaska 99519-6612
(907) 561-5111

Letter No. 50

Reproduced from copy submitted

December 30, 1992

Dr. Earl W. Evans
Environmental Coordinator
Healy Clean Coal Project
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Re: Draft Environmental Impact Statement (DEIS) Healy Clean Coal Project

Dear Dr. Evans:

BP Exploration (Alaska) Inc. (BPX) is pleased to offer these comments on the DEIS for the Healy Clean Coal Project. As the State's largest producer of crude oil and a proponent of rational and environmentally compatible energy development, BPX strongly supports proceeding with this innovative energy project. The DEIS appears to be a thorough and appropriately scoped document. We note the following beneficial impacts (among others) of the project:

- The project will utilize innovative clean coal technology which, if adopted by existing coal burning plants, could have national environmental benefits. This is especially true in the context of the Clean Air Act Amendments of 1990 which specifically encourage technological advancements in electric power generation plants to reduce emissions of pollutants.

- The plant's projected superior performance in terms of air emissions with respect to the PSD criteria pollutants is confirmed by DEIS modeling results which indicate emissions well under the PSD increments for Class II areas. Further, air quality impacts to adjacent Denali National Park and Preserve are projected to be insignificant being well under the PSD increments for Class I areas. One of the issues concerning this proposed project is the potential visibility impact of the plant's plume on Denali Park. Conservative modeling reported in the DEIS projects that the plume may be seen up to 8 hours a year from the Park Visitor Center. However, the DEIS reports that monitoring of the existing plant from Denali Park since January 1992 has yet to detect a plume (as of the November publication date of the DEIS). This issue appears to be insignificant especially in the context of the positive environmental and economic benefits of the project.

- The plant will provide a much needed additional source of power for the projected growth in electrical loads of the Interior and backup capacity for the Anchorage area while at the same time conserving energy sources through its capacity to utilize waste coal

In summary, we believe that the Healy Clean Coal Project provides significant environmental and economic benefits and clearly merits approval by the Department of Energy and other regulatory agencies involved in authorizing the project.

Sincerely,

Steven D. Taylor, Manager
Environmental and Regulatory Affairs, Alaska

Letter No. 50

Steven D. Taylor, Manager, Environmental and Regulatory Affairs, BP Exploration (Alaska), Inc., 900 East Benson Boulevard, P.O. Box 196612, Anchorage, AK 99519-6612

Comments noted.

December 30, 1992

Letter No. 51

Reproduced from copy submitted

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburg, PA 15236

Dear Dr. Evans:

I was unable to attend the Public Hearing here in Fairbanks on the Draft Environmental Impact Statement for the Healy Clean Coal Project so am writing to say I support the project.

1. I feel that this project is environmentally safe, after all there is a coal burning plant right in Washington, D.C. and I have never been aware of it polluting the area during several visits and I have never seen mention of it in the media. The HCCP is even newer technology.

2. This project has economic potential that is healthy for Alaska and the Interior, as well as benefiting Alaskans with power at competitive prices. Many times we are victims of higher prices because we must import essentials, here is an opportunity for us to enjoy our own product, at reasonable costs.

3. HCCP really shows an innovative approach for the energy needs of not only Alaska but of the rest of the U.S. It is important to use this technology for future energy/environmental performance. We do need to develop sources of energy that reduce emissions of toxic substances, this can help do it!

4. Alaskans all hold Denali Nat'l Park as treasure but I am convinced that the HCCP will not diminish the beauty, appeal, or naturalness of the Park.

I strongly endorse HCCP as a beneficial project for not only Alaskans but the rest of the U.S. as well.

Sincerely,

Janet M. Halvarson

Janet M. Halvarson
1024 Kellum
Fairbanks, Alaska 99701

Letter No. 51
Janet M. Halvarson, 1024 Kellum, Fairbanks, AK 99701

Comments noted.

Law offices of
JAMES B. GOTTSTEIN
406 G STREET, SUITE 206
ANCHORAGE, ALASKA 99501
(907) 274-7686
TELECOPIER (907) 274-9493

December 31, 1992

James B. Gottstein
Jill C. Wittenbrader

Letter No. 52

Dr. Earl W. Evans
Environmental Coordinator, HCCP
U.S. Dept. of Energy, PETC
Mail Stop 920L
P.O. Box 10940
Pittsburgh, Pennsylvania 15236

RE: Healy Clean Coal Project

Dear Dr. Evans:

This office, along with the Law Offices of David T. Walker, represent the plaintiffs in the Mental Health Trust Lands litigation, Weiss et al. v. State of Alaska, 4FA 82-2208 Civ., who have reached a proposed settlement with the State (Settling Plaintiffs). As the Draft Environmental Impact Statement for the Healy Clean Coal Project (HCCP) has now been issued by the Department of Energy (DOE), the Settling Plaintiffs would like to notify the DOE of their support for this project.

In 1956, the U.S. Congress granted the Territory of Alaska one million acres of land to be managed as a "public trust" with the income and proceeds to be used "first for the necessary expenses of the mental health program of Alaska".[1] Land was selected under the Mental Health Enabling Act between 1956 and 1966, and included the best land then known for income production. The lands included urban and suburban lands, waterfront, and resource lands such as tracts in Healy where the HCCP project is to be built.

In October of this year, the Plaintiffs agreed to sell two parcels of Mental Health Trust Land to Golden Valley Electric Association (GVEA). GVEA is purchasing the parcels in order to provide a site for the construction of the HCCP coal-fired power plant adjacent to its existing facility.

The Plaintiffs agreed to sell the parcels because the sale fulfills purposes intended under the Mental Health Enabling Act, it provides the Trust with adequate compensation for the land, and the development will increase revenues from nearby Mental Health Trust coal bearing land which will serve as a major source of coal for the new plant.

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[1]See Sec. 202(e) of the Alaska Mental Health Enabling Act.

The HCCP will be one of the cleanest burning coal plants in the world and will provide reliable and competitively priced power to Alaska's Railbelt. The project is considered fundamental to the expansion and diversification of Alaska's economic base, as evidenced by the state's matching funds and legislative support. The HCCP will also create up to 200 new jobs.

The Settling Plaintiffs enthusiastically support this project. If there is any additional information that we may provide you with regarding the Trust or its involvement with the HCCP, please give me or my staff a call (907-274-7686).

Yours truly,

James B. Gottstein

cc: Steve Borell; AK Miners Assoc.
Linda Triplett; Ater, Wynne, Hewitt
Brian Bjorkquist; AG's Office
Ron Swanson; DNR, Director Div. of Lands
Bruce Phelps; DNR, Mental Health Project Manager
Meg Hayes; MHT Lands Project Manager
Dave Thomas; MHT
David T. Walker
Jeff Jessee
Phil Volland
Traeger Machetanz

Letter No. 52

James B. Gottstein, Law Offices of James B. Gottstein, 406 G Street, Suite 206, Anchorage, AK 99501—representing the plaintiffs in the Mental Health Trust Lands litigation, *Weiss et al. v. State of Alaska*, 4FA 82-2208

Comments noted.

Letter No. 53

Reproduced from copy submitted

UNIVERSITY OF MAINE *at Machias*

President Emeritus

102 Maple Drive
Fairbanks, Alaska 99709

January 1, 1993

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans,

The purpose of this letter is to support the Healy Clean Coal Project.

You will note that I am President Emeritus of the University of Maine at Machias. From 1951 to 1971 I was employed by the University of Alaska as Head of the Department of Agriculture, Director of the Cooperative Extension Service, Dean of Statewide Services and Vice President for Public Service. After ten years as President of UMM I retired. My wife and I returned to Fairbanks in 1984. My work now is strictly as a community volunteer in areas I feel strongly about.

The HCCP is environmentally sound. It will provide economic benefits to Alaska. It will make good use of an under-used energy source.

Coal is one of our most abundant sources of energy. For many reasons it has not had a good reputation environmentally. The beauty of the HCCP is that it will use low grade coal cleanly. It will be a model for Alaska and the world. The technology proven in the successful operation of the Healy plant will again make coal acceptable as a less costly energy source.

The HCCP has positive benefits for Alaska and the world. It is environmentally sound. It should be built.

Sincerely,

Arthur S. Buswell

Arthur S. Buswell

Letter No. 53

Arthur S. Buswell, President Emeritus, University of Maine at Machias, 102 Maple Drive, Fairbanks, AK 99709

Comments noted.

DONNA S. ROMERO
3561 Cherry Street
Anchorage, Alaska 99504

Letter No. 54

January 4, 1993

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
Post Office Box 10940
Pittsburgh, PA 14236

Dear Dr. Evans:

I have been a resident of Alaska since 1971 and consider this the most beautiful place in the country, and perhaps in the world. I recently attended the Draft Environmental Impact Statement public hearing on the Healy Clean Coal Project (HCCP) and would like to take this opportunity to express my whole-hearted support for the project.

The HCCP has many positive aspects for Alaska. It will likely be one of the cleanest burning coal plants in the world while providing reliable and competitively priced power to the Northern Railbelt. It will create important economic benefits for Alaska. Construction of the plant will create hundreds of jobs. The availablility of clean and competitively priced power is fundamental to the expansion and diversification of the State's economic base. It is believed by the experts to be the best alternative for meeting the load growth and plant replacement problems confronting Interior Alaska. The additional generating capacity in Healy will also provide emergency backup for the Anchorage area in the event of power interruptions from the Beluga plant. The HCCP will conserve energy resources by burning waste coal which was previously a disposal burden.

The successful demonstration of the HCCP technology will have national and international environmental benefits as well. The new technology can be used to retrofit existing power plants at a much lower cost. This will accelerate the process of enhancing the environmental performance of utilities. The successful demonstration of the HCCP technology and its utilization by Pacific Rim utilities will expand the market for Alaska's enormous reserves of ultra-low sulfur, subbituminous coal. The list of positives goes on and on.

The only even partially negative comment that I was able to glean from the DEIS hearing was that certain fanatically conservative elements believe that there may be a vapor plume from the new

plant, which could be visible at some extremely remote and inaccessible part of Denali Park. This seems highly unlikely since no vapor plume has ever been seen from the existing plant. Additionally, the winds in Healy (which blow often) blow out of the south to the north and AWAY from Denali Park. Both of these facts are very persuasive evidence that the "green" element is worrying in vain.

I found it particularly interesting that one of the speakers at the DEIS hearing, an archaeologist, shared the information with us that hearthstones found in Interior Alaska carbon date back 11,000 years, thus indicating that fossil fuel has been burned for millenniums with no adverse environmental effects.

In closing, I repeat that I enthusiastically pledge my full support to this project and urge its expeditious commencement.

Very truly yours,

Donna S. Romero

Donna S. Romero

Letter No. 54
Donna S. Romero, 3561 Cherry Street, Anchorage, AK 99504

Comments noted.

Local # 97 of the IAHFI&AW
407 Denali
Anchorage, Alaska
POB 203212 99520

Letter No. 55

Environmental Coordinator
Mail Stop 920L
U.S. Dept. of Energy, PETC
POB 10940
Pittsburgh, PA 15236

To whom it may concern;

We, the membership of Local #97 wish to state our approval of the building of the Healy Clean Coal Project. We feel that the economic impact, on both the short and long term, will be of great benefit to the people of Alaska. This opportunity to be a leader in clean coal technology is also a boon to the Great State of Alaska, and will be of benefit to the rest of our planet as well. Our 52 current working members look forward to helping build this first step in the journey toward cleaner utilization of coal as a power source.
In addition we are pleased to work with people that have an environmental record as stable as that of the GVEA, and the Usabeli Mine crew.

Thank you for your attention to this vote to go forward with this important project.

Yours

Mickey Endsley
Business Mgr. Local #97

Letter No. 55
Mickey Endsley, Business Manager Local #97 of the IAHFI7AW, P.O. Box 10940, 407 Denali, Anchorage, AK 99520

Comments noted.

BTW Mining & Exploration Corp.
741 E 13th Ave.
Anchorage, AK 99501
(907)274-0222, FAX (907)274-2110

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U. S. Department of Energy, PETC
P. O. Box 10940
Pittsburgh, PA 15236

Letter No. 56

Dear Mr. Evans:

I wish to go on record as being in support of the Healy Clean Coal Project. Approval of the project will do little or no to harm the environment while improving economy of the state:

- the plant will be one of the cleanest burning coal plants in the world while providing reliable and competitively priced power to the Railbelt;
- the plant will create about 200 jobs during the construction phase and about 35 permanent positions for operation and maintenance;
- the availability of clean and competitively priced power is fundamental to the expansion and diversification of the state's economic base; the State of Alaska, through matching funds and legislative support, has participated in the HCCP project because of its importance to the state;
- the HCCP is the best alternative for meeting the load growth and plant replacement problems facing the Interior Alaska;
- the HCCP will reduce the Northern Railbelt's vulnerability to power interruptions over the intertie and provide the Interior with a new source of dedicated, base load power;
- the additional generating capacity in Healy will provide emergency backup for the Anchorage area in the event of power interruptions from the Beluga plant;
- the plant will conserve energy resources by burning waste coal which was previously a disposal burden and will demonstrate an innovative clean coal technology designed to significantly reduce emissions of sulfur dioxide and nitrogen oxides;

- the successful demonstration of the HCCP technology will have national and international environmental benefits; the new technology can be used to retrofit existing power plants at much lower cost than to build new plants or to rebuild major components of existing plants;

- the successful demonstration of the HCCP technology and its utilization by Pacific Rim utilities will expand the market for Alaska's enormous reserves of ultra-low sulfur, sub-bituminous coal; the technology has the potential to overcome the constraints of conventional combustion technologies and allow the use of lower energy Alaskan coal without resulting in a reduction in boiler energy output.

It has been brought to my attention that obstructionists are opposing the project based on the premise that a source of lime has not been included in the DEIS. This is ridiculous since any lime source will be permitted individually. If that source happens to be on state or native lands, the Department of Energy will have no jurisdiction.

Yours truly,

Richard A. Hughes, P. E.
President / Mining Engineer

Letter No. 56

Richard A. Hughes, P.E., President/Mining Engineer, BTW Mining and Exploration Corp., 741 E. 13th Ave., Anchorage, AK 99501

Comments noted.

Daniel Middaugh
8724 Blackberry
Anchorage, Alaska 99502

Letter No. 57

Environmental Coordinator
Mail Stop 920L
U.S. Dept. of Energy, PETC
POB 10940
Pittsburgh, PA 15236

Thank You for the opportunity to comment.

I have , as many others, some concerns as to the safety of the use of coal as a power source. In the DEIS most of those concerns are laid to rest. My remaining concerns not withstanding, I find that the need for constant power, combined with man's need to continuously move forward with better technology, gets the nod.

The people of Bush Alaska have been in the news a lot lately concerning the need for better sanitation facilities. The ever growing populations of these villages, as well as, other Alaskan cities, and the need to provide inexpensive, clean power give the building of the Healy project my vote.

In closing I will say that the economic benefits of constructing this project in the short run are significant, and the pure fact of the matter is that to build the project now will cost less than to wait and build it in the future. Add to that the use of the "now considered waste coal" and the benefits seem to far outweigh the possible problems.

Yours

Daniel Middaugh

Daniel Middaugh

Letter No. 57
Daniel Middaugh, 8724 Blackberry, Anchorage, AK 99502

Comments noted.

Jan. 8, 1993

RAILBELT MENTAL HEALTH
AND ADDICTIONS PROGRAM
P.O. Box 159
Nenana, AK 99760

RAILBELT MENTAL HEALTH and ADDICTIONS
P.O. BOX 159
NENANA, AK 99760
Phone: 832-5557
Fax: 832-5564
1-800-478-5554

Letter No. 58

TO: DR. EARL W. EVANS
U.S. DEPARTMENT OF ENERGY
PITTSBURGH ENERGY TECHNOLOGY CENTER
PO BOX 10940
PITTSBURGH, PA 15236
FAX# 412-892-4775

FROM: BARBARA PRICE
PROGRAM DIRECTOR
RAILBELT MENTAL HEALTH and ADDICTIONS
PO BOX 159
NENANA, AK 99760
FAX# 907-832-5564

RE: PROPOSED HEALY CLEAN COAL PROJECT,
DENALI BOROUGH, ALASKA

There are corrections to be made to the description of our program, Railbelt Mental Health and Addictions contained in your November, 1992 report.

Railbelt Mental Health and Addictions, with permanent offices in Nenana and Healy and itinerant offices in Anderson, Denali Park and Cantwell, is staffed with two full time clinicians and a director/clinician. One clinician is, in addition, a registered nurse. Direct psychiatric services are available at the Nenana office once each month through our consulting psychiatrist.

An increase of some 300 residents would, typically, increase our caseload by 3. As we believe that increased employment is a major factor in improving mental health, we are willing and able to absorb this increased client load.

Barbara Price
Barbara Price,

cc: Patsy Nordmark, Board President
John Winkelman, Healy Clinic

Letter No. 58

Barbara Price, Railbelt Mental Health and Addictions, P.O. Box 159, Nenana, AK 99760

Letter offering current staffing data for inclusion in the EIS.

BRUCE AFTON
JOHN WINKLMANN, P.A.-C

KENDRICK D. BLAIS, D.O.

HEALY CLINIC
A Professional Corporation
P.O. Box 62
Healy, Alaska 99743

(907) 683-2211

December 18, 1992

Letter No. 59

Reproduced from copy submitted

Dr. Earl Evans
U.S. Department of Energy
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, Pa. 15236

Re: Environmental Impact Statement

Dear Dr. Evans:

I listened with interest to the various speakers at the public hearing in Healy on December 8, 1992. I was surprised to hear that medical and mental health services would be adversely affected by the construction and demonstration projects. I am likewise astonished to find essentially these same remarks printed in the impact statement (pg's 2-35, 3-50, 4-74). The paragraphs on pages 3-50 and 4-74 specify the Healy Clinic. These remarks are 100% inaccurate. The information on page 3-50 about medical care, is invalid. The Healy Clinic provides full medical services, I am not an EMT, I am a Physicians Assistant and I practice emergency and family medicine in accordance with National and State regulations. 59-1

I have lived and worked in the Healy-Denali Park area since 1973, providing medical care to the permanent and summertime residents, tourists and other travelers. I am acutely aware of the capabilities of the Healy Clinic since I have developed this service through the years. To suggest that it is at full capacity is absolutely incorrect. The fluctuation of area population with the seasons has challenged us to meet a continuously growing need each year since the early 1970's and we have enjoyed a certain success in satisfying this demand.

To be sure, the H.C.C.P. would impart some increased requirements for our operation here, but if we are given the anticipated needs and expectations of the plan, within a reasonable time frame, I can assure the availability of quality medical care from the Healy Clinic.

I would be glad to amplify my comments on this issue as needed, any time.

Though I am a supporter of the H.C.C.P. concept, I can't help but wonder about the accuracy of the other reports in the E.I.S. draft, given the errors I've found. The assertions regarding the local mental health system are misleading too. I am sure those folks will forward their views. Thanks for your attention to this matter.

Sincerely,

John Winklmann, P.A.-C

P.S. Go Pens!

Letter No. 59
John Winklmann, P.A.-C, Healy Clinic, P.O. Box 62, Healy, AK 99743

Comment 59-1
"I was surprised to hear that medical and mental health services would be adversely affected by the construction and demonstration projects. I am likewise astonished to find essentially these same remarks printed in the impact statement (pg's 2-35, 3-50, 4-74). The paragraphs on pages 3-50 and 4-74 specify the Healy Clinic. *These remarks are 100% inaccurate.*"

Response:
Sections 3.8.5, 4.1.8.5, and 4.2.8.5 of the EIS text have been revised to include information provided in a letter from Mr. John Winklmann dated December 18, 1992.

P.O. Box 285
Healy
Alaska 99743

3 January, 1993

Dr. Earl W. Evans
Environmental Coordinator, HCCP,
Mail Stop 920L,
Pittsburgh Energy Technology Center,
U.S. Department of Energy,
P.O. Box 10940,
Pittsburgh, PA 152364

Letter No. 60

HCCP Draft EIS

Dear Dr. Evans,

I request that the following be included in the HCCP DEIS public hearing record. This letter contains my personal views and not those of any group or corporation.

As a resident of Healy I hereby add my approval of HCCP to the public record. As a resident of this planet I applaud the innovative technology being assembled and approve of the dynamic Alaskan spirit that has made this project possible. We as individuals must take responsibility for the environment, stop all this preposterous bluster and move this project forward rapidly so that it is proven in time for massive aging utility boilers all over America to take advantage of the staggering improvements offered and expand on and retrofit this technology. I have seen the foul ponds left by the wet scrubbers other power plants have installed and say that they are a poor substitute for the HCCP system.

To address a few of the issues brought up locally:

Garbage Dump. The dump at Healy is currently unlikely to have its permit renewed in a little disagreement between the State and Denali Borough. The State is generously trying to give the land the dump is on to the Borough and rather less generously slide out from under the prospect of future environmental liabilities that may occur if examination and cleanup work become necessary at the site. This has little effect on HCCP though as the Nenana Municipal Dump has a longer term permit and is available.

Ferry Ice Bridge. There is a person made bridge at Ferry now. Residents have used it for years despite it being a railroad bridge. There is a safe walkway built onto it. The suggestion has been made that residents need a substantial ice bridge to take heavy loads across the Nenana River despite the fact that the ice bridge is often not usable at Ferry regardless of heat from the existing or prospective power plants. Last winter the ice was such a jumbled mess that it was quite impossible for it to be used as a road. In any case the east side *can* be accessed by road during the summer months. People usually homestead in remote places to get away from easy access by the masses and some of the locals I have talked to expressed their desire not to have a road bridge.

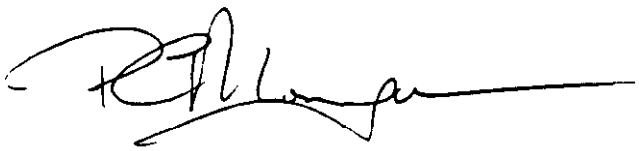
Noise. Residents can hear the Usibelli Mine trucks dumping at the Usibelli tipple on particularly cold days. However, as coal going to the power plant is taken straight from the pit to the power plant pile and does not go through tipple, which is the closest part of the mine to local dwellings, this situation will not be worsened in any way.

Fish. I have seen a few fish in the Nenana itself, although no salmon. Some residents claim there were all kinds of salmon in there at one time. While this sounds like a fisherman's tale to me it should be pointed out that the steady increase in water temperature offered by both power plants is regarded as an advantage for fish by the Fish & Game Department. If there were significant salmon populations at one time it would be presumptuous indeed to declare them reduced due to the existence of the tiny power plant in use currently. There are many coal and gold mining activities locally that may have some bearing but far more likely is that they were either fished out or encountered trouble along the way. Just look at the map. Fish would have to run up the Yukon from the Nome area and swim about a thousand miles to get to Healy.

Water. Just as an observation I know that there are natural sources of hot water locally. Some in the order of 75° F. On 12 December, 1992, I took several photographs of steaming river water, particularly the Healy, which joins the Nenana a quarter mile upstream of the power plant. River fog is naturally occurring here and so is the lack of an ice bridge upstream of the power plant.

Visibility. As Mr. Stickle commented verbally at the public meeting at Healy, in 28 years he has never seen a plume from the power plant make it anywhere near the Denali National Park or associated lands. His house looks from a hillside straight across the valley toward any visible plume. It is interesting that the NPS thought there was no visibility problem when installing their own diesel generating station actually inside the Park boundaries.

I understand that most of the Golden Valley Electric Association generation facilities are scheduled to retire within 15 years. Also the new gold mine north of Fairbanks will bring a significant increase in load. These two points make it rather important that some sort of new generation facilities be started on soon otherwise the bulk of the northern load will be supplied from Anchorage. As they drop us like a hot potato the moment they have any trouble at their end I would say as a consumer that the southern suppliers are not reliable. I also see no reason why the interior should support lower cost power for the masses in Anchorage. The Anchorage utilities enjoy very low cost gas from contracts negotiated many years ago. When these contracts expire they will be forced into more realistic costs and will be looking to share the burden with the interior customers. As we have far more cost effective sources of generation I fail to see why we, the small interior customer base, should be required to support the poor financial decisions of the past made by the Anchorage utilities. They can build their own coal fired plants and enjoy low cost power too. We need our own sources of power. To have the opportunity to solve this need while proving revolutionary improvements in power plant technology is unquestionably a step worth proceeding with as soon as possible. Please, approve the application immediately. Thank you.



P.C. Morgan

Letter No. 60
P. C. Morgan, P.O. Box 285, Healy, AK 99743

Comments noted.

January 4, 1993

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Letter No. 61

Reproduced from copy submitted

Dr. Earl W. Evans:

I have reviewed the Healy Clean Coal Project (HCCP) Draft Environmental Impact Statement (DEIS) issued by the Department of Energy (DOE). I support this project and hope to see it progress as soon as possible.

The HCCP project is probably more important to the State of Alaska than the same project would be to any other State of the Union. Alaska is in an infantile stage of developing its infrastructure. Having clean power is important to all of us. Having clean competitively priced power that our developing industries can bank on for the next 100 years, generated from a supply of coal located right hear in Alaska is a bonus. It is essential to the expansion and diversification of the state's infrastructure and economic base.

The HCCP has the support of the people of Alaska. The construction phase alone would create 200 new jobs with an estimated- 35 permanent jobs once the plant is in operation. Golden Valley Electric Association (GVEA) and the Alaska Public Utilities Commission believe that HCCP is the best alternative for meeting the load growth and plant replacement problems confronting Interior Alaska. The only real non-supportive groups are those with very specialized interest. These specialized interest groups are generally lead from outside organization made up of people who do not live and work in Alaska. Are they effected by the numerous power outages common throughout Alaska? Are they affected by the number of jobs lost now and in the future without a clean stable supply of power to our industries.

The need for the power is there now. The HCCP will be one of the cleanest burning coal plants in the world. It is a well designed project with many benefits to Alaska and it's people.

I strongly support it.

Sincerely,

Kevin G. Greenfield
810 Woodmar Dr.
Anch, AK 99515

Letter No. 61
Kevin G. Greenfield, 810 Woodmar Place, Anchorage, AK 99515

Comments noted.

January 4, 1993

Dr. Earl W. Evans, Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Letter No. 62

Reproduced from copy submitted

Dr. Earl W. Evans:

I have seen the Draft Environmental Impact Statement (DEIS) for the Healy Clean Coal Project (HCCP) issued by the Department of Energy (DOE). I strongly support the HCCP and hope to see the project progress as soon as possible.

The importance of the HCCP project to the State of Alaska cannot be overlooked. Compared to the rest of the U.S., Alaska is in the infant stage of developing its infrastructure. Having clean competitively priced power is essential to the expansion and diversification of the state's infrastructure and economic base. Golden Valley Electric Association (GVEA) and the Alaska Public Utilities Commission believe that HCCP is the best alternative for meeting the load growth and plant replacement problems confronting Interior Alaska.

The need for the power is there now. The HCCP will provide Interior Alaska with a new source of dedicated base-load power and reduce the vulnerability of the Northern Railbelt to power interruptions over the Anchorage intertie. GVEA has no adequate alternate source of power if for any reason power production or intertie transmission from Anchorage is interrupted. Even now there are frequent times when Chugach Electric of Anchorage is not able to supply all the power GVEA requests. As the electrical demand in Anchorage grows, this situation will get worse. An additional benefit of the HCCP is that the additional generating capacity of the new plant will provide emergency backup for the Anchorage area as well.

Even though the HCCP is a relatively small plant, from the environmental perspective, the HCCP will likely be one of the cleanest burning coal plants in the world. The plant will conserve energy resources by burning waste coal that was previously a disposal burden and will demonstrate an innovative clean coal technology designed to significantly reduce sulfur dioxide and nitrogen oxides. The successful demonstration of new technology being used will provide further national and international environmental benefits as the technology gets incorporated into older plants as well as new plants.

The HCCP is a well designed project with numerous social and economic benefits for Alaska's future. I strongly support it.

Sincerely,

Jerry Birch

Jerry Birch
4740 E 115th Ave
Anchorage AK 99516

Letter No. 62
Jerry Birch, 4740 E. 115th Avenue, Anchorage, AK 99516

Comments noted.

Letter No. 63

Reproduced from copy submitted

DENALI BOROUGH

Rick S. Brewer, Mayor

Denali Borough
P.O. Box 480
Healy, AK 99743
Telephone (907) 683-1330
Fax (907) 683-1340

Mayor Rick S. Brewer
P.O. Box 3140
Anderson, AK 99744
Telephone (907) 582-2777

DR. EARL W. EVANS, ENVIRONMENTAL COORDINATOR
HCCP
MAIL STOP 922L
PITTSBURGH ENERGY TECHNOLOGY CENTER
U.S. DEPT OF ENERGY
P.O. BOX 10940
PITTSBURGH, PA 15236

JANUARY 4, 1993

DEAR SIR:

THIS LETTER SHOULD BE CONSIDERED WRITTEN COMMENT FOR THE HEALY CLEAN COAL PROJECT (HCCP).

THE DENALI BOROUGH ADMINISTRATION AND ASSEMBLY IS IN UNANIMOUS SUPPORT OF THE PROJECT AT THE RECOMMENDED SITE AND WOULD SUBMIT THE FOLLOWING ADDITIONAL COMMENTS.

PLEASE FIND ENCLOSED RESOLUTION 92-13 STATING OUR SUPPORT OF THE PROJECT.

WE HAVE FOUND SOME ERRORS IN THE EIS THAT SHOULD BE CORRECTED. ON PAGE (P) 3-46, SECTION 3.8.4 PARAGRAGH (PH) 1 REFERS TO THE BOROUGH AS A SECOND CLASS BOROUGH WHEN IN FACT THE DENALI BOROUGH IS A HOME RULE BOROUGH. THE SAME SECTION, PH 2 STATES A SEVERANCE TAX OF FIVE CENTS PER TON ON COAL, LIMESTONE AND GRAVEL WHEN ACTUALLY THE REFERENDUM ALLOWS FOR A FIVE CENT EQUIVALENT TAX ON ALL NATURAL RESOURCES AND IN THE FOLLOWING SENTENCES EDUCATION REVENUE FUND WILL BE RECEIVED BY THE BOROUGH IN FY 1992 SHOULD BE FY 1993. TABLE 3.8.4 SHOULD BE CORRECTED AS FOLLOWS:

CATEGORY	FY 1992	FY 1993
4% BED TAX	400,000	440,000
MISC./USER FEES	15,000	141,000
MUNICIPAL ASSISTANCE	120,000	101,340
REVENUE SHARING	-0-	32,673
ORGANIZATIONAL GRANTS	200,000	100,000

THE OTHER INFORMATION IS ACCURATE AS SHOWN IN THE TABLE.

TABLE F.8.3 SHOULD BE CORRECTED AS FOLLOWS:

CATEGORY	FY 1992	FY 1993
BOROUGH ASSEMBLY	97,800	92,800
MAYOR'S OFFICE	115,450	146,900
ATTORNEY	25,000	10,000
FINANCE	-0-	-0-
PLANNING	1,500	1,500

THE OTHER INFORMATION IS ACCURATE AS SHOWN IN THE TABLE.

CONTINUING WITH SECTION F.8.5, P F-48 PH 1 STATES THE BOROUGH WILL ASSUME EDUCATION POWERS IN FY 1992 WHEN IN FACT THE BOROUGH ASSUMED THESE POWERS ON JULY 2, 1992 WHICH IS FY 1993. PH 2 STATES THE BOROUGHS CONTRIBUTION TO EDUCATION IS 35% OF THE PRIOR YEAR'S COST. STATE LAW REQUIRES A FOUR MILL EQUIVALENT OF THE ASSESSED PROPERTY VALUES WITHIN THE BOROUGH AS A MINIMUM. THE DENALI BOROUGH WOULD CONTRIBUTE UNDER THE CURRENT ASSESSMENT $145,144.80 IN FY 1995, $217,717.20 IN FY 1996 AND $290,289.60 IN FY 1997 AND FOLLOWING YEARS. WE FEEL THIS WOULD CHANGE OTHER CALCULATIONS MADE IN THAT PARAGRAPH ALSO. P F-49 PH 4 SHOULD BE CORRECTED TO STATE THAT POLICE PROTECTION IS PROVIDED BY TROOPERS FROM CANTWELL AND NENANA ALONG WITH COVERAGE DISPATCHED FROM FAIRBANKS DURING THE PEAK SUMMER MONTHS. P F-50 PH 2 SHOULD REFLECT THE TRI-VALLEY VOLUNTEER FIRE DEPARTMENT AS HAVING TWO AMBULANCES.

LET ME STATE THAT WE UNDERSTAND THAT THIS INFORMATION HAS BECOME EASIER TO FORECAST DUE TO THE TIME ELAPSED SINCE THIS REPORT WAS BEING FORMULATED. LET ME FURTHER SAY THAT WE THINK THE CHANGES WE HAVE SHOWN WILL FURTHER SHOW THAT THE HCCP WILL NOT HAVE AN ADVERSE EFFECT ON THE BOROUGH IN ANY WAY, ESPECIALLY FINANCIAL.

THANK YOU FOR THE OPPORTUNITY TO COMMENT ON THIS MATTER.

SINCERELY,

RICK B BREWER
MAYOR

DENALI BOROUGH, ALASKA

RESOLUTION NO. 92-13

A RESOLUTION IN SUPPORT OF THE HEALY CLEAN COAL PROJECT.

WHEREAS, the Denali Borough is interested in the promotion of the area to continue the Economic Development within the Borough; and

WHEREAS, most residents in the Healy area express support for the Healy Clean Coal Project (HCCP); and

WHEREAS, the HCCP would incorporate some of the newest technology in the field of clean coal fired electrification; and

WHEREAS, the HCCP would provide needed additional employment opportunities for Borough residents; and

WHEREAS, the increase of business and job opportunities will create potential revenue sources for the Borough;

AND WHEREAS, it would not make a significant financial hardship on the Borough.

NOW THEREFORE BE IT RESOLVED that the Denali Borough Assembly strongly supports the Healy Clean Coal Project.

PASSED AND APPROVED by the DENALI BOROUGH ASSEMBLY this 13th day of December, 1992.

MAYOR

ATTEST:

Shelly L. Miller
(ACTING) BOROUGH CLERK

Letter No. 63
Rick S. Brewer, Mayor, Denali Borough, P.O. Box 480, Healy, AK 99743 (Resolution No. 92-13, A Resolution in Support of the Healy Clean Coal Project)

Comments offered current, more accurate socioeconomic data for inclusion in the EIS.

Response:
Sections 3.8.5, 4.1.8.5, and 4.2.8.5 of the EIS text have been revised to include information provided in a letter from Mayor Rick Brewer dated January 4, 1993.

WILLIAM RANSOM WOOD
PRESIDENT (EMERITUS), UNIVERSITY OF ALASKA

Letter No. 64

Reproduced from copy submitted

January 5, 1993

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans,

Having visited on several occasions the Usibelli Coal Mining operation near Healy, Alaska, and having studied the "Draft Environmental Statement for the Proposed Healy Clean Coal Project" with considerable care, I must conclude that the proposed project is very much worthwhile, that it can be accomplished within the technical and environmental parameters identified, that it represents an important advancement of commercially useful industrial technology, that potentially it could be of genuine benefit to many, many people in Alaska and elsewhere. It will do much good at minimal, if any, risk.

As an old man of eighty-five years deeply concerned about the kind of future that my ten grandchildren face, I can think of no legitimate reason why the proposed Healy Clean Coal project should not be approved.

I heartily support its earliest possible plant construction and operation. No good purpose would be served by anyone trying to nit-pick such a sound and sensible project for the common good.

Sincerely,

Wm R. Wood

Wm. R. Wood
President (Emeritus)
University of Alaska

El Dorado Estates #305 • 665 Tenth Avenue • Fairbanks, Alaska 99701 • U.S.A. • Phone: (907) 452-6248

Letter No. 64

William R. Wood, President (Emeritus) University of Alaska, El Dorado Estates #305, 665 Tenth Avenue, Fairbanks, AK 99701

Comments noted.

January 5, 1993

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Letter No. 65

Reproduced from copy submitted

RE: Healy Clean Coal Project (HCCP)

Dear Dr. Evans:

As a resident of Alaska and a U.S. citizen, it is not only my duty but my belief that compels me to write to you about the Healy Clean Coal Project (HCCP). Not only will the HCCP Plant generate important economic benefits for Alaska but our planet will greatly benefit from this venture. Without causing harmful environmental consequences to the State of Alaska wilderness as well as setting an example for the rest of the World, the success of this project will have national and international environmental benefits.

Rather than building new power plants or rebuilding major portions of old ones, we will be able to use this new technology to refurnish existing power plants at a more reasonable cost. This project will show new innovative technology designed to vitally reduce emissions of sulfur dioxide and nitrogen oxides by burning waste coal (enormous reserves of low sulfur coal insure a market for Alaska) which in turn will conserve energy resources.

Contruction of the plant will create about 200 jobs, with another 35 permanent jobs to operate and maintain the plant. Through matching funds and legislative support, the State of Alaska has taken part in the HCCP project because of its significance to Alaska's financial status.

The HCCP will reduce the Northern Railbelt's assailability to power interruptions and equip the Interior with a new origin of committed, base-load power. Currently, GVEA has no ample, alternative source of power if for any reason origination from the Anchorage area is suspended. There are still frequent periods when Chugach is unable to supply all the power GVEA requests. As Anchorage's electrical requirements grow and some units are withdrawn, the situation will only decline.

Finally, it is my opinion that Denali Park will not be adversely affected. The wind direction is from the South away from Denali Park and the Usibelli Coal Mine folks have and always will be protective of the environment.

Thank you for taking the time to understand and listen to my opinion.

Sincerely,

Gerald H. Grewe
2939 Yale Drive
Anchorage, Ak 99508

GHG/lmh

cc: Usibelli Coal Mine, Inc.

Letter No. 65
Gerald H. Grewe, 2939 Yale Drive, Anchorage, AK 99508

Comments noted.

Charles B. Green
P.O. Box 71805
Fairbanks, Alaska 99707

Letter No. 66

January 6, 1993

Dr. Earl W. Evans
U.S. Department of Energy
Pittsburg Energy Technology Center
P.O. Box 10940
Pittsburg, PA 15236

Dear Dr. Evans:

I would like to take this opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Healy Clean Coal Project (DOE/EIS-D186).

The DEIS thoroughly addressed all issues of environmental concern and it is apparent that any environmental impacts will be insignificant compared with the variety of benefits, both social and environmental, that will accrue from this demonstration project.

I strongly support the Proposed Action identified in the DEIS and urge DOE to take all measures to assure that the project is completed as scheduled.

Sincerely,

Charles B. Green

Letter No. 66
Charles B. Green, P.O. Box 71805, Fairbanks, AK 99707

Comments noted.

ALASKA MINERS ASSOCIATION, INC.

501 West Northern Lights Boulevard, Suite 203, Anchorage, Alaska 99503 fax: (907) 278-7997 telephone: (907) 276-0347

Letter No. 67

Reproduced from copy submitted

January 6, 1993

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
U.S. Department of Energy, PETC
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans,

Re: Healy Clean Coal Project DEIS

Thank you for this opportunity to provide written comments on this very important project. The Alaska Miners Association has nearly 1000 members and represents all aspects of the mining industry. This includes large and small mining companies in locatable minerals, materials and coal as well as independent miners, prospectors and suppliers.

We are very pleased that the Department of Energy has selected the Healy Clean Coal Project to be one of the projects for participation by the Department. Golden Valley Electric Association, the Alaska Industrial Development and Export Authority and the Usibelli Coal Mine are excellent corporate citizens and we, and most Alaskans, are pleased that these have joined together in this project.

In the fall of 1990 I attended and testified at the scoping meeting for this Draft EIS. At that time I urged DOE to proceed ahead with all dispatch and complete this Draft EIS in the most expeditious manner possible. It appears that you have done just that and I commend you for it.

It is our opinion that the Draft Environmental Impact Statement for the proposed Healy Clean Coal Project has effectively addressed all the points required by law and that the DEIS is complete. The DEIS also appears to have evaluated the project in sufficient depth to insure that all the pertinent issues have been thoroughly addressed.

Regarding the issues raised by the National Park Service, the DEIS addresses these thoroughly and has even gone beyond what is reasonably necessary to scientifically answer the various questions.

We find it incredible that the NPS, which is a participating agency in the preparation of the DEIS, would recommend an extension to the comment period and that they would make such a request at a public meeting.

We strongly object to the ultra conservative approach used in the DEIS for modeling of the air quality. The model used is far too conservative for the actual situation. The Healy area is known for its strong and extremely varied winds. This model should be either replaced, modified or the results qualified to incorporate the known, measurable, real-life situation and the historical data for the area. If this is not done, we request that the EIS clearly state that this modeling is ultra conservative and that many known factors (these should be listed) have not been included that would greatly decrease any chance of any visible plume from the plant. 67-1

In addition to the fact that the model is not correct, we are concerned that if this model is utilized it may become a precedent for other future power plants in the state of Alaska. 67-2

We would remind the DOE that in 1980 the Alaska National Interest Lands Conservation Act (ANILCA) added several million acres to the then existing Denali National Park with the result that Denali National Park and Preserve now contains more than 6 million acres and is considered by many to the crown jewel of the National Park System. One of the arguments in 1980 for increasing the park to such a large size was to provide a buffer zone within the designated park lands for the core area highest value park lands. This was done and the Denali National Park and Preserve area now includes this buffer. 67-3

This built-in buffer of the park was meant to and will fully accommodate any concerns for visual effects of projects such as the Healy Clean Coal Project. It has been estimated that if a plume ever does occur, it could be seen from at most a few hundred acres of the Park. If we even assume that a plume could be seen from 1000 acres, that would mean it would be seen from only 0.017 % of the Park area. It should also be noted that this area of the Park has only foot access and is not an area having particular appeal to the hiking public.

