

**Alpine Satellite Development Plan
Preliminary Draft Environmental Impact Statement**

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Alpine Satellite Development Plan Draft Environmental Impact Statement

Appendix A

Public Testimony/Traditional Knowledge by Resource

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METHODOLOGY

Introduction

In conjunction with the Alpine Satellite Development Program (ASDP) Environmental Impact Statement (EIS), this technical report provides selected extracts from relevant public testimony recorded in North Slope, Alaska scoping meetings and public hearings conducted from 1976 to 2003. This report contains the extracts organized by EIS resource topic and describes the methods Stephen R. Braund & Associates (SRB&A) used to identify and extract potentially relevant Traditional Knowledge (TK) and Local Knowledge (LK) excerpts from the public testimony. The following discussion will define TK and LK, describe the criteria used to distinguish TK and LK from issues and concerns expressed in testimony, and explain the process of excerpting and organizing relevant testimony. The various EIS resource authors will incorporate this material into the EIS.

Defining Traditional and Local Knowledge

Indigenous peoples who live on the land and harvest its resources have an intimate understanding of their environment grounded in a long-term relationship with the surrounding land, ocean, rivers, ice and resources (Stevenson 1996). This understanding includes knowledge of the anatomy and biology of resources based on centuries of harvesting and processing, distribution of resources, animal behavior, seasons, weather and climate, hydrology, sea ice, currents, how ecosystems function, and the relationship between the environment and the local culture. TK extends beyond knowledge of ecosystem relationships; it also includes appropriate behaviors governing the use of resources (Stevenson 1996:281) and thus provides guidance on culturally appropriate ways to interact with the resources. Knowledge of, respect for, and sharing of resources are highly valued by the Iñupiat.

The Iñupiat people have long relied upon TK and LK for survival in the Arctic. The consequences of a lack of knowledge, incomplete knowledge, or inaccurate knowledge of some aspect of the natural environment could include injury or death by starvation, freezing, drowning, animal attack, or malnutrition. Survival knowledge continues to be too important not to share and is transmitted through oral tradition handed down from elders to other members of the community, shared by active community residents and transmitted to inexperienced hunters and newcomers to an area. TK and LK are self-correcting knowledge bases. If a resource should fail or vary in its distribution or availability, strategies for addressing the consequences of that failure are created on a consensus basis with added weight given to the opinions of the most experienced, or elders.

Thus, TK is the expression of information that is important to the survival of the group that has been tested by multiple generations of resource harvesters and expressed by or attested to by several informants. TK is often distinguishable as having been attested to by elders, having been passed down from preceding generations, and as being collectively recognized as true by a testifier. Each individual, using the body of TK he or she possesses, tests that body of knowledge while living in that environment. Each positive experience for each individual reinforces the value and importance of a particular portion of that body of knowledge. Each negative experience results in the reanalysis of that piece of TK by further experimentation, observation, and discussion with other resource harvesters who have tested that data. This reanalysis results in the further refinement of each piece of TK, which is then redistributed among the resource harvesters for further testing.

Local Knowledge (LK) is the expression of information important to group survival that has not been necessarily tested by multiple generations of resource harvesters but is expressed by or attested to by multiple informants. LK is more responsive to short term changes in the environment and is the initial phase of integrating longer term changes into TK. LK is distinguishable as being a recent observation by one or more resource harvesters.¹

Expressions of LK will often include the observed phenomenon, a hypothesis about the cause of the observed phenomenon, associated observations of potentially related phenomena, and informed speculation projecting potential effects of the observed phenomenon on the community. LK is expressed among resource harvesters and subjected to further testing in a fashion not dissimilar to that used in chemistry and physics, where replicability of an experiment is key to its acceptance into the wider body of theory.

Distinguishing TK and LK from Issues and Concerns

TK and LK are often inextricably tied to discussions of issues and concerns when presented in the context of public hearings and testimony held in the course of NEPA project compliance. An excerpted passage below shows the integration of TK and LK with issues and concerns.

Johnny Ahtuaharuk 2001 Liberty Nuiqsut

BY MR. AHTUANARUK (Resuming): At that time, there was two other guys that was in with him. They marked the property around where they were going to -- you know, where they wanted to be hunting, or something like that. And back to the place where you guys want to put the pipe and drill down there, he knows in summertime, there's lots of fish there, and he knows they're going to be disturbed when you guys start working around in that area 'cause there's lots and lots of kakta (ph) around in that area in summer times. Even though they come through the river, there are fish down there. That's going to be very much disturbed by drilling down there.

Wherever that pipe you guys put under the ocean floor down there, since that happened, them kakta (ph) fish, they go skinny. They are skinnier than they used to be. There is something wrong with them. It might have something to do with that pipe. It -- something's making them skinny. You know, they used to be fat.

¹ Both traditional and local knowledge include understandings of non-environmental parameters such as social, belief and political systems that are not addressed in any detail in this technical report.

In the passage, TK and LK are presented in the following order. First presented is the context and consensus—who was there and what they were doing when the observation was made. This is followed by the TK passage, that is, the location, distribution, and number of “kakta” (*qaataq* or Arctic cisco) at the location. The concern is presented (e.g., drilling will disturb fish). The LK observation, a short-term recent aberration from an established norm is presented (e.g., since the underwater pipe was placed, skinny fish have been observed), followed by a hypothetical construction (e.g., the pipe might be causing the skinny fish).

The above example was selected from a brief review of excerpts. Not all excerpts include issues and concerns, but where the excerpts do contain issues and concerns understanding how the information is communicated is important in distinguishing issues and concerns from TK and LK.

Traditional Knowledge Sources

The sources of TK and LK excerpts in this technical report include North Slope public testimony from 32 scoping meetings and public hearings conducted from 1976 to 2003 in Barrow, Nuiqsut, Kaktovik, Anaktuvuk Pass, Atkasuk, and Wainwright. A list of these public hearing transcripts is shown in Table 1.

It is impractical to include all of the testimony from all of the public hearings (over 3,000 pages). Furthermore, not all of the testimony was relevant to the ASDP EIS. For the purposes of this technical report only representative excerpts that were relevant to the ASDP EIS, most useful for ASDP EIS authors, and responsive to ASDP EIS scoping issues and concerns are included.