ANILCA also included the recognition by the Congress that there was no need for further federal land set-asides in Alaska and that the remaining lands - federal, state and private (primarily Native owned lands) would be available for economic development. Requirements for excessive restrictions, because of the mere existence of the Park, would result in an additional defacto buffer around the Park and thereby effectively increase the federal land set-asides. Any increases to federal conservation units or even study of such increases is specifically disallowed by ANILCA.

The improvements in energy conservation from this project may also be found to result in increased energy conservation in other areas around the U.S. and around the world.

There is also the very strong likelihood that the HCCP technology will be applicable to retro-fitting existing boilers in the Eastern U.S. and in other parts of the world. This would decrease the emissions of those installations where high sulfur coal is now being used. If the HCCP shows that this technology is applicable, this one project will have an even greater positive environmental affect than just the part that we will see here in Alaska.

For all of the above reasons we believe the Healy Clean Coal Project is good for the human and natural environment of Alaska and of the world. Thank you for the opportunity to comment. We urge DOE to complete this EIS as soon as possible and proceed with construction of the Healy Clean Coal Project.

Sincerely,

Steven C. Borell, P.E.
Executive Director

cc: Governor Walter J. Hickel
Commissioner Glen Olds
Acting Director Sam Dunaway

Denali National Park is indeed a magnificent Park. But its sheer size is difficult to appreciate. To place it into perspective, with a total of more than 6 million acres, DNP&P is larger than eight of the 50 states that make up this country.

Some have argued that the scope is too narrow and that the increase in carbon dioxide and the potential for global warming should be considered. We disagree. The preponderance of evidence is that global warming does not exist and so long as any issue is still only a theory it is totally improper to in any way consider the issue in an EIS. 67-4

The argument has also been raised that the source of the limestone must be considered in the EIS. We believe that such a requirement would be inappropriate. It would appear that from two to four truckloads of limestone per week will be required for the project. This will have no more and likely would have less, effect on the Park and the environment than adding the same number of tour busses. Many suppliers from the lower 48 states and possibly from within Alaska will be able to supply the limestone and we see no reason that the source of limestone should be a part of the EIS. 67-5

The HCCP will benefit Alaska and the nation in many ways. In the immediate future it will provide jobs and electricity for the rail belt intertie area of Alaska. It will also be a boost for the service industries in the state that are having extreme difficulty due to the reductions in oil production. Because of over-bearing and often uncertain regulations and strong anti-development pressures, many jobs have been forced out of the State of Alaska and out of the U.S. into other countries having more reasonable regulations and policies. Because of these factors, the jobs and economic stimulus that HCCP will provide could not come at a better time for this state.

For the long term, this project will result in cleaner energy and will provide added value for all Alaskan sub bituminous coals. Success of HCCP would result in new projects with the result that more jobs will be created. Alaskan ultra low sulfur coals will be able to provide clean energy throughout the Pacific Rim and thereby improve the environment in Alaska and elsewhere.

One further very beneficial aspect of the project will be that HCCP will result in greater conservation of energy. This is a major focus of our national energy policy and HCCP will provide significant advances in that direction. By burning coal that is not now marketable, the plant will make wise use of an even larger portion of the available coal resource. This is energy that is already being uncovered in the mining process but is now lost. The fuel and effort to mine this material is already being expended so it is logical and wise to find new uses and markets for this portion of the coal resource.

Letter No. 67

Steven C. Borell, P.E., Executive Director, Alaska Miners Association, Inc., 501 West Northern Lights Boulevard, Suite 203, Anchorage, AK 99503

Comment 67-1:
"We strongly object to the ultra conservative approach used in the DEIS for modeling of the air quality. The model used is far too conservative for the actual situation. The Healy area is known for its strong and extremely varied winds. This model should be either replaced, modified or the results qualified to incorporate the known, measurable, real-life situation and the historical data for the area. If this is not done, we request that the EIS clearly state that this modeling is ultra conservative and that many known factors (these should be listed) have not been included that would greatly decrease any chance of any visible plume from the plant."

Response:
DOE agrees that the modeling of potential air quality and visibility impacts within DNPP is conservative (forming an upper bound of expected impacts). The modeling is intentionally conservative so that actual impacts would not exceed predicted impacts. The modeling includes the input of measured meteorological data such as wind speed and direction and calculates atmospheric stability. The EIS states that the modeling is conservative and lists assumptions used in the modeling.

Comment 67-2:
"In addition to the fact that the model is not correct, we are concerned that if this model is utilized it may become a precedent for other future power plants in the state of Alaska."

Response:
DOE believes that the modeling provides a reasonable upper-bound estimate of potential impacts from the proposed HCCP. The modeling approach is based on general guidance suggested by ADEC and EPA and has been used previously for other proposed projects.

Comment 67-3:
"We would remind the DOE that in 1980 the Alaska National Interest Lands Conservation Act (ANILCA) added several million acres to the then existing Denali National Park with the result that Denali National Park and Preserve now contains more than 6 million acres . . . One of the arguments in 1980 for increasing the park to such a large size was to provide a buffer zone within the designated park lands for the core area highest value park lands. This was done. . . .

This built-in buffer of the park was meant to and will fully accommodate any concerns for visual effects of projects such as the Healy Clean Coal Project."

Response:
The results of air dispersion modeling that DOE has performed for HCCP emissions indicate that no standards, including PSD Class I increments, would be exceeded as a result of HCCP operation. Stringent PSD Class I increments apply to areas such as DNPP where almost any deterioration of air quality is undesirable and little or no major

industrial development would be allowed. Visibility impairment at the DNPP Visitor Access Center from NO_2 emissions is predicted by computer models to occur during less than 1% of the daytime hours per year. DOE does not expect that air quality within DNPP would deteriorate appreciably as a result of the proposed HCCP. Furthermore, DOE agrees that the "core area" (the interior area) of DNPP would not be affected.

Comment 67-4:
"Some have argued that the scope is too narrow and that the increase in carbon dioxide and the potential for global warming should be considered. We disagree. The preponderance of evidence is that global warming does not exist and so long as any issue is still only a theory it is totally improper to in any way consider the issue in an EIS."

Response:
Because of the possibility of major changes in the global climate as a consequence of increasing atmospheric concentrations of "greenhouse" gases (especially CO_2) resulting from human activities, DOE believes that a discussion of the proposed project's contribution to this potential impact is warranted. The discussion on potential global climate change in Sect. 4.1.2.2 has been expanded to further address the potential influence of the proposed HCCP's CO_2 emissions.

Comment 67-5:
"The argument has also been raised that the source of the limestone must be considered in the EIS. We believe that such a requirement would be inappropriate."

Response:
In supporting full disclosure in the EIS, DOE believes that a more extensive discussion of the potential sources of limestone is warranted. The EIS contains further discussion of this resource in Sects. 2.1.6.4 and 5.1. Also, see response to Comment 1-4.

217 Second Street, Suite 201
Juneau, Alaska 99801
(907) 586-2323
FAX (907) 463-5515

ALASKA STATE CHAMBER OF COMMERCE

January 8, 1993

Letter No. 68

Dr. Earl W. Evans
U. S. Department of Energy
Pittsburgh Energy Technology Center
P. O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans:

Re: Draft Environmental Impact Statement (DEIS)
Healy Clean Coal Project (HCCP)

The Alaska State Chamber of Commerce (ASCC) represents over six hundred businesses, large and small, spread through the State of Alaska. ASCC also has members located in several Western states and Canada with vital business interests in Alaska. It is on behalf of Alaska's business leaders and the many jobs they provide that I offer these comments on the DEIS for the HCCP.

The ASCC urges the U. S. Department of Energy (DOE) to move ahead with the HCCP and resist any and all attempts to delay this vital project which promises major medium and long-term benefits to both Alaska and the Nation.

The DEIS is well prepared and clearly and comprehensively examines the environmental and socio-economic impacts on the HCCP. The DOE is to be complimented on preparing a readable and understandable analysis which examines in adequate detail the imprint of this project on the physical and human environment. ASCC, while certainly not insensitive to the need to protect the physical environment, identifies most directly with the human environment in Alaska.

Key to Alaska's economic future is the need to diversify the economy away from gross over dependence upon North Slope oil production (a move which will be dictated by falling production) towards a better balance of economic activity. Many Alaskans identify the development and enlightened utilization of Alaska's huge coal resources as a promising and needed contribution to a more balanced economy as well as a more dependable energy infrastructure. Low cost electrical energy and Alaskan jobs are key benefits to be provided by the HCCP.

There are potential economic benefits attendant upon successful demonstration of new technology at Healy which are not referenced in

the DEIS. The advanced slagging combustor system developed by TRW Inc. could become a major option for repowering aging utility and industrial boilers which currently burn heavy oil or coal. The potential off-shore market is enormous and because Alaskan sub-bituminous coals perform so well with the combustor system it is rational to think in terms of packaging future technology hardware sales with fuel supply commitments.

In the narrow more certain context of Healy and the Railbelt region, the HCCP will provide quality construction jobs and, beyond the construction phase, well-paying permanent Alaskan jobs at the new plant and the coal mine. The community of Healy should have little difficulty coping with the increased demand on educational and social services during the construction phase and ensuing longer-term growth in population. There is adequate time to formulate and implement appropriate mitigation measures.

It is abundantly clear that the provision of low-cost electrical power to the Railbelt and the benefits of short, medium and long-term jobs far outweighs any short-term, real or imagined, impacts.

The HCCP has been designed to burn a mix of run-of-mine coal with waste coal. Waste coal, by definition, is a product which is currently unsaleable and therefore is left in the mine. It may be coal with elevated concentrations of ash rendering it unsaleable or coal which is contaminated with overburden or innerburden as a consequence of mining practices. The most salient fact however is that the HCCP will utilize this here-to-fore unsaleable material -- putting it to beneficial use. This surely is a powerful demonstration of the CONSERVATION ETHIC which should have universal appeal.

The environmental issues, such as they are, stem from the location of the HCCP being within a few miles of the boundary of Denali National Park and Preserve (DNPP) although several tens of miles from the principal attration of that park which is the mountain itself. Two issues examined in detail in the DEIS relate to air quality. The first deals with emission levels from the HCCP while the second examines the potential for visibility impediment due to a plume produced largely from NO_2 reactions.

The emissions levels modeled for the HCCP in-fact are minuscule to the point of being almost inconsequential with respect to SO_2 and NO_2 and particulates. The HCCP, although almost twice the electrical generation capacity of the Healy I plant, will yield a fraction of the older plants output of both SO_2 and NO_2. Together the HCCP and Healy I, when both are operating, will fall well within the National Ambient Air Quality Standards (NAAQS) imposed by the Clean Air Act (CAA). Prevention of Significant Deterioration (PSD) "increments" modeled for the HCCP demonstration case for SO_2, NO2 and particulate matter show maximum concentrations far below limits for an affected Class I area such as the portion of DNPP proximal to the HCCP. Clearly the emission impacts are negligible in DNPP and are benign with respect to the community of Healy.

The visibility issue is said to be of greatest concern to the NPS (National Park Service). The concern appears to focus on the potential for a visible plume to form which may be seen from the Park visitor center. The evidence of a plume formed from nitrogen compounds is predicted from computer modeling. When both the HCCP (Demo Case) and Healy I operate together the computer prediction was that visitors to DNNP visitors center may observe a plume for 1-31 hours a year. When modeled alone the existing Healy I unit should produce a visible plume 1-27 hours a year. No reported instances of a plume associated with Healy I, visible from the DNPP visitor center, have ever been recorded. Indeed no such plume has ever been observed closer in to the plant during the entire time it has operated. Throughout 1992 cameras set up near the DNPP visitor center and also at a site overlooking the existing plant have continuously sought verification of the existence of a plume under certain conditions. With almost a years worth of data there is no verification whatsoever of the computer model predictions regarding plume formation. Surely seeing is believing -- it should certainly be the basis of proof. It is clear in reading the DEIS that there has been considerable discussion and debate with the NPS on this issue alone. Most reasonable readers would probably conclude that visibility concerns are a non-issue and that there is unlikely to be any visibility impairment at any time detectable by visitors to the DNPP as a consequence of the HCCP and its predecessor Healy I.

The DEIS may require minor modifications however, in the form it was issued, it really provides a totally adequate assessment of the physical and human environmental impacts of building the HCCP. These impacts are minimal to inconsequential in the case of the physical environment and beneficial and manageable in the case of the human environment.

ASCC urges DOE to move forward with the HCCP project and demonstrate to Alaska, the Nation and the world that they very best of American Clean Coal Technology utilizing an abundant resource -- ultra-low sulfur Alaska coal -- can produce low-cost electrical energy in an environmentally sensitive and benign manner.

Sincerely,

Jamie Parsons
President

Letter No. 68
Jamie Parsons, President, Alaska State Chamber of Commerce, 217 Second Street, Suite 201, Juneau, AK 99801

Comments noted.

Letter No. 69

Jan. 8, 1993

Dr. Early W. Evans
U.S. Department of Energy,
Pittsburgh Energy Technology Center
Box 10940, MS-920-L
Pittsburgh, PA 15236

Dear Dr. Evans

The following comments are in regards to the Draft Environmental Impact Statement for the proposed Healy Clean Coal Project located near Healy Alaska.

The new technology design proposed for this project is again proof that America can develop our resources and continue to produce energy from coal in an environmentally sensitive and economically feasible manner. I welcome the construction of this project as it shows our commitment to provide the needs of a growing America and reduce environmental pollution. This project provides both and helps reduce world-wide pollution by allowing us to design and build modern power plants with the best technology available.

I recognize that the proposed construction site is in close proximity of Denali National Park. I do not agree with the critics who suggest that construction of the power plant will reduce or affect wilderness habitat. Denali National Park is too large an area to be affected by the plume of emissions exiting the plant. What the plant does accomplish with resounding applause is the reduction of hazardous materials into the atmosphere and the higher efficiency of modern technological industry.

I again affirm my support for this power plant and the positive effects it will demonstrate to keeping Alaska and our world safe and clean.

Sincerely yours,

Stephen T Ranger

Stephen T. Ranger

414

Mr Stephen T Ranger
2025 Grizzly Bear Dr
Wasilla AK 99654-2720

Letter No. 69
Stephen T. Ranger, 2025 Grizzly Bear Drive, Wasilla, AK 99654-2720

Comments noted.

USIBELLI COAL MINE, INC.

P.O. Box 1000
Healy, Alaska 99743
(907) 683-2226
Telecopier (907) 683-2253

January 11, 1993

Letter No. 70

Reproduced from copy submitted

Dr. Earl W. Evans
U.S. Department of Energy
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, PA 15236

Re: *Draft Environmental Impact Statement (DEIS)*
Healy Clean Coal Project (HCCP)

Dear Dr. Evans:

On behalf of Usibelli Coal Mine, Inc. (UCM) the following comments are submitted for your consideration.

In general, the Department of Energy (DOE) and its contractors are to be congratulated for pulling together the diverse aspects of the project into a concise document that covers the scope of the project well yet keeps the bulk of the document to a manageable level.

Conclusions reached in the DEIS appear to be sound and based on logical analysis of documented facts. DOE will, no doubt, be encouraged by opponents of the project to indulge in the analysis of impacts based upon broad speculation of obscure possibilities. The impact analyses, upon which the DEIS is based, already contain generous amounts of conservatism which, by any rational examination, would lead to the overstatement of potential negative impacts of the HCCP. Therefore, DOE is urged to give little or no weight to any comments that suggest extreme levels of adversity of impacts based upon conditions which cannot be substantiated with hard data. The following comments are numbered, to facilitate cross referencing of the comments and are referenced to the page and paragraph in the DEIS on which the comment is based.

1. Page xx, bottom of third paragraph.
There is one major area of conservatism in the analysis of potential visibility impacts that should be added to the list of reasons why the modelling overstates potential impacts. That is, the number of hours when plume transport into the Nenana River Gorge is assumed to occur is significantly overstated. Therefore, it would seem that the total number of hours when visibility impacts might occur would be proportionately overstated. 70-1

Winds 15 degrees either direction from north were assumed to transport the plume into the valley, for purposes of visibility impact analysis. In fact, as observed on several occasions by UCM personnel last winter, gentle northerly winds typically transport the condensate vapor plume from the Healy Unit No. 1 unit southeasterly up the Healy and Moody Creek valleys. This behavior was partially documented by the monitoring cameras on Garner Hill last winter, although the angle of the camera was such that the ultimate path of the vapor plume could not be ascertained, except that it did not persist into the Nenana River Valley. Hopefully, similar weather conditions will occur this winter so that this type of vapor plume behavior can be documented. 70-2

Examination of the wind rose diagram in Figure 3.2.1 reveals that a majority of the winds which were assumed to transport the plume into the Nenana River Valley have a westerly component to them. It is likely that any westerly component to the wind would cause the plume to drift to the southeast and thus the majority of potential hours when visibility impacts are predicted to occur are probably hours when the plume misses the entrance to the Nenana River Valley entirely.

2. Page xxiii, first paragraph.
Discussion of the alternate site implies the loss of 22 acres of wetland, which is based upon interpolation of data from the National Wetlands Inventory (NWI). Caveats on the NWI maps warn that "on the ground" analysis could alter the wetlands status of specific sites. Thus the appropriateness of using the NWI for site specific inventory of wetlands is questionable. The wetlands in the NWI at the proposed site are not quantified at all, even though they are of the same type as some of the wetlands at the alternate site. Since the EIS will become part of the public record and regarded as authoritative on Healy area environmental resources, future development on UCM's lease holding at the alternate site may be influenced by the EIS. An inaccurate inventory of wetlands in this document could adversely affect UCM's ability to utilize the site at a future time. 70-3

Since the wetlands status is not a key issue in the siting of the HCCP, it is unnecessary and probably inaccurate to quantify the acreage at the alternate site based upon map interpretations. There is no argument that the wetlands at the alternate site are more productive than at the proposed site. However, a qualitative statement indicating the presence and nature of wetlands at the alternate site would satisfy the needs of the EIS without implying, prior to an on the ground analysis, that an accurate and quantitative inventory has been performed. 70-4

3. Page 2-14, Table 2.1.1.
This table should be labeled as a typical analysis for UCM coal that will be received by the HCCP. In fact, the run of mine (ROM) and waste coal will both vary considerably in quality over time, especially the waste coal. The performance coal is an assumed blend upon which to base design. The quality of the ROM and waste coal available for blending, to achieve the key performance coal specifications, could vary significantly from day to day in any of the parameters listed in the table. Thus, it is unlikely that the actual performance blend coal would match all of the parameters listed in the table on any given day. 70-5

The source of the quality data is incorrect. The Poker Flats permit application was submitted in 1983 prior to conception of the HCCP and before the use or the quality of a waste coal was contemplated. The source of ROM coal quality was from a 3-year rolling average of tipple samples that was provided to Stone & Webster Engineering by UCM for preparation of the HCCP proposal and the EIV. The waste coal quality is a mathematical combination of ROM coal with typical overburden, figures to achieve a 25 percent ash level. The performance coal is a calculated blend of the ROM and the estimated waste coal. 70-6

4. Page 2-29, Table 2.2.1.
The statements in the first column of the second row that operation of the HCCP would replace electricity generated by natural gas and in the fourth row, second column that "No project" would result in no additional generation are inconsistent with the stated scope of the DEIS. Table 1.6.2, item b) states that the need for electrical generation and alternative technologies are two areas outside the scope of the EIS, as well they should be. Golden Valley Electric Association (GVEA) and the Alaska Public Utilities Commission have addressed both of these issues in depth and concluded that there is a need for the electricity and have fully considered alternative technologies. DOE is therefore fully justified from excluding these issues from the scope of the EIS. Stating that there would be no additional electricity generated implies that there would be no growth in demand for GVEA. Stating that the "No project" alternative would not impact the production of coal or electricity should be adequate. 70-7

Stating that the HCCP will replace gas-generated electricity implies that gas is an appropriate alternative to coal-fired electricity for GVEA's load growth. How GVEA meets future demand increases will be influenced by a host of factors which will significantly affect the need for alternative sources of electricity, without regard to the presence or absence of the HCCP. The only thing that can be said with confidence about the HCCP, with respect to alternative sources, is that the HCCP may postpone the need for GVEA to increase purchases or generation of electricity from alternative sources. 70-8

5. Page 2-34 and 2-35, Table 2.2.2.
Second row, Flood Plains and Wetlands, see comment number 3.

The sections in table 2.2.2. dealing with socioeconomic impacts to the Healy area make it appear that construction and operation of the HCCP will overload all public services in the Healy area. In fact, the majority of these impacts will be mitigated by higher revenues for the various services, which are discussed in detail in Chapter 4 of the DEIS. Healy already has excellent public services for a community of its size, and the HCCP will, if anything, provide a greater income and population base upon which improvement of the services will be possible. 70-9

6. Page 3-23, Table 3.2.2 and page 3-24.
The calculated background visual ranges used in the DEIS cannot possibly include the effects of forest fires if the 10th percentile visual range in the summer is 137 kilometers. One week of smoke filled air would account for almost 10 percent of the summer, and a realistic visual 70-10

range during a forest fire episode is often less than 20 miles and frequently involves much more than one week per year.

The background visual ranges probably do not include the presence of suspended ice particles in the winter air, which are ubiquitous throughout interior Alaska during cold spells. These suspended ice particles are responsible for the sun dogs, which are evidenced in legend, long before arctic haze was conceived, and hoar frost, which is prevalent in remote areas far removed from any man made sources of ice fog.

Both of the above factors are, admittedly, difficult to quantify. However, they both are real factors which reduce the relative magnitude of HCCP's potential impacts on visibility impairment and thus, lend further credence to the conservativeness of the estimates of visibility impacts.

7. Page 3-43, Table 3.8.1.
The population of Healy in 1970 appears to be based on a limited data set which is not comparable to the numbers used for the other years. For practical purposes, the original town of Healy no longer exists. Instead, the three neighboring communities of Healy, Usibelli and Suntrana have coalesced into common area which is now referred to as Healy, and is located approximately 1 mile northwest of the original Healy townsite. The shift to a common population center occurred from the late 70's through the mid-80's. 70-11

8. Page 4-26, first paragraph.
The disposal of wastewater treatment sludge at UCM mine workings is an issue which has not been discussed with UCM. UCM does not have a permit for this activity and would need to know the quantity and character of the material before one could be obtained. If, as stated in the DEIS, the material would be analyzed to ensure that it was non-hazardous nor of sufficient volume or nature to promote instability in the backfill, then UCM would probably have no objection to its disposal along with the ash materials from the HCCP. 70-12

9. Page 4-27, third paragraph.
The seed mixture used by UCM for revegetation typically contains other legumes and native grasses, in addition to non-native grasses and candle rape. 70-13

The statement regarding the observation by Elliot that invasion of native plants had not occurred even after 9 years, should be deleted from the document. Elliot's work has been augmented in greater detail by others who have shown that native plant invasion often occurs quite rapidly. This agrees with observations by UCM. Some of the areas which Elliot studied are now virtually covered with native vegetation. Elliot's study dealt primarily with use of reclaimed mine land by animals, and his observations about plants represent a snapshot in time and should not be extended to imply that native vegetation will not reestablish itself in reasonable time on UCM mined lands.

10. Page 4-59, last paragraph.
Although the Alaska Surface Mining Program was subject to approval under SMCRA, the State of Alaska has primacy for regulation of surface mining in Alaska. Technically, UCM is operating under regulations promulgated from, and a permit issued pursuant to, the Alaska *Surface Coal Mining Control and Reclamation Act.* 70-14

11. Page 4-66, third paragraph.
It is stated that the proposed site for the HCCP is up gradient from Healy. How can this be true with the Nenana River separating the two, and Healy higher than the HCCP site? 70-15

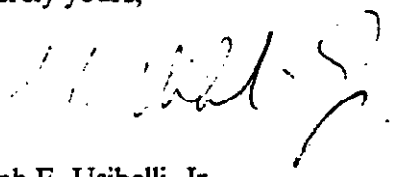
12. Page 4-67, section 4.2.6.
See *comment number* 3. 70-16

13. Page 4-85, third paragraph.
With respect to the use of 15 degrees either side of a line between the HCCP site and the Visitor Access Center, see comment number 2. 70-17

14. Page 5-1, second paragraph.
The statement that there is no risk of exceeding ash disposal capacity is true in a general sense, but not necessarily within the Poker Flats mine. It is likely that the HCCP will receive coal from several mines (or pits as they are referred to at UCM) during its 40 year plus life. Irrespective of which pit UCM is mining coal from, ash from the HCCP will always be an extremely small quantity, relative to the total material being handled and thus, there should be no risk of exceeding ash disposal capacity. 70-18

Thank you for the opportunity to comment and I hope they are useful in your production of the Final EIS for the HCCP. UCM looks forward to working with DOE towards successful construction and demonstration of the HCCP. Please feel free to contact myself or Steve W. Denton if you need additional information or have any questions regarding these comments.

Sincerely yours,



Joseph E. Usibelli, Jr.
PRESIDENT

cc: S. Rosendahl - SWEC
J. Olson; D. McCrohan - AIDEA
F. Abegg - GVEA
MDU; WAM; RCH; LPJ; JS; SD; CG; CPB

Letter No. 70
Joseph E. Usibelli, Jr., President, Usibelli Coal Mine, Inc., P.O. Box 1000, Healy, AK 99743

Comment 70-1:
"Page xx, bottom of third paragraph: There is one major area of conservatism in the analysis of potential visibility impacts that should be added to the list of reasons why the modelling overstates potential impacts. That is, the number of hours when plume transport into the Nenana River Gorge is assumed to occur is significantly overstated. Therefore, it would seem that the total number of hours when visibility impacts might occur would be proportionately overstated."

Response:
The modeling was performed for all daytime hours with wind directions within 15° of a straight line that would transport the plume to the DNPP Visitor Access Center and with wind speeds less than 15 mph (as measured at the HCCP Healy Monitoring Station), a total of 372 hours. Other hours were excluded because a perceptible plume would not be expected at the DNPP Visitor Access Center under other conditions. The range of wind directions was selected to allow transport of the plume to the Nenana River Gorge and the DNPP Visitor Access Center. Using SO_2 concentrations measured at the HCCP Park Monitoring Station as an indicator of when the existing Healy Unit No. 1 emissions are transported into the gorge, a comparison displayed good agreement between modeled and measured results when using wind directions from the north, within 15° of the line between the HCCP and the DNPP Visitor Access Center. Therefore, DOE believes that the EIS provides a reasonable estimate of the number of hours when plume transport into the Nenana River Gorge is expected to occur.

Comment 70-2:
"Page xx, bottom of third paragraph: Winds 15 degrees either direction from north were assumed to transport the plume into the valley, for purposes of visibility impact analysis. In fact, as observed on several occasions by UCM personnel last winter, gentle northerly winds typically transport the condensate vapor plume from the Healy Unit No. 1 unit southeasterly up the Healy and Moody Creek valleys.

Examination of the wind rose diagram in Figure 3.2.1 reveals that a majority of the winds which were assumed to transport the plume into the Nenana River Valley have a westerly component to them. It is likely that any westerly component to the wind would cause the plume to drift to the southeast and thus the majority of potential hours when visibility impacts are predicted to occur are probably hours when the plume misses the entrance to the Nenana River Valley entirely."

Response:
The methodology used (using all daytime hours with wind directions within 15° of a straight line that would transport the plume to the DNPP Visitor Access Center and with wind speeds less than 15 mph) is considered to be a reasonable and conservative estimate, but does not guarantee complete agreement with observed conditions. Some discrepancies are likely with any selected methodology.

Comment 70-3:
"Page xxiii, first paragraph: Discussion of the alternate site implies the loss of 22 acres of wetland, which is based upon interpolation of data from the National Wetlands Inventory (NWI). Caveats on the NWI maps warn that 'on the ground' analysis could alter the wetlands status of specific sites. Thus the appropriateness of using the NWI for site specific inventory of wetlands is questionable. The wetlands in the NWI at the proposed site are not quantified at all, even though they are of the same type as some of the wetlands at the alternate site. Since the EIS will become part of the public record and regarded as authoritative on Healy area environmental resources, future development on UCM's lease holding at the alternate site may be influenced by the EIS. An inaccurate inventory of wetlands in this document could adversely affect UCM's ability to utilize the site at a future time."

Response:
The text has been amended to note that the wetlands data used in the EIS are estimates based on aerial photography.

Comment 70-4:
"Page xxiii, first paragraph: Since the wetlands status is not a key issue in the siting of the HCCP, it is unnecessary and probably inaccurate to quantify the acreage at the alternate site based upon map interpretations. There is no argument that the wetlands at the alternate site are more productive than at the proposed site. However, a qualitative statement indicating the presence and nature of wetlands at the alternate site would satisfy the needs of the EIS without implying, prior to an on the ground analysis, that an accurate and quantitative inventory has been performed."

Response:
DOE believes that a quantitative estimate of wetlands at the alternative site is necessary for comparing potential impacts to wetlands at the proposed and alternative sites.

Comment 70-5:
"Page 2-14, Table 2.1.1: This table should be labeled as a *typical* analysis for UCM coal that will be received by the HCCP. In fact, the run of mine (ROM) and waste coal will both vary considerably in quality over time, especially the waste coal. The performance coal is an assumed blend upon which to base design. The quality of the ROM and waste coal available for blending, to achieve the key performance coal specifications, could vary significantly from day to day in any of the parameters listed in the table. Thus, it is unlikely that the actual performance blend coal would match all of the parameters listed in the table on any given day."

Response:
Table 2.1.1 has been revised to indicate that the analysis is typical.

Comment 70-6:
"Page 2-14, Table 2.1.1: The source of the quality data is incorrect. The Poker Flats permit application was submitted in 1983 prior to conception of the HCCP and before the use or the quality of a waste coal was contemplated."

Response:
Table 2.1.1 has been updated to indicate all sources of the data.

Comment 70-7:
"Page 2-29, Table 2.2.1: The statements in the first column of the second row that operation of the HCCP would replace electricity generated by natural gas and in the fourth row, second column that 'No project' would result in no additional generation are inconsistent with the stated scope of the DEIS.

Stating that the 'No project' alternative would not impact the production of coal or electricity should be adequate."

Response:
DOE believes that the wording in Table 2.2.1, as presented in the draft EIS, provides a factual comparison between the proposed project and the two scenarios of the no-action alternative.

Comment 70-8:
"Page 2-29, Table 2.2.1: Stating that the HCCP will replace gas-generated electricity implies that gas is an appropriate alternative to coal-fired electricity for GVEA's load growth. How GVEA meets future demand increases will be influenced by a host of factors which will significantly affect the need for alternative sources of electricity, without regard to the presence or absence of the HCCP. The only thing that can be said with confidence about the HCCP, with respect to alternative sources, is that the HCCP may postpone the need for GVEA to increase purchases or generation of electricity from alternative sources."

Response:
See response to Comment 70-7.

Comment 70-9:
"Page 2-34 and 2-35, Table 2.2.2; second row, Flood Plains and Wetlands, see comment number 3" (Reference Comments 70-5 and 70-6):

"The sections in Table 2.2.2 dealing with socioeconomic impacts to the Healy area make it appear that construction and operation of the HCCP will overload all public services in the Healy area. In fact, the majority of these impacts will be mitigated by higher revenues for the various services, which are discussed in detail in Chapter 4 of the DEIS. Healy already has excellent public services for a community of its size, and the HCCP will, if anything, provide a greater income and population base upon which improvement of the services will be possible."

Response:
Comment noted.

Comment 70-10:
"Page 3-23, Table 3.2.2 and page 3-24: The calculated background visual ranges used in the DEIS cannot possibly include the effects of forest fires if the 10th percentile visual range in the summer is 137 kilometers. One week of smoke filled air would account for almost 10 percent of the summer, and a realistic visual range during a forest fire episode is often less than 20 miles and frequently involves much more than one week per year.

The background visual ranges probably do not include the presence of suspended ice particles in the winter air, which are ubiquitous throughout interior Alaska during cold spells.

Both of the above factors are, admittedly, difficult to quantify. However, they both are real factors which reduce the relative magnitude of HCCP's potential impacts on visibility impairment and thus, lend further credence to the conservativeness of the estimates of visibility impacts."

Response:
The calculated background visual ranges include any short-term effects of forest fires. However, it is believed that the frequency of summer forest fires that substantially affect the instrumentation is less than 10%, so that summer values of 137 km or greater do not include appreciable effects of forest fires. The background visual ranges may or may not include the effects of suspended ice particles, depending on the extent of evaporation from the instrument's filters. However, the DNPP Headquarters Station does not experience ice fog frequently.

Comment 70-11:
"Page 3-43, Table 3.8.1: The population of Healy in 1970 appears to be based on a limited data set which is not comparable to the numbers used for the other years. For practical purposes, the original town of Healy no longer exists."

Response:
All population figures for Healy in Table 3.8.1 are from the *U.S. Census of Population*. It is likely that the Bureau of the Census defined the community of "Healy" differently in 1970 than in 1980, 1985, and 1990. This would account for the discrepancy in population figures.

Comment 70-12:
"Page 4-26, first paragraph: The disposal of wastewater treatment sludge at UCM mine workings is an issue which has not been discussed with UCM. UCM does not have a permit for this activity and would need to know the quantity and character of the material before one could be obtained."

Response:
Section 4.1.4.2 of the EIS has been revised to state that if the sludge is determined to be hazardous, it would be shipped off-site to an approved hazardous waste landfill.

Comment 70-13:
"Page 4-27, third paragraph: The seed mixture used by UCM for revegetation typically contains other legumes and native grasses, in addition to non-native grasses and candle rape.

The statement regarding the observation by Elliott that invasion of native plants had not occurred even after 9 years, should be deleted from the document. Elliot's work has been augmented in greater detail by others who have shown that native plant invasion often occurs quite rapidly. This agrees with observations by UCM."

Response:
Section 4.1.5.1 of the EIS has been modified to incorporate material provided by UCM.

Comment 70-14:
"Page 4-59, last paragraph: Although the Alaska Surface Mining Program was subject to approval under SMCRA, the State of Alaska has primacy for regulation of surface mining in Alaska. Technically, UCM is operating under regulations promulgated from, and a permit issued pursuant to, the Alaska Surface Coal Mining Control and Reclamation Act."

Response:
The EIS has been changed to incorporate this comment.

Comment 70-15:
"Page 4-66, third paragraph: It is stated that the proposed site for the HCCP is up gradient from Healy. How can this be true with the Nenana River separating the two, and Healy higher than the HCCP site?"

Response:
The water table at the HCCP is at a higher elevation than at Healy; hence, groundwater flows from the HCCP toward Healy and toward the alternative site. The text of the EIS has been revised to clarify this point.

Comment 70-16:
"Page 4-67, section 4.2.6. See comment number 3." (Reference Comments 70-3 and 70-4)

Response:
It is believed that this comment should read "see comment number 2," which discusses wetlands at the alternative site. Therefore, the reader should refer to Comments 70-3 and 70-4 which correspond with "comment number 2."

Comment 70-17:
"Page 4-85, third paragraph: With respect to the use of 15 degrees either side of a line between the HCCP site and the Visitor Access Center, see comment number 1." (Reference Comment 70-2)

Response:
It is believed that this comment should read "see comment number 1," which discusses the visibility modeling. Therefore, the reader should refer to Comment 70-2 which corresponds with "comment number 1."

Comment 70-18:
"Page 5-1, second paragraph: The statement that there is no risk of exceeding ash disposal capacity is true in a general sense, but not necessarily within the Poker Flats mine. It is likely that the HCCP will receive coal from several mines . . . during its 40 year plus life. Irrespective of which pit UCM is mining coal from, ash from the HCCP will always be an extremely small quantity, relative to the total material being handled and thus, there should be no risk of exceeding ash disposal capacity."

Response:
Section 5.1 of the EIS has been reworded to reflect this comment.

January 12, 1993

Letter No. 71

Dr. Early W. Evans
U. S. Department of Energy
Pittsburgh Energy Technology Center
Box 10940, MS-920-L
Pittsburgh PA 15236

Dear Dr. Evans:

As you can see from my return address, I do not live in the vicinity of the proposed Healy Clean Coal Project. However, as in the case of all residents of Alaska, I will share in the benefits derived from this project.

I wish to offer my comments based on my experience in Alaska in the timber industry, and my years as Region 10 Administrator for the United States Environmental Protection Agency. Region 10 includes Alaska. I also served for five years on the National Academy of Sciences Committee on Risk Perception and Communication. I presently sit on the Governor's Advisory Committee on Water Quality Standards. In other words, I have had a lot of experience with public participation in divisive issues.

I have followed the Healy Clean Coal project through reports in the state wide media. I am not familiar with the alternatives described in the DEIS. My comments have to do with the objections about which I have read which have to do with the occasional visual "impacts" of the steam plume. If the environmental benefits achieved by this demonstration project are even close to what is anticipated in the reduction of sulphur dioxide and NOx emissions, some visible steam plume seems a tolerable result. During my time at EPA we struggled with health risk assessments associated with the acidification of air and water due to conventional, high sulphur content coal burning plants. We eagerly sought alternatives and considered the health and environmental risks associated with coal fired plants serious issues.

I do not consider a harmless indication of man's presence on this earth an environmental hazard. I have visited Denali, most recently this summer with my eighty year old parents. The park provides visitors with a wonderful array of experiences, all of them marked to one degree or another by the presence of man. We are, in fact, part of the world, and our ancestors were part of the so-called wilderness in

Letter No. 73
Richard West, P.O. Box 3094, Palmer, AK 99545

Comments noted.

Trustees for ALASKA

A Non-Profit, Public Interest, Environmental Law Firm

Letter No. 74

Reproduced from copy submitted

Jan. 18, 1993

Dr. Earl W. Evans
Environmental Coordinator, Healy Clean Coal Project
P.O. Box 10940, MS-920-L
Pittsburgh Energy Technology Center
Pittsburgh, PA 15236

Dear Dr. Evans:

Enclosed for your review are comments on the draft EIS for the proposed Healy Clean Coal Project. The comments are submitted on behalf of several local Alaskan groups/individuals--the Alaska Federation for Community Self-Reliance, the Alaska Center for the Environment, Trustees for Alaska, and Dave Lacey--and several national environmental organizations--the National Parks and Conservation Association, the Sierra Club, and the Wilderness Society.

The broad base of groups that are submitting the enclosed comments reflects the depth of the public's concerns about the merits of the Healy "Clean Coal" Project, from both a regional and global standpoint.

Thank you for the opportunity to submit the enclosed comments and for extending the comment deadline.

Sincerely,

Michael M Wenig

Michael M. Wenig
Acting Executive Director

725 Christensen Drive, Suite 4 Anchorage, Alaska 99501 (907) 276-4244

COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED HEALY CLEAN COAL PROJECT

By:

The Alaska Center for the Environment
The Alaska Federation for Community Self-Reliance
Dave Lacey
The National Parks and Conservation Association
The Sierra Club
Trustees for Alaska
The Wilderness Society[1]

INTRODUCTION

The Draft Environmental Impact Statement (DEIS) on the Healy Clean Coal Project (HCCP) ignores important, unambiguous requirements of the National Environmental Policy Act (NEPA) and, thus, is deficient from both legal and policy standpoints. For instance, the DEIS's discussion of one of the most important environmental effects of the project--regional air quality--is fundamentally flawed. From a broader perspective, the DEIS fails to meaningfully inform the Department of Energy (DOE) whether the HCCP makes sense in Alaska and whether coal utilization should be promoted in view of the projected increase in the earth's temperature from burning fossil fuels. 74-1

There are three over-arching deficiencies in the DEIS. First, the DEIS fails to examine the alternative of retro-fitting either Healy Unit No. 1 or some other facility in order to avoid the environmental harms arising from a new facility while gaining the benefits from a successful technology demonstration. 74-2

Second, the DEIS declines to examine whether the power from ↓

[1] These comments are intended to supplement, not replace, separate comments already filed by several of the above-referenced commentors.

HCCP is needed in central Alaska. This narrow view of DOE's obligations under NEPA prevents DOE from being truly informed as to the costs and benefits of the proposal. 74-3

Third, the DEIS's discussion of specific environmental effects is inadequate. The principal defect in this regard is the document's analysis of air quality impacts from HCCP. However, the DEIS's discussion of visual impacts from the operation of the facility, and impacts related to waste disposal, also fall short. 74-4

In its current form the DEIS cannot serve its key purpose of informing the public, DOE, and other decision-makers of the effects of the project and the realistic alternatives available. In fact, the document is so flawed that a revised, cured DEIS must be prepared and circulated for public comment. Only then will the DEIS be able to play the role assigned to it under NEPA. 74-5

I. THE DEIS FAILS TO CONSIDER REASONABLE ALTERNATIVES

NEPA is designed to ensure that "environmental values and consequences [are] considered during the planning stages of agency action." Andrus v. Sierra Club, 442 U.S. 347, 350 (1979). Preparation of an EIS facilitates such consideration, and provides tangible evidence that such consideration has in fact occurred, by setting forth in one document sufficient information on the environmental consequences of the action. Id. As a landmark NEPA case put it: the goal is to promote "careful and informed decisionmaking." Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109, 1115 (D.C. Cir. 1971). And to "inform . . . other agencies and the general public about the environmental

consequences of a certain action in order to spur all interested parties to rethink the wisdom of the action." NRDC v. Hodel, 865 F.2d 288, 296 (D.C. Cir. 1988).

In order to undertake the searching analysis envisioned by NEPA, an agency is required to develop and consider alternatives to the proposed action. 42 U.S.C. § 4332(2)(C)(iii); (2)(E). This requirement has been interpreted broadly to compel a discussion of all available and reasonable alternatives to an action. NRDC v. Morton, 458 F.2d 827, 834 (D.C. Cir. 1972). An EIS must examine the alternative of no-action, Swain v. Brinegar, 517 F.2d 766, 780 (7th Cir. 1975), 40 C.F.R. § 1502.14(d); alternatives not within the power of the deciding agency to implement, NRDC v. Morton, 458 F.2d at 835, supra; and where appropriate, alternatives which "partially . . . meet the proposal's goal," NRDC v. Callaway, 524 F.2d 79, 93 (2d Cir. 1975). This requirement--"for a thorough study and a detailed evaluation of alternatives . . . is the linchpin of the entire impact statement." Monroe County Conservation Council v. Volpe, 472 F.2d 693, 697-698 (2d Cir. 1972). See also 40 C.F.R. §1502.14 (alternative analysis is the "heart" of the EIS).