Table 1: Sources of Public Testimony/Traditional Knowledge Excerpts

Year	Location	Type of Meeting/Testimony	Agency	Process	Sale	Date
1976	Barrow	Public Hearing	FEA		Federal Energy Hearings	4/10/76
1979	Barrow	Public Hearing	MMS	EIS	Beaufort Sea Lease Sale BF	6/5/79
1979	Kaktovik	Public Hearing	MMS	EIS	Beaufort Sea Lease Sale BF	5/15/79
1979	Nuiqsut	Public Hearing	MMS	EIS	Beaufort Sea Lease Sale BF	5/16/79
1982	Barrow	Subsistence Hearing	BLM	810	National Petroleum Reserve-Alaska (NPR-A)	11/22/82
1982	Barrow	Public Hearing	MMS	DEIS	Beaufort Sea Diapir Field Sale 71	2/2/82
1983	Barrow	Public Scoping Meeting	COE	DEIS	Endicott Development Project	1/21/83
1983	Barrow	Public Hearing		DEIS	Diapir Field Lease Offering (Sale 87)	10/24/83
1990	Barrow	Public Hearing	MMS	DEIS	Beaufort Sea Oil & Gas Lease Sale 124	4/17/90
1990	Nuiqsut	Public Hearing	MMS	DEIS	Beaufort Sea Oil & Gas Lease Sale 124	4/19/90
1995	Barrow	Public Hearing	MMS		Beaufort Sea Oil & Gas Lease Sale 144	11/8/95
1995	Nuiqsut	Public Hearing	MMS		Beaufort Sea Oil & Gas Lease Sale 144	11/6/95
1996	Barrow	Public Teleconference	MMS	DEIS	OCS Oil & Gas Leasing Program 1997-2002 (5-Year	3/21/96
1996	Nuiqsut	Public Scoping Meeting	MMS	EIS	Northstar EIS Project	5/7/96
1996	Nuiqsut	Whaling Captains' Meeting		EIS	Northstar EIS Project	8/14/96
1997	Barrow	Scoping Meeting	BLM	EIS	NE NPR-A Integrated Activity Plan/EIS	3/17/97
1997	Atkasuk	Scoping Meeting	BLM	EIS	NE NPR-A Integrated Activity Plan/EIS	3/18/97
1997	Kaktovik	Public Hearing	MMS	DEIS	Beaufort Sea Oil & Gas Lease Sale 170	7/9/97
1997	Nuiqsut	Scoping Meeting	BLM	EIS	NE NPR-A Integrated Activity Plan/EIS	4/10/97
1997	Nuiqsut	Public Hearing	MMS	DEIS	Beaufort Sea Oil & Gas Lease Sale 170	6/24/97
1998	Barrow	Public Hearing	BLM	DEIS	National Petroleum Reserve-Alaska	1/13/98
1998	Nuiqsut	Public Hearing	BLM	DEIS	National Petroleum Reserve-Alaska	1/14/98
1998	Anaktuvuk Pass	Public Hearing	BLM	DEIS	National Petroleum Reserve-Alaska	1/15/98
1998	Wainwright	Public Hearing	BLM	DEIS	National Petroleum Reserve-Alaska	1/27/98
1998	Atkasuk	Public Hearing	BLM	DEIS	National Petroleum Reserve-Alaska	1/12/98
2001	Barrow	Public Hearing	MMS	DEIS	Liberty Development & Production Plan	3/21/01
2001	Kaktovik	Public Hearing	MMS	DEIS	Liberty Development & Production Plan	3/20/01
2001	Nuiqsut	Public Hearing	MMS	DEIS	Liberty Development & Production Plan	3/19/01
2002	Barrow	Public Hearing	EPA	DEIS	Pt. Thomson Gas Cycling Project	10/29/02
2002	Nuiqsut	Public Hearing	EPA	DEIS	Pt. Thomson Gas Cycling Project	10/30/02
2003	Barrow	Public Hearing	BLM	DEIS	Alpine Satellite Development Plan	3/17/03
2003	Nuiqsut	Public Hearing	BLM	DEIS	Alpine Satellite Development Plan	3/18/03

Notes:	ADNR	Alaska Department of Natural Resources
	ANILCA 810	Alaska National Interest Lands Conservation Act, Section 810
	BLM	Bureau of Land Management
	COE	Corps of Engineers, U.S. Army
	DEIS	DRAFT Environmental Impact Statement
	EIS	Environmental Impact Statement
	FEA	Federal Energy Authority
	MMS	Minerals Management Service
	NPRA	National Petroleum Reserve – Alaska
	OCS	Outer Continental Shelf
	810	ANILCA, Section 810

Advantages to using this public testimony material include its availability, electronic format, public nature, and focus on issues specific to oil and gas development in North Slope communities. The transcripts are available online in a compressed format (PDF and other formats). The transcripts are of public testimony in a public forum, which helps insure against the possibility that sensitive or confidential material will be printed in a public EIS without the permission of the persons concerned. The focus on oil and gas development increases the efficiency of extracting information by reducing the volume of unrelated information.

There are some potential disadvantages in using public testimony, however. Foremost, public scoping testimony is not focused on traditional knowledge topics but more on local residents' issues and concerns with a specific proposal or project. Furthermore, the timing of the meetings sometimes excludes the busiest hunters, who may not be in town to testify. In addition, some persons may not testify because of shyness or social proscriptions against speaking out or being perceived as criticizing another person. More detailed or more specific information may be available in other sources, particularly oral histories and the like, which are not as easily available and may contain sensitive or confidential information. Finally, the volume of meetings taking place in any village may far exceed the ability of local people to attend them all.

Excerpting Passages

The process of excerpting passages from public testimony into the finished product provided in this report required several steps. When SRB&A began the TK and LK research for this project, only the communities of Barrow and Nuiqsut were included. Atkasuk and Anaktuvuk Pass were added later. The initial strategy was to review only those transcripts addressing onshore development and the NPR-A area. Once this review was completed the lack of TK and LK for several topics was immediately apparent. In response to these gaps, TK and LK from other projects (e.g., primarily the MMS offshore proposed lease sales and development) was included as well.

The hearing transcripts were obtained from several sources in electronic formats, read in their entirety, and passages discussing topics in the EIS outline were cut and pasted into Notepad for initial editing, then to Word files by subject. The speaker, date, location, and name of the project discussed in the testimony were put in the heading of each excerpted passage. The passages excerpted to Word were then checked against the original texts to make sure the texts were correctly transferred and identical to the original transcript. Some passages required significant extra work to make them identical due to the contrast of the original texts when they were scanned into electronic formats. More recent transcripts were made using the electronic file capability of newer transcription equipment, and were more easily handled electronically.