A. The DEIS Fails to Consider the Environmentally Preferable Alternative of Retrofitting Healy Unit No. 1.

A reasonable alternative to building an entirely new facility with its attendant impacts is to retrofit Healy Unit No. 1 with the advanced technologies and garner the benefits from a successful demonstration. Indeed, only those technologies capable of 74-6

retrofitting or repowering existing facilities are qualified for program funding. DEIS at 1-1. Consequently, retrofitting Healy 1 with the technologies would allow for a closer match between the demonstration and the program's goals.

While the DEIS does not specifically address the possibility of retrofitting the 25 MW Healy 1 unit, it notes as justification for not considering a smaller size new facility that a 50 MW capacity unit is the minimum size unit for a viable demonstration. DEIS at 2-36. This assertion is troubling for two reasons. First, the DEIS's statement that the absolute minimum size for this demonstration requires a 50 MW unit is conclusory and plainly inadequate. More explanation is needed on this subject in order to demonstrate the full and fair evaluation required by NEPA. Second, the DEIS's statement is counter-intuitive. Most of the generating units at coal-fired power plants in this country, and presumably the world, are considerably larger than 50 MW. In fact, the average capacity of generating units in this country is 257 MW. EPA, Report to Congress--Wastes from the Combustion of Coal by Electric Utility Power Plants, Office of Solid Waste and Emergency Response, February, 1988 at 2-20. Given that this nation-wide average is considerably larger than either 25 MW or 50 MW, it seems unlikely that the proposed technologies demonstration would be worthless when applied to a 25 MW unit, yet useful on a 50 MW unit.[2]

74-7

[2] Even if it is preferable to demonstrate the technologies at a unit larger than Healy 1, this should not foreclose consideration of the alternative. As DOE is aware, it is not always possible to perfectly match the demonstration with its application. A

B. The DEIS Must Examine a Retrofitting Alternative

There are plain advantages to retrofitting an existing facility instead of building an entirely new facility, making this alternative reasonable and one that DOE must fully consider. As noted above, if the demonstration is successful retrofitting will produce immediate air quality benefits by reducing emissions. This is, after all, the purpose of the program. Retrofitting also will avoid the environmental costs associated with a new facility. These include the costs from a net increase in air pollutants attributable to the new facility and the costs from increased mining of coal. 74-8

Accordingly, if DOE is able to demonstrate in the revised DEIS that the technologies demonstration cannot take place at Healy Unit No. 1, DOE must examine an alternative that would retrofit an existing unit having sufficient capacity. 74-9

DOE appears to justify avoiding this analysis simply by contending that the HCCP sponsors will only build HCCP and DOE cannot force them to do otherwise. DOE's apparent justification is flawed, for several reasons. To begin with, DOE's own scoping notice for the HCCP project acknowledged DOE's responsibility to "examine reasonable alternatives which are beyond [our] immediate 74-10

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technology demonstration merely provides information on the technology's applicability in other situations. For instance, although SO2 removal technology is expected to be of particular value when applied to the very large and numerous coal-fired *generating stations located in the Ohio Valley and the south that* use high-sulfur coal, the use of ultra-low sulfur Alaskan coal did not prevent the Department from selecting HCCP to demonstrate SO2 removal.

authority to implement, but which could also meet the objectives of the CCT program." 55 Fed. Reg. 40913 (October 5, 1990).

Next, the DEIS itself points out that DOE's "objective is to demonstrate technologies." Here, the EIS is designed to ensure that DOE understands the environmental impacts of the proposed technology demonstration and to examine if there are ways to demonstrate the technologies with fewer environmental impacts. That AIDEA will only build HCCP and not a retrofitted facility located elsewhere is basically irrelevant to a determination of which alternatives are reasonable. Explicit guidance on this issue comes from the Council on Environmental Quality's Forty Most Asked Questions Concerning CEQ's NEPA Regulations. It states: "reasonable alternatives include those that are practical or feasible *from the technical and economic standpoint and using* common sense, rather than simply desirable from the standpoint of the applicant." 46 Fed. Reg. 18027 (March 23, 1981) (emphasis in original).

74-11

An essentially analogous situation occurred in Alaska seventeen years ago. In that situation the Federal Power Commission was confronted with two competing applications for the transportation of natural gas from the North Slope to the lower 48. See El Paso Alaska Co., Docket No. CP75-96. Both proposals were examined, along with other reasonable alternatives, in an EIS on Alaska Gas Transportation Systems. The EIS found that a third alternative, not proposed by any party, the so-called Alcan Highway route was environmentally preferable. That finding prompted an

applicant to materialize in support of the Alcan Highway alternative--an alternative ultimately adopted by Congress.

Retrofitting an existing unit, either at Healy or, if necessary, outside of Alaska, is a particularly viable alternative in the present circumstances where the proposal is to build a coal-fired generating unit less than 4 miles from one of this nation's crown jewels--Denali National Park and Preserve. While HCCP is touted as "clean," in reality, like all coal plants, it is anything but. Even assuming the demonstration is successful, HCCP will still emit well over a thousand tons (or more than two million pounds) of air pollutants every year, not including CO2. DEIS at 2-20. These emissions will impact Denali and other natural resources. Faced with this radical proposal, DOE should have undertaken an exhaustive search for alternatives. By failing to do so, DOE has violated both the letter and spirit of NEPA.[3] 74-12

II THE DEIS FAILS TO CONSIDER THE PUBLIC NEED IN THE REGION FOR THE HCCP

DOE's inadequate examination of alternatives is compounded by its refusal to carefully examine the public need or, in our view, the clear lack of need, for the power that the HCCP will generate. DOE's turning a blind eye on this critical matter results in exactly the kind of uninformed decision-making that an EIS was 74-13

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[3] Logically, alternatives include not only retrofitting Healy 1 and other existing coal plants outside of Alaska, but requesting that Congress re-appropriate the funds currently slated for "Clean Coal" demonstration projects, for "alternative" energy demonstration projects (e.g. wind, solar, energy conservation) within and/or outside of Alaska. 74-12

designed to prevent. Moreover, this circumscribed view of NEPA's requirements is at odds with the explicit command of the statute that it be applied "to the fullest extent possible" (42 U.S.C. §4332), and the case law, which directs the courts to "make as liberal an interpretation [of the statute] as we can to accommodate the application of NEPA." Jones v. Gordon, 792 F.2d 821, 826 (9th Cir. 1986).

It is axiomatic that the formulation of alternatives, as well as their subsequent evaluation, cannot rationally occur without an understanding of the need purportedly addressed by the proposal under review. Notably, in an earlier document, DOE justified its preliminary decision to fund HCCP, in part, because the "facility will be an important step towards fuel diversification of Alaska's electrical energy system which currently relies principally on oil." Selection of Proposals document at 10. Having raised public need at this early--proposal selection--stage, DOE must fully consider public need in the DEIS.

The need for DOE to reassess the public need for the HCCP is especially critical since DOE's conclusion, in its proposals selection document, was factually flawed. Rather than relying "principally on oil," Alaska's energy system relies principally on natural gas (roughly 57.7% of total GW output); oil is a mere 11 %. See Alaska Energy Authority and Alaska Systems Coordinating Council, "Alaska Electric Power Statistics, 1960-1991," 17th Ed., Nov., 1992. 74-13

Numerous courts have recognized NEPA's logical imperative that

an EIS identify and analyze the public need for a proposed project. For example, in Libby Rod and Gun Club v. Poteat, 457 F.Supp. 1177 (D. Mont. 1978), aff'd 594 F.2d 742 (9th Cir. 1979), the court held that an EIS prepared by the Army Corps of Engineers for the construction of a dam and associated hydroelectric facilities was inadequate because of the EIS's failure to consider alternative methods for meeting the region's energy needs. The Corps failed to analyzed "how many coal plants are planned or actually under construction and how much power they will provide--i.e., analysis of the necessity for [the project]," thereby forsaking its duty "to assess the need for [the proposal]." 457 F.Supp. at 1187 (emphasis added).[4]

DOE must decide whether to commit 104 million dollars to the HCCP, and whether to allow it to go forward. In order to make a fully informed decision, DOE must consider all "relevant factors" Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402, 416 (1971). Yet, without examining whether HCCP's power is needed, DOE

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[4] See also, e.g., Green County Planning Board v. FPC, 455 F.2d 412, 424 (2d Cir.) cert denied, 409 U.S. 849 (1972) (EIS prepared for the construction of a transmission line was deficient because the statement "disregarded impending plans for future power development" which might mean the "line was unnecessary"); New England Coalition on Nuclear Power v. NRC, 582 F.2d 87, 96-97 (1st Cir. 1978) (evaluation of need required because "absent some need for power, justification for building facility is problematic"). See also, Methow Valley Citizens Council v. Regional Forester, 837 F.2d 810, 815-815 (9th Cir. 1987), rev'd on other grnds, 109 S. Ct. 1835 (1989) (Forest Service "must clearly articulate its goal, specifically identifying the market and geographic pool of skiers targeted," in order "to determine which alternatives are appropriate for investigation and consideration....").

will not be "able to take into account all possible approaches to a particular project ... which would alter the environmental impact and the cost-benefit balance." Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109, 1114 (D.C. Cir. 1971).

DOE appears to justify its failure to analyze the public need for the HCCP, in part, on the ground that the Alaska Public Utilities Commission ("APUC") already undertook such analysis and concluded that there was such a need. This justification is insufficient, for several reasons. First, DOE cannot delegate its analysis of an important factor to another agency, particularly a state agency, without at least considering whether that analysis was performed correctly and, in particular, considered all the factors that would be relevant under NEPA. The enclosed filings before the APUC, and the dissenting portion of the APUC's final decision to license the HCCP, raise serious questions about the validity of the APUC's "needs" analysis. Perhaps most importantly, the APUC failed to consider the local, regional, and global cumulative environmental costs of the project in determining the public "need" for the project. Pages 10-11 of the enclosed APUC Order made it clear that APUC considered the need for the HCCP purely in terms of the economics of rate payers. The APUC also took the State and federal subsidies for the project as a given; it did not consider, as DOE must do here, whether the subsidies themselves were in the public's best interest. 74-14

Putting environmental costs aside altogether, the project hardly appears to be in the public interest when viewed beyond the 74-15

immediate financial interests of the affected rate payers. According to page four of the enclosed Petition for Reconsideration by Dave Lacey, at best, the project will save rate payers $100,000. This savings is a drop in the bucket relative to the roughly $125,000,000 in federal and state funding required for the project.

Given these absurd economics, it is no surprise that the APUC itself went as far as to suggest that, had it considered the HCCP from the standpoint of the public interest of Alaska, the U.S., and the world as a whole, it "might agree" with those public commentors who opposed the project. Order, pp. 10-11. Whether or not the APUC's myopic view in its licensing decisions is lawful under the APUC's enabling statute,[5] it is certainly not lawful under a NEPA "needs" analysis.

Finally, even if DOE can adopt the APUC's technical and policy analysis of public "necessity" without conducting its own needs review, DOE must factor that analysis into its own overall consideration of the project's merits. The APUC hardly found an overwhelming, or even serious, public benefit for the project. DOE must consider, in an EIS, whether that marginal need outweighs the projects costs and the needs and costs of practicable alternatives. 74-16

III. THE DEIS DOES NOT ADEQUATELY ADDRESS THE SPECIFIC ENVIRONMENTAL EFFECTS OF THE HCCP 74-17

A. The DEIS's Analysis of Atmospheric Impacts From HCCP is Severely Flawed.

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[5] Several of the signatory groups on these comments think not and have appealed the APUC's licensing decisions to the Alaska Superior Court. Briefing in that case is currently underway.

There is no question that the HCCP will cause significant environmental atmospheric effects. HCCP alone will emit over one-half million tons of air pollutants, including carbon dioxide. See DEIS at 2-20. The region, since it is relatively pristine, with significant natural resources, simply cannot absorb this level of emissions and the degradation of air quality that would ensue.

The DEIS's discussion of local and global air quality impacts is totally inadequate. First, the DEIS fails to evaluate the effects of global warming and the widespread use of coal for electric generation, preventing DOE and the public from properly evaluating the merits of coal as an energy resource. Second, the DEIS's evaluation of localized air impacts is based on incomplete information, shoddy analysis, and a misreading of the law. These defects are so grave that, even if the remainder of the DEIS was sufficient, a revised, recirculated DEIS is necessary. 74-18

1. The DEIS fails to evaluate impacts from carbon dioxide emissions on global warming.

The DEIS's ostrich-like approach to global warming, perhaps the principal environmental challenge of the 21st century, is inconsonant with the agency's mission, pertinent statutory authority, and the Clean Coal program, not to mention a flat violation of NEPA. 74-19

DOE can no longer deny the threat represented by global warming or ignore its causes.[6] A recent paper by the U.S.

[6] Consistent with its cursory treatment of the subject, the DEIS appears reluctant to acknowledge a link between coal use and global climate change. For example, the DEIS states that CO2 is

Environmental Protection Agency (copy attached) identifies carbon dioxide as the "most important" greenhouse gas and states that "carbon dioxide is the key greenhouse gas which is directly linked to fossil fuel combustion, especially coal combustion." Report at 1, 24. Methane from coal mines is also identified as a source of global warming, as are nitrogen oxides. Id. Nor, according to the EPA report, will implementation of clean coal technologies have any meaningful impact on CO2 emissions. See Report at 15, 20.

In the face of mounting evidence that coal use is inconsistent with the global environment, DOE chooses to ignore the subject. DOE's "head in the sand" approach to the subject can be seen in the Clean Coal Programmatic EIS (PEIS). In that document, DOE touts the program's benefits because of the supposed international marketability of clean coal technology (PEIS at 1-6) and that coal use is expected to increase domestically. Id. at 1-15. Nonetheless, DOE recognizes that a successful implementation of the Clean Coal program will have little impact on global warming. Id. at 4-20.

DOE's failure to analyze the HCCP in terms of its contribution to global warming is wholly inappropriate. As the agency primarily responsible for formulating and implementing the Nation's energy 74-20

"suspected" of causing global warming. DEIS at 2-23. However, when introducing and touting the 1989 Clean Coal program DOE put a different cast on the subject. At that time DOE stated, the "program will yield significant benefits...by [a]ddressing the concerns regarding global warming by significantly increasing the efficiency of power generation." 53 Fed. Reg. 50281 (December 14, 1988).

policy, DOE must consider the global ramifications of its policy directives. DOE's myopia is also at odds with the agency's statutory authority for implementing the Clean Coal program. The Non-Nuclear Energy Research and Development Act of 1974, 42 U.S.C. §5901 et seq., calls for DOE to promote energy-related technologies that are "environmentally acceptable," and is replete with references to environmental considerations. 42 U.S.C. § 5902(a).

The DEIS pays only lip service to DOE's statutory authority for the Clean Coal program and the relevance of environmental considerations in that law. For instance, the DEIS states, "if coal is to reach its full potential and be both environmentally acceptable and economically competitive an expanded slate of advanced clean coal technologies must be developed to provide substantially improved options that are superior to today's choices." DEIS at 1-5. Nowhere, however, does the DEIS examine whether coal use, by the HCCP or another "clean coal" plant, is an environmentally acceptable energy option.

The extent of the DEIS's analysis on the subject is to observe that CO2 emissions from HCCP will be a fraction of the worldwide total. See DEIS at 4-10. While this may be true, it hardly justifies DOE's failure to consider whether to proceed with the HCCP. The very purpose of the program is to examine the viability of coal as a future energy resource. An examination of coal's contribution to global warming and the consequences from climate change is obviously essential to this determination. 74-21

Moreover, by stating that the HCCP alone will not produce

enough CO2 to make a difference in global climate, the DEIS ignores the cumulative impacts of the HCCP, together with other coal plants.[7] Notably, since the precise aim of the Clean Coal program is to develop technologies for national and international application, a successful demonstration at HCCP may promote coal use on a national or global scale and thereby exacerbate global warming. Consequently, the effects of HCCP cannot be as neatly isolated as the DEIS suggests. 74-22

As noted earlier, by providing comprehensive information on environmental costs and benefits to the public and decision-makers--including Congress, independent agencies, and the executive branch--an EIS seeks to ensure informed decision-making. By failing to discuss global warming and the role of coal in climate change the DEIS frustrates its very purpose.

2. The DEIS's discussion of air quality impacts from HCCP is deficient.

While the DEIS purports to demonstrate that the proposed HCCP will operate in compliance with applicable air quality standards, the DEIS makes no such demonstration. In fact, the DEIS' of Clean Air Act ("CAA" or "the Act") standards is riddled with holes and errors. The DEIS' flawed CAA analysis is of no small consequence, 74-23

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[7] Under the same twisted logic, no single person living in Los Angeles should reasonably be expected to reduce his or her automobile usage in order to reduce smog in the L.A. basin, because the person's own driving will have little overall consequence for regional smog. By the same token, no single person should be expected to vote in federal, state, or even municipal elections. This narrow-minded logic makes a complete mockery of the cumulative impacts requirements under NEPA.

since the DEIS used the Act's standards "as a gauge for assessing potential impacts" from HCCP.[8] DEIS at xx. If the DEIS' treatment of this critical issue is flawed, the DEIS is of no value in assessing the air quality impacts from HCCP.

The DEIS appears to be based upon a misunderstanding of the requirements of the Clean Air Act, specifically Part C of the Act and its relationship to the National Ambient Air Quality Standards (NAAQS). Generally speaking, Part C, Prevention of Significant Deterioration (PSD), seeks to ensure that those parts of the country presently meeting the national ambient air quality standards and designated as an attainment area as set forth in section 107 of the Act (42 U.S.C. § 7407), are kept relatively free from additional pollution. See 42 U.S.C. §7470 et seq. This goal is accomplished by establishing air pollution limits within allowable "increments" for new sources in an attainment area. See 42 U.S.C. § 7473. 74-24

Those limits and increments are established as follows: the filing of the first PSD application in an attainment area triggers

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[8] Even if properly applied, this gauge is itself unduly narrow for purposes of the requirements of NEPA. The PSD provisions apply only to those few air pollutants for which the EPA has established NAAQS. Although the DEIS recognizes that the HCCP will emit several other pollutants, including benzene, arsenic, and mercury (DEIS at 2-23, 4-4), the document fails to assess the impacts of those pollutants on an individual or cumulative and synergistic basis with other sources of the same pollutants and other pollutants. Recent news reports about elevated cadmium levels in the Porcupine Caribou Herd that traverses Alaska's eastern arctic region, likely due to air pollution from industries at more southern latitudes, highlight the need for DOE to evaluate the impacts of all pollutants discharged by the HCCP.

a "baseline concentration" for that area. 42 U.S.C. §7479(4). This baseline is simply the ambient concentrations of three pollutants--SO2, NO2 and TSP--in the area.[9] After the baseline is triggered, the levels of the three pollutants are not allowed to exceed the baseline concentration plus the established increment. 42 U.S.C. §7473(b).

The size of the allowable increment depends on what the particular area is designated. Denali National Park is a Class I area and its allowable increment above baseline is lower, meaning less deterioration will be allowed, than the area around Healy, which is a Class II area.

It should also be noted that, although only a major emitting facility need file a PSD application and so triggers the baseline, pollution from local sources that do not need a PSD permit, but which existed in a given area prior to the first PSD application being filed, is included in the baseline calculation. Similarly, pollution from sources not needing a permit that locate in an area after the baseline has been triggered, use up part of the available increment. Increments are also consumed by "secondary emissions." 40 C.F.R. §51.166(b)(18). These are emissions that would not result but for the new facility and include, for example, increased emissions from coal mining next to a new power plant. See 54

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[9] The DEIS refers to "PM10" instead of TSP. While Congress authorized the EPA to substitute the former for the latter, as a measure of particulates (42 U.S.C. § 7476(f)), we are unaware that the EPA has made this substitution, for PSD purposes. See 40 C.F.R. § 1.166(c) (1992).

Fed.Reg. 27288-27290 (June 28, 1989), see also 54 Fed. Reg. 48882 (November 11, 1989).

Finally, in no event can the baseline plus the increment exceed either the national primary or secondary ambient air quality standards. 42 U.S.C. §7473(b)(4). Thus, if baseline plus increment is lower than the NAAQS, baseline plus increment is the relevant standard. If baseline plus increment is higher than the NAAQS, the NAAQS is the relevant standard.

It follows from the above explanation that a determination of whether expected air pollution from the HCCP will comply with the applicable PSD requirements of the CAA requires an identification of (1) the baseline; (2) the increment; (3) the portion of the increment that has already been consumed; and (4) the additional portion of the increment that the HCCP and secondary emissions will consume. Yet, the DEIS does not properly identify any of these values.

First, the DEIS fails to acknowledge and account for the fact that the baseline for each of the target pollutants has already been triggered. Alaska Department of Environmental Conservation, PSD Public Comment Draft, at 41-42.[10] Instead, the DEIS claims "[n]o other major pollutant source has been constructed in the Healy region since the establishment of the PSD increments in

74-25

[10] We disagree with ADEC's draft PSD analysis for much of the same reasons as those discussed in these comments. However, our specific comments on that analysis will be provided to ADEC under separate cover.

1977." DEIS at 4-5.[11] This critical flaw prevents the DEIS from identifying either the baseline or the increment already consumed. In concluding that HCCP will meet the applicable standards, the DEIS merely looked at the emissions from HCCP and determined they would be within the increment. See DEIS at 4-5. But, this is not what the law requires.

Second, the DEIS does not appear to consider all emissions from the HCCP. The DEIS does not appear to have taken into account all on-site sources. The only such ancillary facility specifically identified by the DEIS is the fly ash storage silo. See DEIS at 4-6. It does not appear that DOE included other on-site facilities, like the limestone storage silo, the crusher, or the coal piles, in its air quality analysis. 74-26

As discussed above, on-site sources are not the only sources that must be considered. So-called secondary emissions must also be taken into account. These include fugitive emissions from the increased mining of coal, from the increased truck traffic for hauling the coal to the plant and the ash to the mine, and from the limestone mining necessary for the project. These emissions are likely to be significant.[12] For example, the DEIS estimates that 74-27

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[11] The DEIS compounds its difficulties with the use of imprecise terms such as the "Healy region" and "major pollutant source." These are not the terms of the statute or regulations and their use prevents the reviewer from understanding what DOE is saying and suggests that DOE does not understand the law. The revised DEIS must remedy this problem.

[12] For the record, we (and Congress, which intended to regulate particulate matter under the CAA) disagree with the DEIS's characterization of fugitive emissions and the implication that

truck traffic from coal hauling will increase by 20 percent, DEIS at 4-6, and given the enormous volume of ash that will be produced by HCCP total traffic on the haul road will likely increase many times over its present levels.[13] See DEIS at 2-20.

Another secondary source that must be considered to consume part of the available increment is Healy Unit No. 1. This is particularly true given the synergistic relationship between Healy 1 and HCCP. As described by the DEIS, the presence of HCCP creates a "downwash" exacerbating the effects of Healy Unit No. 1. DEIS at 4-7. Accordingly, while emissions from Healy 1 in isolation do not consume increment and only go into baseline, emission concentrations from Healy 1 which would not occur but for the operation of HCCP constitute secondary emissions which must be considered to consume part of the available increment. 74-28

In short, the DEIS has failed to identify the proper baseline[14] and all sources consuming the available increment, and to quantify that portion of the increment consumed by the HCCP, including its secondary emissions. Until these tasks are 74-29

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such emissions are not of concern. See DEIS at 4-6. DOE's belief on this score likely accounts for its failure to consider fugitive emissions in the DEIS.

[13] Given that total coal consumption will roughly double, the DEIS's estimate that coal-hauling truck traffic will increase by only 20 percent is highly questionable.

[14] The DEIS' measure of ambient air quality at the Park Monitoring station does not identify baseline because it includes emissions from sources consuming part of the increment. Also, the location of this monitor, upwind from Healy Unit No. 1, concerns us. We request an explanation as to why this location was chosen and how that location meets the relevant legal standards. 74-30

performed, at a minimum, DOE will be unable to assess the regional air quality impacts of the project.

Lastly, we underscore the need for a revised DEIS that will be recirculated for public comment. DOE's air quality analysis is so embedded with flaws that it serves no useful purpose and must be entirely reworked. Since a legally sufficient DEIS will contain extensive new information enabling an assessment of air quality impacts from HCCP, the public is entitled to comment on the revised DEIS as if it were being displayed for the first time. 74-31

B. The DEIS' Analysis of Impacts to Visual Resources Is Highly Suspect.

It appears obvious to us that a coal-fired power plant, located less than four miles from Denali National Park, and which can be seen from numerous points inside the Park, will have unacceptable adverse impacts on the Park's visual resources. 74-32

We are skeptical of the DEIS' claim to the contrary for two reasons. First, the DEIS is not being sufficiently conservative in its analysis. Rather than utilize models proposed by the National Park Service, the DEIS prefers its models which demonstrate, against common-sense, that the significant increase of emissions from HCCP will only lead to visibility effects "slightly greater than the frequency, duration, and extent of the effects from Unit No. 1 alone." DEIS at 4-91. DOE must use conservative models in order to fully protect the Park's valuable resources. 74-33

The DEIS' severely flawed PSD analysis, and failure to adequately consider alternatives, global impacts, and public need, 74-34

provide further cause for us to distrust the DEIS' analysis of visual impacts. On the whole, the DEIS appears to have been drafted to justify a decision already made and, thus, is not completely forthcoming on issues that could present a problem for the facility. Likewise, the DEIS' choice of models and discussion of visual resources may not be accurate, especially given that the visibility monitoring data comes from a small area over a relatively short time frame.[15]

C. The DEIS's Discussion of the Environmental Effects From Waste Disposal is Inadequate.

The DEIS blithely assumes that the enormous volume of solid waste produced by HCCP can be disposed of at the mine without causing any adverse impacts. HCCP will generate over 60,000 tons per year of solid waste, all of it destined to end up in the mine. DEIS at 2-20. Without any explanation whatsoever, the DEIS asserts that no contaminants will leach from the waste to groundwater. See DEIS at 4-27. 74-36

That assertion is not only conclusory and counter-intuitive, it also flies in the face of studies proving that groundwater contamination occurs at utility disposal sites. In a report to Congress on the subject, the EPA stated that "data on actual field observations indicate that migration of potentially hazardous constituents from utility waste disposal has occurred." "Wastes

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[15] We note further that the DEIS fails to examine visual impacts to that portion of Denali Park northwest of Healy. Considering that the prevailing wind is in the direction of that portion of the Park, the lack of such an evaluation is significant. See DEIS at 3-5, 3-20. 74-35

From the Combustion of Coal by Electric Utility Power Plants" at ES-4, supra. In light of these demonstrable impacts, the DEIS must do more than simply note the possibility of effects and suggest that the effects will not occur.

The revised DEIS must also provide a more complete discussion of the extent of groundwater contamination from the existing Healy Unit No. 1 coal pile and the potential for additional, cumulative impacts from the siting of additional piles. See DEIS at 4-66.[16] 74-37

D. The DEIS Fails To Evaluate Actions Connected To The HCCP Including Those Associated With The Appropriation Of Limestone For The HCCP. 74-38

NEPA requires that all "connected actions" be considered together in a single EIS. See 40 C.F.R. §1508.25(a)(1); Thomas v. Peterson, 753 F.2d 754 (9th Cir. 1985). This includes actions which are interdependent parts of a larger operation and depend on the larger action for their justification. Id.

The HCCP will require that a source of limestone be identified and exploited for use in the plant. Nevertheless, the DEIS is wholly silent as to where this limestone will come from and what effects its acquisition will have on the environment. The DEIS must address this issue.

CONCLUSION

The Healy Clean Coal Plant is ill-advised. Its power is not needed by Alaskans. It is an inefficient allocation of scarce

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[16] The DEIS contradicts itself by stating (p. 4-26) that groundwater contamination at the site has not occurred. This apparent contradiction must be resolved.

resources, including private development dollars that would not be drawn to the project were it not for DOE's misguided financial contribution. Finally, and most importantly, a new coal burning power plant should not be countenanced in a region, such as that including and adjacent to Denali National Park, where natural resource values are of critical importance. Simply put, DOE has failed to explain why the HCCP will not have irreparable and unacceptable impacts on one of Alaska's most prized treasures.

In order to fit a square peg--the HCCP--into a round hole, DOE has produced a DEIS that is rife with defects. DOE must prepare a revised DEIS in order to fulfill the agency's mandates under its enabling statute and NEPA, and to fully inform the agency and the public of the import of its decision. 74-39

The cited attachment, " Greenhouse Warming: The Mitigation Challenge," has not been reproduced as part of the EIS but is available in the public reading rooms or upon request to Dr. Earl W. Evans (as listed in the EIS cover sheet).

Letter No. 74
Michael M. Wenig, Acting Executive Director, Trustees for Alaska, 725 Christensen Drive, Suite 4, Anchorage, AK 99501

The following comments were submitted by local Alaskan Groups and individuals—the Alaska Federation for Community Self-Reliance, the Alaska Center for the Environment, Trustees for Alaska, and Dave Lacey—and several national environmental organizations—the National Parks and Conservation Association, the Sierra Club, and the Wilderness Society.

Attached to these comments were the following: (1) "Greenhouse Warming: the Mitigation Challenge," (2) State of Alaska, Alaska Public Utilities Commission, "Petition for Re-consideration of Commission Approval of Certificate for Public Convenience and Necessity and of Power Sales Agreement," (3) "Petition for Reconsideration on Externalities," (4) "Order Approving Application and Contract, with Conditions," and (5) "Dissenting Statement of Commissioner Mark A. Foster."

Comment 74-1:
"The Draft Environmental Impact Statement (DEIS) on the Healy Clean Coal Project (HCCP) ignores important, unambiguous requirements of the National Environmental Policy Act (NEPA) and, thus, is deficient from both legal and policy standpoints. For instance, the DEIS's discussion of one of the most important environmental effects of the project—regional air quality—is fundamentally flawed. From a broader perspective, the DEIS fails to meaningfully inform the Department of Energy (DOE) whether the HCCP makes sense in Alaska and whether coal utilization should be promoted in view of the projected increase in the earth's temperature from burning fossil fuels."

Response:
DOE believes that it has fulfilled the intent of NEPA. The goal of the Clean Coal Technology Program is to make advanced environmental control technologies for coal use available to the U.S. marketplace. The promotion of coal utilization is addressed in the Programmatic EIS for the Clean Coal Technology Program.

Comment 74-2:
"There are three over-arching deficiencies in the DEIS. First, the DEIS fails to examine the alternative of retro-fitting either Healy Unit No. 1 or some other facility in order to avoid the environmental harms arising from a new facility while gaining the benefits from a successful technology demonstration."

Response:
See response to Comment 74-7 concerning retrofitting Healy Unit No. 1 (a 25-MW unit) with the HCCP technology. See response to Comment 74-8 concerning retrofitting another facility.

Comment 74-3:
"Second, the DEIS declines to examine whether the power from HCCP is needed in central Alaska. This narrow view of DOE's obligations under NEPA prevents DOE from being truly informed as to the costs and benefits of the proposal."

Response:
The need for power was determined by the APUC from applications from GVEA on the projected load growth. DOE independently reviewed the APUC's conclusions and found them to be reasonable (see Sect. 1.4.2). However, under the CCT enabling legislation, DOE's decisions are driven by the need to demonstrate the advanced clean coal technology.

Comment 74-4:
"Third, the DEIS's discussion of specific environmental effects is inadequate. The principal defect in this regard is the document's analysis of air quality impacts from HCCP. However, the DEIS's discussion of visual impacts from the operation of the facility, and impacts related to waste disposal, also fall short."

Response:
DOE believes that the EIS's discussion of specific environmental effects (including air quality, visibility impairment, and waste disposal) is comprehensive.

Comment 74-5:
"In its current form the DEIS cannot serve its key purpose of informing the public, DOE, and other decision-makers of the effects of the project and the realistic alternatives available. In fact, the document is so flawed that a revised, cured DEIS must be prepared and circulated for public comment. Only then will the DEIS be able to play the role assigned to it under NEPA."

Response:
DOE believes that the EIS fulfills the agency's mandates in the letter and spirit of NEPA and a revised DEIS need not be issued for review. The public has given meaningful comment on the DEIS which is included in this volume of the FEIS. Changes have been made to the EIS to respond to these comments and to describe the reduced impacts achieved by the Memorandum of Agreement. See response to Comment 76-1.

Comment 74-6:
"I. The DEIS fails to consider reasonable alternatives.

A. The DEIS fails to consider the environmentally preferable alternative of retrofitting Healy Unit No. 1.

A reasonable alternative to building an entirely new facility with its attendant impacts is to retrofit Healy Unit No. 1 with the advanced technologies and garner the benefits from a successful demonstration. Indeed, only those technologies capable of retrofitting or repowering existing facilities are qualified for program funding. DEIS at 1-1. Consequently, retrofitting Healy 1 with the technologies would allow for a closer match between the demonstration and the program's goals."

Response:
See response to Comment 74-7.

Comment 74-7:
"While the DEIS does not specifically address the possibility of retrofitting the 25 MW Healy 1 unit, it notes as justification for not considering a smaller size new facility that a 50 MW capacity unit is the minimum size unit for a viable demonstration. DEIS at 2-36. This assertion is troubling for two reasons. First, the DEIS's statement that the absolute minimum size for this demonstration requires a 50 MW unit is conclusory and plainly inadequate. More explanation is needed on this subject in order to demonstrate the full and fair evaluation required by NEPA. Second, the DEIS's statement is counter-intuitive. Most of the generating units at coal-fired power plants in this country, and presumably the world, are considerably larger than 50 MW. . . . Given that this nation-wide average is considerably larger than *either* 25 MW or 50 MW, it seems unlikely that the proposed technologies demonstration would be worthless when applied to a 25 MW unit, yet useful on a 50 MW unit."

Response:
See response to Comment 1-2. Retrofitting Healy Unit No. 1 with the HCCP technology is not a reasonable alternative to the HCCP as proposed because it would not meet the applicant's need for additional power generation capacity. In addition, it is not capable of accomplishing DOE's purpose for the project, which is to demonstrate the TRW combustor and the Joy dry scrubber in combination. The proposed project is to demonstrate the technology with the minimum commercial-size components in order to generate all data from design, construction, and operation necessary for the private sector to judge the commercial potential; 50 MW is the minimum size facility that would use commercial-size components and meet the applicant's need for additional power.

Comment 74-8:
"B. The DEIS must examine a retrofitting alternative.

There are plain advantages to retrofitting an existing facility instead of building an entirely new facility, making this alternative reasonable and one that DOE must fully consider. As noted above, if the demonstration is successful retrofitting will produce immediate air quality benefits by reducing emissions. This is, after all, the purpose of the program. Retrofitting also will avoid the environmental costs associated with a new facility. These include the costs from a net increase in air pollutants attributable to the new facility and the costs from increased mining of coal."

Response:
The retrofit of another facility with the same technology was not offered to DOE. This would require a new solicitation, an option which is subsumed in the no-action alternative. See response to Comment 1-2.

Comment 74-9:
"Accordingly, if DOE is able to demonstrate in the revised DEIS that the technologies demonstration cannot take place at Healy Unit No. 1, DOE must examine an alternative that would retrofit an existing unit having sufficient capacity."

Response:
See response to Comment 74-8.

Comment 74-10:
"DOE appears to justify avoiding this analysis simply by contending that the HCCP sponsors will only build HCCP and DOE cannot force them to do otherwise. DOE's apparent justification is flawed, for several reasons. To begin with, DOE's own scoping notice for the HCCP project acknowledged DOE's responsibility to 'examine reasonable alternatives which are beyond [our] immediate authority to implement, but which could also meet the objectives of the CCT program.' 55 Fed. Reg. 40913 (October 5, 1990)."

Response:
See response to Comment 1-2. The discussion in Sect. 2 includes alternatives which are beyond DOE's authority to implement. As discussed in Sect. 2.2, the needs and goals of the applicant help to define the scope of reasonable alternatives to the proposed action. DOE did consider as a reasonable alternative locating the project at the only alternative site which would meet those needs and goals, even though it is beyond DOE's authority to compel the applicant to relocate there. Also, Sect. 2.2.3 discusses other alternatives beyond DOE's jurisdiction which have been dismissed as unreasonable because they do not address the purposes of the CCT Program. Finally, as part of the analysis of the no-action alternative, DOE has addressed the impacts of building a conventional coal plant on the Healy site. This alternative was included because it is a reasonably foreseeable result if DOE were to decide not to fund the HCCP further, even though it is beyond DOE's jurisdiction to implement.

Comment 74-11:
"Next, the DEIS itself points out that DOE's 'objective is to demonstrate technologies.' Here, the EIS is designed to ensure that DOE understands the environmental impacts of the proposed technology demonstration and to examine if there are ways to demonstrate the technologies with fewer environmental impacts. That AIDEA will only build HCCP and not a retrofitted facility located elsewhere is basically irrelevant to a determination of which alternatives are reasonable."

Response:
See response to Comment 1-2. DOE disagrees with the comment. The needs and goals of the applicant are very relevant in determining the scope of reasonable alternatives.

Comment 74-12:
"Retrofitting an existing unit, either at Healy or, if necessary, outside of Alaska, is a particularly viable alternative in the present circumstances where the proposal is to build a coal-fired generating unit less than 4 miles from one of this nation's crown jewels—Denali National Park and Preserve. While HCCP is touted as 'clean,' in reality, like all coal

plants, it is anything but. Even assuming the demonstration is successful, HCCP will still emit well over a thousand tons (or more than two million pounds) of air pollutants every year, not including CO_2. DEIS at 2-20. These emissions will impact Denali and other natural resources. Faced with this radical proposal, DOE should have undertaken an exhaustive search for alternatives. By failing to do so, DOE has violated both the letter and spirit of NEPA.

Footnote 3: Logically, alternatives include not only retrofitting Healy 1 and other existing coal plants outside of Alaska, but requesting that Congress reappropriate the funds currently slated for 'Clean Coal' demonstration projects, for 'alternative' energy demonstration projects (e.g. wind, solar, energy conservation) within and/or outside of Alaska."

Response:
See response to Comment 1-10. As discussed in Sect. 2.2, all reasonable alternatives must be capable of meeting the goals of the underlying legislation. For this program, Congress specified the narrow goal of demonstrating clean coal technologies by means of cost-sharing projects proposed by participants.

Comment 74-13:
"II. The DEIS fails to consider the public need in the region for the HCCP.

DOE's inadequate examination of alternatives is compounded by its refusal to carefully examine the public need or, in our view, the clear *lack* of need, for the power that the HCCP will generate. . . .

The need for DOE to reassess the public need for the HCCP is especially critical since DOE's conclusion, in its proposals selection document, was factually flawed. Rather than relying 'principally on oil,' Alaska's energy system relies principally on natural gas (roughly 57.7% of total GW output); oil is a mere 11%."

Response:
See response to Comment 74-14.

Comment 74-14:
"DOE appears to justify its failure to analyze the public need for the HCCP, in part, on the ground that the Alaska Public Utilities Commission ('APUC') already undertook such analysis and concluded that there was such a need. This justification is insufficient, for several reasons. First, DOE cannot delegate its analysis of an important factor to another agency, particularly a state agency, without at least considering whether that analysis was performed correctly and, in particular, considered all the factors that would be relevant under NEPA. . . . The APUC also took the State and federal subsidies for the project as a given; it did not consider, as DOE must do here, whether the subsidies themselves were in the public's best interest."

Response:
DOE's decisions are driven by the need to demonstrate clean coal technologies as directed by Congress (see Sect. 1.4.1). Determination of need for power is under the purvue of

the APUC which approved the power sales agreement on September 3, 1992. Alternative methods of meeting Alaska's power need are evaluated in the Integrated Resource Plan submitted to the APUC by GVEA which was used as a basis for the determination of need for power. DOE has independently reviewed the APUC's conclusions and finds them to be reasonable (see Sect. 1.4.2).

Comment 74-15:
"Putting environmental costs aside altogether, the project hardly appears to be in the public interest when viewed beyond the immediate financial interests of the affected rate payers. According to page four of the enclosed Petition for Reconsideration by Dave Lacey, *at best*, the project will save rate payers $100,000. This savings is a drop in the bucket relative to the roughly $125,000,000 in federal and state funding required for the project."

Response:
In reaching its decision, DOE must determine whether the benefit derived in terms of furthering the program goal of demonstrating clean coal technology as directed by Congress, is worth the cost, including environmental impacts and other considerations. These environmental impacts are discussed in detail in the EIS.

Comment 74-16:
"Finally, even if DOE can adopt the APUC's technical and policy analysis of public 'necessity' without conducting its own needs review, DOE must factor that analysis into its own overall consideration of the project's merits. The APUC hardly found an overwhelming, or even serious, public benefit for the project. DOE must consider, in an EIS, whether that marginal need outweighs the projects costs and the needs and costs of practicable alternatives."

Response:
See response to Comment 27-26.

Comment 74-17:
"III. The DEIS does not adequately address the specific environmental effects of the HCCP.

A. The DEIS's analysis of Atmospheric impacts from HCCP is severely flawed.

There is no question that the HCCP will cause significant environmental atmospheric effects. HCCP alone will emit over one-half million tons of air pollutants, including carbon dioxide. See DEIS at 2-20. The region, since it is relatively pristine, with significant natural resources, simply cannot absorb this level of emissions and the degradation of air quality that would ensue."

Response:
DOE believes that the EIS's discussion of specific environmental effects, including atmospheric impacts, is comprehensive. DOE agrees that the proposed HCCP would emit over one-half million tons of CO_2, but CO_2 is not considered an air pollutant in the sense

that it is harmful to human health. The results of air dispersion modeling that DOE has performed for HCCP emissions indicate that no standards, including PSD Class I increments, would be exceeded as a result of HCCP operation. Stringent PSD Class I increments apply to areas such as DNPP where almost any deterioration of air quality is undesirable and little or no major industrial development would be allowed. Therefore, DOE does not expect that air quality within DNPP would deteriorate appreciably as a result of the proposed HCCP.