Figure 1: Example of passage cut from Adobe Acrobat into Notepad

```
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 __-
lease sale.
CHAIRMAN: Thank you. Thank you, Samuel.
NANNY WOODS: (Inupiat) My name is Woods. (Inupiat)
(APPLAUSE) INTERPRETER: Her name is Nanny Woods. W-0-0-D-S. She had lived
here in Nuiqsut in
1921. She had traveled east to Cross Island and that's where they got a
whale. There was lots of people down in that area. Then they got
separated. She traveled separately from her parents. She traveled east
towards Bar Island. She was with her husband, separated from her parents
and we lived on subsistence. Hunting caribou., fish whatever is on
island. Then on up to river, Sag
River. Used to be full of fish and all the rivers were full of fish. And
she does not know if there are fish anymore in these
rivers. This is how we traveled in our..at that time. She says she's
going to be one of the people that's opposing to lease sale. She had
observed, seen how life
is in this area, where the area is in the lease sale. There were lots of
caribou that
we hardly see anymore. There's little bit of fish around here. And the
fish come from ocean in the fall, travel up river, then
in spring- time goes out. But she thinks that she hardly see caribou any-
more. Life is getting hard and she can barely..she is one of the elders,
elders here at Nuiqsut.
CHAIRMAN: Thank you very much, Nanny.
RUTHNUKAPIGAK: (Inupiat)
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-33-
ALASKA-WIDE COURT REPORTERS 545 EAST FOURTH AVENUE -277-6922
ANCHORAGE, ALASKA 09101
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Figure 2: Edited excerpt

Nanny Woods 1979 Sale BF Nuiqsut

INTERPRETER: Her name is Nanny Woods. W-O-O-D-S. She had lived here in Nuiqsut in 1921. She had traveled east to Cross Island and that's where they got a whale. There was lots of people down in that area. Then they got separated. She traveled separately from her parents. She traveled east towards Bar Island. She was with her husband, separated from her parents and we lived on subsistence. Hunting caribou., fish whatever is on island. Then on up to river, Sag River. Used to be full of fish and all the rivers were full of fish. And she does not know if there are fish anymore in these rivers. This is how we traveled in our...at that time. She says she's going to be one of the people that's opposing to lease sale. She had observed, seen how life is in this area, where the area is in the lease sale. There were lots of caribou that we hardly see anymore. There's little bit of fish around here. And the fish come from ocean in the fall, travel up river, then in spring- time goes out. But she thinks that she hardly see caribou anymore. Life is getting hard and she can barely...she is one of the elders, elders here at Nuiqsut.

Figure 3: Underlined sections reflect cultural resources, italicized reflect subsistence, fish, and caribou sections.

Nanny Woods 1979 Sale BF Nuiqsut

INTERPRETER: Her name is Nanny Woods. W-O-O-D-S. She had lived here in Nuiqsut in 1921. She had traveled east to Cross Island and that's where they got a whale. There was lots of people down in that area. Then they got separated. She traveled separately from her parents. She traveled east towards Bar Island. She was with her husband, separated from her parents and we lived on subsistence. Hunting caribou., fish whatever is on island. Then on up to river, Sag River. Used to be full of fish and all the rivers were full of fish. And she does not know if there are fish anymore in these rivers. This is how we traveled in our...at that time. She says she's going to be one of the people that's opposing to lease sale. She had observed, seen how life is in this area, where the area is in the lease sale. There were lots of caribou that we hardly see anymore. There's little bit of fish around here. And the fish come from ocean in the fall, travel up river, then in spring- time goes out. But she thinks that she hardly see caribou anymore. Life is getting hard and she can barely...she is one of the elders, elders here at Nuiqsut.

Organizing Passages

Excerpts and passages from larger excerpts were organized by subject, retaining the speaker, hearing, community and date information in the heading (See Appendix 1). Excerpts and passages appear in chronological order by community, the same order in which the transcripts were reviewed. Where multiple subjects were addressed in testimony the passages were either divided into sections addressing a single topic or placed in multiple categories where they were inextricably intertwined. For example, a section with testimony about the interrelated nature of fish and water quality could be found in the sections headed Fish, Freshwater Resources, Hazardous Materials, Physical Oceanography and Coastal Water Quality, and Environmental Consequences.

If an extract pertained to more than one resource category, SRB&A made an effort to put it in both sections, resulting in some duplication. In addition, resource authors may find relevant information in different categories (e.g., the Environment and Hazardous Materials section contains references to fish; terrestrial and marine mammals authors should read "hazardous Material" as they have references to caribou and fish).

There is some duplication between sections if the material applies to more than one resource. Also, there is duplication between the various resource sections and the "environmental consequences" section. As discussed above, due to the nature of the source material (e.g., public hearings related to pending development projects and oil and gas lease sales), the testimony is slanted toward issues and concerns.

This technical report does not contain any contextual explanation and/or interpretation of the extracts.

PUBLIC TESTIMONY BY RESOURCE

Weather/Climate/Environmental Changes

Archie Ahkiviana 2001 Liberty Nuiqsut

And then this high wind, we were down at Cross Island about a couple of years ago. We couldn't go off the island, even though we'd gotten all our quotas in, 'cause of the high wind. The swells were about 28 feet high. Even the seismic boat couldn't reach us, it was so high-winded, you know. And then when the wind died down, the seismic boat went after us to pick us up off the island 'cause we were getting low on water and food, you know, but we got a lot of whale meat and stuff.

HEARING OFFICER: Twenty-eight-foot swells were where again?

MR. AHKIVIANA: Around that area.

HEARING OFFICER: Cross Island?

MR. AHKIVIANA: Yeah. They couldn't -- I mean, yeah. Yeah, just right by the Cross Island, yeah.

Isaac Akootchook 2001 Liberty Kaktovik

Until today, and we have more visitors to come over and see this oil and gas to be -- work on it. But I have a lot of questions to you people sometime, next time maybe you come back again, because this is a change. It's from my life. When I growing up, the weather and the ocean and the currents, something like that, it's a lot of changing. When I was young and the ice piling right up to the cliff down here, sometimes the ice piling up and no wind, just push it from the current, and the piling is sometimes 20 feet, 10 feet. And around about 20, 30s, and 40s, and up to that, we never seen it anymore. The weather did change. The oceans is warmer. And the animals, there's a lot of animals still around, but that's when I look at it.

Freshwater Resources

Bessie Ericklook 1979 Sale BF Nuiqsut

For example, Putu used to have a free flowing channel. Now, last year, it had to be physically channeled. Two years ago, my brother Paul went to fish at Itkillikpaat where he fished. He came back with no fish. We used to catch fish anytime we put a hook in. The Itkillik River is now rusty colored. There are even a bridge at Puviksuk. This river used to be glassy clear, as I have known it. These are the effects of past activity

Flora Ipalook 1979 Sale BF Nuiqsut

FLORA IPALOOK: My name is Flora Ipolock. (Inupiat) (APPLAUSE)

INTERPRETER: Her name is Flora Ipalook, I-P-A-L-O-O-K. She says she's been hearing the oil destroy our subsistence animals, but she's concerned about these rivers that are... the water is getting lower and lower in these rivers, are oil the companies using these waters also and is this why our fish are being destroyed also because of the lower water in the rivers? She's asking, do you put anything in the drill holes when they are done drilling or for exploration drilling? do they do with these? Do they fill them up? She said she was born and raised here in 1930, here at Nuiqsut. Her mother raised them while their father is out hunting. She says she took care of four small brothers and sisters while their parents are gone. Sometimes they don't have anything to eat all day, until their parents come home. Few fish, their mother's catch, this is what they eat. Sometimes one fish. Their mother and their father goes out hunting further out. She wants to know if these.. drill holes are filled with something. Filled with water or what? She want to know why these rivers are getting shallower and shallower?

Arnold Brower, Sr. 1976 Federal Energy Barrow

I noticed in the first exploration on that some of these lakes, especially Shinmar rock have dropped about two to three feet loss of water, a depth which is known to be about eight feet. At the time I noticed it-it went down to about five to six feet - and therefore it cannot support any more fish because a tremendous amount of water has been lost in that first exploration at Shinmar-Rock. We enjoy these fish because we know where they're at-and during the winter whenever we need them we can go and get them but these lakes that I mentioned I would say they are zero fish in them - and even if I was to go in an emergency to survive on these fish I wouldn't be successful.

Daniel Leavitt 1979 Sale BF Barrow

INTERPRETER: His name is Daniel Leavitt. He doesn't have any papers like the other people to give to you, but he'd like to say something. Whenever we hear about something that's in danger in-regards to our land, we always talk about it. He went back to- where he grew up five years, it's been five years now since he's been returning to where he grew up. He went there in 1919 when he was two and a half years old. This is to the east of here where this lease sale is, that area is. And he lives there until 1936. He returned there after being employed when he came. He started working and stuff and then around 1970, he finally went back over there. He said he's not a hunter or become a hunter until late. He's comparing to his brothers and sisters, but when they lived there, they never went hunting because there was the sea, the lakes, the rivers, and the land. There were animals where they could get food from. He's concerned about why a lot of these lakes and rivers are getting too shallow. He's found where they. these seismic graphic testing He's even seen them at the edge of Tsukpuk [Teshepuk] Lake and he's - he can't help but blame something like that because there's lakes where they just could put part of a fishnet and they will get fish. When they stop for lunch, they can pick up lots of fish for lunch with just part of a net in the water but now even people try with two hundred foot nets and still don't get that much; there is one lake where you can't find any fish at all. There is one that were a few but he has seen the tests going on over there too and he's afraid that there won't be any more fish there again. Tsukpuk Lake is another he's wondering about that's getting shallower over there. The streams, little rivers, whatever-you call them, where they shoot out from Tsukpuk Lake, they used to be able to go in boats in those but they can't even go on them. Some of them less than half an inch of water on them He's wondering why the water in the lakes is so shallow and he blames it on the tests that keep happening after promising that they wouldn't do it anymore, they still keep doing it.

Joash Tukle 1982 NPR-A Barrow

Then moving back to what I said earlier, use the water from the ocean instead of the lakes or the rivers. They should go to the nearest Region which have Corporations and ask where from the ocean without bothering the fish could we put up our wells for water. By asking them. The water is very precious. The people and I have come to know just how much water is being used by the drillers nowadays here, because they're drilling just east of us. Having heard about how much water they are using, we do not want them to use the water from the land. And also in trying to help the Corporation by asking them, "If you make your well right by your side where the ocean water is the deepest, and using this water that you have purified, I would help by paying for the water that you have purified.

Raymond Neakok 1982 NPR-A Barrow

You have not taken into consideration the villages that are going to be affected by oil exploration (ph) of the areas that are pointed up here. Number 1 is: All drilling operations, will take a lot of water. That means the same thing will happen Sagavanirktok like they did in the Sagavanirktok (ph) River. They ran it dry, completely dry twice in one year. And, if that happens in the Colville River or any of these places that are printed up here--like the lakes, the big lakes and river -any one of those go dry, the animals are goi [sic]-the fish are not going to be there. That's destroying the villages.

Nate Olemaun 2003 ASDP Barrow

One thing I'd like to bring out is the Sag River. Prudhoe been in existence over a year -- over 30 years and it's a yearly event of for over 30 years now for Sag River to have a wash-out. No matter how high, how strong they make that crossing, after the bridge they put in there in Sag River, it always washing out. So it's unpredictable. It's not in the same place the strength is going to be during wash-out; it's all over the tundra, all over the channels of the river.

Leonard Lampe 2003 ASDP Nuiqsut

With the satellite programs, I, too, am very concerned about satellite -- the crossing of the Nigliq Channel, the bridge design, as well as CD-4 as well as CD -- I believe it's 7, the most southern site. Nuiqsut has not experienced, neither has Alpine, what we call the 100 year Colville flood. We've only experienced a 25 year flood and with that 25 year flood, it came very close affecting those areas. Now, with the 100 year flood that hasn't occurred -- and I know you have data of what a 100 year flood might look like, but when we first moved here in Nuiqsut, that 100 year flood -- the whole plains down there was covered except for the hill down there. And we haven't seen that ever since we've been here in the 30 some years we've been here. But, you know, the industry needs to know of these dangers Mother Nature brings out on these sites and areas. There are things that -- you can do all the protections you can do, we can have all the policies and stipulations in places, but when Mother Nature's forces come in line, there's nothing any of us can do to stop her of what she's planning to do. And this 100 year flood will come and it will occur and it will devastate those well sites that will go into the Nigliq Channel.

Ice

Nuiqsut Whaling Captains Meeting 1996 Northstar Nuiqsut

Thomas Napageak: If it gets heavy enough, if this gets heavy enough, that ice is not going to do nothing else but just pile up. Instead of trying to get on top. Whereas here, (in the proposed design) it's ready to go on top. There's snow drifting that could build up in here. Cause the snow drifts start in October.

Inupiaq Patsy Tukle:

Thomas Napageak Those are the most serious months he's talking about now.

Inupiaq Thomas Ahtuanguaruk

Thomas Napageak: That's very important that they should know that the critical months are October, November, and December. After the first of the year, the ice is solid enough that you'll start moving further north from the shore flat ice. It moves out.

Inupiaq: Archie Ahkiviana: The only place it will form special form ice is down where the current is, down farther down, on those where you could see it from Cross Island when you're over there in the winter time.

Jon Isaacs: And did I hear a figure mentioned to six to seven feet? I'm wondering what happens to the water level when the tide comes up? What happens to the water level and actually how high can the water and the ice go up with those southwest winds?

Frank Long: If there's enough water that comes in, it'll bring the ice up, plus water will be flowing over up over the edge

Jon Isaacs: K.

Archie Ahkiviana: Ya, and then when it a flooded Christ all the way up to, a from here it's about 12 miles up river.

Thomas Napageak Ya Ocean Point.

Archie Ahkiviana: 18 miles up from the shore, around the river drainage. I don't know how it is on the other side around Sagavanirktok maybe it go farther up. I know it goes through here and then it goes through Howuerenokto (I?) Ocean point, that's about 18 miles from the shore.

Jon Isaacs: That's sort of the same time period where the ice is actually also maybe help pushing the water up making the water go up over the top of the ice and pushing it.

Frank Long: major. Inupiaq? [Dike?]

Karen Shemet: Powerful.

Thomas Napageak Ya I tried to use the example of the ice overflowing, I mean the water overflowing on top of the ice. That's it's very simply. It doesn't you know, it uses these ice bergs, chunks of ice. A chunk of ice may be big as this and twice the height and the wind blows it to where it's shallow and it freezes it there. I mean it's frozen solid. But when the tide comes, these chunks of ice that are out there are already frozen, the ice breaks around them and the tide comes up and that's where the water comes out. Floods the whole area. That's one of the dangers out there, when you're on a dog team or snow machining or . . .

Jon Isaacs: So it's almost like they were sort of stones in place and when the water is forced it kind of gets forced up among the ice that's kind of grounded and frozen there.

Noise

Leonard Lampe 1996 Northstar Nuiqsut

Also on your project, how are you going to resupply the project? Like you have to bring in supplies, so how are you going to do that? By helicopter, by air? So that doesn't ease me that you are going to have a lot of noise disturbance if you are going to be supplying by air, or by boat.

Nuiqsut Whaling Captains Meeting 1996 Northstar Nuiqsut

Thomas Napageak: Yes. Of all the animals that I've known, the wolves are, when you are hunting them, they're very noise sensitive, but more so are the bowhead whales. Any noise that they hear, they respond to that by going, moving away from it. A lot of times polar bears are different. Their curiosity can kill them very easy. They go toward the noise or anything that moves, they go for that.

Karen Shemet: And the whales go away from the noise.
Thomas Napageak They'll just come over and... Inupiaq

Ruth Nukapigak 1998 NPR-A Nuiqsut

These wildlife folk that see it -- they've witnessed, I guess they are wildlife folks, that walk in the country and looking at birds and things in the Colville River delta, maybe the east side, down by Ulumniak (ph), that's next to -- not far from the old Nuiqsut site, they're monitoring these birds and go to and fro to these places with a chopper. It upsets, disrupts, displaces, perhaps some of their only opportunity to go get their game, especially caribou, in the area are scared and may their run off because of these impediments that arrive are not natural. Naturally, they would walk along the coast where they're at and be able to harvest their caribou. Fishing, or (Inupiaq) have been plentiful and caribou has been plentiful this year because with the advent of late start of industrial work, this year has -- may have to cause that but the caribou has been plentiful in around Nuiqsut this fall. But she's suspect that if activity persists throughout the year, it will alter the hunting and game will no longer be visible and maybe -- may cause hunters to go much farther. This has regards to the harvest their subsistence and additional resources safety of hunters when they have to go that much farther for to their subsistence and additional resources.

Johnny Ahtuanaruk 2001 Liberty Nuiqsut

He would -- that would be right, you know, since with all these noise around here, they scare the animals. You know? The day I fly, I never seen nothing except about ten, five miles away from the mountain. That's the only caribou I seen. We fly in the open, and I didn't see nothing.

He's thinking about that. If that happened, if the animals wouldn't come around here no more, what's going to replace them? That's their living. That's their way of their making a living. You know. That's what they live on. They hate to see them animals be driven out of here.

Herman Rexford 1979 Sale BF Kaktovik

And he says, the planes, that the ships, are very noisy for these animals and can drive them away. He said he's been out hunting before and he can hear, and with their own ears, the animals can hear better than the human being. The noise will interrupt seals, polar bears, whales, fish, or whatever.

Isaac Nukapigak 1996 Northstar Nuiqsut