Comment 74-18:
"The DEIS's discussion of local and global air quality impacts is totally inadequate. First, the DEIS fails to evaluate the effects of global warming and the widespread use of coal for electric generation, preventing DOE and the public from properly evaluating the merits of coal as an energy resource. Second, the DEIS's evaluation of localized air impacts is based on incomplete information, shoddy analysis, and a misreading of the law. These defects are so grave that, even if the remainder of the DEIS was sufficient, a revised, recirculated DEIS is necessary."

Response:
The potential environmental consequences (including changes in CO_2 emissions) of widespread commercialization of each of 22 successfully demonstrated clean coal technologies in the year 2010 were addressed in the programmatic EIS for the CCT Program (DOE/EIS-0146). As part of the overall strategy for compliance with NEPA that was developed for the CCT Program, the EIS for the proposed HCCP tiers to the programmatic EIS to eliminate repetitive discussions of the same issues. DOE believes that the EIS's evaluation of localized air impacts is comprehensive. DOE does not believe that a revised, recirculated draft EIS is necessary.

Comment 74-19:
"1. The DEIS fails to evaluate impacts from carbon dioxide emissions on global warming.

The DEIS's ostrich-like approach to global warming, perhaps the principal environmental challenge of the 21st century, is inconsonant [*sic*] with the agency's mission, pertinent statutory authority, and the Clean Coal program, not to mention a flat violation of NEPA."

Response:
The discussion on potential global climate change in Sect. 4.1.2.2 of the EIS has been expanded to further address the potential contribution of the proposed HCCP's CO_2 emissions. The analysis includes a comparison of the HCCP's CO_2 emissions with those from a conventional coal-fired power plant.

Comment 74-20:
"DOE's failure to analyze the HCCP in terms of its contribution to global warming is wholly inappropriate. As the agency primarily responsible for formulating and implementing the Nation's energy policy, DOE must consider the global ramifications of its policy directives."

Response:
See responses to Comments 74-18 and 74-19.

Comment 74-21:
" . . . Nowhere, however, does the DEIS examine whether coal use, by the HCCP or another 'clean coal' plant, is an environmentally acceptable energy option."

The extent of the DEIS's analysis on the subject is to observe that CO_2 emissions from HCCP will be a fraction of the worldwide total. See DEIS at 4-10. While this may be true, it hardly justifies DOE's failure to consider whether to proceed with the HCCP. The very purpose of the program is to examine the viability of coal as a future energy resource.

An examination of coal's contribution to global warming and the consequences from climate change is obviously essential to this determination."

Response:
See responses to Comments 74-18 and 74-19.

Comment 74-22:
"Moreover, by stating that the HCCP alone will not produce enough CO_2 to make a difference in global climate, the DEIS ignores the cumulative impacts of the HCCP, together with other coal plants. Notably, since the precise aim of the Clean Coal program is to develop technologies for national and international application, a successful demonstration at HCCP may *promote* coal use on a national or global scale and thereby *exacerbate* global warming. Consequently, the effects of HCCP cannot be as nearly isolated as the DEIS suggests."

Response:
See response to Comment 74-18.

Comment 74-23:
"2. The DEIS's discussion of air quality impacts from HCCP is deficient.

While the DEIS purports to demonstrate that the proposed HCCP will operate in compliance with applicable air quality standards, the DEIS makes no such demonstration. In fact, the DEIS of Clean Air Act (CAA or 'the Act') standards is riddled with holes and errors. The DEIS's flawed CAA analysis is of no small consequence, since the DEIS used the Act's standards 'as a gauge for assessing potential impacts' from HCCP. DEIS at xx. If the DEIS's treatment of this critical issue is flawed, the DEIS is of no value in assessing the air quality impacts from HCCP."

Response:
DOE believes that the EIS's evaluation of air quality impacts is comprehensive. DOE believes that the air quality standards, including the PSD increments, used as gauges for

assessing potential impacts are appropriate. In addition, the ADEC determined through its regulatory process that the HCCP would comply with CAA standards and issued the PSD permit on March 10, 1993.

Comment 74-24:
"The DEIS appears to be based upon a misunderstanding of the requirements of the Clean Air Act, specifically Part C of the Act and its relationship to the National Ambient Air Quality Standards (NAAQS)." (See pages 16-18 for the "groups" interpretation of the CAA.)

Response:
The EIS uses PSD Class I and II increments as yardsticks to measure the contribution of the proposed HCCP alone (within and outside DNPP, respectively). The EIS uses the National Ambient Air Quality Standards (NAAQS) as yardsticks to measure cumulative effects from the contribution of the proposed HCCP and other sources.

Comment 74-25:
"First, the DEIS fails to acknowledge and account for the fact that the baseline for each of the target pollutants has already been triggered. Alaska Department of Environmental Conservation, PSD Public Comment Draft, at 41-42. Instead, the DEIS claims '[n]o other major pollutant source has been constructed in the Healy region since the establishment of the PSD increments in 1977.' DEIS at 4-5. This critical flaw prevents the DEIS from identifying either the baseline or the increment already consumed. In concluding that HCCP will meet the applicable standards, the DEIS merely looked at the emissions from HCCP and determined they would be within the increment. See DEIS at 4-5. But, this is not what the law requires."

Response:
For the Class II increment analysis, EPA guidance only requires modeling of increment consuming sources within 50 km of the proposed source's significant impact area. There are no major increment consuming sources within 50 km of the HCCP significant impact area. For the Class I increment analysis, EPA guidance is not as specific, but the nearest major increment consuming source is located over 600 km from Healy. Certainly, the HCCP is the only major source that would affect the PSD increment analysis.

Comment 74-26:
"Second, the DEIS does not appear to consider all emissions from the HCCP. The DEIS does not appear to have taken into account all *on*-site sources. The only such ancillary facility specifically identified by the DEIS is the fly ash storage silo. See DEIS at 4-6. It does not appear that DOE included other *on*-site facilities, like the limestone storage silo, the crusher, or the coal piles, in its air quality analysis."

Response:
Besides the fly ash storage silo, the EIS includes other sources such as the limestone storage silo, the crusher, and the coal piles, in its air quality analysis.

Comment 74-27:
"As discussed above, on-site sources are not the only sources that must be considered. So-called secondary emissions must also be taken into account. These include fugitive emissions from the increased mining of coal, from the increased truck traffic for hauling the coal to the plant and the ash to the mine, and from the limestone mining necessary for the project. These emissions are likely to be significant. For example, the DEIS estimates that truck traffic from coal hauling will increase by 20 percent, DEIS at 4-6, and given the enormous volume of ash that will be produced by HCCP total traffic on the haul road will likely increase many times over its present levels. See DEIS at 2-20."

Response:
Secondary emissions are discussed fully in the EIS. However, detailed air dispersion modeling is not performed for these emissions because potential impacts are expected to be minor. In accordance with the EIS focusing on potentially significant impacts, detailed air dispersion modeling is performed for the operation of the proposed HCCP and Healy Unit No. 1.

Fly ash would be back-hauled to the UCM mine by coal delivery truck, thus the increased number of trucks on the haul road will be directly related to the additional coal requirements rather than trips required to transport ash back to the mine.

Comment 74-28:
"Another secondary source that must be considered to consume part of the available increment is Healy Unit No. 1. This is particularly true given the *synergistic* relationship between Healy 1 and HCCP."

Response:
The response to Comment 74-25 recognizes that the emissions from Unit No. 1 are included in the baseline and hence do not consume any of the PSD increment. DOE believes that the EIS evaluates fully the potential air quality impacts resulting from the proposed HCCP, and potential cumulative impacts to air quality from the simultaneous operation of the proposed HCCP and Healy Unit No. 1. The only synergistic effects of the HCCP would be beneficial because of the retrofit of Unit No. 1 under the Agreement. See response to Comment 76-1.

Comment 74-29:
"In short, the DEIS has failed to identify the proper baseline and all sources consuming the available increment, and to quantify that portion of the increment consumed by the HCCP, including its secondary emissions. Until these tasks are performed, at a minimum, DOE will be unable to assess the regional air quality impacts of the project."

Response:
See responses to Comments 74-25, 74-26, 74-27, and 74-28.

Comment 74-30:
"Footnote 14 to Comment 74-29: The DEIS's measure of ambient air quality at the Park Monitoring station does not identify baseline because it includes emissions from sources

consuming part of the increment. Also, the location of this monitor, upwind from Healy Unit No. 1, concerns us. We request an explanation as to why this location was chosen and how that location meets the relevant legal standards."

Response:
The location of the HCCP Park Monitoring Station was chosen with guidance from ADEC to provide data on existing air quality at the boundary of DNPP nearest to the existing Healy Unit No. 1. The cumulative air quality impact analysis in the EIS includes the conservative (upper bound) assumption of summing contributions from Unit No. 1 included in both (1) modeling results, and (2) monitoring data from the HCCP Park Monitoring Station (thereby "double counting" Unit No. 1 concentrations to some extent).

Comment 74-31:
"Lastly, we underscore the need for a revised DEIS that will be recirculated for public comment. DOE's air quality analysis is so embedded with flaws that it serves no useful purpose and must be entirely reworked. Since a legally sufficient DEIS will contain extensive new information enabling an assessment of air quality impacts from HCCP, the public is entitled to comment on the revised DEIS as if it were being displayed for the first time."

Response:
See responses to Comments 74-5 and 74-23.

Comment 74-32:
"B. The DEIS's analysis of impacts to visual resources is highly suspect.

It appears obvious to us that a coal-fired power plant, located less than four miles from Denali National Park, and which can be seen from numerous points inside the Park, will have unacceptable adverse impacts on the Park's visual resources."

Response:
See responses to Comments 21-6 and 21-1.

Comment 74-33:
"We are skeptical of the DEIS's claim to the contrary for two reasons. First, the DEIS is not being sufficiently conservative in its analysis."

Response:
The modeling performed for the HCCP visibility analyses is conservative, (i.e., to overestimate the visual effects that might actually occur). A list of factors that cause the analyses to be conservative has been presented in the EIS. Thus, it is expected that the actual visibility impairment would be less than estimated by DOE's modeling results. Also, see response to Comment 21-1.

Comment 74-34:
"The DEIS's severely flawed PSD analysis, and failure to adequately consider alternatives, global impacts, and public need, provide further cause for us to distrust the DEIS's analysis of visual impacts. On the whole, the DEIS appears to have been drafted to justify a decision already made and, thus, is not completely forthcoming on issues that could present a problem for the facility. Likewise, the DEIS's choice of models and discussion of visual resources may not be accurate, especially given that the visibility monitoring data comes from a small area over a relatively short time frame."

Response:
The PSD analysis was reviewed and approved by the Alaska DEC. See response to Comment 1-2 for alternatives, response to Comment 22-1 for global impacts, and response to Comment 76-12 for the need for power. DOE believes that the choice of visibility models is appropriate and results in conservative predictions of potential visibility impacts. The valley box and PLUVUE I models were used in the DEIS. Because NPS requested that DOE use the PLUVUE II model for its analysis, modeling was performed using PLUVUE II and is included in the FEIS. The results are presented in Sects. 4.3.2.3 and 5.2. The monitoring for visibility impacts from the existing Healy Unit No. 1 occurred over a time period in excess of one year. See response to Comment 76-1 for a discussion of mitigation of visibility impacts.

Comment 74-35:
"Footnote 15 to Comment 74-34: We note further that the DEIS fails to examine visual impacts to that portion of Denali Park northwest of Healy. Considering that the prevailing wind is in the direction of that portion of the Park, the lack of such an evaluation is significant. See DEIS at 3-5, 3-20."

Response:
In Sect. 4.3.2.3, the DEIS evaluated potential visibility impairment to the Northeast Unit of DNPP, located about 9 miles west-northwest of the HCCP proposed site. For the HCCP alone and for cumulative emissions, the potential impacts were predicted to be less than those at the Visitor Access Center. The visibility analysis has been revised in the FEIS, and results indicate no hours in which a plume might be perceptible at the DNPP Northeast Unit from the HCCP alone or from simultaneous emissions with Healy Unit No. 1. During the demonstration case for cumulative emissions, the maximum NO_2 burden predicted was 112 ppbv • km, less than the threshold for plume perceptibility of 150 ppbv • km (see Sect. 4.3.2.3). During the permitted case for cumulative emissions, the maximum NO_2 burden predicted was 137 ppbv • km (see Sect. 5.2).

Comment 74-36:
"C. The DEIS's discussion of the Environmental effects from waste disposal is inadequate.

The DEIS blithely assumes that the enormous volume of solid waste produced by HCCP can be disposed of at the mine without causing any adverse impacts. HCCP will generate over 60,000 tons per year of solid waste, all of it destined to end up in the mine. DEIS at 2-20. Without any explanation whatsoever, the DEIS asserts that no contaminants will leach from the waste to groundwater. See DEIS at 4-27.

That assertion is not only conclusory and counter-intuitive, it also flies in the face of studies proving that groundwater contamination occurs at utility disposal sites."

Response:
The statement on page 4-27 of the DEIS refers to the fact that no effect on terrestrial biota is expected from leaching of buried wastes. See response to Comment 45-7.

Comment 74-37:
"The revised DEIS must also provide a more complete discussion of the extent of groundwater contamination from the existing Healy Unit No. 1 coal pile and the potential for additional, cumulative impacts from the siting of additional piles. See DEIS at 4-66."

Response:
The requested discussion is contained in Sect. 4.1.4.1 of the EIS. Coal pile runoff from the plant, which would enter the Nenana River directly or as baseflow by way of seepage into the groundwater, would be regulated by the U.S. Environmental Protection Agency (EPA) under a National Pollutant Discharge Elimination System (NPDES) permit (see Table 7.2.1). Also, seepage from the coal pile runoff basin would be regulated by the Alaska Department of Environmental Conservation under an Alaska Wastewater Disposal Permit.

Comment 74-38:
"D. The DEIS fails to evaluate actions connected to the HCCP including those associated with the appropriation of limestone for the HCCP.

The HCCP will require that a source of limestone be identified and exploited for use in the plant. Nevertheless, the DEIS is wholly silent as to where this limestone will come from and what effects its acquisition will have on the environment. The DEIS must address this issue."

Response:
See response to Comment 1-4.

Comment 74-39:
"In order to fit a square peg—the HCCP—into a round hole, DOE has produced a DEIS that is rife with defects. DOE must prepare a revised DEIS in order to fulfill the agency's mandates under its enabling statute and NEPA, and to fully inform the agency and the public of the import of its decision."

Response:
See response to Comment 74-5.

United States
Environmental Protection
Agency

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1200 Sixth Avenue
Seattle WA 98101

Alaska
Idaho
Oregon
Washington

EPA

JAN 2? 1993

Letter No. 75

Reproduced from copy submitted

REPLY TO
ATTN OF: WD-126

Dr. Earl W. Evans
U.S. Department of Energy
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, Pennsylvania 15236-0940

Re: Healy Clean Coal Project Draft Environmental Impact Statement

Dear Dr. Evans:

The Environmental Protection Agency (EPA) has reviewed the Healy Clean Coal Project (HCCP) Draft Environmental Impact Statement (DEIS). The 50 megawatt HCCP, proposed to be located near Healy, Alaska adjacent to the existing power plant, would be cost-shared by the Department of Energy (DOE) and the Alaska Industrial Development and Export Authority under the Clean Coal Technology Program. The HCCP would demonstrate innovative technologies for reducing coal combustion stack emissions.

Our review is conducted in accordance with the National Environmental Policy Act (NEPA), and EPA's authorization under Section 309 of the Clean Air Act to assess the environmental acceptability of federally authorized actions.

The HCCP requires a National Pollutant Discharge Elimination System (NPDES) permit from EPA. Because the project is defined as a new source under the NPDES regulations (40 CFR 122.2, and 122.29) and a major federal action under the Clean Water Act [Section 511(c)(1)], EPA is required to comply with NEPA prior to final action on the NPDES permit application, and is therefore a cooperating agency on the HCCP DEIS. We have provided previous written comments on the scope of the EIS, EIS Implementation Plan and the preliminary DEIS. We appreciate the efforts of the DOE in facilitating our review of the EIS and in addressing our previous comments.

In addition to the proposed action, the DEIS evaluates the no-action alternative and an alternative site located approximately four miles from the proposed site. A preferred alternative is not identified in the DEIS. The preferred alternative will need to be identified in the final EIS (FEIS), along with the rationale for its selection. 75-1

EPA has rated the DEIS as EC-2 (Environmental Concerns-Insufficient Information). A summary of the EPA rating system is

enclosed for your reference. Many of our previous comments have been addressed. We have requested, in our detailed review comments on the DEIS (enclosed), additional information bearing on the impacts of the project to air quality and the Nenana River, reflecting our primary concerns regarding these project-related issues. The cumulative air emissions associated with the proposed project and the existing Healy power plant is a primary concern. The FEIS should accurately reflect revised air impact analyses being prepared for the Prevention of Significant Deterioration (PSD) permit application. Additional information is also needed to support our review of the project NPDES permit application and the impacts of the proposed discharges. 75-2

Pursuant to our request to DOE, a report was prepared describing the methodology employed for modeling the thermal discharge from the proposed project (Draft Thermal Discharge Impact Analysis, Elements of Technical Analysis, Stone & Webster Engineering Corp., 12/92). We provided comments to DOE on that draft report (letter dated 12/28/92). We have not received the final report yet but request that it be referenced and summarized in the final EIS. 75-3

Thank you for the opportunity to review the DEIS. We would be pleased to provide further assistance in addressing our comments. Rick Seaborne in the Environmental Review Section is the lead contact person for this review and can be contacted at (206) 553-8510.

Sincerely,

Kathy Veit

Kathy Veit, Chief
Program Coordination Branch

Enclosures

U.S. Environmental Protection Agency (EPA)
Region 10
Detailed Comments On Healy Clean Coal Project (HCCP)
Draft Environmental Impact Statement (DEIS)

1. Page 1-14, Section 1.8, Role of Cooperating Agencies: The DEIS indicates that "The role of a cooperating agency differs from that of a permitting agency..." Compliance with the National Environmental Policy Act by cooperating agencies with project permitting authority (i.e. EPA) is required and we function as both a cooperating agency and a permitting agency. The statement should therefore be clarified in the HCCP Final Environmental Impact Statement (FEIS). 75-4

2. Page 2-20, Table 2.1.2: The FEIS should explain the discrepancy in this table between cooling water consumption (12,500 X 10^6 gal/yr) and effluent (10,276 X 10^6 gal/yr) for the proposed HCCP. 75-5

3. Page 2-24, Boiler Blowdown: This section indicates that all or most of the boiler blowdown waste stream would be used in the flue gas desulfurization system. For the purposes of the National Pollutant Discharge Elimination System (NPDES) permit (requiring information which should be reflected in the EIS) it is necessary to characterize when and how much boiler blowdown will be discharged in the liquid waste stream. The FEIS needs to indicate the volumes of boiler blowdown likely to be discharged as effluent if not used in the flue gas desulfurization system and the circumstances under which this is likely to occur. The FEIS also needs to indicate how often peak flow conditions may occur and the volume of boiler blowdown that may be discharged as a result of it. The same also needs to be done for demineralizer regenerant wastewater. 75-6

4. Page 2-25, Discharge Rates: For the purposes of the NPDES permit, the FEIS needs to include a breakdown of the discharge rates into their component parts. Please indicate in the FEIS if there will be any discharge to the Nenana River from dewatering fly ash, bottom slag ash, and flue gas desulfurization slurry. "Miscellaneous wastewater" flow, on page 4-19 (Table 4.1.5) should be broken up into its component parts. 75-7

5. Page 2-32, Table 2.2.2: Under the "Proposed site" column for surface water resources, the "Operation" status indicates that "occasional" surface water withdrawals would not substantially affect Nenana River flow. The FEIS should indicate whether withdrawals from the Nenana River would be intermittent or continuous. 75-8

6. Page 3-27, Section 3.3.2, Water Quality and Use: The last two sentences of the first paragraph read as follows: "Although no public drinking water supplies are drawn from the Nenana River, the most stringent standards (drinking water) apply. These standards are listed in Table 3.3.1." These sentences should be deleted and replaced with the following: "The Nenana River is protected for all water classes. The water quality standards for the Nenana River are listed in Table 3.3.1." 75-9

In determining the water quality criteria (from 18 AAC 70.20) the most stringent water quality standard for each parameter must be used. The most stringent standard is not always the drinking water standards. An example is pH. The pH criteria for drinking water is 6.0 - 8.5. The pH criteria for contact recreation & aquaculture is 6.5-8.5. Since the latter is more restrictive, that is the one used. 75-10

Also, please delete from the FEIS the last two sentences of the second paragraph (beginning with "EPA is presently..."). Statements such as this, alluding to the possible nature of NPDES permit conditions, could be misleading. 75-11

Also, the third paragraph talks about monitoring done on several parameters (1962-1967) in the Nenana River and Healy Creek. The sampling was compared with Alaska primary and secondary drinking water regulations and indicates there was no indication of any exceedances for any regulated constituent that was monitored. When comparing sampling data, to determine if it may exceed any water quality standard, it is necessary to compare the parameter to either (see Table 3.3.1, #8 - Toxic and other deleterious organic and inorganic substances) the Alaska Drinking Water Standards, or the EPA Water Quality Criteria, 1986 whichever has the more restrictive value. 75-12

7. Page 3-29, Table 3.3.1: Number 9 should read "Color shall not exceed 50 color units." (Because the Nenana River is protected for aquaculture, see AAC 70.20). 75-13

8. Page 3-40: The paragraph at the top of the page indicates that aquatic microinvertebrate density in the Nenana River was found to be 35 organisms/m^2 in 1979, and that there was no obvious effect of the thermal component of the Golden Valley Electric Association's (GVEA's) discharge on river bottom fauna density, composition or distribution. The FEIS needs to elaborate on the sampling conducted, including when and where it was conducted, results, etc., to support this conclusion. 75-14

9. Pages 4-4 through 4-7, Section 4.1.2.2, Operation, Ambient Air Quality Impacts: We consider the technical adequacy of the air quality impact analysis for the HCCP to be particularly important due to the impacts to a pristine area where air 75-15

quality-related values are very high, and because the projected pollutant concentrations are very high relative to the National Ambient Air Quality Standards (NAAQS) and allowable Prevention of Significant Deterioration (PSD) increments. The DEIS itself does not provide adequate detail to reveal how the modeling was performed in order to determine its consistency with EPA guidelines.

EPA is separately providing comments to the state of Alaska on the proposed HCCP PSD permit and technical assessment document. While the DEIS references the air modeling analysis that was included in the PSD permit application, prepared by the Alaska Industrial Development and Export Authority (AIDEA), it is clear from comparing the DEIS and PSD permit application that differences exist between the air quality analyses in these documents. For example there are differences in the air emissions estimates and maximum model predictions. The basic conclusions of the two analyses are the same in that both predict that the NAAQS and PSD increments will not be violated as a result of the project. However, the estimates of the amount of PSD increment consumed by the project (a factor that may limit future growth in the area) are significantly different. The DEIS references a 40% consumption of the Class I sulfur dioxide increment, while the PSD application predicts 96% consumption of the same increment. Generally the DEIS predictions seem to be biased lower than the PSD application estimates, apparently due in part to the DEIS using lower emissions estimates and possibly different modeling methodologies. 75-16

The visibility analysis in the DEIS is based on an April, 1992 report prepared by AIDEA's consultant. Based on comments from the Alaska Department of Environmental Conservation, the National Park Service, and EPA, that visibility analysis was modified in an updated report in September 1992. The updated analysis increased the estimate of the amount of time there may be visibility impairment in the Class I area. 75-17

The FEIS should include a updated, revised summary and presentation of the results of all air quality analyses performed for the PSD application, as modified through the PSD permitting process. 75-18

10. Page 4-11, Section 4.1.3.1, Construction, Erosion and Sedimentation, Page 4-21, and Page 7-7, Table 7.2.1: NPDES permit authorization for storm water discharges associated with construction activities is required in addition to the NPDES permit for the HCCP discharges described in the DEIS. 75-19

11. Page 4-20: The paragraph at the top of the page indicates that if a discharge from the second coal pile runoff pond must occur, the pH would be adjusted to 6.5 - 8.5. In addition to pH adjustment, the discharge would be limited for TSS to 50 mg/l. 75-20

Table 4.1.6 compares the results of toxicity characteristic leaching procedure (TCLP) tests of HCCP performance coal, fly ash, and slag with the TCLP metals toxicity limits established in 40 CFR 261.24. The only conclusion that can be made based on this is that the leachate would not be classified as hazardous waste. It cannot be stated, however, as it was on the top of page 4-21, that the leachate is not toxic with respect to all metals. In order to draw conclusions with respect to toxicity, a direct comparison needs to be made of the samples to aquatic life criteria, or drinking water standards (whichever are more stringent). 75-21

The Alaska Water Quality Standards and/or EPA Water Quality Criteria (whichever gives the more stringent limit, please see Table 3.3.1 of the EIS) would be used to determine the water quality standards for the listed elements. 75-22

12. Page 7-3, Section 7.1.2, Clean Water Act: The last sentence on the page should be changed to the following: 75-23

> "The HCCP would not be allowed to discharge into waters of the United States without an NPDES permit."

13. Page 7-4: The second sentence on the page should be changed to the following: 75-24

> "Table 7.1.2 lists the New Source Performance Standards (NSPS) for the Steam Electric Power Generation Category."

SUMMARY OF THE EPA RATING SYSTEM FOR DRAFT ENVIRONMENTAL IMPACT STATEMENTS: DEFINITIONS AND FOLLOW-UP ACTION *

Environmental Impact of the Action

LO–Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplish with no more than minor changes to the proposal.

EC–Environmental Concerns

The EPA review has identified environmental impacts that should be avoid in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO–Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU–Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1–Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or date collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2–Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoid in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3–Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussion are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 policy and Procedures for the Review of Federal Actions Impacting the Environment.

Letter No. 75
Kathy Veit, Chief, Program Coordination Branch, U.S. Environmental Protection Agency, Region 10, 1200 Sixth Avenue, Seattle, WA 96101

Comment 75-1:
"In addition to the proposed action, the DEIS evaluates the no-action alternative and an alternative site located approximately four miles from the proposed site. A preferred alternative is not identified in the DEIS. The preferred alternative will need to be identified in the final EIS (FEIS), along with the rationale for its selection."

Response:
The proposed action as described in the DEIS is DOE's preferred alternative and is stated as such in Sect. 2.2 of the final EIS. The rationale for the selection of the preferred alternative will be provided in the Record of Decision.

Section 2.2.2 of the EIS discusses important factors that go into choosing a site. These include coal transportation costs, the existing infrastructure, availability of a source of cooling water, the distance to the electrical intertie system, and those sites that are available to the participant. Feasibility studies for siting coal-fired power plants in different locations in the Alaska railbelt were conducted by several parties prior to the proposal of the participant's project to DOE. These studies are discussed in the response to Comment 21-2.

Comment 75-2:
"We have requested, in our detailed review comments on the DEIS (enclosed), additional information bearing on the impacts of the project to air quality and the Nenana River, reflecting our primary concerns regarding these project-related issues. The cumulative air emissions associated with the proposed project and the existing Healy power plant is a primary concern. The FEIS should accurately reflect revised air impact analyses being prepared for the Prevention of Significant Deterioration (PSD) permit application. Additional information is also needed to support our review of the project NPDES permit application and the impacts of the proposed discharges."

Response:
DOE has performed air dispersion modeling for the Healy area and DNPP. The results presented in the EIS indicate that no standards would be exceeded as a result of HCCP operation. In addition, air dispersion modeling performed for the simultaneous operation of the HCCP and Healy Unit No. 1 indicates that no standards would be exceeded. The air dispersion modeling performed for the DEIS represented an independent evaluation of potential air quality impacts; the results were slightly different from those in the PSD permit application because of slight differences in model input. For the FEIS, DOE has worked closely with the preparers of the PSD permit application to ensure that the results for the permitted case reflect revised air impact analyses in the application. Consequently, the results presented for the permitted case in Sect. 5.2 of the FEIS are identical to the results presented in the PSD permit application. Additional information has been provided to support the review of the NPDES permit application.

Comment 75-3:
"Pursuant to our request to DOE, a report was prepared describing the methodology employed for modeling the thermal discharge from the proposed project (Draft Thermal Discharge Impact Analysis, Elements of Technical Analysis, Stone & Webster Engineering Corp., 12/92). We provided comments to DOE on that draft report (letter dated 12/28/92). We have not received the final report yet but request that it be referenced and summarized in the final EIS."

Response:
The subject report has been summarized and referenced in Sect. 4.1.3.2 of the FEIS.

Comment 75-4:
"1. *Page 1-14, Section 1.8, Role of Cooperating Agencies*: The DEIS indicates that 'The role of a cooperating agency differs from that of a permitting agency . . . ' Compliance with the National Environmental Policy Act by cooperating agencies with project permitting authority (i.e. EPA) is required and we function as *both* a cooperating agency and a permitting agency. The statement should therefore be clarified in the HCCP Final Environmental Impact Statement (FEIS)."

Response:
The FEIS includes a statement in Sect. 1.8 to clarify that some agencies function as both a cooperating agency and a permitting agency.

Comment 75-5:
"2. *Page 2-20, Table 2.1.1*: The FEIS should explain the discrepancy in this table between cooling water consumption (12,500 $\times$ 10^6 gal/yr) and effluent (10,276 $\times$ 10^6 gal/yr) for the proposed HCCP."

Response:
The correct figure for "Effluent, Cooling Water" in the column headed "Proposed HCCP" is 12,500—not 10,276. The FEIS includes this correction.

Comment 75-6:
"3. *Page 2-24, Boiler Blowdown*: This section indicates that all or most of the boiler blowdown waste stream would be used in the flue gas desulfurization system. For the purposes of the National Pollutant Discharge Elimination System (NPDES) permit (requiring information which should be reflected in the EIS) it is necessary to characterize when and how much boiler blowdown will be discharged in the liquid waste stream. The FEIS needs to indicate the volumes of boiler blowdown likely to be discharged as effluent if not used in the flue gas desulfurization system and the circumstances under which this is likely to occur. The FEIS also needs to indicate how often peak flow conditions may occur and the volume of boiler blowdown that may be discharged as a result of it. The same also needs to be done for demineralizer regenerant wastewater."

Response:
Maximum boiler blowdown for peak design flow has been calculated to be 3.5% of the steam generator flow rate, or about 40 gpm. As stated in the EIS, much of this blowdown

is expected to be consumed (evaporated) in the HCCP flue gas desulfurization (FGD) system. Any surplus blowdown would be commingled with other wastewater streams, where it would be neutralized, treated for removal of suspended solids, and discharged to the Nenana River. The EIS has been revised to include the maximum blowdown estimate.

An estimated maximum of 21 gpm of demineralizer regenerant wastewater would be produced. Regenerant wastewater would be neutralized to adjust pH to between 6.5 and 8.5. Most of the wastewater from this system would be used as make-up water for the slag quenching/bottom ash process and the FGD system. Any surplus regenerant wastewater would be pumped to a final pH equalization circuit, mixed with other wastewater streams, treated for removal of suspended solids, and discharged to the river. The EIS includes the estimate of the rate of demineralizer regenerant wastewater.

Comment 75-7:
"4. *Page 2-25, Discharge Rates*: For the purposes of the NPDES permit, the FEIS needs to include a breakdown of the discharge rates into their component parts. Please indicate in the FEIS if there will be *any* discharge to the Nenana River from dewatering fly ash, bottom slag ash, and flue gas desulfurization slurry. 'Miscellaneous wastewater' flow, on page 4-19 (Table 4.1.5) should be broken up into its component parts."

Response:
There is expected to be no discharge of wastewaters from fly ash, bottom slag ash, and FGD slurry into the Nenana River. The EIS has been revised to reflect this. Table 4.1.5 has been revised to show individual components of the HCCP wastewater systems.

Comment 75-8:
"5. *Page 2-32, Table 2.2.2*: Under the 'Proposed site' column for surface water resources, the 'Operation' status indicates that 'occasional' surface water withdrawals would not substantially affect Nenana River flow. The FEIS should indicate whether withdrawals from the Nenana River would be intermittent or continuous."

Response:
"Occasional surface water withdrawals" as used here refers to the intermittent withdrawal of water for fire protection in time of need.

Comment 75-9:
"6. *Page 3-27, Section 3.3.2, Water Quality and Use*: The last two sentences of the first paragraph read as follows: 'Although no public drinking water supplies are drawn from the Nenana River, the most stringent standards (drinking water) apply. These standards are listed in Table 3.3.1.' These sentences should be deleted and replaced with the following: 'The Nenana River is protected for all water classes. The water quality standards for the Nenana River are listed in Table 3.3.1.'"

Response:
The two sentences have been revised in Sect. 3.3.2 of the EIS.

Comment 75-10:
"In determining the water quality criteria (from 18 AAC 70.20) the *most* stringent water quality standard for each parameter must be used. The most stringent standard is *not* always the drinking water standards. An example is pH. The pH criteria for drinking water is 6.0–8.5. The pH criteria for contact recreation & aquaculture is 6.5–8.5. Since the latter is more restrictive, that is the one used."

Response:
The comment is correct. Please refer to Table 3.3.1, item nos. 3 and 8.

Comment 75-11:
"Also, please delete from the FEIS the last two sentences of the second paragraph (beginning with 'EPA is presently . . .'). Statements such as this, alluding to the possible nature of NPDES permit conditions, could be misleading."

Response:
The last two sentences have been deleted from Sect. 3.3.2 of the EIS.

Comment 75-12:
"Also, the third paragraph talks about monitoring done on several parameters (1962–1967) in the Nenana River and Healy Creek. The sampling was compared with Alaska primary and secondary drinking water regulations and indicates there was no indication of any exceedances for any regulated constituent that was monitored. When comparing sampling data, to determine if it may exceed any water quality standard, it is necessary to compare the parameter to *either* (see Table 3.3.1, #8—Toxic and other deleterious organic and inorganic substances) the Alaska Drinking Water Standards, or the EPA Water Quality Criteria, 1986 whichever has the *more* restrictive value."

Response:
Comment noted.

Comment 75-13:
"7. *Page 3-29, Table 3.3.1*: Number 9 should read 'Color shall not exceed 50 color units.' (Because the Nenana River is protected for aquaculture, see AAC 70.20.)"

Response:
Item No. 9 of Table 3.3.1 has been revised to incorporate this comment.

Comment 75-14:
"8. *Page 3-40*: The paragraph at the top of the page indicates that aquatic microinvertebrate density in the Nenana River was found to be 35 organisms/m^2 in 1979, and that there was no obvious effect of the thermal component of the Golden Valley Electric Association's (GVEA's) discharge on river bottom fauna density, composition or distribution. The FEIS needs to elaborate on the sampling conducted, including when and where it was conducted, results, etc., to support this conclusion."

Comment 75-24:
"13. *Page 7-4*: The second sentence on the page should be changed to the following: 'Table 7.1.2 lists the New Source Performance Standards (NSPS) for the Steam Electric Power Generation Category.'"

Response:
This change has been incorporated into the EIS.

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240

TAKE PRIDE IN AMERICA

ER 92/1042

JAN 29 1993

Letter No. 76

Reproduced from copy submitted

Dr. Earl W. Evans
U.S. Department of Energy
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, Pennsylvania 15236

Dear Dr. Evans:

The Department of the Interior has reviewed the draft environmental impact statement for the proposed Healy Clean Coal Project, Healy, Alaska.

Our comments are attached to this letter for your consideration.

Sincerely,

for Jonathan P. Deason
Director
Office of Environmental Affairs

Enclosures

U. S. Department of the Interior
Comments on Healy Clean Coal Project
Healy, Alaska

General

The proposed project has several benefits, including the pilot testing of a coal burning procedure that may burn coal more efficiently and produce fewer air pollutants than conventional processes. We do not believe, however, that all environmental impacts, mitigation measures and project alternatives have been adequately evaluated. We are greatly concerned about the construction of a new major powerplant virtually on the border of the only national park in Alaska designated for Class I air quality protection. 76-1

Further, we recommend a supplement or a revised draft statement be issued after proper consideration of the air quality issues developed and analyzed in the Prevention of Significant Deterioration (PSD) process, which is not yet complete. We believe comments on the draft environmental impact statement (DEIS) should have followed, rather than preceded, comments on the PSD permit as many PSD comments are likely to be appropriate draft statement comments as well. We shall soon provide you with the Department of the Interior's comments on the proposed PSD permit, due to the Alaska Department of Environmental Conservation on February 8, 1993, and we ask that you include the comments on the PSD permit with these comments on the draft statement for your review and response. 76-2 76-3

Our National Park Service (NPS), as a cooperating agency in the EIS process, has substantial concerns regarding the scope, analyses, and conclusions presented in the document for the Department of Energy's (DOE) proposed clean coal project. A significant amount of additional information and analyses are needed to assess the potential impacts of the Healy Clean Coal Project (HCCP) on Denali National Park and Preserve (DNPP). The project must not be rushed through the National Environmental Policy Act (NEPA) process without careful consideration of not only potential impacts on DNPP, but also the fundamental NEPA questions concerning the need for this powerplant and the reasonable alternatives to it. 76-4

To comply with the spirit of NEPA and allow for full public participation, all data collection programs designed to gather information pertinent to potential impacts from HCCP should be referenced within the body of, and carefully discussed in the appendix to, the DEIS. 76-5

To more accurately assess the impacts of DOE's preferred alternative -- HCCP at Healy -- additional data collection and analyses are needed to address foreseeable significant adverse impacts. Proper modeling of projected visibility impacts and better long-term monitoring of the existing visibility impacts are essential. In addition, NPS has attached a list of recommended special studies that would address some of the deficiencies in the DEIS that would need to be corrected before NPS could accurately assess the environmental impacts of the proposed HCCP on DNPP. The Council on Environmental Quality (CEQ) NEPA regulations support requests for relevant information, particularly from cooperating agencies. We believe the information requested here would be relatively easy and cost effective to acquire. 76-6

This information is essential to a reasoned choice among alternatives. Without these revisions, the public will not be fairly apprised of potential impacts, and thus will be deprived of the opportunity to meaningfully comment on DOE's proposed action. Accordingly, DOE should examine these issues in a revised DEIS and resubmit the DEIS for comment, or alternately submit a supplemental DEIS for comment. 76-7

We are very concerned that DOE intends to publish a final EIS as soon as March 1993. Accordingly, if the issues we have raised are not resolved satisfactorily, then we believe the final statement would be a candidate for referral to the Council on Environmental Quality (CEQ), as provided under the National Environmental Policy Act (NEPA) implementing regulations at 40 CFR Sec. 1504.3. 76-8

Lest these comments be misinterpreted, we do not oppose the development of clean coal technologies that will enable development of more efficient and less polluting use of coal combustion methodologies. We are concerned, however, about the construction of a new major powerplant virtually on the border of the only Class I air quality national park in Alaska without adequate and careful consideration of its potential impacts or of reasonable and environmentally preferable alternatives. 76-9

Scope of the Draft Statement

We believe the scope of the draft statement has been unduly limited. In discussing the scope, DOE does not address the need for HCCP, yet "but for" DOE's approximately $104, million grant, it is unclear whether there would be a viable proposal for a powerplant at this location. By limiting this draft statement to the issue of whether to fund the clean coal technology, DOE is depriving the government and the public of the opportunity to fully consider the impacts of this proposal and the alternatives to it. For all these reasons, we ask that DOE broaden the scope of its inquiry as required by NEPA. For example, the section titled Need for the Project only discusses clean coal technology. 76-10

Need for the Project

The discussion on pages 1-5 and 1-6 only addresses the need for clean coal demonstration projects for better utilization of coal. However, it is unclear whether there is a need in Alaska for the additional 50 MW of electricity that would be generated by the new facility. 76-11

This section of the draft statement should also discuss the need for a new 50 megawatt (MW) powerplant at this location. On pages 1-13, 2-36, and 2-37, the draft statement indicates that since the "need for electrical generation" was considered by the Alaska Public Utilities Commission (APUC), this issue is "beyond the scope of the EIS." The APUC's decision, however, declined to consider certain issues, such as environmental externalities, that may be relevant in this NEPA context. In addition, the dissent in the APUC's decision raises additional issues about the need for the power that should be evaluated in the NEPA context. Therefore, please present and evaluate the APUC's decision within the NEPA context. 76-12

We recommend the discussion on the need for this project be expanded to include the need for the power to be generated by this project. This discussion should evaluate whether existing sources such as Chugach Electric Association, Inc., could continue to supply electricity to this region without construction and operation of the Healy Clean Coal Project. 76-13

We believe this evaluation is needed to clarify the need for an additional 50 MW of power in this region of limited growth and demand when the existing Healy Unit 1 appears to be operating substantially below capacity, based on the data modeled in the visibility analysis. This discussion should assess whether costs of operating two powerplants so close to DNPP outweigh the benefits of the additional power. 76-14

Alternatives

Once the purpose and need are clearly established, alternatives to HCCP -- in terms of power production, location, and technology -- and the environmental and other impacts of each alternative must be carefully analyzed. After all, the discussion of alternatives forms "the heart of the environmental impact statement." Finally, measures to mitigate the impacts of each alternative must be identified and discussed. 76-15

It is unclear why a more thorough evaluation of reasonable alternatives was omitted from the draft statement. For example, page 2-30 summarily states that a plant located closer to Fairbanks "would probably not be permitted due to nonattainment of air quality standards in the Fairbanks area." Fairbanks, however, is only a moderate nonattainment area for carbon monoxide. Fairbanks is not listed as a nonattainment area for the pollutants of concern that could be emitted by the powerplant; i.e., NO_x and SO_2. 76-16

Among other possibilities, we believe a site more than 6 miles away from the park boundary and located closer to the proposed service area should have been considered, as well as a continuation to purchase power from Chugach Electric Association. 76-17

Air Quality

As a cooperating agency, our NPS believes the protection of air quality values in a Class I area must strongly outweigh the convenience of an existing plant site and proximity to a fuel source when determining the suitability of any proposed project. 76-18

NPS repeatedly has expressed concerns about HCCP's potential impacts on air quality and visibility, as well as aquatic and terrestrial resources. DNPP has some of the most pristine air quality in the United States; it is the only national park in the state of Alaska designated as a Class I area for PSD under the Clean Air Act (CAA). Of particular concern, all visibility analyses completed to date, including those performed for the PSD permit application and the DEIS, have demonstrated that emissions from HCCP are likely to create perceptible visibility impacts in the park. 76-19

As the federal land manager for DNPP, the Department of the Interior has a substantial interest in preserving visibility and other air quality-related values (AQRVs) as part of its stewardship responsibility. DOE acknowledges this "affirmative responsibility" to protect AQRVs in DNPP on p. 1-16 of the DEIS.