Eliminate air traffic is a good example. During the time that the Nuiqsut whales are out there, to eliminate the air traffic for any type of vessel traffic until the quota has been met by Kaktovik and Nuiqsut. (Inaudible) Us Natives depend on different types of species of marine habitat and mammals.

Physical Oceanography and Coastal Water Quality

Thomas Nusunginya 1982 Sale 71 Barrow

MR. NUSUNGINYA: I'm just translating what I just said, in Inupiat. (Speaks Inupiat) My mother was born right there in Cape Halkett, and that's one of my big concerned areas. I don't want any offshore development out there of any kind, 'cause I can see all the infallible I can see all some of the things that you can't overcome. Ocean currents are erratic. The further inland you go in, the more erratic the currents are. If the current tide is incoming, it'll bring the oil into the channels, rivers. If it's outgoing, it'll dissipate out in the ocean, but it'll bring up the hydrocarbon level to a point where it's toxic to biota, plankton, and up the ladder of the ocean cycle.

Archie Ahkiviana (read by Maggie Ahmaogak) 2001 Liberty Barrow

PUBLIC TESTIMONY OF MR. ARCHIE AHKIVIANA

(Excerpt read by Ms. Maggie Ahmaogak)

Archie's testified that around Tern Island are the strongest currents, now are behaving in that -- the currents are now very strong, and that the north side is now deep and is used by the migrating arctic cisco, which goes into the Kukpuk River and are caught through nets by the subsistence hunters when they get to the village of Nuiqsut.

Visual/Aesthetic

Leonard Lampe 1996 Northstar Nuiqsut

I am also concerned about a few things like if we are going to have flames out on the project, if there is going to be any flames flaring out on the project. Because it's very close to the whaling base of Nuiqsut called Cross Island, so I am very concerned on the migration and the impactment on the whales when we are out there. Because it makes whales more spooked and more dangerous for the crews, so I am very scared for the crews on the behavior of the whale. On the lights, I want to see -- you know, it might disturb migration. I want to make sure, if there are going to be any flames out there as well as discoloration to the environment, different colors.

Also, on lighting, beams, lighting beams on the project as well. We are concerned -- we know that there are some state codes that you have to follow, but we would like you to try to make it as close as you can to the environment.

Marie Rexford 1997 Sale 170 Kaktovik

I've lived here all my life, and I oppose everything with the oil companies. I don't like what I see in Prudhoe Bay. I never liked what I saw over there when I went working over there. So I'm putting my comment to say I oppose all the oil leases.

Jim Vorderstrasse 1998 NPR-A Barrow

I see that protective measures, exploratory drilling is not allowed within 1,200 feet of any cabin or known long-term campsite. To me I don't have any scientific data, but I know if we would have had a drilling rig within 1,200 feet of our

honeymoon it sure wouldn't have been as great of an experience as it was. And I hope that my children can someday experience the solitude, the feeling of being out there on your own.

Mayor Jim Vorderstrasse 1998 NPR-A Barrow

But I know, fortunately, the oil companies had developed new technology and I appreciate that and, you know, they can say they're doing it for the environment, I personally think they're doing it for economic reasons because the smaller that footprint is, the less taxes they're going to have to pay the North Slope Borough. But for whatever their reasons, the footprint is smaller and we're thankful for that. However, there's still a certain amount of pollution, noise pollution, venting of gas. I know flying over Prudhoe Bay I thought to myself, gee, this reminds of the Wizard of Oz when he was in there running all these levers and the flames shooting up. And I think, gee, you know, we look to Prudhoe Bay as the Wizard of Oz, we thought they were going to solve a lot of our problems, but unfortunately that just hasn't happened.

Isaac Nukapigak 2003 ASDP Nuiqsut

And the coating of the pipe, the outside layer, you know, it's just like a reflection especially during the summer hot months. I mean you could see that, you know, the pipe having reflection. I think they should put better, you know, coating or something that wouldn't reflect. I think that's where the problem -- maybe -- I don't know. Maybe that's one of the issues that needs to be addressed, that it's deferring the caribou. I mean there's some studies, I think, that needs to be done.

Other Environment

Othniel Oomituk 1982 NPR-A Barrow

When the seismic has been, we have seen the caribous with the seismic wire. Is there a possibility for BLM to identify, or color code their seismic wire so we could identify who has not coincided (ph) with the stipulations of cleaning up after the seismic operations?

MR. WOLF: We'll consider that comment. Thank you.

James Nageak 1982 NPR-A Barrow

My name is James Nageak. I'm an employee of the North Slope Borough under the Inupiat History Language and Culture Commission, and, also, as a concerned citizen of the North Slope Borough. One of the things that Amos Morry made a comment on was the impact of an oil spill even away from a waterway like the Colville River. There are small creeks that tend to develop from an area where there's pad (ph) development. It gets higher, and from that high area, the small creeks tend to go toward the bigger river. And from the bigger river, into the ocean. And one of the thing she's concerned with is that the water that the animals drink, the caribou and the foxes, the wolves, those that are on land --if that water is polluted, the effect on the animals would be such that it would affect the lifestyle of the North Slope people. Not only up in the areas near Anaktuvuk Pass, but all along the coast.

One of the things that we haven't even covered is: How is the gravel exploitation going to affect the caribou? I read in here someplace that the effect of the gravel movement to make paths would permanently affect that area where they have taken the gravel out. And we know that on top of the gravel is the soil that perpetuates the lichen. And if that area such that it's no longer there, and the caribou comeback to that certain area at a certain time they usually come back to that area--after they have waited a while to wait for the lichen to grow back --and they find that there's nothing, then how are they going to be affected? I have not heard any biological statements to that that can affect an animal --goes to an area knowing that, maybe seven years before, that there was lichen there, and they enthusiastically go to that area and find that area with no soil, just gravel. I don't know how --I haven't seen any statements, I don't think, to the effect that how is going to affect the caribou. Are they going to stay along there and eat gravel, or are they going to go to an area where there isn't any affected, or, you know... They probably won't find anything along so that's going to make my lifestyle a lot different, and my subsistence way of living.

Joash Tukle 1982 NPR-A Barrow

Since you already explained, I will say that what Ben Nungasuk said is right. When the Navy (people) first came there was no impact on the animals. The Navy (people) that first came to drill for oil did not use and place dynamite into the land nor did they use compressors in the water. And now these present oil (companies) that have been drilling, ever since oil was found, use explosives during the winter. And, as told in a comment made by an inland person earlier, he said his father would kill fish by hitting (the ice) from the top, and if there is ice-free water under there the fish would die. And then he would make some holes in the ice down-current for the dead fish to float up through. This, (his story) is also true. This is how the (people) that are drilling, using explosives on land during the winter near the lakes, kill the fish. And also in the ocean when they are using compressors, it is no different.

A compressor which sends off a very loud noise (and vibrations) can also kill a lot of fish. An elder (made a comment) to stop (the drilling for five (5) years.) since we, ourselves are elders now. I will support his comment to stop (for five years) to see if the animals will return to (their habitats); I am glad to know that a person thinks in this way. If they are going to drill near the river, don't use the water in that river. The (abundance) of fish will change.

We did not want to be forced to have any drilling done, but if they go ahead and drill then let them use water from the ocean by (purifying) it. Not from the lakes up there for they will kill the fish from the lack of water. Don't use the water in the rivers till their empty. I am saying this since I feel that we have been forced to yield to pressure. (Purify) the ocean water for their use, no matter how much the quantity. We want to protect our fish that are in the lakes and the rivers.

The river, during the winter, is like a lake. The mouth (of the river) only having water, and as though it was a lake the fish are here for the winter. If they pump the water and empty it, all the fish will die due to the lack of water.

If they're going to haul gravel, they should not-get it from the river. They should not bother (disturb) the path of the fish. They should haul gravel where there are no fish to disturb. I am deeply concerned as I am a resident of Nuiqsut

and of Barrow, and knowing all the lakes and the rivers that contain fish all the way to Anaktuvuk Pass. Even if I point to one part (of the map) avoiding the other, they will destroy the (fish) that are in the other. Right now, the fishes' habitats are the ocean, the rivers and the lakes that are all in this area. Our land is not like the land that are all in this area. Our land is not like the land that never freeze. The lakes where the fish are inland freeze over in the winter and they die due to the lack of water

When observing during any time of the year, where they have used explosives, there's not a fish in (sight), wherever they relocate. And then the next year, after they have used explosives in that (certain) area and have moved a little ways, one hears reports of our land acquiring fish again, fish which are fleeing from where they are using explosives.

Joash Tukle 1982 NPR-A Barrow

It is a fact that one never gets any fish at all after explosives have been used nearby.

By asking them. The water is very precious. The people and I have come to know just how much water is being used by the drillers nowadays here, because they're drilling just east of us. Having heard about how much water they are using, we do not want them to use the water from the land. And also in trying to help the Corporation by asking them, "If you make your well right by your side where the ocean water is the deepest, and using this water that you have purified, I would help by paying for the water that you have purified."

Nate Olemaun 2003 ASDP Barrow

One thing I'd like to bring out is the Sag River. Prudhoe been in existence over a year -- over 30 years and it's a yearly event of for over 30 years now for Sag River to have a wash-out. No matter how high, how strong they make that crossing, after the bridge they put in there in Sag River, it always washing out. So it's unpredictable. It's not in the same place the strength is going to be during wash-out; it's all over the tundra, all over the channels of the river.

Leonard Lampe 2003 ASDP Nuiqsut

With the satellite programs, I, too, am very concerned about satellite -- the crossing of the Nigliq Channel, the bridge design, as well as CD-4 as well as CD -- I believe it's 7, the most southern site. Nuiqsut has not experienced, neither has Alpine, what we call the 100 year Colville flood. We've only experienced a 25 year flood and with that 25 year flood, it came very close affecting those areas. Now, with the 100 year flood that hasn't occurred -- and I know you have data of what a 100 year flood might look like, but when we first moved here in Nuiqsut, that 100 year flood -- the whole plains down there was covered except for the hill down there. And we haven't seen that ever since we've been here in the 30 some years we've been here. But, you know, the industry needs to know of these dangers Mother Nature brings out on these sites and areas. There are things that -- you can do all the protections you can do, we can have all the policies and stipulations in places, but when Mother Nature's forces come in line, there's nothing any of us can do to stop her of what she's planning to do. And this 100 year flood will come and it will occur and it will devastate those well sites that will go into the Nigliq Channel.

Rosemary Ahtuanguaruak, Mayor 2003 ASDP Nuiqsut

When I started as a health aide in 1985 I had one asthma patient. By the time I went to the University of Washington for my physician assistant certificate in 1989, I had 20 to 25. When I came back in '91, there were 35. When I quit in 2000, there were over 60. The village make-up has not changed; it is still mostly Inupiaq. What was contributing, the most overwhelming issue, was that oil development around the community had increased and gotten closer. The worst nights on call were nights with many natural gas flares occurring. We could see it in the flares or in the fields around us. They release particles and they travel to us. The chance of an inversion will affect us. An inversion is a bowl-like air trap with cold air trapped by warm air. Increased concentrations of particulate matter occurs during these episodes. I fear what has been reinjected into the ground. The oil percolates up through the land. One of our elders said: we new about the oil; it made a good light source. We could not carry enough of it as we followed our resources. When the substances that were put down come back up, what will be the effects? Are we just beginning to see them? What will happen with the global warming and the sink hole shows up and the erosion continues and the permafrost decreases? Has the permafrost protected us so far? In areas throughout the state, there were DEW line sites being cleaned up. The early defense warning sites. I notice that the worst levels of contamination are further south. Is that what we have to look forward to? When I asked about what was brought here, they do not compare with what the workers have stated what is there. What is there will come back to us through our resources, through our land and our water. The contaminants concentrate in us through our consumption of our food. They accumulate in our bodies, our livers, our kidneys, our breast milk into our children.

We're seeing the changes. The caribou have problems. Lesions on the liver with a bad cover. They have lesions on the joints and internal organs. We asked the North Slope Borough about testing, but they said they have no budget for that. Where do we turn to identify the problems? The fish have problems with increased parasites, tumors in the muscles, stomachs, and ovaries.

They claim that the caribou herd is healthy with numbers, but the only caribou I got last year was bad. Twenty caribou were harvested in October when we could access areas not accessible by boat. Seventeen were sick. When I went camping last year, I waited three days for the herd, to have a helicopter to divert them away from us. When they were diverted, we went without. We have had to deal with harassment. We had overflights three times while trying to cut the harvest. It is disturbing. The next year we had a helicopter do the same thing, but it was worse. They were carrying a sling going from Alpine to Meltwater, another oilfield. It went right over us three times. The herd was right there and it put us at risk.

What if there is a severe icing event that the caribou die off by the thousands? What if the only way for us to have a chance is by reindeer herding? What if we have no resources to turn to because multiple resources are affected? What if a spill occurs during the whale migrations and they all die? What if there are no resources to get? What will you offer us?

Last summer the water near Alpine in the Colville River delta was 70 degrees. What is happening?

Raymond Neakok 1982 NPR-A Barrow

You have not taken into consideration the villages that are going to be affected by oil exploration (ph) of the areas that are pointed up here. Number 1 is: All drilling operations, will take a lot of water. That means the same thing will happen Sagavanirktok like they did in the Sagavanirktok (ph) River. They ran it dry, completely dry twice in one year. And, if that happens in the Colville River or any of these places that are printed up here--like the lakes, the big lakes and river -any one of those go dry, the animals are goi-the fish are not going to be there. That's destroying the villages.

The main problem for me is the seismic operation that is going to be done with dynamite. We know for sure, and it's a stated fact that the caribou does eat that powder comes out of that hole and they get rabid. Also, we know for sure that it does affect the bone structure of the caribou. Because of an incident in Atqasuk where a man seen a caribou walking and then fall down. He went to check to see what happen to it. He started to turn it over, the doggone the head come off but body did not move. Now, there's something wrong with that. We reported it. It took them three weeks, in fact. I remember I was involved in the reporting of that incident. And, nobody wanted to come in and make sure that it did happen. They waited three weeks. Now, the other thing. Any time there is any sites that are being put on, the animals are going to congregate around there. When they start eating all that stuff, you going to have a lot of rabid foxes, caribou, wolves, what- ever. Because they are going to get rabid like them They're going to eat around they're going to congregate around those places and they are going to be contaminated. And, that goes doubly for summertime when the birds migrate and come to nest.

Fish

Thomas Itta, Sr. 1998 NPR-A Atqasuk

Mr. Ahvakana: Thank you. Thomas Itta, Sr. was born and raised in the vicinity of Teshekpuk Lake, Cape Halkett is the place were he was born. Ever since he could remember he used that area for subsistence hunting. And all those lakes that are there visible, all of them, have fish in them. And he also stated that all the rivers that are around Teshekpuk Lake all flow into that lake and , therefore, they do have fish also. That Teshekpuk Lake from the beginning that we could remember that's been passed on by--from generation to generation. Our forefathers had stated that there's fish there that nobody knows that exist in that lake.

Archie Ahkiviana (read by Maggie Ahmaogak) 2001 Liberty Barrow PUBLIC TESTIMONY OF MR. ARCHIE AHKIVIANA

(Excerpt read by Ms. Maggie Ahmaogak)

Archie testified that around Tern Island are the strongest currents, now are behaving in that -- the currents are now very strong, and that the north side is now deep and is used by the migrating arctic cisco, which goes into the Kukpuk River and are caught through nets by the subsistence hunters when they get to the village of Nuiqsut.

Amos Morry 1982 NPR-A Barrow

ALICE SOLOMON FOR AMOS MORRY: My father takes me fishing on the ice when he was living and sometimes my father would strike or wheelos (ph-willows). He would strike the ice with a branch (of willows) when we see fish under ice and then, after he strikes them, the fish would die right there. And, then we would get them after he hit the ice. And, they see the fish under ice.

And, he said the fish, when they're drilling by the rivers, the oil seepage from the --If there should be oil struck and there is damage --When something happens to oil rigs and there's spillage, then he said the same thing will happen to the fish. The rivers will all be filled with oil spills and he said that the fish wouldn't be there like they used to be.

Johnny Aiken 1997 NPR-A Barrow

Anyway I was listening over the radio to what's going on here, travel with my folks wherever they go fishing, we go to Taulik Lake where we go fishing. Every now and then in that particular lake we hardly get any fish. It's a surprising time. Two years ago we hardly got any grayling from that spot, that's our main grayling fish getter and we hardly got any a couple years ago, that was surprising. And then in our own river Kugaruk, Kugaruk too, every now and then we always lose what we get there. We hardly get anymore fish there.

And I have an opposition, if NPR-As gonna be drilling in those areas where we live by subsistence mainly and we give what we catch, I'm wondering if tomorrow we're going to be giving these fish away to my people, whoever needs them.

George Olemaun 2003 ASDP Barrow