We are concerned about impacts to air quality from this proposed experimental project if it cannot meet its predicted operating levels. The analysis of this scenario should be more rigorous in order to provide more detailed information about anticipated impacts. The final statement should address these issues. 76-20

In addition to DOE's inadequate examination of the purpose of, need for, and alternatives to a powerplant next to DNPP, the DEIS also fails to adequately consider the potentially serious environmental impacts of HCCP on the adjacent DNPP. 76-21

To make development of the environmental impact statement a meaningful process, DOE has a duty to examine all reasonable alternatives and mitigation measures pertinent to its proposed action. The purpose of this DEIS is to closely scrutinize the environmental impacts of the HCCP and to analyze all reasonable alternatives in a comparative form, to provide a clear basis for choice among options. We believe this obligation has not been met by DOE. 76-22

Visibility Impacts

AIDEA has performed visibility impact analyses in support of their application for a PSD air quality permit. Those analyses indicate greater visibility impacts than suggested in the present DEIS. This information should be included in a revised draft statement. In addition, as noted earlier, we request that DOE incorporate our NPS comments on the PSD permit into this revised statement. NPS modeling indicates substantially greater visibility impacts than suggested by either AIDEA's or DOE's modeling. 76-23

The visibility analysis contained in the AIDEA document, "Addendum to the Visual Impact Analysis of the Plume From the Healy Clean Coal Project on Denali National Park and Preserve" (STI-91170-1205-ADD) (Addendum), is similarly relevant to the disclosure of the visibility impacts to the park from HCCP and Healy Unit 1. This document was generated for the pending PSD permit process, and should be included in the revision. 76-24

In addition to the Addendum, the correspondence of September 28, October 1, and October 12, 1992 from AIDEA to Mr. Len Verrelli of the Alaska Department of Environmental Conservation should also be included in the final statement. These letters outline AIDEA contractors' rationale for changing the "NO2 burden threshold" values from 69 ppbv*km to 138 ppbv*km and then to 150 ppbv*km. These manipulations eliminated numerous hours of visible plume impact from DOE's visibility analysis. These technical discussions are pertinent to the visible plume issue, and should be available for full public disclosure and NEPA compliance. 76-25

The DEIS should have articulated the reasons for NPS's concerns regarding the potential for HCCP to cause or contribute to adverse visibility impacts at DNPP. For instance, even though, as explained above, the plume impacts in the DEIS are likely underestimated, the predicted impacts are still greater with respect to their frequency, magnitude, extent and duration than an impact level previously found to constitute an adverse visibility impact in a Class I area in Maine. 76-26

Regional Haze

The analysis of regional haze on p. 4-91 is inadequate. No attempt to quantify existing, let alone projected haze impacts, from HCCP in DNPP was done. The DEIS should not have dismissed HCCP's potential to cause and contribute to regional haze by citing a single year of meteorological data and an undocumented belief that sources in Eurasia are responsible for the regional haze that currently affects the Healy area and DNPP. 76-27

The sulfur dioxide emissions from HCCP were not considered in any analysis of visibility impacts on DNPP. The potential magnitude for sulfate-related visibility impairment should be fully analyzed. Homogeneous conversion of sulfur dioxide should be more carefully considered, especially in the summer months. In-cloud conversion chemistry should use the maximum hydrogen peroxide monitored values. High sulfate scattering efficiencies at high relative humidities should also be analyzed and included in the assessment. This could have a substantial impact on visibility. 76-28

Visibility Modeling

For accurately calculating the visibility impacts of plumes, the EPA-approved Plume Visibility Model PLUVUE II should be used. The DEIS used a modified version of an earlier, less sophisticated version of this model, known as PLUVUE I (see Section 4.3.2.3). Part of the reason given for this was that the PLUVUE II model contained some errors. The problems with the PLUVUE II model, however, have been corrected by EPA. 76-29

Instead of PLUVUE II, DOE chose the PLUVUE I model, even though the PLUVUE I model contained application limitations for Alaska. The HCCP consultants working on the DEIS made efforts to correct PLUVUE I's problems; however, the modified model has not been subjected to a theoretical or performance review by the EPA, as was the PLUVUE II model, which was approved by EPA. Therefore, the draft statement's claim that the model used is the "EPA-approved PLUVUE I model" is not correct. 76-30

The limitations of PLUVUE I are serious. One of the primary things missing from the modeling analysis in the DEIS is the visibility of plumes when the sun is very low in the sky as often is the case in high latitudes, such as in the region surrounding the park. The modified model used in the DEIS does not calculate those impacts. The EPA-approved PLUVUE II model is capable of calculating those impacts, and should be used to more accurately model visibility impacts of HCCP. 76-31

The DEIS also includes some results of an untested valley box model (pp. 4-81, 4-88), which underestimate HCCP's visibility impact. This technique bears no relation to any EPA approved or suggested models and has not been shown to accurately simulate the complex flows of the area. Therefore, the inclusion of the results of this untested technique are not appropriate in the DEIS. 76-32

In addition, the measured meteorological data used as input to both the modified PLUVUE I model and the DOE valley box model were incorrectly modified by "bumping" the measured atmospheric stability classes up one class. This results in the dilution of the plume concentrations and a reduced estimate of plume visual impacts. Modification of the meteorological data is not allowed under EPA's "Guideline on Air Quality Models", yet DOE ignored this requirement. Ironically, on p. 4-4 of the DEIS, DOE references the EPA 76-33

"Guideline on Air Quality Models" when justifying its choice of dispersion models for use in the ambient air quality and PSD increment analyses.

The DEIS also attempted to calibrate the PLUVUE I plume model against air quality measurements. This is evident by the statement that: "The redone analysis without any adjustment to stability classes resulted in PLUVUE I overestimating the known effects of unit No. 1 (and thereby any potential effects of the proposed HCCP) because the results are much too high to be consistent with the absence of documented visual effects from Unit No. 1 alone" (p. 4-90).

This interpretation is clearly not allowed under the EPA "Guideline on Air Quality Models":

> There have been attempts by some to compare short term estimates and measurements on an event-by-event basis and then to calibrate a model with results of that comparison. This approach is severely limited by uncertainties in both source and meteorological data and therefore it is difficult to precisely estimate the concentration at an exact location for a specific increment of time. Such uncertainties make calibration of short term models of questionable benefit. Therefore, short term model calibration is unacceptable.

76-34

Since the purpose of the DEIS is to fairly disclose the potential environmental impacts of the project to the public, using EPA suggested models and following EPA modeling regulations would ensure that an unbiased analysis is performed.

On p. 4-89, the DEIS indicates that cumulative visible plume impacts from the HCCP demonstration project and Healy Unit 1 to the Northeast Unit of DNPP are less than or equal to 14 hours. Since this is less than the number of hours predicted for the DNPP Visitor Access Center sight path, DOE concludes that there is no need to consider these impacts further. This is a misleading conclusion that underestimates the hours of visibility impairment. Plumes impacting the Northeast Unit cannot at the same time impact the Visitor Access Center, and therefore should be added to the total number of hours of visible plume impacts at the Visitor Access Center, for a "Cumulative Total Visible Plume Impact". These 14 hours should be included in Table 4.3.4, which shows the HCCP demonstration project emissions. The HCCP permitted case (i.e., the allowed emissions under the proposed PSD permit for this source) will emit an additional 423 tons per year (TPY) of NO_x and 14 TPY of TSP compared to the HCCP demonstration project. Therefore, an analysis needs to be performed for the Northeast Unit with the larger permitted emission rate, and these impacts should be included in Table 5.1.4 which has the permitted case visibility results for the Visitor Access Center.

76-35

In determining which hours in the year to model for the visibility analysis, DOE applied the concept of NO_x burden as follows:

> The NO_x concentrations were integrated along each sight path to calculate so-called NO_x burdens (in units of parts per billion by volume times kilometers, or ppbv*km) as a ready measure of plume perceptibility. Because an NO_2 burden of 69 ppbv*km corresponds to a Delta E of 2, all calculations in which the burden exceeded 68 ppbv*km were assumed to have a perceptible plume (Page 4-85).

This NO_x burden concept does not include the particulate emissions which can at times exacerbate visible plume impacts. The particulate emissions which are emitted from the stacks after passing through the baghouse are very fine in size, and are excellent at scattering light, especially with the low sun angles experienced at Healy. Although the scattering caused by fine particulate is less important than the NO_2 effects, these particulate emissions should have been incorporated into the "NO_x burden" calculations. The inclusion of particulate emissions means that more hours than the 372 hours which were identified by only "NO_x burden" should have been modeled with PLUVUE II which can correctly calculate visibility impacts at low sun angles. 76-36

In the PLUVUE I analysis for the DNPP Visitor Access Center (page 4-85), DOE modeled wind directions that were +/- 15 degrees from centerline transport down the valley. Except for impacts at the Northeast Unit, DOE modeled only hours for which the plume would be transported within +/- 3 degrees from plume centerline as the centerline passed over the observer. Additional wind directions, greater than three degrees from centerline, should be analyzed to accurately model impacts. This would most likely include many more hours in the visibility analysis. The wind rose for the Healy Monitoring Station Fig. 3.2.1 (p. 3-20) indicates that, 28% of the time, winds from the southeast and east-southeast would transport the plume to the Northeast Unit. Thus, it would appear that many more hours should have been modeled; i.e., approximately 8,760 divided by 2 (day/night) times 28%, for a total of 1,226 hours. 76-37

On p. 4-86, the DEIS notes that the ten meter winds at the DNPP Visitor Access Center would be more representative than the 30 meter winds measured near the HCCP site, thus making the analysis conservative. This is incorrect. Visibility and dispersion modeling are always performed with wind speed and direction data which are most representative of the proposed source's site, and height of emissions release, as was done in this DEIS. 76-38

Visibility Monitoring

Preconstruction visibility monitoring data were collected to provide background data to assess potential visibility impacts from HCCP (see p. 3-19 through 3-21). The DEIS incorrectly implies that the monitoring data show that there are no visibility impacts in the park from Healy Unit 1. 76-39

The visibility monitoring data represent only a small area over a relatively short time frame. Despite these limitations, there are several occasions when visible plumes leave the field of view of the monitor, and consequently the extent of their reach into the park boundaries is 76-40

unknown. Contrary to the conclusions made in the DEIS, the monitoring data show that the plumes undergo complex transport and the plumes may in fact travel to DNPP. This information is consistent with the occurrence of visibility impacts predicted by the modelsdiscussed below.

In addition, the monitoring data show that ice plumes from water vapor emissions of Healy Unit 1 occur in the winter (see p. 4-2). Water vapor emissions will more than double, because the HCCP plume would be saturated from the water in the spray absorber scrubber. These saturated plumes could impair the visibility within the park.

For example, on December 9 and 10, 1992, a park employee travelled from the park to Healy between 4 p.m. and 7 p.m. On both days a plume was visible. The plume which was seen on the December 10 was anvil shaped and extended to the south-southeast for about one mile. This plume from Healy Unit 1 is a water vapor plume, which will probably be much greater when combined with the saturated plume from HCCP. This documentation is anecdotal, but would clearly point to the fact that there are visual effects which may not be recorded by the cameras. 76-41

Given the demonstrated potential for visibility impairment in DNPP from HCCP, in order to arrive at a valid assessment of potential visibility impacts on DNPP by HCCP, the visibility monitoring program now being conducted should be completed for at least one full year although a longer time period so as to reexamine periods previously unexamined due to camera failure or other events would be preferable. The results of the complete monitoring program, should be analyzed in a revised complete or supplemental DEIS. 76-42

The assessment of visual impacts of HCCP operation on p. 4-54, Section 4.1.8.6 needs to address the impacts of the plume on tourism and recreation during the late fall, winter and early spring when the powerplant plumes would be most visible. During many days in the winter the plume from Healy Unit 1 is the most prominent visual feature in the Healy area. For the tens of thousands of motorists who drive the George Parks Highway during the winter, the existing plume can be seen for miles. Pilots use the plume to navigate between Fairbanks and Anchorage during clear winter days. The experiences of winter recreationists in the Healy area, such as snowmobilers, cross-country skiers, dog mushers, and snowshoers, can also be affected by the existing plume. 76-43

Similarly, the assessment of environmental consequences of the alternate site on p. 4-61, Section 4.2 should also address the visual impacts of HCCP operations on tourism and recreation during the late fall, winter and early spring when the powerplant plumes would be most visible. Two powerplant plumes in the Healy area would accentuate the visual impacts of Healy Unit 1 on motorists and winter recreationists. 76-44

The discussion on page 4-89, regarding DNPP visitor use patterns and their relationship to visibility focuses on current visitor use levels and patterns. This may be inappropriate as use levels vary from year to year and demands for use of park resources change with time. For example, while the northeastern unit of the park may receive little use today, it may receive increased use in future years. Those areas that are within easy reach of existing roads are far more likely to experience increases in visitor use. The northeastern section of the park is close to the George Parks Highway and the Stampede Road. 76-45

The DEIS notes on page 3-43 that NPS is the second largest employer in the Denali Borough, and that DNPP visitor-generated expenses for 1989 alone were estimated in excess of $41 million (p. 3-50). The final statement should consider what impact HCCP plumes combined with Healy Unit 1 plumes might have tourism, and thus on jobs and revenue associated with the nearby park. 76-46

Air Quality Impact Analysis

The PSD permit application, and the NPS comments thereon, contain significant relevant information on the air quality impact of HCCP. They should be considered and evaluated in this draft statement. 76-47

Regarding the PSD increment analysis, the air quality dispersion modeling results for the permitted case in table 5.1.1 (p. 5-5) indicate a 24-hour SO_2 Class I impact of 4.0 ug/m^3 for the permitted case, whereas the PSD permit for this project indicates a 24-hour impact of 4.8 ug/m^3. This discrepancy should be investigated further. If further analysis of complete ambient air quality modeling results shows that any Class I increment is exceeded, HCCP will not be in compliance with legal requirements unless the Department of the Interior, as the federal land manager, issues a certification of no adverse impact. 76-48

Specifically, in order for NPS to properly assess the impact of air pollutants on sensitive resources in DNPP, DOE must calculate the total pollutant loading in the park. This is accomplished by performing a National Ambient Air Quality Standard (NAAQS) type of analysis for locations within DNPP. Table 5.1.2 of the DEIS (p. 5-6) does address the NAAQS impacts in Class II areas adjacent to the plant property for SO2, NOX, and TSP emissions from Healy Unit 1 and HCCP. This was done by modeling emissions from Unit I and HCCP and then adding them to the monitored ambient pollutant levels. This same type of analysis is needed for the Class I area, DNPP. 76-49

The DEIS (see Table 5.1.1) addresses the Class I PSD increment that will be consumed by HCCP under the permitted case scenario, but does not take into account the cumulative pollutant loading of the new HCCP emissions added to the existing pollution from Healy Unit 1 and the ambient background concentrations. This cumulative total pollutant loading analysis, which is needed to determine whether the cumulative impact could harm DNPP resources, should be performed for the pollutants SO2, NOX, and TSP. 76-50

In addition, the DEIS does not provide a PSD increment analysis for the retrofit case (see pp. 5-8 and 5-9). The increment analysis for the design case (Table 5.1.2) shows that nearly all of the 24 hour Class I increment at DNPP would be consumed (approximately 96%). Because SO2 emissions under the retrofit case are substantially greater than those under the project demonstration scenario, it is likely that Class I increment violations would occur if HCCP were operated under the retrofit scenario. The DEIS should include such Class I analysis for the retrofit case. 76-51

In general, the DEIS fails to compare potential impacts of the possible operational scenarios for HCCP. The DEIS should include a chart which clearly compares the air quality and visibility impacts of the HCCP demonstration to commercial operation, permitted commercial operation, and retrofit commercial operation. Impacts from Unit No. 1 should be included in this chart. 76-52

BIOLOGICAL EFFECTS

In commenting on earlier EIS drafts evaluating biological effects, NPS has raised concerns regarding the quality of the analyses performed. Similarly, at times, this DEIS includes only those references that support the position that biological resources will not be affected by the proposed emissions. By excluding current references that support the opposite conclusion, DOE, contrary to "both NEPA and the dictates of basic fairness," is misrepresenting the body of literature on the subject in order to support its proposal for HCCP. CEQ regulations specifically provide that "the [impact] statement must be objectively prepared and not slanted to support the choice of the agency's preferred alternative." In order to fully and accurately assess potential effects on resources in the park, studies that document adverse effects on biological resources associated with emissions must also be presented and considered. 76-53

For example, the discussion of nitrogen fertilization (see page 4-30) does not include studies that identified adverse effects on vegetation associated with increased nitrogen input, including the large body of literature from Europe (e.g., Aber et al. 1989, Gundersen and Rasmussen 1988). In addition, other potential effects associated with nitrogen emissions, such as soil nitrogen saturation (e.g., Johnson 1992) and aluminum mobilization (e.g., Richter et al. 1992), are not considered. The negative effects of acidic deposition on winter hardening of plants (p. 4-30) are mentioned, but not fully discussed. 76-54

Also, the DEIS does not address the effects of pollutant inhalation on wildlife, and instead "assumes" that the powerplant would not affect wildlife (p. 4-28). While there may not be a great deal of information about the effects of pollutants on wildlife, there have been studies of laboratory animals which show that adverse effects occur at concentrations below the NAAQS (Newman and Schreiber 1988). There is no reason to believe that wildlife is not equally as sensitive to air pollutants as laboratory animals. 76-55

Most disturbing is the DEIS's conclusion that effects on ecological resources from the proposed emissions will be "minimal" or insignificant (see e.g., pp. 4-28, 4-31, 4-92). These conclusions are not based on a comparison of modeled pollutant concentrations to known sensitivity levels of resources in DNPP, but rather on the lack of that information. NPS must stress the need for objective data concerning effects at DNPP, especially since documented pollutant effects on resources in other areas indicate emissions such as HCCP's could injure DNPP resources. 76-56

For example, studies on aquatic ecosystems in the western U.S. show that many of these ecosystems are extremely susceptible to acidification. Lakes in the Sierra, Rocky Mountains, and Cascades are, for the most part, of glacial origin and contain the most dilute waters in the country (Charles 1991). These mountainous regions also have thin soil layers with low buffering capacity, and the aquatic ecosystems are subject to acidic episodes associated with snowmelt. While surface water studies have not been performed in DNPP, geological and hydrological characteristics similar to those mentioned above suggest that lakes and streams in the park may be sensitive to acidification. Regarding terrestrial resources, early studies in Barrow showed that nitrogen availability is an important limiting factor for tundra species (Tieszen 1978), and a recent study on the Kenai peninsula linked forest decline to nitrogen emissions (Sullivan et al. 1990). Also, studies show that acidic cloudwater affects high elevation coniferous forests (e.g., Mohnen 1992). This may be of particular concern in DNPP, since its most famous attraction, Mt. McKinley, is shrouded by clouds much of the year. 76-57

Overall, DOE has not adequately addressed the potential effects of emissions from HCCP on soils, water, vegetation, and wildlife in DNPP. Because of documented effects on similar resources in other areas, NPS is concerned that park resources may be at risk. The only way to truly assess the sensitivity of ecological resources in the park is to perform special studies, including ecosystem monitoring, dose-response studies, and deposition and effects modeling. The following studies excluded from the DEIS should be reviewed as examples of the type of studies required for NPS and the public to adequately assess the potential ecological impacts of HCCP at the park: 76-58

J.D. Aber, K.J. Nadelhoffer, P. Steudler, and J.M. Melillo, "Nitrogen saturation in northern forest ecosystems: excess nitrogen from fossil fuel combustion may stress the biosphere," BioScience 39(6):378 (1989).

D.F. Charles, ed., Acidic Deposition and Aquatic Ecosystems-Regional Case Studies, Springer-Verlag, New York (1991).

P. Gundersen and L. Rasmussen, Critical Loads for Sulfur and Nitrogen, J. Nilsson and P. Grennfelt, eds., Nordic Council of Ministers, Copenhagen, pp. 225-68 (1988).

D.W. Johnson, Atmospheric Deposition and Forest Nutrient Cycling, D.W. Johnson and S.E. Lindberg, eds., Springer-Verlag, New York, pp. 275-333 (1992).

V.A. Mohnen, Ecology and Decline of Red Spruce in the Eastern United States, C. Eager and M.B. Adams, eds., Springer-Verlag, New York, pp. 64-124 (1992).

J.R. Newman and R.K. Schreiber, "Air pollution and wildlife toxicology: an overlooked problem," Environ. Toxicol. and Chem. 7:381 (1988).

D.D. Richter, D.W. Johnson, and K.H. Rai, Atmospheric Deposition and Forest Nutrient Cycling, D.W. Johnson and S.E. Lindberg, eds., Springer-Verlag, New York, pp. 341-57 (1992).

T.J. Sullivan, C.L. Rose, R.E. Gilfilian, J.M. Eilers, N. van Breeman, J.A.Bernert, D. Hanson, and B.E. Queitzsch, Nikiski Vegetation Impact Assessment. Executive Summary Report, prepared for the Alaska Department of Environmental Conservation, Juneau (1990).

L.L. Tieszen, ed., Vegetation and Production Ecology of an Alaskan Arctic Tundra, Springer-Verlag, New York (1978).

Specific Biological Effects

The following sections deal with specific issues regarding the possible effects of powerplant emissions on natural resources in DNPP and the failure of the DEIS to adequately address these issues. As indicated in the previous section, most of these issues should be addressed through ecosystem monitoring, dose-response studies, and deposition and effects modeling.

Ice Fog

The DEIS still has no discussion of the chemical characteristics of the ice fog, with possible incorporation of the gaseous pollutants into the ice crystals. Even though this issue is not addressed in the appropriate section on page 4-7, later in the document on page 4-94, the authors contend that the emissions from the plant would travel along the top of the ice fog. This odd meteorological phenomena could be investigated now with some sampling of the chemical composition of the ice fog associated with the existing Healy Unit 1 powerplant emissions. There is no basis for the assertion that the chemical constituents of the plume will not be incorporated into the ice fog and possibly come in contact with surface vegetation. 76-59

Acidic Deposition

The DOE 1989 citation on p. 4-9 does not take into account the more recently published information on the relationship of emissions to deposition (see NAPAP State of the Science and Technology documents). The DEIS implies that only coal-fired powerplants contribute to acidic deposition; many other anthropogenic sources can contribute to total pollutant 76-60

loading and acidic deposition. The DEIS asserts that there should not be "long-distance" transport of HCCP pollutants, but does not support this assertion with monitoring or modeling data. The statement "acidic deposition resulting from HCCP air emissions is expected to be minor," page 4-9 is similarly not supported by any data, modeling, or quantitative analysis.

The claim on page 4-78 that it is unlikely that there will be any effects of acid deposition to resources of DNPP based on "existing data and studies" is unsubstantiated. The DEIS did not analyze existing NPS data on surface waters, deposition, and vegetation in the park. The DEIS has not analyzed the NAPAP data mentioned above, except to say that acidic events are probably caused by other factors (e.g., organics, which are not a big factor in the taiga and tundra). Again, the DEIS refers to the bulk deposition study by ENSR and not the quality-assured, network data collected by the National Atmospheric Deposition Program (NADP). The conclusion that acid deposition would not be a stress to sensitive ecosystems with the increase in emissions can only be confirmed with a research and monitoring program, which includes snow and snowmelt monitoring, dose-response studies, analysis of existing data sets, and consideration of the chemical characteristics of soils and surface waters. 76-61

Global Climate Change

Regarding p. 4-10, it is not particularly important what HCCP would contribute to overall carbon dioxide emissions. An appropriate analysis would discuss the alternatives that would result in no additional carbon dioxide emissions. The objective of a clean coal "pilot" plant, such as HCCP, would be to encourage the burning of coal in the longer term. The proliferation of this technology would add significantly to the loading of carbon dioxide to the atmosphere. 76-62

Ecological Resources

The DEIS provides additional, although somewhat out-of-date references on p. 4-26, to support its statement that vegetation will not be damaged by sulfur dioxide from the HCCP. Although the DEIS admits that current exposure is within the range that damages some sensitive vegetation, there is no information available on the genotypes of vegetation that might be affected by these moderately-high levels of sulfur dioxide. Fumigation of native species is the only way to provide data to make this assessment. Therefore, the summary conclusion that "positive or negative effects should not be large" on page 4-29 cannot be supported. 76-63

There is a similar lack of data on the sensitivity of lichen species. During the USGS study only one lichen species was sampled. There are no data to support the statement on page 4-29 that "lichens in this area are not much more sensitive than those in more temperate areas". Only fumigation studies would resolve this issue. 76-64

On the issue of fertilization of soil and vegetation by sulfur and nitrogen oxides, the DEIS still does not address NPS's original point that nitrogen fertilization, especially in harsh environments, is often detrimental to plant species. There is considerable literature on the effects of nitrogen additions to mountain spruce-fir forests in the eastern United States. Information on the detrimental effects of nitrogen deposition on terrestrial ecosystems in Europe is voluminous and totally ignored in this section of the DEIS. 76-65

When attempting to expand the interpretation of the one-time transect survey performed by the U.S. Geological Survey (USGS), the DEIS concludes that based on sampling three vegetation species (a lichen, a moss, and white spruce) that "the fact that the investigators were able to find sites with similar vegetation at all distances from Unit No. 1 suggests that if effects have occurred, they are subtle" (p. 4-32). All this really suggests is that these may not have been the "sensitive species." 76-66

Furthermore, NPS comments on the USGS Bioaccumulation Study have not been addressed. NPS regards the study as inconclusive in the determination and prediction of biological impacts and the prediction of "loading" of trace elements and other pollutants in the DNPP ecosystem. The study was not designed to address the existing potential effects of acid deposition on terrestrial and aquatic resources, yet the DEIS used the results of the study to support their contention that acid deposition is not a problem. 76-67

It is curious that on p. 4-32 the DEIS cites results of a non-quality assured, one-year data set on bulk deposition (which includes both wet deposition and the alkaline dust that would tend to neutralize the inputs and lead to a high pH) to support its conclusion that acidic deposition does not occur in the vicinity of the proposed site of the HCCP. Later in the document, the DEIS does cite the multi-year National Atmospheric Deposition Program (NADP) wet deposition data set is cited that shows instances of acidic episodes in the vicinity of DNPP. But the claim is made that a wet deposition pH of 3.9 is representative of "background" sites, with no mention of the type of "background" region being considered. This assertion is false. Regions located away from the influence of marine aerosols do not typically have rain pH below about 5.5, unless there are anthropogenic sources affecting the chemistry. 76-68

There was no attempt to address the NPS comments relative to the incorporation of pollutants into the snowpack and then pulsed release of pollutants during snowmelt. This "episodic acidification" of surface waters has been monitored in areas where annual average precipitation pH is in the range of 5-6 (Rockies, Cascades, Sierra Nevada). The DEIS would need to document headwater lake and stream chemical composition, analyze the chemical composition of rain, storms, and snowmelt, and then perform an analysis of the potential for episodic acidification of these waters, before its conclusions could be supported. 76-69

The DEIS fails to make the distinction between sulfur in gaseous and particulate form and sulfate in wet deposition. On p. 4-33, the DEIS contends that the relatively low concentrations of sulfur in lichen and mosses confirms the lack of soil acidification due to sulfate and hydrogen ion. One has very little to do with the other. Sulfate in precipitation is a mobile anion which moves through the soil, displacing basic cations. The only way to obtain information about sulfate absorption in soils is to perform a soil lysimeter study to determine the movement of chemical species though the soil. Analysis of surface soil and lichen chemistry will not provide that information. 76-70

Water Quality

The impacts to water quality will require further discussion and description. In particular, the description of potential impacts on the water quality of the Nenana River are inadequate. The water quality standards of the Nenana River listed in the Section 3.3.2 should be Fresh Water Chronic Criteria for protection of freshwater aquatic life, wherever these standards are more stringent than those for drinking water. Toxicity Characteristic Leaching Procedure thresholds listed on page 4-20 are applicable only to landfills, and should not be used in reference to waters discharged from the coal pile runoff pond. 76-71

State chronic water quality criteria for all surface water discharges should be met outside the established mixing zone unless those surface waters naturally exceed the standards. Therefore, additional modelling is needed to estimate total recoverable metal concentrations in micrograms per liter (µg/L) at various downstream locations within and at the edge of the mixing zone. Data should be presented based on actual expected dilutions using data with detection limits lower than chronic criteria for protecting fish and wildlife. Moreover, modelling should include organics, including polycyclic aromatic hydrocarbons, a known component of coal and coal ash (Neff 1979). The concentrations of ammonia and salts should also be addressed. Monitoring should begin prior to project construction to establish a more accurate baseline for water quality of the Nenana River downstream of the proposed facility. The DEIS should also contain information on the amount and nature of solids that would be deposited in the Nenana River, and on their potential to alter drainage or erosion patterns. Solids discharged from the operation of the plant may vary considerably from the glacial sediments common in the river. An analysis of the transport of these solids is needed, especially near the facility and the adjacent access road. 76-72

Impacts to Fish and Wildlife

The potential exists for significant fish and wildlife impacts in the immediate areas of the project and DNPP if the existing Unit 1 and the Healy Clean Coal Project operate below predicted performance levels. This scenario is briefly discussed on page 5-10 but needs to be expanded to include sulfur dioxide (SO_2) and particulate matter (PM) emissions. DOE should prepare more extensive case studies in Section 5 and the associated contingency plans to offset the potential impacts to fish and wildlife because the potential impacts on fish and wildlife and related resources are also significant if the experiment fails. 76-73

Hazardous Materials/Wastes

Metal cleaning wastes as noted on Page 2-25 may qualify as Resource Conservation and Recovery Act wastes and should be more fully described. The potential treatment of these wastes should also be described in detail. 76-74

The potential impacts of transporting hazardous wastes and materials to the facility over the life of the project should be discussed in Section 4.1.10. 76-75

Mitigation

This DEIS spends only two and one half pages discussing measures to mitigate impacts from HCCP as a commercial operation and as a demonstration project in Section 4.4 and 5.4. The final statement notes many of the suggested mitigation measures are related to socioeconomic issues on page 4-94. None of these socioeconomic mitigation measures, however, addresses HCCP's impact on DNPP. 76-76

We understand Healy Unit 1 is being upgraded and refurbished to extend its operating life to 2015 and beyond. Therefore, one significant mitigation measure that should be thoroughly evaluated in the final statement would be to provide best available retrofit technology (BART) to lower the emissions from Unit 1. We believe the omission of this alternative is significant and strengthens our recommendation for issuing a revised draft statement. Shutdown of Unit 1 should also be evaluated. Further, the revised DEIS should discuss whether emissions from Unit 1 can be ducted to the spray-dryer-absorber of Unit 2. 76-77

In addition, none of the mitigation measures is related to the environmental and particular AQRV impacts of HCCP on DNPP, with the possible exception of the "use of sprinkler trucks, as needed, during construction to spray roads and construction areas to minimize fugitive dust (page 4-95). Specific mitigation measures should include: development of procedures, materials, and personnel training to respond to hazardous materials spills; wetland restoration activities where needed; and long-term studies to monitor visibility and biological effects. Courts have held environmental impact statements inadequate for failure to adequately address mitigation measures. 76-78

The following stipulations for environmental protection should be incorporated into the DOE's grant:

1. lining (either clay or synthetic) of the coal pile runoff/ash pond to prevent seepage of heavy metals and organics into the highly permeable soils of the site;

2. enclosure of coal conveyor systems to reduce dust;

3. diversion of surface drainage, including snow melt and uphill runoff, around the storage and landfill areas. Snow fences may also help reduce precipitation buildup within the storage site; and

4. a plan to rehabilitate disturbed areas as soon as revegetation is a viable option. The plan should include stockpiling topsoil, fertilization, seeding with native species, and monitoring revegetation success.

76-79

Fish and Wildlife Coordination Act

The DEIS indicates a Section 404 Corps of Engineers permit would be required for project implementation. Our U. S. Fish and Wildlife Service (Service) advises that it would not object to the issuance of such a permit if the mitigation measures outlined in the DEIS and the measures outlined within this response are included in the final project plans and specifications.

76-80

SPECIFIC COMMENTS

Page 3-7, Section 3.1.1.1:
One error that is consistently made throughout the document is the use of the name McKinley Park to identify the town located at the east entrance of Denali National Park and Preserve. The post office name for McKinley Park was changed in 1981 to reflect the Alaska National Interest Lands Conservation Act's enlargement of the park by four million acres and its renaming to Denali National Park and Preserve.

76-81

Page 3-7, Section 3.1.1.2:
The following statement should be expanded to read, "Automobile traffic is generally restricted to the paved portion of the road from the DNPP entrance to Savage River (approximately 15 miles), with a limited number of private vehicles allowed access to campgrounds beyond and private land in the Kantishna Hills." 76-82

The following statement should be revised to read, "The remainder of tourist access is provided by NPS and concessionaire buses that travel round trip to the park interior." 76-83

Any reference to the concessionaire buses should indicate that they are tour buses (and not shuttle buses). Only a few buses actually travel round-trip to Wonder Lake. 76-84

The following statement should be revised to read, "Once beyond the intensive development in the area of the DNPP Headquarters, virtually the only human-made features are the Denali Park Road, five campgrounds along the road, Toklat Road Camp, the Eielson Visitor Center, several ranger stations, three rest stops, and development in the Kantishna area." 76-85

Page 3-8, Section 3.1.2.2:
The following statement should be revised to read, "Modifications have been related primarily to provisions for transportation and utility lines (i.e., the George Park's Highway, the Alaska Railroad, and the Anchorage-Fairbanks Transmission Intertie) and to the intensive commercial development near the DNPP entrance." 76-86

Page 3-9, Section 3.1.2.3:
The Tanana Basin Area Plan for State Lands was updated in 1991. The citation date for the Alaska Department of Natural Resources should be revised to 1991. 76-87

Page 3-27, Section 3.3.1:
The presentation of Nenana River low flow information should be further clarified to minimize confusion and ensure that the appropriate information is used in modeling the thermal effects of discharge waters. What is the proper interpretation of the number 190 cfs? Does 190 cfs represent a single event low flow over a period of 30 years or is it the mean low for those 30 years? If 190 cfs actually represents the mean low for 30 years, what does the number 500 cfs represent? 76-88

Page 3-39, Section 3.5.1.2:
The following statement should be revised to read, "DNPP contains large areas of natural vegetation disturbed only by a few roads, a railroad line, visitor facilities, placer and lode mined areas, and NPS operations (borrow pits, equipment storage, etc.)." 76-89

Page 3-41, Section 3.5.3.2:
The U.S. Fish and Wildlife Service should be consulted regarding the two listed peregrine falcon species that are of concern within the DNPP. These species should be identified in the DEIS. 76-90

The statement that the Chukch primrose (Primula tschuktschorum) occurs in Denali National Park and Preserve is not correct. Another primrose, Primula eximia, is present, but is not a listed species. 76-91

The use of the common name "California dandelion" should be changed to "Flesh-colored dandelion." 76-92

Page 3-49, Section 3.8.5:
The following statement should be revised to read, "Police protection in the Denali Borough is provided by two Alaska state troopers, one stationed in Cantwell and the other in Nenana." The trooper position in Healy was recently transferred to Fairbanks. 76-93

Pages 4-26 and 4-27, Section 4.1.5.1:
The discussion regarding the disturbance of terrestrial resources focuses only on the powerplant. Other sections of the document acknowledge that additional facilities (housing, landfill, services buildings) will be built as a result of the construction and operation of the powerplant. The impacts associated with all aspects of project development should be addressed. 76-94

Discussion is provided regarding concerns about human-bear interactions. We recommend that project planning consider the use of bear-resistant litter containers to minimize the potential for attracting bears to the project site. 76-95

Page 4-30, Section 4.1.5.1:
It is stated that "some small and localized decrease in growth of sensitive plant species" could occur. This statement should be clarified. What is the basis for coming to the conclusion that this effect will be small and localized? 76-96

Page 4-37, Section 4.1.6:
In Appendix H, the Corps of Engineers public notice for application for a permit for the proposed project indicates that the potential disturbance of 45 acres of wetlands. This information should be reflected in the discussion of wetland impacts in Table 2.2.2 and in Section 4.1.6. 76-97

The DEIS states that "the area would quickly revert to wetlands following the completion of construction." The National Park Service's experience with wetland restoration indicates that structural restoration is relatively easy in most cases, but functional restoration is not readily achieved. Additional information should be provided to substantiate the statement. Also, the applicant will need to replace the value, function, and area of the destroyed wetlands, in accordance with Section 404(b)(1) of the Clean Water Act. 76-98

Pages 4-49 to 4-51, Section 4.1.8.5:
The potential impacts to terrestrial and aquatic resources resulting from the development of project-related public services should be addressed. 76-99

Page 4-53, Section 4.1.8.6:
The potential impacts associated with project-induced increased recreation demand should be addressed. 76-100

Page 4-92, Section 4.3.3:
The DEIS needs to clarify the discussion of acid deposition. The statement appears to contradict the discussion in Section 4.1.5.1 (page 4-32) that "local ecosystems, including small high-altitude watersheds with little soil development, could be sensitive to acidification." 76-101

Page 4-92, Section 4.3.6:
The DEIS should consider the potential for hazardous materials spills to affect floodplains and wetlands. 76-102

Pages 4-93 to 4-94, Section 4.3.13:
The discussion should be revised, as appropriate, based on review comments about previous sections. 76-103

Pages 8-1 through 8-8, Section 8:
The reference list should be revised. It appears to be incomplete when compared to the citations provided in the text. 76-104

The Tanana Basin Area Plan for State Lands was updated in 1991. The citation date for the Alaska Department of Natural Resources should be revised to 1991. 76-105

Enclosure 2

HCCP Special Studies Proposed by NPS

Ice Fog Analysis: There should be monitoring of the chemical composition and the frequency of ice fog and rime ice deposition to vegetation at the existing site to determine the loading to the foliage. There should be modeling done to determine the dissolution of additional nitrogen, sulfur, and acids in the ice fog and how that will affect vegetation. 76-106

Cumulative Deposition Effects on Vegetation: There should be a monitoring program set up to determine the wet and dry deposition of acids, nitrogen, and metals in the vicinity of the plant. These loads, plus the projected loads from the new source, would be used as the basis for controlled fumigation experiments to determine the effects of these stresses on lichens and tree species. 76-107

Metals Accumulation in Sediments: Sediment cores from freshwaters (lakes, streams, rivers, ponds) adjacent to the powerplant and in the DNPP should be collected and analyzed for trace metals to determine the previous loading to the aquatic environment and the potential for accumulation of toxic levels of these metals in the sediments. Biological sampling of invertebrates could be done in tandem to determine bioaccumulation by biota in the sediments. 76-108

Assessment of Surface Waters: Available data on the seasonal chemistry of small lakes and streams in DNPP should be collected and analyzed to determine the susceptibility of these systems to nitrogen enrichment and acidic deposition. This data base could then form the basis for the design of a synoptic survey of lake and streams waters, particularly focusing on the ANC and nitrogen concentrations in these waters. 76-109

SOx Fumigation of Lichen Species: It appears from the DEIS analysis that current levels of sulfur dioxide may be reaching the threshold for damage to native lichen species. These species should be subjected to controlled chamber fumigation studies with gaseous sulfur dioxide at levels expected with the addition of the HCCP. 76-110

Snowmelt Effects on Surface Waters: In areas where the lake and stream ANCs are low, there should be a seasonal monitoring program set up to sample the snowpack at maximum accumulation to determine the chemical load. The early snowmelt runoff season would see researchers sampling snowpack, runoff, and surface waters at regular intervals (under the ice on a weekly schedule) to determine if acidic pulses are currently affecting surface waters. Models could be used to estimate the additional load to the pack resulting from the proposed powerplant and how that would affect the severity of the snowmelt acid pulse. 76-111

Seasonal Use of the Proposed HCCP Site by Wildlife: An analysis should be made of the use of this area by such species as lynx, moose, and bear. Then, an assessment should be made of the disruption construction and operation would have on populations that spend part of the year in DNPP. 76-112

Particulate Dispersion and Bioaccumulation Monitoring: DOI recommends a monitoring program, beginning prior to construction and continuing for five years following plant start-up, would be appropriate to monitor airborne particulate dispersion and bioaccumulation. 76-113

Letter No. 76
Jonathan P. Deason, Director, Office of Environmental Affairs, U.S. Department of the Interior, Office of the Secretary, Washington, DC 20240

Comment 76-1
"We do not believe, however, that all environmental impacts, mitigation measures and project alternatives have been adequately evaluated. We are greatly concerned about the construction of a new major powerplant virtually on the border of the only national park in Alaska designated for Class I air quality protection."

Response:
DOE acknowledges and shares the concerns of the NPS regarding the proposed construction and operation of a new 50-MW coal-fired power plant at the site of the existing 25-MW coal-fired Healy Unit No. 1 located four miles north of the border to the DNPP. Based upon the analyses presented in the EIS, DOE believes that, because of the size and associated emission control technologies proposed for the HCCP, the HCCP would present no individual or cumulative threat to air quality and visibility in the DNPP. Nevertheless, DOE has continued to work closely with the NPS to address its view that particular care should be exercised when a Class I air quality area could potentially be impacted.