What they mentioned about the noise, and I guess that's why the fish are not coming back or they're depleting. That's one of the things you should study or monitor as you said. This drilling, you can barely hear it up, you know, up on the ground, but down it goes deeper and, you know, noise travels further especially I guess if it's close to the water. And I'm just saying that that could be the cause. And, as you may or may not know, we all love ahnalik [broad whitefish] here and we need it, too. So we need that for our subsistence.

Arnold Brower, Sr. 1976 Federal Energy Barrow

Now during the first exploration I sensed because of my own backing to my own livelihood around in the Tripp [sic] River area that there was tremendous damage in the fishing areas where I used to fish and the river was contaminated with diesel oil that was actually being distributed along there and I do not wish to have these same incidents in the exploration number two which is now going on.

I said this last fall that the fishing was poor and the exploration has gone through the same area. It is my understanding that the lakes that have now re-established their fish within a period of ten to twelve years were in the same situation because I could not find any fish in the ponds.

FLOSSIE: Do you want to name those lakes where the fish aren't any more?

Mr. BROWER : Yes, I recall one that's called Finmore Rock, Sitkulik, and the rest of the lakes that are in the Tripp river area, they do not have names but they are the fish rearing ponds. I notice that these fish we have, the white fish, have not migrated out into the ocean, they just migrated back into these lakes and stayed there for the winter, they are locked in for the winter when they get there.

Some of these lakes that I named as the rearing ponds are also the wintering areas for these fish. As far as I know there has been hardly any research in these lakes but any biologist or Fish and Game Department people to know which lakes have the fish, even though they have been in this land for a number of years -it's pretty hard.

I noticed in the first exploration that some of these lakes, especially Shinmar rock have dropped about two to three feet loss of water, a depth which is known to be eight feet. At the time I noticed it-it went down to about five to six feet -and therefore it cannot support any more fish, because a tremendous amount of water has been lost in that first exploration at Shinmar Rock. We enjoy these fish because we know where they're at -and during the winter whenever we need them we can go and get them but these lakes that I mentioned I would say they are zero fish in them -and even if I was to go in an emergency to survive on these fish I wouldn't be successful.

I notice that these seismic have dealt with some tremendous amounts without even knowing they are on some of these lakes -and I think there is no one that can say I am out of order when I mention that because there are indications where the blasting has been done in these lakes and no research of any kind had been done to find out if these lakes did have fish in them -they were used as that source

And that's the way an expert in the field of demolition (and I know what explosives can do to fish) -knowing for a fact that some of these lakes if you blew-up under ice you did it with powders, such as black powder put in kegs or in a shell, have a tremendous impact. I tested it once and I know it can damage a lot of fish under ice. I noticed what an explosive can do -it would detonate -which is a fast act of explosion.

Just to recall back in my time when we was in that area fishing with a hammer -= you could use a hammer to strike right on the ice -observing the fish below you-you can strike right on the ice itself, stun the fish and kill it. That's how sensitive a noisemaker would be in any of these areas. I would say that permafrost would have the same effect, the detonation of a strong impact could be used in the permafrost.

I sure wish that the impact statement that was being presented by the Navy to be used by the contractors exploring this, especially GSI, be implemented and used up to the capacity where the impact is. As far as I know that impact statement is there and must be utilized -it's not being utilized -it's just there. I think this will conclude my testimony!

Charlie Edwardson 1976 Federal Energy Barrow

Also my uncle, Arnold Brower is my uncle, him and I was raised together and we traveled all over, we're the guys that was always looking for fish and lakes and we'd find them too, but we don't fish them. We just check them for the future. In one where mentioned over there -you see that lake just for checking it -I fished there for eight hours and I got over a thousand fish with one net -and right now you can't catch a thing in it. There's no creeks out of it -it's a big lake. After PET 4 seismograph party went through -the depth of the lake is a little over eight feet -and a few blasts would clean the whole thing up around the lake. During those days, we never blasted but they'll just blast anyplace - and I've been with them. Last year up at our fish camp (I've got a couple of fish camps) and Arnold Brower has one, there's about five fish camps up there and just right about my fish camp they had their line, seismograph line, and they went right along the river, on the edge of it, on the ice -and the impact of every blast can kill all the fish on that side of that river. And you know why I said that --you see if you see a lingcod under the water, if you could see it, you could take a hammer and hit the ice right above him -and there's just the impact of the hammer -how many fish does a blast kill? and that's why our lakes where we fish are just about extinct, our fish. I asked one of the seismograph guys 'how far do you get from the edge of the lake to blast' and he said 'right on the edge where the water comes'. Now that blast can kill a lot of fish -it don't take much to kill the fish in the water with blasts.

I guess that's what's happening to our fish. We had some good fishing grounds up there and this fall we hardly even caught any. I followed the trail of the seismograph last spring, checking on it with a Skidoo -and I wasn't alone, there were three Skidoos together. We followed that trail and we followed it right across the lakes. You never go around them you go right straight across -some of the lakes is better than a mile across, and they are deep. And there's a lot of fish right above too -I hope they don't do any blasting there. That's what's happening -and that's what we live on. We don't just go out here and kill a beef as we please like the outsiders or dig in the ground and get some potatoes, that's a little hard for up here. I'd like to see the environmental guys get a little strict on the seismograph parties. That might kind of slow then down but -you can't replace them fish or caribou

Joash Tukle 1982 NPR-A Barrow

And, as told in a comment made by an inland person earlier, he said his father would kill fish by hitting (the ice) from the top, and if there is ice-free water under there the fish would die. And then he would make some holes in the ice down-current for the dead fish to float up through. This, (his story) is also true. This is how the (people) that are drilling, using explosives on land during the winter near the lakes, kill the fish. And also In the ocean when they are using compressors, it is no different. A person saw this with his own eyes and knows that lust by hitting the top of the ice the fish would be dead. A compressor which sends off a very loud noise (and vibrations) can also kill a lot of fish.

If they are going to drill near the river, don't use the water in that river. The (abundance) of fish will change.

(Purify) the ocean water for their use, no matter how much the quantity. We want to protect our fish that are in the lakes and the rivers. The river, during the winter, is like a lake. The mouth (of the river) only having water, and as though it was a lake the fish are here for the winter. If they pump the water and empty it, all the fish will die due to the lack of water.

If they're going to haul gravel, they should not-get it from the river. They should not bother (disturb) the path of the fish. They should haul gravel where there are no fish to disturb. I am deeply concerned as I am a resident of Nuiqsut

and of Barrow, and knowing all the lakes and the rivers that contain fish all the way to Anaktuvuk Pass. Even if I point to one part (of the map) avoiding the other, they will destroy the (fish) that are in the other.

Right now, the fishes' habitats are the ocean, the rivers and the lakes that are all in this area. Our land is not like the land that are all in this area. Our land is not like the land that never freeze. The lakes where the fish are inland freeze over in the winter and they die due to the lack of water.

They will let us run out of fish by doing this. When observing during any time of the year, where they have used explosives, there's not a fish in (sight), wherever they relocate. And then the next year, after they have used explosives in that (certain) area and have moved a little ways, one hears reports of our land acquiring fish again, fish which are fleeing from where they are using explosives. The (people) that are using explosives are getting closer to Barrow, when we were out whaling this year, even though (they) are not talking about the ocean, I will talk about the ocean. I think they wanted to know more about the land during the fall time, ever since they started using compressors, our whales that use to come through before the ice started to come in, have started reaching Barrow when we can't reach them anymore, after (the whalers) have gone ashore. They should take extreme caution not to use the water from the lakes and the rivers after we have been forced to yield to pressure, after we (have repeatedly) told them not to drill.

Jenny Ahkivgak (Okkingak) 1982 NPR-A Barrow

And there are 11 fishes that have different names that are in the rivers.

Having been raised at Prudhoe Bay. I took my (2) sons there when they were able to do things, to let them see where I had been raised. When I reached there with them, I set up a net for than where we use to fish near the ocean. There were places where they had drilled, right beside the place where our house use to be. I placed a net for them in the lagoon near the ocean where my Dad use to catch Arctic char and there use to be a lot of fish here, and this is where they had drilled, on the side and even on land but also touching that area. Even though we had the net overnight it did not get any fish at all.