In their capacities both as cooperating agencies in the preparation of the EIS and as environmentally concerned federal agencies, DOE and DOI/NPS have engaged in an extensive and productive dialogue over the past year. This constructive approach to clarifying issues associated with the proposed project led to joint discussions among DOE, DOI/NPS, the industrial participant (AIDEA), and the owner of Healy Unit No. 1 (GVEA). As an outgrowth of these discussions, DOE facilitated negotiations between DOI/NPS and the project participant team (AIDEA and GVEA) to resolve the NPS concerns that increased emissions from the combined operation of Unit No. 1 and the HCCP could adversely affect DNPP. These negotiations were successfully concluded and a Memorandum of Agreement signed by the respective parties on November 9, 1993, calling for the retrofit of Unit No. 1, along with various administrative controls, to reduce emissions. The general provisions of this mitigation are described in Sect. 2.1.3.2 of the EIS and the Agreement is presented in its entirety in Appendix I. Section 5.4 of the EIS discusses the technical and quantitative features of various mitigation measures, including those which would be implemented under the terms of the Agreement.

As part of this Agreement, the DOI/NPS has withdrawn its opposition to the issuance of an operating permit for the HCCP by the Alaska Department of Environmental Conservation, and supports the release of the EIS. Both agencies have publicly expressed satisfaction with the approach taken to resolve this matter and the positive aspects of the outcome.

Since many of the DOI/NPS comments provided to DOE nearly a year ago relate to air quality and visibility issues, the terms of the Agreement have essentially rendered such comments moot. Accordingly, the balance of the responses and comments have been updated to the extent practical, in accordance with terms of the aforementioned Memorandum of Agreement.

Comment 76-2:
"Further, we recommend a supplement or a revised draft statement be issued after proper consideration of the air quality issues developed and analyzed in the Prevention of Significant Deterioration (PSD) process, which is not yet complete. We believe comments on the draft environmental impact statement (DEIS) should have followed, rather than preceded, comments on the PSD permit as many PSD comments are likely to be appropriate draft statement comments as well."

Response:
DOE believes that the EIS provides a comprehensive evaluation of the potential air quality impacts resulting from the proposed HCCP. DOE does not believe that a revised, recirculated DEIS would contain new or unexplored issues as they relate to the PSD permit. Many of the comments on the DEIS and the PSD permit are similar.

Comment 76-3:
"We shall soon provide you with the Department of the Interior's comments on the proposed PSD permit, due to the Alaska Department of Environmental Conservation on February 8, 1993, and we ask that you include the comments on the PSD permit with these comments on the draft statement for your review and response."

Response:
DOE has received the Department of the Interior's comments on the PSD permit. Many of the comments are similar to those on the DEIS. While DOE is not responding explicitly to the PSD permit comments, DOE has incorporated some of the suggestions into the EIS.

Comment 76-4:
"Our National Park Service (NPS), as a cooperating agency in the EIS process, has substantial concerns regarding the scope, analyses, and conclusions presented in the document for the Department of Energy's (DOE) proposed clean coal project. A significant amount of additional information and analyses are needed to assess the potential impacts of the Healy Clean Coal Project (HCCP) on Denali National Park and Preserve (DNPP). The project must not be rushed through the National Environmental Policy Act (NEPA) process without careful consideration of not only potential impacts on DNPP, but also the fundamental NEPA questions concerning the need for this powerplant and the reasonable alternatives to it."

Response:
The analysis of air quality and related values, especially visibility, has been expanded in direct response to the NPS. DOE believes that the analyses in the EIS are sound, and are based upon the available range of literature. These analyses together with extensive background studies (Sect. 8, References, of the EIS) logically support the conclusion presented in the EIS that the potential environmental impact to DNPP would not be major. Whatever impacts to DNPP that might be caused by the HCCP would be mitigated by the retrofit controls to be applied to Healy Unit No. 1 (see Sects. 2.1.3.2 and 5.4.6). See responses to Comments 76-12 and 45-5 for discussion on the need for power and the project. See responses to Comments 1-2 and 21-2 regarding alternatives.

Comment 76-5:
"To comply with the spirit of NEPA and allow for full public participation, all data collection programs designed to gather information pertinent to potential impacts from HCCP should be referenced within the body of, and carefully discussed in the appendix to, the DEIS."

Response:
DOE incorporated material by reference according to CEQ regulations (40 CFR 1502.21). The DEIS and pertinent references have been available since the beginning of the public comment period in the six public reading rooms. All the studies were carefully analyzed, have been cited in the EIS, and need not be discussed separately in an appendix.

Comment 76-6:
"To more accurately assess the impacts of DOE's preferred alternative—HCCP at Healy—additional data collection and analyses are needed to address foreseeable significant adverse impacts. Proper modeling of projected visibility impacts and better long-term monitoring of the existing visibility impacts are essential. In addition, NPS has attached a list of recommended special studies that would address some of the deficiencies in the DEIS that would need to be corrected before NPS could accurately assess the environmental impacts of the proposed HCCP on DNPP. The Council on Environmental Quality (CEQ) NEPA regulations support requests for relevant information, particularly from cooperating agencies. We believe the information requested here would be relatively easy and cost effective to acquire."

Response:
DOE recognizes DOI's right to request additional information and responds below to specific requests. DOE believes that sufficient data have been collected and adequate analyses have been performed to assess the potential impacts resulting from the proposed HCCP.

Comment 76-7:
"This information is essential to a reasoned choice among alternatives. Without these revisions, the public will not be fairly apprised of potential impacts, and thus will be deprived of the opportunity to meaningfully comment on DOE's proposed action. Accordingly, DOE should examine these issues in a revised DEIS and resubmit the DEIS for comment, or alternately submit a supplement DEIS for comment."

Response:
DOE has actively included the public in the EIS process and encouraged comments on the proposed scope of work and potential impacts. See response to Comment 74-5.

Comment 76-8:
"We are very concerned that DOE intends to publish a final EIS as soon as March 1993. Accordingly, if the issues we have raised are not resolved satisfactorily, then we believe the final statement would be a candidate for referral to the Council on Environmental Quality (CEQ), as provided under the National Environmental Policy Act (NEPA) implementing regulations at 40 CFR Sec. 1504.3."

Response:
DOE is aware of NPS concerns (see Sect. 4.3.13 of the EIS). See response to Comment 76-1 for discussions about mitigation measures that address the NPS concerns.

Comment 76-9:
"We are concerned, however, about the construction of a new major powerplant virtually on the border of the only Class I air quality national park in Alaska without adequate and careful consideration of its potential impacts or of reasonable and environmentally preferable alternatives."

Response:
DOE is aware of the sensitive relationship between the proposed project site and DNPP. DOE believes that the EIS provides a comprehensive evaluation of potential air quality and related impacts to DNPP resulting from the proposed HCCP. The EIS contains a thorough discussion of alternatives in Sect. 2. See response to Comment 1-2 for further discussion on alternatives.

Comment 76-10:
"We believe the scope of the draft statement has been unduly limited. In discussing the scope, DOE does not address the need for HCCP, yet 'but for' DOE's approximately $104 million grant, it is unclear whether there would be a viable proposal for a powerplant at this location. By limiting this draft statement to the issue of whether to fund the clean coal technology, DOE is depriving the government and the public of the opportunity to fully consider the impacts of this proposal and the alternatives to it. For all these reasons, we ask that DOE broaden the scope of its inquiry as required by NEPA. For example, the section titled *Need for the Project* only discusses clean coal technology."

Response:
DOE believes that the scope of the EIS is appropriate for the decision to be made and is consistent with the level of discretion it has in making that decision (see Sect. 1.4 and 2.2.2, and response to Comment 1-2). The decision before DOE is to fund or not to fund the project. DOE addressed alternatives which would meet the goals and objectives of the participant. Other alternatives were not considered by DOE to be reasonable.

Comment 76-11:
"The discussion on pages 1-5 and 1-6 only addresses the need for clean coal demonstration projects for better utilization of coal. However, it is unclear whether there is a need in Alaska for the additional 50 MW of electricity that would be generated by the new facility."

Response:
As discussed in the response to Comment 76-12, the determination of need for power was made by the APUC when it approved the power sales agreement on September 3, 1992. DOE's decisions are driven by the need to demonstrate this clean coal technology so that it can be used commercially to help U.S. utilities meet the Clean Air Act Amendments of 1990 as discussed in Sect. 1.4 of the EIS.

Comment 76-12:
"This section of the draft statement should also discuss the need for a new 50 megawatt (MW) powerplant at this location. On pages 1-13, 2-36, and 2-37, the draft statement indicates that since the 'need for electrical generation' was considered by the Alaska Public Utilities Commission (APUC), this issue is 'beyond the scope of the EIS.' The APUC's decision, however, declined to consider certain issues, such as environmental externalities, that may be relevant in this NEPA context. In addition, the dissent in the APUC's decision raises additional issues about the need for the power that should be evaluated in the NEPA context. Therefore, please present and evaluate the APUC's decision within the NEPA context."

Response:
The need for power was determined by the APUC from applications from GVEA on projected load growth. DOE independently reviewed the APUC's conclusions and found them to be reasonable (see Sect. 1.4.2). However, under the CCT enabling legislation, DOE decisions are driven by the need to demonstrate clean coal technology (see Sect. 1.4.1). The environmental impacts discussed in the EIS will be weighed by DOE in making a decision on whether the HCCP should be funded in furtherance of that goal. DOE believes that this is the appropriate role for NEPA to play in its decision process, rather than as an element of any reconsideration of APUC's decision. Nevertheless, DOE does recognize that the emission reductions to be achieved by the Memorandum of Agreement (see Sect. 2.1.3.2) would significantly improve the environmental externalities associated with power generation.

Comment 76-13:
"We recommend the discussion on the need for this project be expanded to include the need for the power to be generated by this project. This discussion should evaluate whether existing sources such as Chugach Electric Association, Inc., could continue to supply electricity to this region without construction and operation of the Healy Clean Coal Project."

Response:
See response to Comment 76-12. The APUC has approved the power sales agreement for the purchase of power from the proposed HCCP as the lowest-cost alternative for GVEA to meet its load growth. The APUC approval contemplates that existing sources such as Chugach Electric Association, Inc. (CEA) would be needed to continue to supply electricity to this region even with the construction and operation of the HCCP. The CEA is not expected to have the ability to provide sufficient power to the Railbelt to satisfy the load growth predicted by GVEA.

Furthermore, energy purchases from CEA are "non-firm." CEA does not reserve capacity for GVEA, so power sales to GVEA can be halted whenever CEA needs capacity for its own customers. Historically, CEA has not been able to meet GVEA's peak requirements, even at current load levels. Aging generating capacity and unit retirement schedules at CEA and GVEA will make this situation even worse. By the year 2007, GVEA's growth will push peak load projection to 165 MW and its available "firm" resources, after retirements, will be 20 MW. Even with the HCCP, GVEA must secure 150 MW of additional "firm" capacity by then. Each MW of non-firm power that CEA provides to GVEA must be backed up by a "firm" MW of GVEA capacity. In other words,

purchases from CEA do not reduce GVEA's "firm" capacity obligations. Non-firm purchases are only used to shut down less economical generators (e.g., GVEA's oil-fired turbines). For these reasons, power from the HCCP would be different from intertie power obtained from Anchorage utilities.

Comment 76-14:
"We believe this evaluation is needed to clarify the need for an additional 50 MW of power in this region of limited growth and demand when the existing Healy Unit 1 appears to be operating substantially below capacity, based on the data modeled in the visibility analysis. This discussion should assess whether costs of operating two powerplants so close to DNPP outweigh the benefits of the additional power."

Response:
The capacity factor of the existing Healy Unit No. 1, cited as 90% on page 2-20 of the DEIS, is higher than most coal-fired power plants. As discussed in the responses to Comments 76-4, 76-11, 76-12, and 76-13, the APUC addressed the issues of load growth and the costs to supply additional power. See response to Comment 76-12 for discussion on the need for power.

Comment 76-15:
"Once the purpose and need are clearly established, alternatives to HCCP—in terms of power production, location, and technology—and the environmental and other impacts of each alternative must be carefully analyzed. After all, the discussion of alternatives forms 'the heart of the environmental impact statement.' Finally, measures to mitigate the impacts of each alternative must be identified and discussed."

Response:
The purpose and need are established in Sects. 1.3 and 1.4 of the EIS. Also, see response to Comments 76-12, 76-13, and 76-14. DOE believes that an appropriate range of reasonable alternatives for the HCCP and their environmental impacts have been presented and analyzed. In Sect. 2.2 of the EIS, DOE discusses the alternatives which meet the goals and objectives of the participant (see responses to Comment 1-2).

It is appropriate to bound the range of alternatives to those found to be reasonable and proposed by the participant. DOE also believes that its analysis of alternatives satisfies the range of alternatives according to the Council on Environmental Quality's regulations. While DOE has identified and discussed each alternative that it considers to be reasonable. See response to Comment 76-1 for a discussion of the Memorandum of Agreement for mitigation.

Comment 76-16:
"It is unclear why a more thorough evaluation of reasonable alternatives was omitted from the draft statement. For example, page 2-30 summarily states that a plant located closer to Fairbanks 'would probably not be permitted due to nonattainment of air quality standards in the Fairbanks area.' Fairbanks, however, is not listed as a nonattainment area for the pollutants of concern that could be emitted by the powerplant; i.e., NO_x and SO_2."

Response:
As discussed in the response to Comment 76-15, DOE believes that it has sufficiently evaluated an appropriate range of reasonable alternatives. Fairbanks is listed as a non-attainment area for CO (AQCR 9); therefore, a major source of CO would probably not be permitted. Since the HCCP would produce 480 tons per year of CO as designed, it is considered a major source of CO.

Comment 76-17:
"Among other possibilities, we believe a site more than 6 miles away from the park boundary and located closer to the proposed service area should have been considered, as well as a continuation to purchase power from Chugach Electric Association."

Response:
DOE recognizes DOI's concern with site location, but as stated in the response to Comment 76-12, DOE has no control over the participant's choice of location. DOE has no authority to require the participant to relocate any project to a site not previously identified as a reasonable alternative. Section 2.2.2 of the EIS has been expanded to demonstrate that the alternative site proposed to DOE by the participant is the only reasonable alternative. See response to Comment 76-13 regarding the purchase of power from Chugach Electric Association.

Comment 76-18:
"As a cooperating agency, our NPS believes the protection of air quality values in a Class I area must strongly outweigh the convenience of an existing plant site and proximity to a fuel source when determining the suitability of any proposed project."

Response:
See response to Comment 21-1. DOE does not expect that air quality within DNPP would deteriorate appreciably as a result of the proposed HCCP. In the EIS, DOE is not weighing the convenience of an existing power plant and proximity to a fuel source versus protection of air quality values in a Class I area. What DOE is considering in the EIS is all reasonable alternatives in its compliance with the full disclosure intent of NEPA. The comparison of these values will be part of the ROD deciding whether or not to fund the construction and operation of the HCCP.

Comment 76-19:
"NPS repeatedly has expressed concerns about HCCP's potential impacts on air quality and visibility, as well as aquatic and terrestrial resources. DNPP has some of the most pristine air quality in the United States; it is the *only* national park in the state of Alaska designated as a Class I area for PSD under the Clean Air Act (CAA). Of particular concern, all visibility analyses completed to date, including those performed for the PSD permit application and the DEIS, have demonstrated that emissions from HCCP are likely to create perceptible visibility impacts in the park."

Response:
See response to Comment 76-1. With the retrofit of Unit No. 1, the impacts of emissions from both units to visibility in DNPP would be reduced. In estimating visibility impacts,

DOE performed a sensitivity analysis of the model used to predict the results, after consultations with NPS and EPA (see Sects. 4.3.2 and 5.4.6).

Comment 76-20:
"We are concerned about impacts to air quality from this proposed experimental project if it cannot meet its predicted operating levels. The analysis of this scenario should be more rigorous in order to provide more detailed information about anticipated impacts. The final statement should address these issues."

Responses:
In Sect. 5, the EIS addresses two scenarios in which the proposed HCCP does not meet its target emission objectives. The emission levels are identical for both scenarios and represent the upper bounds for emissions which could occur if the HCCP demonstration is unsuccessful. A detailed analysis using air dispersion modeling is presented for these emission levels in Sect. 5.

Comment 76-21:
"In addition to DOE's inadequate examination of the purpose of, need for, and alternatives to a powerplant next to DNPP, the DEIS also fails to adequately consider the potentially serious environmental impacts of HCCP on the adjacent DNPP."

Response:
In Sect. 4.3, DOE analyzes all resources in DNPP upon which there is a potential impact, and acknowledges the concerns of NPS (Sect. 4.3.13). Section 5.4 discusses the mitigation of these impacts as a result of the agreement described in Sect. 2.1.3.2.

Comment 76-22:
"To make development of the environmental impact statement a meaningful process, DOE has a duty to examine all reasonable alternatives and mitigation measures pertinent to its proposed action. The purpose of this DEIS is to closely scrutinize the environmental impacts of the HCCP *and* to analyze *all* reasonable alternatives in a comparative form, to provide a clear basis for choice among options. We believe this obligation has not been met by DOE."

Response:
DOE agrees with NPS in the belief that the EIS development process should be meaningful and believes that it has fully met its obligations. As stated in response to Comment 76-1, DOE believes that environmental impacts have been analyzed as fully as possible in the EIS.

Comment 76-23:
"AIDEA has performed visibility impact analyses in support of their application for a PSD air quality permit. Those analyses indicate greater visibility impacts than suggested in the present DEIS. This information should be included in a revised draft statement. In

addition, as noted earlier, we request that DOE incorporate our NPS comments on the PSD permit into this revised statement. NPS modeling indicates substantially greater visibility impacts than suggested by either AIDEA's or DOE's modeling."

Response:
The results of the air quality and visibility impairment analyses presented in the FEIS reflect the results presented in the PSD permit application. Additionally, DOE has incorporated into the EIS some of the NPS suggestions that were in the PSD permit comments. The NPS visibility modeling results presented in Appendix A of the NPS Comments on the draft PSD permit were not produced by a valid plume optics module. Therefore, the aforementioned NPS visibility modeling is not included in the EIS.

DOE has done additional analysis on the sensitivity of the modified PLUVUE I model to changes in parameters. The perceptibility threshold was changed and the sight paths were extended beyond the DNPP boundaries. See Sect. 5.4.6 for results of the sensitivity analysis.

Comment 76-24:
"The visibility analysis contained in the AIDEA document, 'Addendum to the Visual Impact Analysis of the Plume from the Healy Clean Coal Project on Denali National Park and Preserve' (STI-91170-1205-ADD) (Addendum), is similarly relevant to the disclosure of the visibility impacts to the park from HCCP and Healy Unit 1. This document was generated for the pending PSD permit process, and should be included in the revision."

Response:
This document has been cited, but not included in the EIS because of its length. However, the document is available for public inspection at the public reading rooms.

Comment 76-25:
"In addition to the Addendum, the correspondence of September 28, October 1, and October 12, 1992 from AIDEA to Mr. Len Verrelli of the Alaska Department of Environmental Conservation should also be included in the final statement. These letters outline AIDEA contractors' rationale for changing the 'NO_2 burden threshold' values from 69 ppbv*km to 138 ppbv*km and then to 150 ppbv*km. These manipulations eliminated numerous hours of visible plume impact from DOE's visibility analysis. These technical discussions are pertinent to the visible plume issue, and should be available for full public disclosure and NEPA compliance."

Response:
Section 4.3.2.3 of the EIS includes a discussion of the rationale for changing the 'NO_2 burden threshold' values to reflect more realistic values for the sight paths from the DNPP Visitor Access Center. Also, see response to Comment 76-23.

Comment 76-26:
"The DEIS should have articulated the reasons for NPS's concerns regarding the potential for HCCP to cause or contribute to adverse visibility impacts at DNPP. For instance, even though, as explained above, the plume impacts in the DEIS are likely

underestimated, the predicted impacts are still greater with respect to their frequency, magnitude, extent and duration than an impact level previously found to constitute an adverse visibility impact in a Class I area in Maine."

Response:
The EIS has been revised to elaborate on the NPS concerns regarding potential visibility impairment at DNPP. DOE does not expect that air quality, including visibility, within DNPP would deteriorate appreciably as a result of the proposed HCCP. See response to Comment 21-1.

Comment 76-27:
"The analysis of regional haze on p. 4-91 is inadequate. No attempt to quantify existing, let alone projected haze impacts, from HCCP in DNPP was done. The DEIS should not have dismissed HCCP's potential to cause and contribute to regional haze by citing a single year of meteorological data and an undocumented belief that sources in Eurasia are responsible for the regional haze that currently affects the Healy area and DNPP."

Response:
Section 4.3.2.4 of the EIS has been substantially expanded to quantify and discuss further the potential contributions of the HCCP to regional haze in DNPP.

Comment 76-28:
"The sulfur dioxide emissions from HCCP were not considered in *any* analysis of visibility impacts on DNPP. The potential magnitude for sulfate-related visibility impairment should be fully analyzed. Homogeneous conversion of sulfur dioxide should be more carefully considered, especially in the summer months. In-cloud conversion chemistry should use the maximum hydrogen peroxide monitored values. High sulfate scattering efficiencies at high relative humidities should also be analyzed and included in the assessment. This could have a substantial impact on visibility."

Response:
The EIS has been modified in Sect. 4.3.2.3 to include the following text. The visual effects of particles in the HCCP plume, including sulfate particles formed from SO_2, were considered and found that in almost all cases, any reasonable concentration of particles in the emissions would counteract and diminish the visual effects of NO_2 and cause the plume to be less visible. For most viewing conditions, omitting the effects of particles causes the visibility impacts of the HCCP emissions to be overestimated. In addition, Sect. 4.3.2.4 has been expanded to include an analysis that quantifies sulfate-related visibility impairment associated with regional haze.

Comment 76-29:
"For accurately calculating the visibility impacts of plumes, the EPA-approved Plume Visibility Model PLUVUE II should have been used. The DEIS used a modified version of an earlier, less sophisticated version of this model, known as PLUVUE I (see Sect. 4.3.2.3). Part of the reason given for this was that the PLUVUE II model contained some errors. The problems with the PLUVUE II model, however, have been corrected by EPA."

Response:
The EIS has been modified to include a side-by-side comparison and interpretation of PLUVUE I and PLUVUE II results.

Comment 76-30:
"Instead of PLUVUE II, DOE chose the PLUVUE I model, even though the PLUVUE I model contained application limitations for Alaska. The HCCP consultants working on the DEIS made efforts to correct PLUVUE I's problems; however, the modified model has not been subjected to a theoretical or performance review by the EPA, as was the PLUVUE II model, which was approved by EPA. Therefore, the draft statement's claim that the model used is the 'EPA-approved PLUVUE I model' is not correct."

Response:
The EIS has been modified to include a side-by-side comparison and interpretation of PLUVUE I and PLUVUE II results.

Comment 76-31:
"The limitations of PLUVUE I are serious. One of the primary things missing from the modeling analysis in the DEIS is the visibility of plumes when the sun is very low in the sky as often is the case in high latitudes, such as in the region surrounding the park. The modified model used in the DEIS does not calculate those impacts. The EPA-approved PLUVUE II model is capable of calculating those impacts, and should be used to more accurately model visibility impacts of HCCP."

Response:
The EIS has been modified to include a side-by-side comparison and interpretation of PLUVUE I and PLUVUE II results.

Comment 76-32:
"The DEIS also includes some results of an untested valley box model (pp. 4-81, 4-88), which underestimate HCCP's visibility impact. This technique bears no relation to any EPA approved or suggested models and has not been shown to accurately simulate the complex flows of the area. Therefore, the inclusion of the results of this untested technique are not appropriate in the DEIS."

Response:
Although the valley box model has not been approved or suggested by EPA, it is a reasonable model containing realistic assumptions. The valley box model uses a Gaussian plume cross-section and, unlike the PLUVUE models, attempts to account for the effects of terrain features (that would increase dispersion) by comparing the cross-section with the valley width and plume height, and when the latter are larger, increases the cross-section so that the plume approximately fills the valley. Nevertheless, the valley box model was replaced by the PLUVUE II model in the FEIS so as to be responsive to the NPS concerns that the PLUVUE II model is the most appropriate visibility model.

Comment 76-33:
"In addition, the measured meteorological data used as input to both the modified PLUVUE I model and the DOE valley box model were incorrectly modified by 'bumping' the measured atmospheric stability classes up one class. This results in the dilution of the plume concentrations and a reduced estimate of plume visual impacts. Modification of the meteorological data is not allowed under EPA's 'Guidelines on Air Quality Models,' yet DOE ignored this requirement. Ironically, on p. 4-4 of the DEIS, DOE references the EPA 'Guidelines on Air Quality Models' when justifying its choice of dispersion models for use in the ambient air quality and PSD increment analyses."

Response:
The EIS has been changed so that the visibility analyses are based on the use of the measured atmospheric stability classes.

Comment 76-34:
"The DEIS also attempted to calibrate the PLUVUE I plume model against air quality measurements. This is evident by the statement that: 'The redone analysis without any adjustment to stability classes resulted in PLUVUE I overestimating the known effects of unit No. 1 (and thereby any potential effects of the proposed HCCP) because the results are much too high to be consistent with the absence of documented visual effects from Unit No. 1 alone' (p. 4-90).

This interpretation is clearly not allowed under the EPA 'Guideline on Air Quality Models.'

There have been attempts by some to compare short term estimates and measurements on an event-by-event basis and then to calibrate a model with results of that comparison. This approach is severely limited by uncertainties in both source and meteorological data and therefore it is difficult to precisely estimate the concentration at an exact location for a specific increment of time. Such uncertainties make calibration of short term models of questionable benefit. Therefore, short term model calibration is unacceptable.

Since the purpose of the DEIS is to fairly disclose the potential environmental impacts of the project to the public, using EPA suggested models and following EPA modeling regulations would ensure that an unbiased analysis is performed."

Response:
The EIS has been changed so that the visibility analyses are based on the use of the measured atmospheric stability classes.

Comment 76-35:
"On p. 89, the DEIS indicates that cumulative visible plume impacts from the HCCP demonstration project and Healy Unit 1 to the Northeast Unit of DNPP are less than or equal to 14 hours. Since this is less than the number of hours predicted for the DNPP Visitor Access Center sight path, DOE concludes that there is no need to consider these impacts further. This is a misleading conclusion that underestimates the hours of visibility impairment. Plumes impacting the Northeast Unit cannot at the same time impact the Visitor Access Center, and therefore should be added to the total number of hours of

visible plume impacts at the Visitor Access Center, for a 'Cumulative Total Visible Plume Impact.' These 14 hours should be included in Table 4.3.4, which shows the HCCP demonstration project emissions. The HCCP permitted case (*i.e.*, the allowed emissions under the proposed PSD permit for this source) will emit an additional 423 tons per year (TPY) of NO_x and 14 TPY of TSP compared to the HCCP demonstration project. Therefore, an analysis needs to be performed for the Northeast Unit with the larger permitted emission rate, and these impacts should be included in Table 5.1.4 which has the permitted case visibility results for the Visitor Access Center."

Response:
The visibility analysis has been revised in the EIS, and results indicate no hours in which a plume might be perceptible at the DNPP Northeast Unit from the HCCP alone or from simultaneous emissions with Healy Unit No. 1 (for either the HCCP demonstration case or permitted case). Therefore, the cited tables do not need to present cumulative hours including a perceptible plume at the DNPP Northeast Unit. See response to Comment 74-35.

Comment 76-36:
"In determining which hours in the year to model for the visibility analysis, DOE applied the concept of NO_x burden as follows:

The NO_x concentrations were integrated along each sight path to calculate so-called NO_x burdens (in units of parts per billion by volume times kilometers, or ppbv*km) as a ready measure of plume perceptibility. Because an NO_2 burden of 69 ppbv*km corresponds to a Delta E of 2, all calculations in which the burden exceeded 68 ppbv*km were assumed to have a perceptible plume (Page 4-85).

This NO_x burden concept does not include the particulate emissions which can at times exacerbate visible plume impacts. The particulates emissions which are emitted from the stacks after passing through the baghouse are very fine in size, and are excellent at scattering light, especially with the low sun angles experienced at Healy. Although the scattering caused by fine particulate is less important than the NO_2 effects, these particulate emissions should have been incorporated into the 'NO_x burden' calculations. The inclusion of particulate emissions means that more hours than the 372 hours which were identified by only 'NO_x burden' should have been modeled with PLUVUE II which can correctly calculate visibility impacts at low sun angles."

Response:
See response to Comment 76-28.

Comment 76-37:
"In the PLUVUE I analysis for the DNPP Visitor Access Center (page 4-85), DOE modeled wind directions that were +/- 15 degrees from centerline transport down the valley. Except for impacts at the Northeast Unit, DOE modeled only hours for which the plume would be transported within +/- 3 degrees from plume centerline as the centerline passed over the observer. Additional wind directions, greater than three degrees from centerline, should be analyzed to accurately model impacts. This would most likely include many more hours in the visibility analysis. The wind rose for the Healy Monitoring

Station Fig. 3.2.1 (p. 3-20) indicates that, 28% of the time, winds from the southeast and east-southeast would transport the plume to the Northeast Unit. Thus, it would appear that many more hours should have been modeled; *i.e.*, approximately 8,760 divided by 2 (day/night) times 28%, for a total of 1,226 hours."

Response:
For the DNPP Visitor Access Center, the visibility modeling was performed for all daytime hours with wind directions within 15° of a straight line that would transport the plume to the DNPP Visitor Access Center and with wind speeds less than 15 mph (as measured at the HCCP Healy Monitoring Station), a total of 372 hours. Other hours were excluded because a perceptible plume would not be expected at the Visitor Access Center under other conditions. The range of wind directions was selected to allow transport of the plume to the Nenana River Gorge and the Visitor Access Center. Using SO_2 concentrations measured at the HCCP Park Monitoring Station as an indicator of when the existing Healy Unit No. 1 emissions were transported into the gorge, a comparison displayed good agreement between modeled and measured results when using wind directions from the north, within 15° of the line between the HCCP and the Visitor Access Center. Therefore, DOE believes that the EIS provides a good estimate of the number of hours when plume transport into the Nenana River Gorge is expected to occur. For the DNPP Northeast Unit, the visibility modeling was performed for all daytime hours with wind directions from the southeast between 100° and 143° inclusive and with wind speeds less than 15 mph (as measured at the HCCP Healy Monitoring Station), a total of 532 hours.

Comment 76-38:
"On p. 4-86, the DEIS notes that the ten meter winds at the DNPP Visitors Access Center would be more representative than the 30 meter winds measured near the HCCP site, thus making the analysis conservative. This is incorrect. Visibility and dispersion modeling are always performed with wind speed and direction data which are most representative of the proposed source's site, and height of emissions release, as was done in this DEIS."

Response:
The comparison in the EIS of the HCCP Healy Monitoring Station is with the HCCP Park Monitoring Station located on the border of DNPP about 4 miles south of the proposed HCCP, not at the DNPP Visitor Access Center (as identified in the comment). The EIS does not state that the HCCP Park Monitoring Station would be more representative. DOE agrees that the HCCP Healy Monitoring Station is the appropriate station to use and only used data from this monitoring station for the computer analysis. However, the EIS states that actual impacts are expected to be less than these predicted impacts using the HCCP Healy Monitoring Station alone because the plume would often accelerate as it passed through the Nenana River Gorge into DNPP (as indicated by data from the HCCP Park Monitoring Station).

Comment 76-39:
"Preconstruction visibility monitoring data were collected to provide background data to assess potential visibility impacts from HCCP (see p. 3-19 through 3-21). The DEIS incorrectly implies that the monitoring data show that there are no visibility impacts in the park from Healy Unit 1."

Response:
The EIS text referenced in the comment discusses meteorological data collected, not air quality or visibility data.

Comment 76-40:
"The visibility monitoring data represent only a small area over a relatively short time frame. Despite these limitations, there are several occasions when visible plumes leave the field of view of the monitor, and consequently the extent of their reach into the park boundaries is unknown. Contrary to the conclusions made in the DEIS, the monitoring data show that the plumes undergo complex transport and the plumes may in fact travel to DNPP. This information is consistent with the occurrence of visibility impacts predicted by the models discussed below."

Response:
See response to Comment 21-1.

Comment 76-41:
"In addition, the monitoring data show that ice plumes from water vapor emissions of Healy Unit 1 occur in the winter (see p. 4-2). Water vapor emissions will more than double, because the HCCP plume would be saturated from the water in the spray absorber scrubber. These saturated plumes could impair the visibility within the park.

For example, on December 9 and 10, 1992, a park employee travelled from the park to Healy between 4 p.m. and 7 p.m. On both days a plume was visible. The plume which was seen on the December 10 was anvil shaped and extended to the south-southeast for about one mile. This plume from Healy Unit 1 is a water vapor plume, which will probably be much greater when combined with the saturated plume from HCCP. This documentation is anecdotal, but would clearly point to the fact that there are visual effects which may not be recorded by the cameras."

Response:
See response to Comment 21-6. It was dark between 4 p.m. and 7 p.m. on December 9 and 10, 1992, when the park employee was traveling from the park to Healy. Photographic data for December 9 and 10, 1992, indicate that the Unit No. 1 plume did not enter DNPP.

Comment 76-42:
"Given the demonstrated potential for visibility impairment in DNPP from HCCP, in order to arrive at a valid assessment of potential visibility impacts on DNPP by HCCP, the visibility monitoring program now being conducted should be completed for at least one full year although a longer time period so as to reexamine periods previously unexamined due to camera failure or other events would be preferable. The results of the complete monitoring program, should be analyzed in a revised complete or supplemental DEIS."

Response:
The FEIS includes the results of the complete monitoring program.

Comment 76-43:
"The assessment of visual impacts of HCCP operation on p. 4-54, Sect. 4.1.8.6 needs to address the impacts of the plume on tourism and recreation during the late fall, winter and early spring when the powerplant plumes would be most visible. During many days in the winter the plume from Healy Unit 1 is the most prominent visual feature in the Healy area. For the tens of thousands of motorists who drive the George Parks Highway during the winter, the existing plume can be seen for miles. Pilots use the plume to navigate between Fairbanks and Anchorage during clear winter days. The experiences of winter recreationists in the Healy area, such as snowmobilers, cross-country skiers, dog mushers, and snowshoers, can also be affected by the existing plume."

Response:
See responses to Comments 21-6 and 21-1. Impacts to tourists during the winter months, motorists, pilots, and winter recreationists in the Healy area are not expected to be appreciable.

Comment 76-44:
"Similarly, the assessment of environmental consequences of the alternate site on p. 4-61, Sect. 4.2 should also address the visual impacts of HCCP operations on tourism and recreation during the late fall, winter and early spring when the powerplant plumes would be most visible. Two powerplant plumes in the Healy area would accentuate the visual impacts of Healy Unit 1 on motorists and winter recreationists."

Response:
The EIS has been revised in Sect. 4.2.1 to incorporate this comment.

Comment 76-45:
"The discussion on page 4-89, regarding DNPP visitor use patterns and their relationship to visibility focuses on current visitor use levels and patterns. This may be inappropriate as use levels vary from year to year and demands for use of park resources change with time. For example, while the northeastern unit of the park may receive little use today, it may receive increased use in future years. Those areas that are within easy reach of existing roads are far more likely to experience increases in visitor use. The northeastern section of the park is close to the George Parks Highway and the Stampede Road."

Response:
Comment noted. In Sects. 4.3.2.3 and 5.2, the EIS includes analyses of potential visibility impairment occurring at the Visitor Access Center and the Northeast Unit of DNPP.

Comment 76-46:
"The DEIS notes on page 3-43 that NPS is the second largest employer in the Denali Borough, and that DNPP visitor-generated expenses for 1989 alone were estimated in excess of $41 million (p. 3-50). The final statement should consider what impact HCCP plumes combined with Healy Unit 1 plumes might have [*sic*] tourism, and thus on jobs and revenue associated with the nearby park."

Response:
The EIS discusses potential aesthetic and visibility impacts to DNPP in Sects. 4.3.1 and 4.3.2. There has never been an indication that plumes from Healy Unit No. 1 have had any impact on tourism.

Comment 76-47:
"The PSD permit application, and the NPS comments thereon, contain significant relevant information on the air quality impact of HCCP. They should be considered and evaluated in this draft statement."

Response:
The results of the air quality and visibility impairment analyses presented in the FEIS reflect the results presented in the PSD permit application. The NPS comments on the draft PSD permit paralleled those on the HCCP DEIS. Therefore, by responding to the HCCP DEIS comments, DOE feels that the issues have been addressed.

Comment 76-48:
"Regarding the PSD increment analysis, the air quality dispersion modeling results for the permitted case in table 5.1.1 (p. 5-5) indicate a 24-hour SO_2 Class I impact of 4.0 $\mu g/m^3$ for the permitted case, whereas the PSD permit for this project indicates a 24-hour impact of 4.8 $\mu g/m^3$. This discrepancy should be investigated further. If further analysis of complete ambient air quality modeling results shows that any Class I increment is exceeded, HCCP will not be in compliance with legal requirements unless the Department of the Interior, as the federal land manager, issues a certification of no adverse impact."

Response:
See responses to Comments 75-2 and 76-16. Results indicate that no Class I increment would be exceeded.

Comment 76-49:
"Specifically, in order for NPS to properly assess the impact of air pollutants on sensitive resources in DNPP, DOE must calculate the total pollutant loading in the park. This is accomplished by performing a National Ambient Air Quality Standard (NAAQS) type of analysis for locations within DNPP. Table 5.1.2 of the DEIS (p. 5-6) does address the NAAQS impacts in Class II areas adjacent to the plant property for SO_2 NO_x, and TSP emissions from Healy Unit 1 and HCCP. This was done by modeling emissions from Unit I and HCCP and then adding them to the monitored ambient pollutant levels. This same type of analysis is needed for the Class I area, DNPP."

Response:
Cumulative air quality impacts to DNPP (a Class I area) resulting from the simultaneous operation of the HCCP and Healy Unit No. 1 were evaluated in Sect. 4.3.2.1 of the DEIS. All total impacts are expected to be less than 25% of the NAAQS. Table 4.3.3 in the FEIS is a new table which has been added to illustrate in more detail that total impacts to DNPP are not anticipated to be major.

Comment 76-50:
"The DEIS (see Table 5.1.1) addresses the Class I PSD increment that will be consumed by HCCP under the permitted case scenario, but does not take into account the cumulative pollutant loading of the new HCCP emissions added to the existing pollution from Healy Unit 1 and the ambient background concentrations. This cumulative total pollutant loading analysis, which is needed to determine whether the cumulative impact would harm DNPP resources, should be performed on the pollutants SO_2, NO_x, and TSP."

Response:
Table 5.2.3 in the FEIS is a new table which has been added so that the EIS includes an analysis of cumulative pollutant loading on DNPP for both the demonstration case and permitted case scenarios in Sects. 4.3.2.1 and 5.2, respectively.

Comment 76-51:
"In addition, the DEIS does not provide a PSD increment analysis for the retrofit case (see pp. 5-8 and 5-9). The increment analysis for the design case (Table 5.1.2) shows that nearly all of the 24 hour Class I increment at DNPP would be consumed (approximately 96%). Because SO_2 emissions under the retrofit case are substantially greater than those under the project demonstration scenario, it is likely that Class I increment violations would occur if HCCP were operated under the retrofit scenario. The DEIS should include such Class I analysis for the retrofit case."

Response:
Air emissions for the retrofit case and permitted case are identical. Therefore, the results for the retrofit case are the same as those for the permitted case in Tables 5.2.1-5.2.4.

Comment 76-52:
"In general, the DEIS fails to compare potential impacts of the possible operational scenarios for HCCP. The DEIS should include a chart which clearly compares the air quality and visibility impacts of the HCCP demonstration to commercial operation, permitted commercial operation, and retrofit commercial operation. Impacts from Unit No. 1 should be included in this chart."

Response:
Tables 5.2.1, 5.2.2, and 5.2.3 in the EIS provide the requested comparisons for air quality impacts. The results for the retrofit case are identical to those for the permitted case given in these tables. Table 5.2.4 displays a side-by-side comparison of PLUVUE I and PLUVUE II results for the HCCP and Unit No. 1 for the permitted case for visibility. Table 4.3.5 depicts the corresponding results for the demonstration case.

Comment 76-53:
"In commenting on earlier EIS drafts evaluating biological effects, NPS has raised concerns regarding the quality of the analyses performed. Similarly, at times, this DEIS includes only those references that support the position that biological resources will not be affected by the proposed emissions. By excluding current references that support the opposite conclusion, DOE, contrary to 'both NEPA and the dictates of basic fairness,' is misrepresenting the body of literature on the subject in order to support its proposal for HCCP. CEQ regulations specifically provide that 'the [impact] statement must be

objectively prepared and not slanted to support the choice of the agency's preferred alternative.' In order to fully and accurately assess potential effects on resources in the park, studies that document adverse effects on biological resources associated with emissions must also be presented and considered."

Response:
The analysis was not slanted to support any position. The CEQ regulations do not require that all potentially related references be cited; they only require that the best science be applied. For the discussion of air pollution effects, the results of the NAPAP reviews and analyses were utilized (Shriner et al. 1990, Sisterson et al. 1990). NAPAP was conducted by eleven U.S. Government Agencies (including the EPA and DOI) and was extensively reviewed by nongovernmental scientists. Other studies have also been incorporated as appropriate to supplement the NAPAP review. The references cited by the DOI are discussed below.

Comment 76-54:
"For example, the discussion of nitrogen fertilization (see page 4-30) does not include studies that identified adverse effects on vegetation associated with increased nitrogen input, including the large body of literature from Europe (e.g., Aber *et al.* 1989, Gundersen and Rasmussen 1988). In addition, other potential effects associated with nitrogen emissions, such as soil nitrogen saturation (e.g., Johnson 1992) and aluminum mobilization (e.g., Richter *et al.* 1992), are not considered. The negative effects of acidic deposition on winter hardening of plants (p. 4-30) are mentioned, but not fully discussed."

Response:
The Aber et al. (1989) paper provides "a formal definition of this concept [nitrogen saturation] and sets forth a series of testable hypotheses regarding the stages of forest ecosystem response to chronic nitrogen deposition." Hence, it was a call for a research program and concludes only that excess nitrogen "may lead to reductions in production and perhaps contribute to forest decline." In a later comment (76-57), the DOI argues that the problem is that the receiving systems are nitrogen limited (the soil data provided by the applicant supports that contention), which suggests that "nitrogen saturation" is not a threat to these systems. The discussion by Aber et al. (1989) of possible effects of nitrogen addition to forests on winter hardiness is based on a review of publications from 1984 which have been superseded by subsequent research results cited in the EIS. The synthesis and conclusions chapter of the Eagar and Adams (1992) volume cited in a later DOI comment concludes that "nitrogen fertilization (via soil) does not have an adverse effect on cold tolerance."

The Johnson (1992) reference addresses the deposition and loss of base cations in forests. It concludes that at only one of 22 IFS sites (the Oak Ridge loblolly site) "would atmospheric deposition play a major role in soil change." The high sulfate and nitrate deposition, high leaching, and high productivity of the Oak Ridge site are not characteristic of DNPP. DNPP is more similar to the Washington sites, where "atmospheric deposition plays a very minor role in soil solution cation leaching."

The Richter et al. (1992) reference addresses the conditions in which atmospheric pollution deposition would lead to increased cation leaching. Their conclusion with respect to aluminum mobilization is as follows: "In acid soils, exchangeable Al^{3+} is

potentially a major leachable cation that responds to increasing ionic strength, provided that Al^{3+} saturates more than 75% of the soil's effective cation exchange sites. Acid soils are a necessary but not sufficient condition for drainage water to be acidic and to contain Al^{3+}. Elevated ionic strength in combination with extreme soil acidity can elevate Al^{3+} within the soil profile and potentially to drainage water." These conditions have been found in areas of susceptible soils exposed to high levels of acid deposition. However, there is no evidence to suggest that these extreme conditions prevail in the DNPP or could be induced there by the HCCP.

The Gundersen and Rasmussen (1988) reference deals with the acidifying effect of nitrification and resulting aluminum leaching as is indicated by the title (*Nitrification, Acidification and Aluminum Release in Forest Soils*). Nitrification is the oxidation of ammonia which releases H^+. Because fossil fuel consumption releases oxidized forms of nitrogen, this is not an issue for the HCCP. Rather, the paper and the issue that it discusses are relevant to terrestrial ecosystems that are fertilized with ammonius fertilizers, subject to ammonia deposition from atmospheric sources, or are naturally high in ammonia (e.g., alder stands).

In summary, none of the references cited by the DOI provide evidence to suggest that the conclusions of the DEIS are incorrect.

Comment 76-55:
"Also, the DEIS does not address the effects of pollutant inhalation on wildlife, and instead 'assumes' that the powerplant would not affect wildlife (p. 4-28). While there may not be a great deal of information about the effects of pollutants on wildlife, there have been studies of laboratory animals which show that adverse effects occur at concentrations below the NAAQS (Newman and Schreiber 1988). There is no reason to believe that wildlife is not equally as sensitive to air pollutants as laboratory animals."

Response:
The statement in the EIS summarized available information about effects of air pollutants on wildlife populations. While it is true that laboratory rodents exhibit reversible respiratory distress at concentrations below the *secondary* NAAQS for SO_2 as described by Newman and Schreiber (1988), the statement in the EIS referred to the primary NAAQS.

Comment 76-56:
"Most disturbing is the DEIS's conclusion that effects on ecological resources from the proposed emissions will be 'minimal' or insignificant (*see e.g.,* pp. 4-28, 4-31, 4-92). These conclusions are not based on a comparison of modeled pollutant concentrations to known sensitivity levels of resources in DNPP, but rather on the lack of that information. NPS must stress the need for objective data concerning effects at DNPP, especially since documented pollutant effects on resources in other areas indicate emissions such as HCCP's could injure DNPP resources."

Response:
It is true that the conclusions of the assessment are not based on "known sensitivity levels of resources in DNPP." No studies of air pollution effects in DNPP have been conducted. The study conducted by the NPS and USGS was sited outside of the DNPP.

In the absence of data specific to the DNPP, the assessors could only base their conclusions on the available information (i.e., the studies around the existing Healy Unit No. 1 and literature values).

Comment 76-57:
"For example, studies on aquatic ecosystems in the western U.S. show that many of these ecosystems are extremely susceptible to acidification. Lakes in the Sierra, Rocky Mountains, and Cascades are, for the most part, of glacial origin and contain the most dilute waters in the country (Charles 1991). These mountainous regions also have thin soil layers with low buffering capacity, and the aquatic ecosystems are subject to acidic episodes associated with snowmelt. While surface water studies have not been performed in DNPP, geological and hydrological characteristics similar to those mentioned above suggest that lakes and streams in the park may be sensitive to acidification. Regarding terrestrial resources, early studies in Barrow showed that nitrogen availability is an important limiting factor for tundra species (Tieszen 1978), and a recent study on the Kenai peninsula linked forest decline to nitrogen emissions (Sullivan *et al.* 1990). Also, studies show that acidic cloudwater affects high elevation coniferous forest (e.g., Mohnon 1992). This may be of particular concern in DNPP, since its most famous attraction, Mt. McKinley, is shrouded by clouds much of the year."

Response:
DOE agrees that high-elevation systems with little buffering capacity are susceptible to acidification, and a statement is made to that effect in the last paragraph of page 4-32 of the DEIS. However, for acidification to occur there must be exposure to acid deposition. As the EIS indicates, the proposed HCCP is not likely to produce appreciable acid deposition in DNPP, and there does not appear to be acidic deposition above background in DNPP to which deposition from the HCCP emissions would be added.

The study by Sullivan et al. (1990) demonstrates forest damage associated with nitrogen emissions on the Kenai Peninsula in Alaska. However, the atmospheric emissions of nitrogen presented in the study are far greater than those predicted for the proposed HCCP. In addition, the nitrogen emissions in the study have been predominately in the form of ammonia and even after recent reductions are still approximately half ammonia. Ammonia and ammonium ions have different phytotoxicities from the nitrogen oxides emitted by power plants and have much higher capacities for soil acidification than nitrogen oxides due not only to NH_4^+ but also to the nitrification process. Although Sullivan et al. (1990) conclude that more studies are needed to determine the cause of the observed forest decline, they indicate that the chlorosis and necrosis observed in their study are "symptoms of NH_x-caused decline." Because of the large differences in nitrogen exposure levels and form, their study does not change the conclusions of the EIS that the predicted levels of NO_x for the HCCP have not been associated with negative effects on forest ecosystems.

The comment about clouds on Mt. McKinley and effects of cloud water on high elevation coniferous forests is unclear. There would need to be substantial contamination of the clouds before effects would occur, as described in the studies summarized by Mohnon (1992).

Comment 76-58:
"Overall, DOE has not adequately addressed the potential effects of emissions from HCCP on soils, water, vegetation, and wildlife in DNPP. Because of documented effects on similar resources in other areas, NPS is concerned that park resources may be at risk. The only way to truly assess the sensitivity of ecological resources in the park is to perform special studies, including ecosystem monitoring, dose-response studies, and deposition and effects modeling. The following studies excluded from the DEIS should be reviewed as examples of the type of studies required for NPS and the public to adequately assess the potential ecological impacts of HCCP at the park: [see this letter, pp. 12-13 for list of references]."

Response:
While the results of such studies would be of interest, they were not available for the EIS. It is DOE's assessment that the requested studies are not required in order to conduct a valid assessment of the type and magnitude of impacts which may occur within DNPP. The EIS was based on available evidence including the study conducted by the USGS and NPS.

Comment 76-59:
"The DEIS still has no discussion of the chemical characteristics of the ice fog, with possible incorporation of the gaseous pollutants into the ice crystals. Even though this issue is not addressed in the appropriate section on page 4-7, later in the document on page 4-94, the authors contend that the emissions from the plant would travel along the top of the ice fog. This odd meteorological phenomena could be investigated now with some sampling of the chemical composition of the ice fog associated with the existing Healy Unit 1 powerplant emissions. There is no basis for the assertion that the chemical constituents of the plume will not be incorporated into the ice fog and possibly come in contact with surface vegetation."

Response:
The emissions from the HCCP would exit the stack 315 ft above the surface of the river and travel in a thin elevated layer with little vertical mixing during the stable atmospheric conditions in which ice fog occurs. Ice fog originates from the ice-free portions of the Nenana River and also has little vertical dispersion above the river because of the stable atmospheric conditions. The ice fog is not expected to mix with the HCCP emissions plume and therefore would not contain any gaseous emissions from the HCCP.

Comment 76-60:
"The DOE 1989 citation on p. 4-9 does not take into account the more recently published information on the relationship of emissions to deposition (see NAPAP State of the Science and Technology documents). The DEIS implies that only coal-fired powerplants contribute to acidic deposition; many other anthropogenic sources can contribute to total pollutant loading and acidic deposition. The DEIS asserts that there should not be 'long-distance' transport of HCCP pollutants, but does not support this assertion with monitoring or modeling data. The statement 'acidic deposition resulting from HCCP air emissions is expected to be minor,' page 4-9 is similarly not supported by any data, modeling, or quantitative analysis."

Response:
The comment is correct that sources other than coal-fired power plants may significantly contribute to acid deposition, and the text has been changed in the EIS. The statements described as unsupported are supported in Sects. 4.1.5.1 and 4.3.2.2, and those sections are clearly referenced in the section discussed in the comment.

Comment 76-61:
"The claim on page 4-78 that it is unlikely that there will be any effects of acid deposition to resources of DNPP based on 'existing data and studies' is unsubstantiated. The DEIS did not analyze existing NPS data on surface waters, deposition, and vegetation in the park. The DEIS has not analyzed the NAPAP data mentioned above, except to say that acidic events are probably caused by other factors (*e.g.*, organics, which are not a big factor in the taiga and tundra). Again, the DEIS refers to the bulk deposition study by ENSR and not the quality-assured, network data collected by the National Atmospheric Deposition Program (NADP). The conclusion that acid deposition would not be a stress to sensitive ecosystems with the increase in emissions can only be confirmed with a research and monitoring program, which includes snow and snowmelt monitoring, dose-response studies, analysis of existing data sets, and consideration of the chemical characteristics of soils and surface waters."

Response:
The NADP results for DNPP are discussed in Sect. 4.3.5. Data provided by the NPS concerning deposition and stream water chemistry have been reviewed and the results are incorporated in Sect. 4.3.5. The conclusion that organic acids along with naturally derived sulfate contribute to low pH precipitation events at background sites is not DOE's but that of Sisterson et al. (1990) which is NAPAP State of Science and Technology Report 6. Organic acids are major components of taiga and tundra ecosystems. The EIS does not conclude that "acid deposition would not be a stress to sensitive ecosystems." It simply concludes that existing information suggests that emissions from the proposed HCCP would not cause detectable effects on DNPP through acid deposition.

Comment 76-62:
"Regarding p. 4-10, it is not particularly important what HCCP would contribute to overall carbon dioxide emissions. An appropriate analysis would discuss the alternatives that would result in no additional carbon dioxide emissions. The objective of a clean coal 'pilot' plant, such as HCCP, would be to encourage the burning of coal in the longer term. The proliferation of this technology would add significantly to the loading of carbon dioxide to the atmosphere."

Response:
See responses to Comments 74-18 and 74-19.

Comment 76-63:
"The DEIS provides additional, although somewhat out-of-date references on p. 4-26, to support its statement that vegetation will not be damaged by sulfur dioxide from the HCCP. Although the DEIS admits that current exposure is within the range that damages some sensitive vegetation, there is no information available on the genotypes of vegetation

that might be affected by these moderately-high levels of sulfur dioxide. Fumigation of native species is the only way to provide data to make this assessment. Therefore, the summary conclusion that 'positive or negative effects should not be large' on page 4-29 cannot be supported."

Response:
In Sect. 4.1.5.1, the analysis of SO_2 effects on vegetation is based on the best information that was available to DOE. The DOI does not indicate what genotype information they desire in the assessment, how it would be used, or how genetic parameters would be used in the assessment. DOE agrees that studies of SO_2 effects on local species could be of interest. When the NPS designed its bioaccumulation ecological monitoring study, DOE's reviewers suggested that the NPS pay more attention to sulfur, but that suggestion was not implemented. The data that was collected by the NPS show no gradient of sulfur accumulation away from Healy Unit No. 1. That study and the earlier study by AIDEA found no signs of vegetation injury near the existing Healy Unit No. 1 power plant. Those data and the literature values form the basis for the analysis in the EIS.

Comment 76-64:
"There is a similar lack of data on the sensitivity of lichen species. During the USGS study only one lichen species was sampled. There are no data to support the statement on page 4-29 that '*lichens in this area are not much more sensitive than those in more* temperate areas.' Only fumigation studies would resolve this issue."

Response:
The data to support the statement quoted in the comment are those gathered by the NPS for the species that they chose as sensitive species for the area. If local species were "much more sensitive," lichens probably would be missing or injured at sites nearest the existing unit. There is no evidence of such distraction or injury near the existing Unit No. 1.

Comment 76-65:
"On the issue of fertilization of soil and vegetation by sulfur and nitrogen oxides, the DEIS still does not address NPS's original point that nitrogen fertilization, especially in harsh environments, is often detrimental to plant species. There is considerable literature on the effects of nitrogen additions to mountain spruce-fir forests in the eastern United States. Information on the detrimental effects of nitrogen deposition on terrestrial ecosystems in Europe is voluminous and totally ignored in this section of the DEIS."

Response:
This issue is addressed in Sect. 4.1.5.1 of the EIS and is elaborated upon in the response to Comment 76-54.

Comment 76-66:
"When attempting to expand the interpretation of the one-time transect survey performed by the U.S. Geological Survey (USGS), the DEIS concludes that based on sampling three vegetation species (a lichen, a moss, and white spruce) that 'the fact that the investigators

were able to find sites with similar vegetation at all distances from Unit No. 1 suggests that if effects have occurred, they are subtle' (p. 4-32). All this really suggests is that these may not have been the 'sensitive species.'"

Response:
The statement in the EIS specifically refers to the similarity of the sampling sites established by the USGS and NPS scientists, not to analytical results for the three sampled species. If all sites had similar vegetation along the transects away from the plant, any effects must be subtle because gross effects would have changed the vegetation in ways that should have been noted by the investigators. As to the sensitivity of the selected species, they were also selected by the NPS and USGS. It cannot be assumed that there are more sensitive species just because the selected species were not shown to be injured. However, assuming that the NPS and USGS characterized the sites well, then they have set an upper bound for effects on the plant community as a whole.

Comment 76-67:
"Furthermore, NPS comments on the USGS Bioaccumulation Study have not been addressed. NPS regards the study as inconclusive in the determination and prediction of biological impacts and the prediction of 'loading' of trace elements and other pollutants in the DNPP ecosystem. The study was not designed to address the existing potential effects of acid deposition on terrestrial and aquatic resources, yet the DEIS used the results of the study to support their contention that acid deposition is not a problem."

Response:
DOE agrees that the NPS/USGS study was not well designed to support the EIS. However, DOE extracted useful information from portions of the study for use in the EIS.

Comment 76-68:
"It is curious that on p. 4-32 the DEIS cites results of a non-quality assured, one-year data set on bulk deposition (which includes both wet deposition and the alkaline dust that would tend to neutralize the inputs and lead to a high pH) to support its conclusion that acidic deposition does not occur in the vicinity of the proposed site of the HCCP. Later in the document, the DEIS does cite the multi-year National Atmospheric Deposition Program (NADP) wet deposition data set is cited that shows instances of acidic episodes in the vicinity of DNPP. But the claim is made that a wet deposition pH of 3.9 is representative of 'background' sites, with no mention of the type of 'background' region being considered. This assertion is false. Regions located away from the influence of marine aerosols do not typically have rain pH below about 5.5, unless there are anthropogenic sources affecting the chemistry."

Response:
The bulk deposition data are cited because they are relevant to deposition that is occurring in the vicinity of the Healy site. The EIS discusses the role of dust in determining those pHs. The single pH 3.9 event was judged to be consistent with background based on the NAPAP SOST-6 report on deposition (Sullivan et al. 1990). "Background" is defined by NAPAP. The DOI provides no reference in its comment to refute the NAPAP conclusions.

Comment 76-69:
"There was no attempt to address the NPS comments relative to the incorporation of pollutants into the snowpack and then pulsed release of pollutants during snowmelt. This 'episodic acidification' of surface waters has been monitored to areas where annual average precipitation pH is in the range of 5-6 (Rockies Cascades, Sierra Nevada). The DEIS would need to document headwater lake and stream chemical composition, analyze the chemical composition of rain, storms and snowmelt, and then perform an analysis of the potential for episode acidification of these waters, before its conclusions could be supported."

Response:
Although "episodic acidification" of surface waters by pulsed release of pollutants during snowmelt conceivably has occurred downwind of large industrialized areas, the potential for measurable acidification of surface waters by release of pollutants generated by the HCCP during snowmelt appears to be extremely low because of (1) the much smaller quantities of pollutants expected to be released by the HCCP; (2) the considerably greater flows generally prevailing during snowmelt; and (3) the naturally high pH levels and buffering capacities of area surface waters. Acidic deposition from operation of the proposed project is discussed in Sect. 4.1.3.2.

Comment 76-70:
"The DEIS fails to make the distinction between sulfur in gaseous and particulate form and sulfate in wet deposition. On p. 4-33, the DEIS contends that the relatively low concentrations of sulfur in lichen and mosses confirms the lack of soil acidification due to sulfate and hydrogen ion. One has very little to do with the other. Sulfate in precipitation is a mobile anion which moves through the soil, displacing basic cations. The only way to obtain information about sulfate absorption in soils is to perform a soil lysimeter study to determine the movement of chemical species through the soil. Analysis of surface soil and lichen chemistry will not provide that information."

Response:
While it is true that the kinetics of sulfur dioxide and sulfate are different, the passage in the EIS cited in the comment does not depend on that distinction. When terrestrial ecosystems are exposed to significant deposition of either form of sulfur, sulfur concentrations increase in plants and litter. That was not observed in the NPS/USGS study. Data used in the EIS were collected by the NPS.

Comment 76-71:
"The impacts to water quality will require further discussion and description. In particular, the description of potential impacts on the water quality of the Nenana River are inadequate. The water quality standards of the Nenana River listed in the Sect. 3.3.2 should be Fresh Water Chronic Criteria for protection of freshwater aquatic life, wherever these standards are more stringent than those for drinking water. Toxicity Characteristic Leaching Procedure thresholds listed on page 4-20 are applicable only to landfills, and should not be used in reference to waters discharged from the coal pile runoff pond."

Response:
The level and scope of analysis of water quality impacts is commensurate with the proposed project's potential for and credible magnitude of adverse effects. The statement that water quality standards of the Nenana River should be freshwater chronic criteria for protection of aquatic life where these are the most stringent is correct. Item 8 of Table 3.3.1 is, in fact, consistent with this statement. With regard to the listing of TCLP limits and results, the comment is correct that the limits apply to landfills, and, by implication, do not relate directly to levels of trace elements in the coal, ash, and slag leachate and are therefore included in the discussion of effects on water quality.

Comment 76-72:
"State chronic water quality criteria for all surface water discharges should be met outside the established mixing zone unless those surface waters naturally exceed the standards. Therefore, additional modelling is needed to estimate total recoverable metal concentrations in micrograms per liter ($\mu g/L$) at various downstream locations within and at the edge of the mixing zone. Data should be presented based on actual expected dilutions using data with detection limits lower than chronic criteria for protecting fish and wildlife. Moreover, modelling should include organics, including polycyclic aromatic hydrocarbons, a known component of coal and coal ash (Neff 1979). The concentrations of ammonia and salts should also be addressed. Monitoring should begin prior to project construction to establish a more accurate baseline for water quality of the Nenana River downstream of the proposed facility. The DEIS should also contain information on the amount and nature of solids that would be deposited in the Nenana River, and on their potential to alter drainage or erosion considerably from the glacial sediments common in the river. An analysis of the transport of these solids is needed, especially near the facility and the adjacent access road."

Response:
As discussed in Sects. 2.1.7.2 and 4.1.3.2, boiler blowdown, demineralizer regenerant wastewater, and floor and equipment wastewaters (including pump seal water) comprise the principal low-volume wastewaters which may be discharged to the river. Most if not all of some of these wastewaters (e.g., boiler blowdown and demineralizer regenerant wastewater) would be consumed in other operations at the site and therefore either would not be discharged to the river at all, or only on an intermittent basis in relatively small quantities. Total low-volume effluent to the Nenana River is expected to be about 75 gpm under normal operating conditions and 102 gpm under peak conditions. This represents approximately 0.005% to 0.007% of the river's average flow (dilution ratio of 21,000-15,400 : 1).

The wastewater stream discharge concentrations would be less than the chronic limits at the discharge to the once-through cooling system of the HCCP. Concentrations would be further diluted as the wastewater of the once-through cooling system discharges to the Nenana River. Therefore, there would not be a need to monitor the effluent parameters in a mixing zone in the river. Instead, the parameters of concern would be monitored in the wastewater stream as it discharges to the once-through cooling system.

Except for temporary increases in suspended solids from storm water runoff and sedimentation from construction, the mobilization of solids and their sedimentation by the proposed HCCP would be very low and have almost no effect on suspended solid burden

and sedimentation in the Nenana River. The low-volume wastes that may contain relatively high concentrations of suspended solids would be treated to remove most suspended solids prior to discharge in accordance with an NPDES permit.

Comment 76-73:
"The potential exists for significant fish and wildlife impacts in the immediate areas of the project and DNPP if the existing Unit 1 and the Healy Clean Coal Project operate below predicted performance levels. This scenario is briefly discussed on page 5-10 but needs to be expanded to include sulfur dioxide (SO_2) and particulate matter (PM) emissions. DOE should prepare more extensive case studies in Sect. 5 and the associated contingency plans to offset the potential impacts to fish and wildlife because the potential impacts on fish and wildlife and related resources are also significant if the experiment fails."

Response:
The atmospheric emissions in the retrofit case are assumed to be the same as in the permitted case and in the no-action case with construction of a conventional power plant at the Healy site. Those emissions are discussed in Sect. 5 and the estimated maximum concentrations are presented in Table 5.2.1. A discussion of the ecological impacts of these exposure levels has been added to the EIS.

Comment 76-74:
"Metal cleaning wastes as noted on Page 2-25 may qualify as Resource Conservation and Recovery Act wastes and should be more fully described. The potential treatment of these wastes should also be described in detail."

Response:
Although the exact composition of the metal cleaning wastes to be used is not yet determined, it is known that they would be generated infrequently and in relatively small quantities during planned shutdown periods. They would also be collected in appropriate containers and transported off-site by a contractor for disposal at an approved landfill in accordance with federal, state, and local regulations according to the HCCP Hazardous Waste Disposal Plan. If the metal cleaning wastes qualify as RCRA wastes, they would be packaged and transported accordingly.

Comment 76-75:
"The potential impacts of transporting hazardous wastes and materials to the facility over the life of the project should be discussed in Sect. 4.1.10."

Response:
Caustic soda and sulfuric acid would be routinely trucked to the HCCP. If these products were shipped together and an accidental spill were to occur, one of these products could be used to neutralize the other. Although the pH of surface water would be buffered, the water would be relatively enriched in Na_2SO_4. This suggestion is for a first-phase rapid response to a hazardous material spill. The spill then would be cleaned up by a soil decontamination crew.

Comment 76-76:
"This DEIS spends only two and one half pages discussing measures to mitigate impacts from HCCP as a commercial operation and as a demonstration project in Sect. 4.4 and 5.4. The final statement notes many of the suggested mitigation measures are related to socioeconomic issues on page 4-94. None of these socioeconomic mitigation measures, however, addresses HCCP's impact on DNPP."

Response:
See response to Comment 76-1 for a discussion of mitigation measures which would be implemented by GVEA to reduce emissions from the existing Healy Unit No. 1.

As stated in Sect. 4.3.8, DOE believes that there would be no socioeconomic impacts on DNPP from the HCCP; therefore, DOE believes that no mitigation measures are required. As suggested by NPS in a review of the Preliminary DEIS (PDEIS), one socioeconomic issue is the "potential drop in tourism due to potential degradation of visibility." With a predicted maximum of 24 h/year of a barely perceptible plume (during simultaneous operation of Healy Unit No. 1 and the HCCP for the permitted case) occurring mostly in the winter months, it is difficult to conceive of any impacts on tourism by visibility degradation.

Comment 76-77:
"We understand Healy Unit No. 1 is being upgraded and refurbished to extend its operating life to 2015 and beyond. Therefore, one significant mitigation measure that should be thoroughly evaluated in the final statement would be to provide best available retrofit technology (BART) to lower the emissions from Unit 1. We believe the omission of this alternative is significant and strengthens our recommendation for issuing a revised draft statement. Shutdown of Unit No. 1 should also be evaluated. Further, the revised DEIS should discuss whether emissions from Unit 1 can be ducted to the spray-dryer-absorber of Unit 2."

Response:
See response to Comment 76-1 for a discussion of measures that GVEA would take to mitigate the emissions of Healy Unit No. 1 in order to offset emissions expected from the HCCP. Retrofitting Healy Unit No. 1 with low NO_x burners was discussed in Sect. 5.4 of the DEIS. Having addressed this issue in the DEIS, DOE believes that it is not necessary to reissue a DEIS.

Although it is possible to duct the flue gas flow from Unit No. 1 to the HCCP Spray Dryer Absorber (SDA) it would not be advisable to do so for the following reasons:

1. The characteristics of the flue gas constituents from Unit No. 1 and the HCCP are drastically different due to the slagging combustor technology. Only about 20–30% of the ash generated in the HCCP is fly ash, whereas 70–80% of the Unit No. 1 ash is fly ash entering the flue gas stream. The range of operating conditions imposed on the HCCP SDA over the operating load range of the combined units would therefore be far more complex than currently designed for the HCCP. It is likely that the SDA would not perform satisfactorily over the entire combined unit operating range.

2. Any failure in the SDA causing its removal from service for repairs would cause a loss of the entire 75-MW two-unit power plant for the time of repair. As currently designed, failure of the SDA would cause only the loss of the HCCP.

3. It would be very difficult if not impossible to design a reliable furnace draft control system consisting of one forced-draft fan per unit, one furnace per unit, one common SDA, and one induced-draft fan per unit. The integration of the two-unit combustion control systems with the furnace draft control system and the development of open flow path and other safety interlocks would be so complex that unit availability would be compromised.

4. There would be a significant cost increase to accommodate combining the Unit No. 1 and HCCP flue gas systems.

Comment 76-78:
"In addition, none of the mitigation measures is related to the environmental and particular AQRV impacts of HCCP on DNPP, with the possible exception of the use of sprinkler trucks, as needed, during construction to spray roads and construction areas to minimize fugitive dust (page 4-95). Specific mitigation measures should include: development of procedures, materials, and personnel training to respond to hazardous materials spills; wetland restoration activities where needed; and long-term studies to monitor visibility and biological effects. Courts have held environmental impact statements inadequate for failure to adequately address mitigation measures."

Response:
The analysis presented in the DEIS indicates that there would be no impacts on the environmental resources of DNPP, other than predicted visibility impacts, and concludes that no mitigation measures for DNPP concerning the above issues are required. Hazardous materials from operation of the HCCP would not be handled in DNPP. Wetlands in DNPP would not be disturbed as a result of the HCCP. See response to Comment 76-1 and Sect. 2.1.3.2 for information regarding the mitigation of a potential AQRV impacts from the HCCP.

Comment 76-79:
"The following stipulations for environmental protection should be incorporated into the DOE's grant:

1. lining (either clay or synthetic) of the coal pile runoff/ash pond to prevent seepage of heavy metals and organics into the highly permeable soils of the site;

2. enclosure of coal conveyor systems to reduce dust;

3. diversion of surface drainage, including snow melt and uphill runoff, around the storage and landfill areas. Snow fences may also help reduce precipitation buildup within the storage site; and

4. a plan to rehabilitate disturbed areas as soon as revegetation is a viable option. The plan should include stockpiling topsoil, fertilization, seeding with native species, and monitoring revegetation success."

Response:
The existing ash pond, constructed by GVEA for ash disposal in 1992, would be the coal pile runoff/ash pond. It does not have a surface water discharge, so it does not require an NPDES permit. However, it is operated under an Alaska Waste Water Disposal Permit, which requires monitoring of heavy metals. Analytical results have not indicated that the pond needs to be lined.

The existing coal conveyer system of Unit No. 1 would continue to be operated to convey coal from the coal yard to the HCCP and Unit No. 1. This system is enclosed.

The diversion of surface drainage, including uphill and snowmelt runoff, around the coal pile and the fill areas is included in the Storm Water Runoff Pollution Prevention Plan for the NPDES permit of the combined HCCP and Unit No. 1 power plant site. The PSD permit has requirements for the installation of a wind fence.

It is the intent of AIDEA and GVEA to restore the disturbed areas as soon as revegetation is a viable option. Therefore, as part of the specifications, the General Construction Contractor would be required to prepare the surface of the disturbed areas of the construction site, fertilize, and reseed to native grass species. Native pioneering trees and shrubs would also be allowed to reestablish on these areas. GVEA would maintain the area for the life of the power plant.

Comment 76-80:
"The DEIS indicates a Section 404 Corps of Engineers permit should be required for project implementation. Our U.S. Fish and Wildlife Service (Service) advises that it would not object to the issuance of such a permit if the mitigation measures outlined in the DEIS and the measures outlined within this response are included in the final project plans and specifications."

Response:
The U.S. Army Corps of Engineers, as a cooperating agency in the preparation of the EIS, has assisted DOE in the fulfillment of the requirements for a Section 404 permit; the Public Notice is incorporated in the EIS (Appendix H). Decisions regarding compliance with Section 404(b)(1) are the sole responsibility of the Corps of Engineers. In addition, DOE consulted with the U.S. Fish and Wildlife Service under Sect. 7 of the Endangered Species Act of 1973 as documented in Sect. 7.1.4 and Appendix C of the EIS.

Comment 76-81:
"Page 3-7, Section 3.1.1.1:
One error that is consistently made throughout the document is the use of the name McKinley Park to identify the town located at the east entrance of Denali National Park and Preserve. The post office name for McKinley Park was changed in 1981 to reflect the Alaska National Interest Lands Conservation Act's enlargement of the park by four million acres and its renaming to Denali National Park and Preserve."

Response:
The EIS has been revised to indicate that the correct name of the town is Denali Park.

Comment 76-82:
"Page 3-7, Section 3.1.1.2:
The following statement should be expanded to read, 'Automobile traffic is generally restricted to the paved portion of the road from the DNPP entrance to Savage River (approximately 15 miles), with a limited number of private vehicles allowed access to campgrounds beyond *and private land in the Kantishna Hills.*'"

Response:
Section 3.1.1.2 has been revised to reflect this comment.

Comment 76-83:
"The following statement should be revised to read, 'The remainder of tourist access is provided by NPS and concessionaire buses that travel round trip to *the park interior.*'"

Response:
Section 3.1.1.2 has been revised to reflect this comment.

Comment 76-84:
"Any reference to the concessionaire buses should indicate that they are tour buses (and not shuttle buses). Only a few buses actually travel round-trip to Wonder Lake."

Response:
Section 3.1.1.2 has been revised to reflect this comment.

Comment 76-85:
"The following statement should be revised to read, 'Once beyond the intensive development in the area of the DNPP Headquarters, virtually the only *human-made* features are the Denali Park Road, five campgrounds along the road, *Toklat Road Camp,* the Eielson Visitor Center, *several ranger stations, three rest stops, and development in the Kantishna area.*'"

Response:
Section 3.1.1.2 has been revised to reflect this comment.

Comment 76-86:
"Page 3-8, Section 3.1.2.2:
The following statement should be revised to read, 'Modifications have been related primarily to provisions for transportation *and utility lines* (i.e., the George Park's Highway, the Alaska Railroad, *and the Anchorage-Fairbanks Transmission Intertie*) and to the intensive commercial development near the DNPP entrance.'"

Response:
Section 3.1.2.2 has been revised to reflect this comment.

Comment 76-87:
"Page 3-9, Section 3.1.2.3:
The Tanana Basin Area Plan for State Lands was updated in 1991. The citation date for the Alaska Department of Natural Resources should be revised to *1991*."

Response:
Section 3.1.2.3 has been revised to reflect this comment.

Comment 76-88:
"Page 3-27, Section 3.3.1:
The presentation of Nenana River low flow information should be further clarified to minimize confusion and ensure that the appropriate information is used in modeling the thermal effects of discharge waters. What is the proper interpretation of the number 190 cfs? Does 190 cfs represent a single event low flow over a period of 30 years or is it the mean low for those 30 years? If 190 cfs actually represents the mean low for 30 years, what does the number 500 cfs represent?"

Response:
Section 3.3.1 has been rewritten to indicate that the minimum flow of record is 190 cfs and the maximum flow of record is 46,800 cfs for the 29-year period of record from 1951 through 1979. A flow rate of 500 cfs was used in the thermal plume modeling as a representative low flow rate during the winter. The discussion of modeling has been moved to Sect. 4.1.3.2.

Comment 76-89:
"Page 3-39, Section 3.5.1.2:
The following statement should be revised to read, 'DNPP contains large areas of natural vegetation disturbed only by a few roads, a railroad line, visitor facilities, *placer and lode* mined areas, and NPS operations (*borrow pits*, equipment storage, etc.).'"

Response:
The suggested changes have been made in the EIS.

Comment 76-90:
"Page 3-41, Section 3.5.3.2:
The U.S. Fish and Wildlife Service should be consulted regarding the two listed peregrine falcon species that are of concern within the DNPP. These species should be identified in the DEIS."

Response:
The two peregrine falcon subspecies are listed as potentially occurring in the area in the section prior to the one cited in the comment. The consultation with the FWS is also cited in that section and reproduced in Appendix C. Both sections refer to species

occurring in the region including both the site vicinity and the DNPP. The two sections have been merged into a single section in the FEIS (Sect. 3.5.3).

Comment 76-91:
"The statement that the Chukch primrose (*Primula tschuktschorum*) occurs in Denali National Park and Preserve is not correct. Another primrose, *Primula eximia*, is present, but is not a listed species."

Response:
The listing has been deleted in the EIS.

Comment 76-92:
"The use of the common name 'California dandelion' should be changed to 'Flesh-colored dandelion.'"

Response:
The common name has been changed in the EIS to "Flesh-colored dandelion."

Comment 76-93:
"Page 3-49, Section 3.8.5:
The following statement should be revised to read, 'Police protection in the Denali Borough is provided by *two* Alaska state troopers, one stationed in Cantwell and the other in Nenana.' The trooper position in Healy was recently transferred to Fairbanks."

Response:
In a telephone interview on March 22, 1993, First Sergeant Corkill of the Fairbanks office of the Alaska State Troopers informed ORNL that the Denali Borough is patrolled by two troopers, one stationed at Cantwell and the other at Nenana. The EIS text has been revised to reflect this updated information.

Comment 76-94:
"Page 4-26 and 4-27, Section 4.1.5.1:
The discussion regarding the disturbance of terrestrial resources focuses only on the powerplant. Other sections of the document acknowledge that additional facilities (housing, landfill, services buildings) will be built as a result of the construction and operation of the powerplant. The impacts associated with all aspects of project development should be addressed."

Response:
DOE believes that the EIS thoroughly addresses potential impacts to terrestrial resources. Potential impacts resulting from related activities not evaluated in the EIS are expected to be negligible.

Comment 76-95:
"Discussion is provided regarding concerns about human-bear interactions. We recommend that project planning consider the use of bear-resistant litter containers to minimize the potential for attracting bears to the project site."

Response:
Comment noted.

Comment 76-96:
"Page 4-30, Section 4.1.5.1:
It is stated that 'some small and localized decrease in growth of sensitive plant species' could occur. This statement should be clarified. What is the basis for coming to the conclusion that this effect will be small and localized?"

Response:
The effects are estimated to be small because the predicted maximum concentrations have been associated with small effects on the growth of sensitive species in published studies. The effects are estimated to be localized because concentrations sufficient to reduce growth of sensitive species are predicted to occur only in the area of maximum concentration near the proposed site.

Comment 76-97:
"Page 4-37, Section 4.1.6:
In Appendix H, the Corps of Engineers public notice for application for a permit for the proposed project indicates that the potential disturbance of 45 acres of wetlands. This information should be reflected in the discussion of wetland impacts in Table 2.2.2 and in Sect. 4.1.6."

Response:
As stated in the discussion of wetlands in Sect. 4.1.6 of the EIS, the proposed project would not intrude on wetlands of the area, although the site itself probably contained wetlands prior to past clearing and grading for the existing Healy Unit No. 1. A slight possibility does exist that one or two acres of existing wetland would be used as a temporary construction laydown area.

Comment 76-98:
"The DEIS states that 'the area would quickly revert to wetlands following the completion of construction.' The National Park Service's experience with wetland restoration indicates that structural restoration is relatively easy in most cases, but functional restoration is not readily achieved. Additional information should be provided to substantiate the statement. Also, the applicant will need to replace the value, function, and area of the destroyed wetlands, in accordance with Section 404(b)(1) of the Clean Water Act."

Response:
The DEIS statement in Sect. 4.1.6 that disturbed areas "would quickly revert to wetlands" has been revised to read: "In this unlikely event, the disturbed area eventually may revert to wetland if existing hydrologic features are maintained or restored."

The major function of the existing wetlands of the proposed laydown/storage area is hydrologic. There is no surface water which stands and very little vegetation to support wildlife habitat. The surface of the undisturbed areas has been shaped by the glacial materials of Healy Creek. These materials have a hydraulic gradient greater than 1. Therefore, minor disturbance of the surface 2 to 4 feet during leveling would not cause much disturbance to the hydrologic function of the wetlands. Loss of the function of the wetlands would be less than 10%.

Comment 76-99:
"Pages 4-49 to 4-51, Section 4.1.8.5:
The potential impacts to terrestrial and aquatic resources resulting from the development of project-related public services should be addressed."

Response:
DOE believes that the EIS thoroughly addresses potential impacts to terrestrial and aquatic resources. Potential impacts resulting from related activities not evaluated in the EIS are expected to be negligible.

Comment 76-100:
"Page 4-53, Section 4.1.8.6:
The potential impacts associated with project-induced increased recreation demand should be addressed."

Response:
Potential impacts associated with project-induced increased recreation demand are expected to be negligible.

Comment 76-101:
"Page 4-92, Section 4.3.3:
The DEIS needs to clarify the discussion of acid deposition. The statement appears to contradict the discussion in Sect. 4.1.5.1 (page 4-32) that 'local ecosystems, including small high-altitude watersheds with little soil development, could be sensitive to acidification.'"

Response:
The discussion in Sect. 4.1.5.1 continues to state that it seems unlikely that the proposed HCCP would cause substantial effects through its contribution to acid deposition, given the relatively high values of mean and minimum pH compared with regions where acid deposition has caused ecological effects on aquatic communities and forests.

Comment 76-102:
"Page 4-92, Section 4.3.6:
The DEIS should consider the potential for hazardous materials spills to affect floodplains and wetlands."

Response:
Hazardous materials spills at the HCCP are not expected to affect floodplains and wetlands within DNPP. The probability of an accidental release occurring adjacent to DNPP while transporting hazardous materials to or from the HCCP is remote. A Hazardous Material Handling Plan would be implemented by the HCCP and would be required of all carriers of hazardous materials to or from the site.

Comment 76-103:
"Pages 4-93 to 4-94, Section 4.3.13:
The discussion should be revised, as appropriate, based on review comments about previous sections."

Response:
The EIS has been revised to elaborate on NPS concerns.

Comment 76-104:
"Pages 8-1 through 8-8, Section 8:
The reference list should be revised. It appears to be incomplete when compared to the citations provided in the text."

Response:
The reference list in the EIS has been revised.

Comment 76-105:
"The Tanana Basin Area Plan for State Lands was updated in 1991. The citation date for the Alaska Department of Natural Resources should be revised to *1991*."

Response:
The citation date has been revised to 1991.

Comment 76-106:
"*Ice Fog Analysis*: There should be monitoring of the chemical composition and the frequency of ice fog and rime ice deposition to vegetation at the existing site to determine the loading to the foliage. There should be modeling done to determine the dissolution of additional nitrogen, sulfur, and acids in the ice fog and how that will affect vegetation."

Response:
See response to Comment 76-59.

Comment 76-107:
"*Cumulative Deposition Effects on Vegetation*: There should be a monitoring program set up to determine the wet and dry deposition of acids, nitrogen, and metals in the vicinity of the plant. These loads, plus the projected loads from the new source, would be used as the basis for controlled fumigation experiments to determine the effects of these stresses on lichens and tree species."

Response:
Comment noted. Supplemental monitoring would be carried out, but the scope has not been defined.

Comment 76-108:
"*Metals Accumulation in Sediments*: Sediment cores from freshwaters (lakes, streams, rivers, ponds) adjacent to the powerplant and in the DNPP should be collected and analyzed for trace metals to determine the previous loading to the aquatic environment and the potential for accumulation of toxic levels of these metals in the sediments. Biological sampling of invertebrates could be done in tandem to determine bioaccumulation by biota in the sediments."

Response:
Seasonal scouring of sediments would likely prevent build-up of the expected low quantities of metals that could be discharged through the HCCP effluent outfalls. Should NPDES-mandated effluent monitoring show higher than expected concentrations of metals in effluents, then a surface water, sediment, and biota sampling program may be appropriate. Metal input to lakes from operation of the HCCP should be negligible.

Comment 76-109:
"*Assessment of Surface Waters*: Available data on the seasonal chemistry of small lakes and streams in DNPP should be collected and analyzed to determine the susceptibility of these systems to nitrogen enrichment and acidic deposition. This data base could then form the basis for the design of a synoptic survey of lake and streams waters, particularly focusing on the ANC and nitrogen concentrations in these waters."

Response:
See responses to Comments 76-69 and 76-71, and discussions of acid deposition in Sects. 4.1.2.2, 4.1.5.1, and 4.3.2.2 of the EIS. Also note that due to local topography and prevailing winds, most of the expected minor amounts of acid deposition resulting from operation of the HCCP would not occur in DNPP.

Comment 76-110:
"*SO_x Fumigation of Lichen Species*: It appears from the DEIS analysis that current levels of sulfur dioxide may be reaching the threshold for damage to native lichen species. These species should be subjected to controlled chamber fumigation studies with gaseous sulfur dioxide at levels expected with addition of the HCCP."

Response:
Studies of SO_2 effects were recommended to the DOI but rejected. In the absence of such studies, the literature and data that the NPS collected were used for the assessment. The presence of the highly sensitive species of lichen, *Usnea*, at the existing power plant site is reliable documentation that existing SO_2 levels are likely not contributing to damage to other native lichen species.

Comment 76-111:
"*Snowmelt Effects on Surface Waters*: In areas where the lake and stream ANCs are low, there should be a seasonal monitoring program set up to sample the snowpack at maximum accumulation to determine the chemical load. The early snowmelt runoff season would see researchers sampling snowpack, runoff, and surface waters at regular intervals (under the ice on a weekly schedule) to determine if acidic pulses are currently affecting surface waters. Models could be used to estimate the additional load to the pack resulting from the proposed powerplant and how that would affect the severity of the snowmelt acid pulse."

Response:
See responses to Comments 76-69 and 76-71, and discussions of acid deposition in Sects. 4.1.2.2, 4.1.5.1, and 4.3.2.2 of the EIS. Also note that due to local topography and prevailing winds, most of the expected minor amounts of acid deposition resulting from operation of the HCCP would not occur in DNPP.

Comment 76-112:
"*Seasonal Use of the Proposed HCCP Site by Wildlife*: An analysis should be made of the use of this area by such species as lynx, moose, and bear. Then, an assessment should be made of the disruption construction and operation would have on populations that spend part of the year in DNPP."

Response:
As discussed in the EIS, the proposed site is already in use as a power plant site. Therefore, it is not credible that disturbance of wildlife by construction and operation of the HCCP would appreciably affect wildlife populations that spend part of the year in DNPP.

Comment 76-113:
"*Particulate Dispersion and Bioaccumulation Monitoring*: DOI recommends a monitoring program, beginning prior to construction and continuing for five years following plant start-up, would be appropriate to monitor airborne particulate dispersion and bioaccumulation."

Response:
Comment noted. Compliance and supplemental monitoring would be carried out, but the scope has not been defined.

Sandra Kogl/George Wagner
PO Box 1
Denali Park AK 99755

Letter No. 77

Reproduced from copy submitted

January 18, 1993

Dr. Earl W. Evans
U.S. Department of Energy
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, PA 15236

Dear Dr. Evans:

We are in opposition to the proposed Healy Clean Coal Project

This project is not needed in interior Alaska and is a waste of tax dollars. This locale already has one of the more clean burning coal resources in the country. 77-1

With serious air pollution occurring from coal burning power plants in many major U.S. population centers, why isn't this money being put to better use in those areas to solve some real problems? 77-2

The proposed construction project and operation of this power plant will provide short term and short-sighted benefits to a relatively few people and perpetuate the upward spiral of energy consumption rather than conservation. An alternative power project, tapping into the incessant winds in the Healy Tri-Valley area would far more appropriate. 77-3

Sincerely,

George Wagner
Sandra Kogl

RECEIVED
1993 JAN 22 PM 1:40

Letter No. 77
Sandra Kogl and George Wagner, P.O. Box 1, Denali Park, AK 99755

Comment 77-1:
"We are in opposition to the proposed Healy Clean Coal Project. This project is not needed in interior Alaska and is a waste of tax dollars. This locale already has one of the more clean burning coal resources in the country."

Response:
See responses to Comments 1-16, 35-2, and 76-12.

Comment 77-2:
"With serious air pollution occurring from coal burning power plants in many major U.S. population centers, why isn't this money being put to better use in those areas to solve some real problems?"

Response:
The objective of the HCCP is to demonstrate a clean burning technology that may be used commercially nationwide and would help alleviate pollution problems from coal utilization. See response to Comment 45-5.

Comment 77-3:
"The proposed construction project and operation of this power plant will provide short term and short-sighted benefits to a relatively few people and perpetuate the upward spiral of energy consumption rather than conservation. An alternative power project, tapping into the incessant winds in the Healy Tri-Valley area would [be] far more appropriate."

Response:
Wind power is beyond the scope of this EIS because the purpose of the project is to demonstrate clean coal technologies. Wind power is being developed through other programs in DOE. See response to Comment 1-2.

LIVENGOOD/TOLOVANA MINING DISTRICT
P.O. Box 73069
Fairbanks, Ak 99707
January 18, 1993

Dr. Earl W. Evans
Environmental Coordinator, HCCP
Mail Stop 920L
Pittsburgh Energy Technology Center
U.S. Department of Energy
P.O. Box 10940
Pittsburgh, PA 15236

RE: HCCP Draft EIS

Dear Mr. Evans;

The Livengood/Tolovana Mining District would like to compliment the Department of Energy for looking forward in an attempt to develop clean energy. It appears to us that the Healy Clean Coal Project will be one of the cleanest coal plants in the world. While it is small in comparison with other power plants, it will still generate important economic benefits for Alaska.

The State of Alaska has supported this project, through matching funds, not only because of the importance of this project to Alaska, but also because clean and competitively priced power is fundamental to maintaining a strong America.

During the 1992-93 winter, the Fairbanks area has experienced several losses of power, due primarily to failure of the intertie. This project will reduce the number of power outages and interruptions; thus benefiting the greater Fairbanks area. Additionally, it will create jobs for Alaska.

We understand that the successful demonstration of the HCCP will have national and international environmental benefits. The new technology can be used to retrofit existing power plants at a much lower cost than to build new power plants. Additionally, successful completion of the project has the potential to overcome the constraints of conventional combustion technologies and allow the use of a lower energy Alaskan coal without resulting in a reduction in boiler energy output.

Again, we commend the Department of Energy for proposing this very beneficial project, and support the DEIS.

Sincerely yours,

Rose Rybachek

552

Rose Rybachek, President

Letter No. 78

Rose Rybachek, President, Livengood/Tolovana Mining District, P.O. Box 73069, Fairbanks, AK 99707

Comments noted.

United States Department of Agriculture | Rural Electrification Administration | Washington D.C. 20250

Letter No. 79

Reproduced from copy submitted

JAN 28 1993

Dr. Earl W. Evans
Environmental Coordinator
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, Pennsylvania 15236

Dear Dr. Evans:

We have received and reviewed the Draft Environmental Impact Statement (DEIS) concerning the Healy Clean Coal Project. The DEIS review was done in compliance with the National Environmental Policy Act in accordance with the Council on Environmental Quality regulations.

We believe the report adequately covers the potential impacts to air and water quality, floodplains, wetlands, threatened and endangered species, cultural and historic properties, effect on the health of humans and animals and a variety of other environmental concerns with respect to the proposed project.

We have no objections to the project as proposed. Should you have any questions or if this office can be of further assistance to you, please contact Mr. Nurul Islam at (202) 720-1414.

Sincerely,

Merle J. Beachy

MERLE J. BEACHY
Chief, Northwest Engineering Branch
Northern Regional Division

Letter No. 79

Merle J. Beachy, Chief, Northwest Engineering Branch, Northern Regional Division, United States Department of Agriculture, Washington, DC 20250

Comments noted.

Letter No. 80

Reproduced from copy submitted

National Parks and Conservation Association
PO Box 202045
Anchorage, AK 99520
January 19, 1993

RECEIVED
1993 JAN 26 AM 10:40

Dr. Earl Evans, Environmental Coordinator
Healy Clean Coal Project
PO Box 10940, MS-920-L
Pittsburgh Energy Technology Center
Pittsburgh, PA 15236

Dear Dr. Evans,

I am writing on behalf of the National Parks and Conservation Association (NPCA), the only national non-profit citizens organization that focuses on park concerns. Our 300,000 members (including over 2,300 in Alaska) promote the protection, preservation and public understanding of our nation's National Park System through diverse activities. We appreciate this opportunity to comment and appreciate the extension of the comment deadline.

The Healy Clean Coal demonstration project is ill-advised and its power is not needed. The resource values, including strict protection of air quality, of Denali National Park and Preserve are of critical importance. Substantive comments regarding this proposed project were submitted on NPCA's behalf by Trustees for Alaska. 80-1 80-2

The Draft Environmental Impact Statement (DEIS) is deficit. The DEIS fails to examine the possibility of retro-fitting Healy Unit #1 or some other facility to avoid environmental harms while still gaining information from a demonstration project. The DEIS does not address whether or not additional power is needed in central Alaska. The DEIS does not adequately address the specific, cumulative environmental effects, from the cursory discussion about air quality to failure to evaluate the use of limestone. 80-3

NPCA urges that the Department of Energy prepare a revised DEIS that can inform the public, DOE and other decision-makers of the cumulative effects of this proposed demonstration project and the realistic alternatives available. 80-4

Thank you for your consideration of our comments,

Mary Grisco
Alaska Regional Director

556

1776 Massachusetts Avenue, N.W., Washington, D.C. 20036
Telephone (202) 223-NPCA(6722) • Fax (202) 659-0650

Letter No. 80
Mary Grisco, Alaska Regional Director, National Parks and Conservation Association, P.O. Box 202045, Anchorage, AK 99520 (Second Letter Received)

Comment 80-1:
"The Healy Clean Coal demonstration project is ill-advised and its power is not needed."

Response:
See responses to Comments 76-11, 76-12, 76-13.

Comment 80-2:
"The resource values, including strict protection of air quality, of Denali National Park and Preserve are of critical importance. Substantive comments regarding this proposed project were submitted on NPCA's behalf by Trustees for Alaska."

Response:
DOE agrees that DNPP's resource values, including strict protection of air quality, are important. DOE acknowledges receipt of the comments prepared by the Trustees for Alaska.

Comment 80-3:
"The Draft Environmental Impact Statement (DEIS) is deficient. The DEIS fails to examine the possibility of retro-fitting Healy Unit #1 or some other facility to avoid environmental harms while still gaining information from a demonstration project. The DEIS does not address whether or not additional power is needed in central Alaska. The DEIS does not adequately address the specific, cumulative environmental effects, from the cursory discussion about air quality to failure to evaluate the use of limestone."

Response:
See response to Comments 1-4, 74-6, 74-8, and 76-13. For Healy Unit No. 1 and the HCCP, the cumulative environmental impacts are discussed throughout the document. Cumulative impacts from other sources are discussed in Sect. 6.

Comment 80-4:
"NPCA urges that the Department of Energy prepare a revised DEIS that can inform the public, DOE and other decision-makers of the cumulative effects of this proposed demonstration project and the realistic alternatives available."

Response:
See response to Comment 74-39.

Letter No. 81

Reproduced from copy submitted

OFFICE OF THE GOVERNOR

OFFICE OF MANAGEMENT AND BUDGET
DIVISION OF GOVERNMENTAL COORDINATION

☐ SOUTHCENTRAL REGIONAL OFFICE
3601 "C" STREET, SUITE 370
ANCHORAGE, ALASKA 99503-2798
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☒ CENTRAL OFFICE
P.O. BOX 110030
JUNEAU, ALASKA 99811-0300
PH: (907) 465-3562/FAX: (907) 465-3075

☐ PIPELINE COORDINATOR'S OFFICE
411 WEST 4TH AVENUE, SUITE 2C
ANCHORAGE, ALASKA 99501-2343
PH: (907) 278-8594/FAX: (907) 272-0690

January 19, 1993

Joseph P. Strakey
Associate Director
Office of Clean Coal Technology
U. S. Department of Energy
Pittsburgh Energy Technology Center
P. O. Box 10940
Pittsburgh, Pennsylvania 15236-0940

Dear Mr. Strakey:

The State of Alaska has reviewed the draft Environmental Impact Statement concerning the proposed Healy Clean Coal Project. This letter contains the consolidated comments of the State's resource agencies.

The State strongly supports the Healy Clean Coal project which is intended to demonstrate the integration of advanced combustion and gas flue cleanup technologies. The project planners and authors of the draft environmental impact statement (DEIS) should be commended for the thorough analyses and paucity of unresolved technical concerns. It is apparent that a high degree of cooperation exists among the primary proponents and the technical reviewers on this project.

State resource agencies concur with the December 18, 1992 letter from the Alaska Energy Authority which concludes that "the environmental impacts described in the DEIS are acceptably low, and are far outweighed by the advantages of the project in terms of economic development and power supply."

At this time we have identified one technical issue that should be modified in the final EIS. The Division of Geologic and Geophysical Surveys within the Alaska Department of Natural Resources has identified the existence of an active fault line

81-1

trending in a north-northeast direction through the property that Golden Valley Electric Association intends to purchase in support of this project. Page 3-36 of the DEIS states that the nearest fault is three miles north of the project location site. The Department of Natural Resources has submitted the enclosed documentation concerning this fault which may be used to modify the final EIS.

The Golden Valley Electric Association and the Alaska Industrial Development and Export Authority have been informed of this new information. They are aware that the State presently does not have any residual liability due to earthquake damage before or after the land sale is complete.

Thank you for the opportunity to provide these comments. If you have any questions concerning the fault information provided herein, please feel free to contact Susan Malen of the Department of Natural Resources at 907-451-2700.

Sincerely,

Paul C. Rusanowski, Ph D
Director

Enclosures

cc:
Ronald Garzini, Executive Director, Alaska Energy Authority
John Olson, Alaska Industrial Development and Export Authority
Alaska Public Utilities Commission
Glenn Olds, Commissioner, Department of Natural Resources
John Sandor, Commissioner, Department of Environmental Conservation
Carl Rosier, Commissioner, Department of Fish and Game

CSU Distribution List
Healy Clean Coal DEIS
January 20, 1993

Tina Cunning, Department of Fish & Game, Anchorage
Terry Haynes, Department of Fish & Game, Fairbanks

Priscilla Wohl, Department of Environmental Conservation, Anchorage
Joyce Beelman, Department of Environmental Conservation, Fairbanks

Alice Iliff, Department of Natural Resources, Anchorage

Diane Mayer, Department of Commerce & Economic Development, Juneau
John Katz, Governor's Office, Washington, D.C.
Stan Leaphart, CACFA, Fairbanks

Mike Strunk, NPS, Planning, Anchorage

Russ Berry, Superintendent, Denali NPP

Susan Malen, DNR, Div. of Land, Fairbanks

GOLDEN VALLEY ELECTRIC ASSOCIATION INC. Box 71249, Fairbanks, Alaska 99707-1249, Phone 907-452-115

December 17, 1992

Susan Malen
State of Alaska
Department of Natural Resources
Northern Region
3700 Airport Road
Fairbanks AK 99709-4699

OFFICE OF MANAGEMENT & BUDGET
DEC 30 1992
GOVERNMENTAL COORDINATION

Re: ADL 24148 - Healy Clean Coal Project

Dear Ms. Malen:

Thank you again for the information on the possible active fault that trends in an east - northeast direction near the sale parcel.

Golden Valley has provided this information to Alaska Industrial Development Authority (AIDEA), as the owner of the Healy Clean Coal Project (HCCP), and to Stone and Webster, as the design engineer. The HCCP site is located in a Seismic Zone 3 area and is being designed accordingly.

After conferring with AIDEA and weighing the impacts of an earthquake at this site, Golden Valley still wishes to pursue the purchase of Lot 7 and 8 sale parcels. Golden Valley and AIDEA both realize that the State presently does not have any residual liability due to earthquake damage nor or after the sale is complete.

Thank you for providing this information.

Sincerely,

Steven Haagenson
Manager of Engineering Services

cc: Dennis McCrohan - AIDEA
John Olsen - AIDEA
Steve Rosendahl - Stone and Webster
Linda Triplett - Ater, Wynne
Frank Abegg - GVEA

STATE OF ALASKA

WALTER J. HICKEL, GOVERNO

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF LAND

NORTHERN REGION
3700 AIRPORT WAY
FAIRBANKS, ALASKA 99709-4699
PHONE: (907) 451-2700

November 25, 1992

Steve Haagenson
Golden Valley Electric Association
P.O. Box 71249
Fairbanks, AK 99707

Re: ADL 24148 - Healy Clean Coal Project

Dear Mr. Haagenson:

This shall confirm our conversation of November 24, 1992 regarding a memo received from the Division of Geological and Geophysical Surveys as a result of Agency Review currently being conducted for GVEA's negotiated sale application for the Healy Clean Coal Project site.

Enclosed is a copy of the above mentioned memo from Dick Reger, Engineering Geology Section, in which he indicates that a possibly active fault trends in an east-northeast direction through the sale parcel. Also attached is the referenced 1979 "Robert Thorson" article.

After you review this information, please let me know how GVEA wishes to proceed.

Sincerely,

Susan L. Malen
Natural Resource Officer
Operations Section

Enclosure

cc: Dick Reger, DGGS
bc: Linda Triplett
John Ebel
Wendy Feurer
AIDEA

MEMORANDUM State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

TO: Susan L. Malen
DOL Operations Section

DATE: November 24, 1992

FILE NO:

TELEPHONE NO: 474-7147

THRU: Milton A Wiltse
Acting Director and State Geologist

SUBJECT: ADL 24148

FROM: Dick Reger
Engineering Geology Section

In response to your memorandum dated November 19, I reviewed the paperwork you attached regarding the negotiated sale to GVEA of about 15 acres of land near Healy in Government Lots 7 and 8, Section 21, Township 12 South, Range 7 West, Fairbanks Meridian. According to your memorandum and the attached documents, the proposed use of the land is the construction and operation of a coal-fired power plant with an estimated value of $198 million.

My search of the relevant geologic literature indicates that a possibly active fault trends in an eastnortheast direction right through the sale parcel. I attach a copy of the 1979 article by Robert Thorson, which proposes that recurrent displacement has occurred along the Healy fault during the last 22,000 years. In his article, Thorson (p. 12-13) suggested that there may have been 1.5 meters of offset of the Riley Creek II terrace, which is estimated to be between 8,500 amd 13,000 years old, along the Healy fault. If true, this situation fits the standard 10,000-year criterion for an active fault. At the very least, GVEA should evaluate the potential effects of movement along a fault directly beneath the power-plant site before building that regionally important facility. I am also concerned about the degree of liability assummable by the State of Alaska if the subject parcel is sold for the stated purpose when the State knows that a potentially active fault is present.

If you have any questions, I will be out of the office until December 7, but Rod Combellick has been advised of this situation, and you can contact him in my absence.

Attachment (1)

xc: Rod Combellick (DGGS)

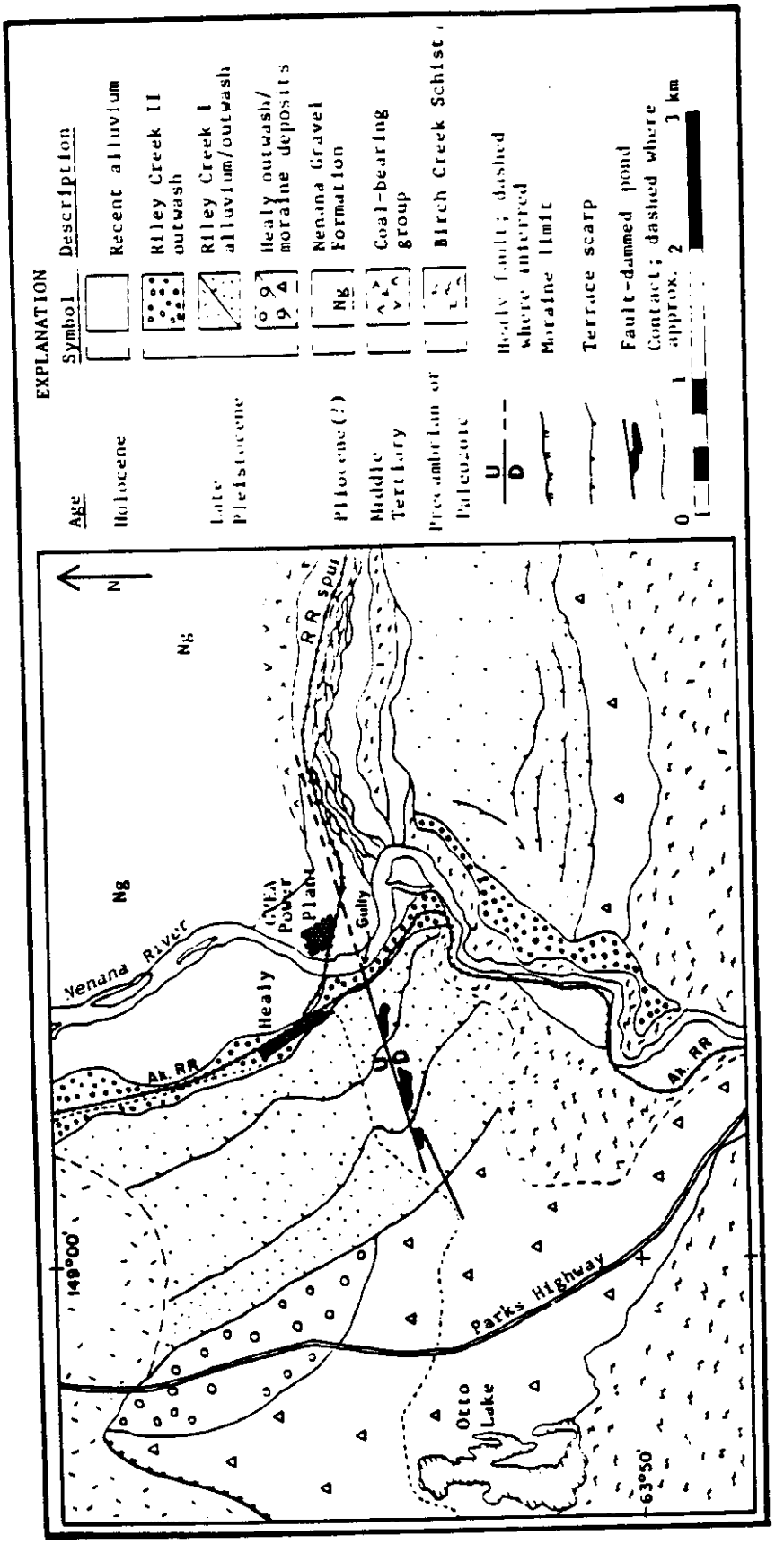

Figure 1. Generalized geologic map of the Healy area showing the Healy fault. Modified from Wahrhaftig (1970).

RECURRENT LATE QUATERNARY FAULTING NEAR HEALY, ALASKA

By Robert M. Thorson[1]

INTRODUCTION

A large normal fault that offsets Tertiary and Quaternary strata just south of Healy was discovered during geological mapping of the Nenana River valley in 1978 (fig. 1). The purpose of this report is to document the fault and to describe the inferred episodes of movement that occurred along it during late Quaternary time.

The Healy area is at the northern front of the Alaska Range (fig. 1). The Birch Creek Schist of Precambrian or Paleozoic age is the oldest rock in the area, and generally occurs south of Healy Creek (Wahrhaftig, 1970). Rocks of the foothill belt to the east and north of Healy consist of folded coal-bearing strata of middle Tertiary age. The Nenana Gravel, consisting of oxidized semiconsolidated gravel deposits, is Pliocene(?) and mantles much of the older strata north of Healy.

Four major glaciations of the Nenana River valley were recognized by Wahrhaftig (1958). Deposits of the two oldest glaciations are not present in the Healy area. Deposits of the Healy Glaciation in the study area consist primarily of gravelly hummocky moraines and outwash terraces. They were derived from a glacier that nearly covered the Healy area, and are presently believed to be of early Wisconsinan age (30,000-70,000 years B.P.). During the subsequent Riley Creek Glaciation, glaciers advanced no farther north than about 15 km south of Healy, but their meltwater caused extensive alluviation of the Nenana River north of the mountain front. Deposits of the initial and major phase of the Riley Creek Glaciation (Riley Creek 1) are almost certainly correlative to deposits that occur throughout Alaska and northwestern North America, and are believed to date between about 13,000 and 22,000 years B.P. The large outwash terrace west of Healy was built during Riley Creek I time (fig. 1). Riley Creek II outwash was deposited during a significant readvance of the Nenana River valley glacier during late Riley Creek time. The younger Riley Creek II drift predates occupation of the Carlo Creek archeologic site, which occurred at about 8,500 years B.P. in the upper Nenana River valley (Peter Bowers, pers. comm., 1978).

Wahrhaftig (1958) first presented evidence for Quaternary tectonic deformation of the northern Nenana River valley. In his classic study of its glacial deposits, he demonstrated that extensive upwarping of glacial outwash terraces occurred north of the range front. Wahrhaftig (1970) also mapped a large high-angle fault about 4 km north of Healy that offsets late Quaternary terrace deposits.

EVIDENCE FOR FAULTING

Just south of Healy a recent fault forms a prominent scarp that strikes N. 74° E. for about 2 km and clearly crosscuts the outwash terraces (fig. 1). This fault is hereafter referred to as the 'Healy fault.' The north side of the scarp is upthrown as much as 5.5 m where it crosses the Riley Creek I outwash terrace about 0.7 km south of Healy. Three hundred meters farther east, where the fault crosses a younger Riley Creek I outwash terrace, is only 4 m high. Southeast of Healy the fault crosses a Riley Creek II outwash terrace; where it intersects the Nenana River a gully about 25 m deep and 75 m long has been cut through the Quaternary and Tertiary deposits (figs. 2 and 3; table 1). Railroad maintenance and construction activity has obscured the surface relations of the fault in this area, but it appears to be upthrown on the north. Projection of the fault eastward indicates that it crosses the Nenana River within about 100-200 m south of the existing Golden Valley Electric Association (GVEA) power plant at Healy. The fault trace also extends southwest of Healy but cannot be traced beyond the marginal portion of the Healy moraine.

The fault scarp has been modified along much of its length by colluvial processes and vegetation growth but is very fresh where vegetation is largely absent and where partly stabilized lichen-covered bouldery gravel covers the scarp. The Healy fault scarp slopes as steeply as 32° but is generally less than 20°.

Surface drainage on the terrace surfaces is strongly controlled by the Healy fault. Three large ponds on the downthrown side—one on each Riley Creek I outwash terrace—are dammed against the fault scarp (fig. 1). These ponds have been modified and expanded by beaver-dam construction. Fresh-water springs issue from the terrace scarps near the fault zone and deep, straight gullies occupy the fault trace where it crosscuts terrace edges.

Where the Healy fault intersects the Nenana River a major shear zone 60-90 cm wide is exposed in the north wall of the gully (figs. 2 and 3). Both the coal-bearing strata and the overlying gravel units are clearly offset and foliation is well developed in both units. In the

[1]Department of Geological Sciences, University of Washington, Seattle, WA 98195.

Thorson, R.M., 1979, Recurrent late Quaternary faulting near Healy, Alaska: in Short Notes on Alaskan Geology 1978: Alaska Division of Geological and Geophysical Surveys Geologic Report 61, p. 10-13.

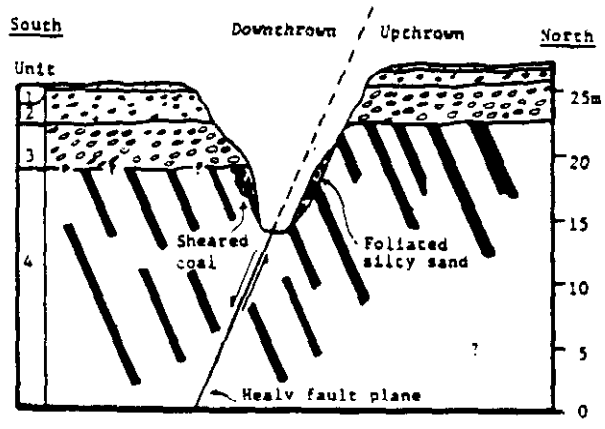

Figure 2. Generalized cross section showing geologic relations exposed in a gully where the Healy fault intersects the Nenana River. The fault plane strikes N. 74° E. and dips 66° S. The horizontal and vertical scales are the same; vertical distances were measured with a hand level and horizontal distances estimated. See table 1 for description of geologic units.

poorly consolidated coal-bearing sandstones, foliation consists of 1-cm-thick parallel sheets that strike N. 74° E. and dip 66° S. In the overlying gravel, foliation consists of discoidal pebbles and cobbles that have been sharply realigned parallel to the fault plane. The attitude of the foliation in the gully wall lies within 10° of the trace of the surface scarp and suggests that the Healy fault is a south-dipping normal fault.

A shear zone in the north gully wall lies several meters west of the major shear zone (fig. 3). The minor shear zone slightly offsets unit 2 and controls oxidation of the gravel. However, the apparent differences in surface altitude of the Riley Creek II terrace on opposite sides of the gully (fig. 2) indicate that faulting of comparable age may have occurred elsewhere in the gully, perhaps along the gully floor. At one locality along the south wall of the gully the coal beds are severely folded and faulted. This deformation may represent a shear zone that crosses the gully floor near its axis. Both lateral erosion by the Nenana River and active faulting are responsible for the steep, irregular, long profile of the gully floor.

INFERRED EPISODES OF FAULT MOVEMENT

The Healy moraine shows less fault displacement than the younger Riley Creek sediments, perhaps suggesting that either fault movement has been confined to the axial portions of the Nenana River valley or that surface displacements on the Healy moraine did not occur because the additional thickness of glacial drift attenuated faulting at depth. Also, large-scale movement on the Healy fault may not have occurred between the Healy and Riley Creek Glaciations west of a point 1 km east of the Parks Highway (fig. 1).

Table 1. *Measured stratigraphic section of units exposed on the south wall of the gully where the Healy fault intersects the Nenana River.*[1]

Unit	Thickness (m)	Description
1	0.5	*Spoil.* Mixed deposit of sand, railroad debris, and gravel. Nearly horizontal profile and uniform thickness. Terrace surface not extensively modified.
2	2.5	*Interbedded sand, gravel.* Rounded to subrounded clasts to medium cobble size (commonly 10-20 cm) in well-sorted sand-granule matrix. Interbedded with 5- to 10-cm-thick beds of finely bedded, well-sorted fine-coarse sand with minor silty-sand beds. Sand beds occasionally exhibit undulose sinusoidal deformation with amplitudes of 1 to 10 cm. Pronounced reddish-brown oxide staining generally follows textural contacts. Lower contact distinct but appears gradational.
3	3.5	*Coarse gravel.* Rounded to subrounded clasts to small boulder size (commonly 20-30 cm) in well-sorted sand-granule matrix. No horizontal bedding, but most clasts are discoidal and exhibit pronounced horizontal fabric.
4	19.0	*Coal-bearing unit.* Interbedded white sandstone, pebbly sandstone, silty claystone, and subbituminous coal. Unit poorly consolidated.

[1] See figs. 2 and 3 for geologic relationships between units.

There is evidence for at least two episodes of movement along the Healy fault during and after the Riley Creek glacial maximum, which probably occurred about 14,000 years ago (table 2). The fault scarp is about 1.5 m higher on the older Riley Creek I terrace than on the younger Riley Creek I terrace, suggesting that at least 1.5 m of displacement occurred during Riley Creek I time. Because both gravel units exposed in the gully appear to have a gradational relationship (fig. 3), they are interpreted to have occurred during Riley Creek II time.

The possible truncation of the major shear zone by the younger gravel (unit 2) suggests that about 3.5 m of displacement occurred during Riley Creek II time, probably between about 8,500 and 13,000 years ago. The possible shear zone developed in unit 2 (fig. 3) and the apparent differences in altitude of the Riley Creek II outwash terrace on opposite sides of the gully (fig. 2) suggest that fault movement also occurred after Riley Creek II time; the freshness of the fault scarp along much of its length suggests that this episode of faulting may have occurred within the past few thousand years.

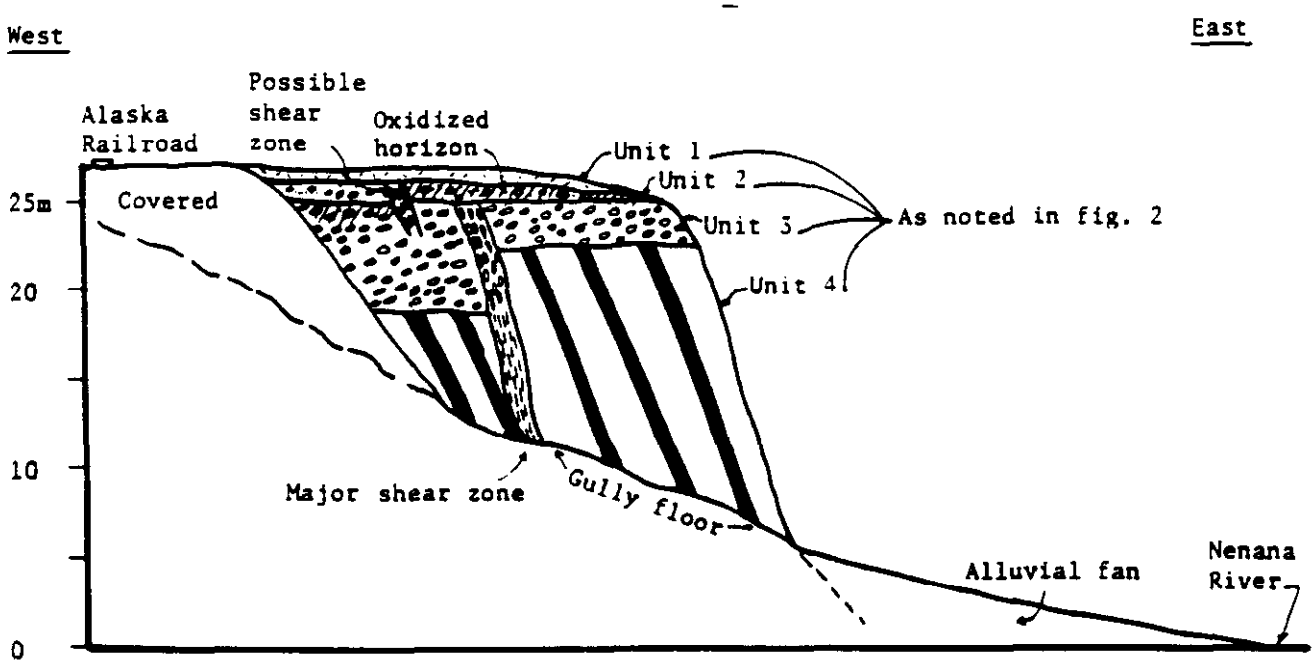

Figure 3. East-west longitudinal cross section showing geologic relations exposed on the north wall of a gully where the Healy fault intersects the Nenana River. The horizontal and vertical scales are the same; vertical distances were measured with a hand level and horizontal distances estimated. See table 1 for description of geologic units.

Table 2. *Inferred episodes of movement along the Healy fault*

Episode	Vertical movement (m)	Relative age	Estimated age (years B.P.)	Evidence
3	1.5(?)	Post-Riley Creek II	100-10,000	Fault apparently causes surface displacement of Riley Creek II terrace. Fault scarp is nearly continuous, gravelly at edge, and as steep as 32°. Surface drainage is controlled by fault. Gullies along fault trace are not deeply eroded.
2	3.5(?)	Riley Creek II time	8,500-13,000	Offset in coal-bearing formation probably post-dates deposition of coarse gravel but predates deposition of interbedded sand and gravel. Both units are interpreted to be of Riley Creek II age.
1	1.5(?)	Riley Creek I time	13,000-22,000(?)	Fault scarp appears about 1.5 m higher on older Riley Creek I terrace than on younger Riley Creek I terrace.

CONCLUSIONS

There is convincing evidence that the Healy fault underwent significant movement during late Quaternary time. During each inferred episode of faulting since the beginning of Riley Creek time, at least 1.5 m of vertical displacement may have occurred. The inferred ages and amounts of displacement along the Healy fault are extremely tentative. A more detailed study is required to either support or refute these preliminary conclusions.

ACKNOWLEDGMENTS

The mapping was done in conjunction with the North Alaska Range Early Man project, which is jointly funded by the National Geographic Society and the National Park Service.

This report was thoughtfully reviewed by Richard D. Reger and Wyatt G. Gilbert. Florence R. Weber provided helpful suggestions and discussions during preparation of the manuscript.

REFERENCES CITED

Wahrhaftig, Clyde, 1958, Quaternary geology of the Nenana River valley and adjacent parts of the Alaska Range: U.S. Geol. Survey Prof. Paper 293-A, p. 1-68.

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Letter No. 81

Paul C. Rusanowski, Ph D, Director, State of Alaska, Office of the Governor, Office of Management and Budget, Division of Governmental Coordination, Central Office, P.O. Box 110030, Juneau, AK 99811-0300

Comment 81-1:

"At this time we have identified one technical issue that should be modified in the final EIS. The Division of Geologic and Geophysical Surveys within the Alaska Department of Natural Resources has identified the existence of an active fault line trending in a north-northeast direction through the property that Golden Valley Electric Association intends to purchase in support of this project. Page 3-36 of the DEIS states that the nearest fault is three miles north of the project location site. The Department of Natural Resources has submitted the enclosed documentation concerning this fault which may be used to modify the final EIS."

Response:

The EIS has been modified to incorporate the above information.

Denali Citizens Council

RECEIVED
1993 JAN 27 AM 8:58

P.O. Box 78, Denali Park, Alaska 99755

January 20, 1993

Letter No. 82

Reproduced from copy submitted

Dr. Earl W. Evans
Pittsburgh Energy Technology Center
U.S. Department of Energy
P.O. Box 10940
Pittsburg, PA 15236

Denali Citizen's Council
P.O. Box 78
Denali Park, Alaska 99755

Dear Dr. Evans,

This letter is our second, written in response to the DEIS for the proposed Healy coal plant. I would like to first reiterate our questioning of the need for the power plant. Others have brought up the feasibility of retrofitting the Healy Unit No. 1. That has not been adequately addressed in the DEIS. Also, given what we know about global warming and the link between it and carbon dioxide emissions, along with methane and nitrogen oxides, it appears that the DEIS ignores this impact by saying that emissions are not significant and thus would not contribute to global warming. Isn't the intent of this plant to conduct experiments that will, if successful, be used in larger plants across the country? What about the impact and expansion of more coal plants on global warming? 82-1 82-2 82-3 82-4 82-5

We also feel that the environmental impacts are just not addressed sufficiently to warrant support of the project from our organization. Our primary goal is to protect the integrity of Denali National Park and its surrounding area and the DEIS does not placate our fears of adverse environmental impacts. 82-6

We also previously brought up our concern about solid waste disposal (over 60,000 tons per year) and its effect on groundwater. The DEIS states and we were told at the local Healy meeting that leaching would not occur. There appears to be no basis for this statement and research of other coal facilities does not support that statement. 82-7

In summary, we feel that the DEIS does not suffiently address our concerns for the air quality of Denali National Park and the possible resulting contamination of land and water sources in the Park and Healy 82-8

area. We can not support the HCCP with the use of this DEIS as a guarantee of safeguards. Thank you for your consideration of this and our previous letter of concerns.

Sincerely,

Jan St. Peters
Denali Citizen's Council

Letter No. 82
Jan St. Peters, Denali Citizen's Council, P.O. Box 78, Denali Park, AK 99755

Comment 82-1:
"I would like to first reiterate our questioning of the need for the power plant."

Response:
See responses to Comments 76-11, 76-12, and 76-13.

Comment 82-2:
"Others have brought up the feasibility of retrofitting the Healy Unit No. 1. That has not been adequately addressed in the DEIS."

Response:
See responses to Comments 27-2, 74-2, and 74-7.

Comment 82-3:
"Also, given what we know about global warming and the link between it and carbon dioxide emissions, along with methane and nitrogen oxides, it appears tht the DEIS ignores this impact by saying that emissions are not significant and thus would not contribute to global warming."

Response:
See response to Comment 1-6.

Comment 82-4:
"Isn't the intent of this plant to conduct experiments that will, if successful, be used in larger plants across the country?"

Response:
See response to Comment 77-1.

Comment 82-5:
"What about the impact and expansion of more coal plants on global warming?"

Response:
See response to Comment 82-3.

Comment 82-6:
"We also feel that the environmental impacts are just not addressed sufficiently to warrant support of the project from our organization. Our primary goal is to protect the integrity of Denali National Park and its surrounding area and the DEIS does not placate our fears of adverse environmental impacts."

Response:
DOE believes that the EIS provides a comprehensive assessment of potential impacts from the proposed HCCP.

Comment 82-7:
"We also previously brought up our concern about solid waste disposal (over 60,000 tons per year) and its effect on groundwater. The DEIS states and we were told at the local Healy meeting that leaching would not occur. There appears to be no basis for this statement and research of other coal facilities does not support that statement."

Response:
HCCP solid waste is expected to produce some non-hazardous leachate at the UCM disposal site (about five times as much as that from current Unit No. 1 operations alone). Ash from Healy Unit No. 1 has been disposed of at the UCM mine for several years, and no measurable effects on surface or groundwater have been documented. The volume of ash proposed for disposal at the mine from the HCCP is a small quantity relative to the total amount of overburden used for backfilling of mined out pits. This, coupled with the lack of impacts from current ash disposal practices, suggests that the addition of HCCP ash to the pit backfill would probably not be measurable. Section 4.1.4.2 of the EIS has been revised to include this information.

Comment 82-8:
"In summary, we feel that the DEIS does not suffiently [*sic*] address our concerns for the air quality of Denali National Park and the possible resulting contamination of land and water sources in the Park and Healy area. We can not support the HCCP with the use of this DEIS as a guarantee of safeguards."

Response:
DOE believes that the EIS provides a comprehensive assessment of potential impacts from the proposed HCCP, including air quality, water resources, and land resources.