Even the fish are real easy to die, for example: if the water had something in it, it is very hard to drink. Even the animal makes tracks when they're just walking. They are not like us human beings. They must have run away when they smell something that they don't want to smell like oil, grease, or a smell that the oil drillers have left behind.

Even the fish that are in the river...,for instance, people start netting fish around September before the fish start spawning.

Noah Itta 1982 NPR-A Barrow

On one of my fishing trips, I saw the markers of the sounders(?) that had been placed there following the river. From that time on, the fishes in that river changed and are not there anymore right now. The river being like this. Every springtime, a lot of the rivers clean-up by the full force of their break-up, whatever trash is in there is taken out then its clean. And the stream that does not break-up is where the animals and the fish are because it does not break-up. Since it does not (break-up and) throw out any trash, a lot of the fishes that were killed by the sounding(?) and could not get out being at the bottom, and the fishes always wanting to be in clean water did not want to go there anymore. The sounders (?) having killed the fish that were at the bottom of the stream. This is a true fact.

Based on this fact, I would like, if I can, add more weight to what Ben Nungasuk (Nungasak) said, to hold off for five years, thinking that maybe the fish will come back, even in other areas. It is also knowledgeable that this has occurred in other areas that the dead fish look like driftwood, right on the pat of the sounders (?). They look like driftwood washed ashore. I want to testify because it is a true fact that the fishes can be killed wherever the oil people are.

Joash Tukle 1982 NPR-A Barrow

My name is Joash Tukle again. I want to add, since Kuugaagruk was brought up by Noah Itta. Since (I) fished in this area and still do fish there a number of times so last year we were there for two weeks and did not get any fish even though the hook was visible the fish were not biting; acting strange as if they were not aware of anything and we did not get even one little fish. What Noah Itta said is a true fact about the people who had used explosives during the winter. It is a fact that one never gets any fish at all after explosives have been used nearby.

Then moving back to what I said earlier, use the water from the ocean instead of the lakes or the rivers. They should go to the nearest Region which have Corporations and ask where from the ocean without bothering the fish could we put up our wells for water.

Sam Taalak 1982 NPR-A Barrow

We have on page 9 the classification system for determining Western(ph) impact. There's a point which I would like to..... The clarification I would like to get from you on the classification system, for determining Western impact under percentages on use of the subsistence animals we have around Colville River. Like the fish --It's about 90 percent of our meat. You only rated it 2. On your briefs, here, you have failed to point out the area of Fish Creek, one of the most important rivers that we have for the people of Nuiqsut. As a subsistence area, it is hunted and fished very heavily.

I would like to come back and comment on the animals(ph) and the water and the fish of this area at a later date. But, I would like to insist on a three mile buffer zone where we must protect this. I am talking as an illustration: I do not want to pay \$25 for a single chicken, which we have do. This river is my store. I would like to protect it and the whole country would feel I can keep it.

Arnold Brower, Jr. 1982 NPR-A Barrow

Even now days because our nutrients, our food sources are still based on these things from the land. From the lichen the caribou eats, to the mosquitoes that the fish eat. All these little things, microscopic organisms in the rivers and in the lakes are the food source, the eco-system, the food chain is our livelihood --each lake, each river.

Westward of the point on all waters, right now, that drain into the Chukchi Sea, there's absolutely no Large White fish. Large White Fish is a very nutritional fish that we crave, that we have. As a matter of fact, it's probably one of the largest kinds of fish that we subsist with through gill netting. And, this kind of a spillage can be very detrimental to the population of this White Fish, because we feel it each year by how much we catch. The impact is known by each of our festivities when we eat, when we share our food. Just like (ph) the whale.

I think there are only technical reasons in the area concern for fish, because I have seen the State of Alaska's harvesting programs--by germinating the eggs of those fish. And, I know that can be done because it has happened, and we have done it here before. My father has showed me how, and he's done it before. And, I think we have just between the North Slope Borough with our people and your people we can make cooperative efforts to create harvesting areas in fishes on these deep lakes. These deep lakes are very crucial to us. And, those are the prime targets that you are looking at for your water source. Because, in the shallow areas, the fish don't over-winter in the shallow lakes. They over-winter in the deepwater, because they freeze to the bottom of the lake six to seven feet sometimes in the course of a year. Well, through out each year. And, I've done the study with my staff in fresh water lakes, salt water lakes, and the Arctic Ocean. And, I know that for a fact because I have records of those reasons.

Walter Akpik, Sr. 1982 NPR-A Barrow

Also, when I was assisting the oil people(seismic crew?) as a guide for two years with the GSI Service, when I was helping them. we would work on the area which our boss had marked as the area which we were to work on that day. If I knew of anything along the route which could most likely be destroyed I would have the bombardier skirt around that area. I was in the first vehicle, a bombardier among that survey group. I had riding right alongside me the chief person. I would often tell him. "We are about to reach the river." Then before reaching it, we would erect a (sharp point?) where the drilling is to take place. And then we would cross to the other side of the river after erecting that. Sometimes the river is wide, all right, but once those (sharp points?) are erected they do no drilling within these areas. And then when we go ashore we write on the wood, telling the (drillers) to drill there.

We would place the (sharp points?) about four hundred feet from the river. Because I have previously assisted these oil people when they searched for oil I don't like to oppose them. But I do try to help them so that they do it in the best manner possible one in which they don't destroy anything. Because, you see. I also think about my fellow Inupiat.

There are fish in lakes too in the summer. Fish are the one most important thing to watch for because of their characteristics. Although there are caribou which run everywhere along the top of the ground too, and although they, too, need to be provided for, I would be most grateful to the oil people if they would stay away from the lakes and rivers inhabited by fish when they begin using underground explosives in their search. These are much used by us who have subsisted by fishing.

These small lines are what their job is to be, whether it goes right through a lake, a river, or whatever, the line does not waver. It keeps on going. But when it is about to reach a river they stop just before it and erect a (shock point?). And when they realize that the line goes through a big lake, when they realize the line goes through it -as you can see, this line is straight, it does not waver even a bit -when they realize that it goes right through a big lake they would stop just before reaching it and erect (shock point?) where they are to drill. And then although they would cross the big lake without drilling in it, they do put in markers every so many feet or so and keep on going. And then after crossing it they would again put in markers where drilling is to be done.

And then when the lake is not very big -after looking for a while and realizing that the lake is not very big -when we see that the line goes right through it we would skirt around it If that is possible. Then they would erect whatever over at the other side.

They know me and they can't do things on purpose in my presence. They don't do things on purpose in my presence. Because I have heard one of them say that he, himself, would never place dynamite anywhere there is water. He scolded those drillers there in my presence. He would never, he said, place dynamite right along a waterway.

Rossman Peetook 1982 NPR-A Barrow

Good evening. My name is Rossman Peetook from Wainwright. Since we are talking about the valuable subsistence land area, the NPR-A, we need a protection. If the Seismic exploration happen to violate or did not follow the stipulations that they have, we need a protection, too for our rivers, nesting areas. I do not oppose the seismic exploration on land, but I don't want to see violators while they are exploring right on the river or on the lakes where the fish are. And, I want to clarify one I want to ask you a question that -- If the violators happen to start exploring right on the fishing areas, do they have some kind of a punishment?

Thomas Brower, Jr. and James Aiken, Sr. 1997 NPR-A Atqasuk

THOMAS BROWER, JR. - ATQASUK: Why aren't all the creeks and rivers on the map, because I know of a lot of creeks and rivers that aren't on the map that have a lot of fish. Even on those and in here.

LOHMAN: Let him show us and we'll put them on...

THOMAS BROWER, JR.: There's a place called Dubbelick that's not on the map that I know for a fact to be a very good resource for fish, there is also near Teshekpuk there is also a place called Upulatook near Nuiqsut where there is a creek that has a lot of fish and not including these on the map is detrimental. There are also some streams to the east of Nuiqsut that are also not on the map. I have gone how many times to Inigok where there was some drilling that took place, and I have seen bones from birds that have been killed from the, from after they drill a hole, the stuff they leave behind, the fluids. I don't want to see that kind of thing happening where we see our wildlife and waterfowl dying from contaminants being left after having conducted drilling activity, I don't want to see that kind of thing. And leaving an area without having done some kind of thing to put it back into the shape it was before the drilling took place.

JAMES AIKEN, SR. - ATAQSUK: There is a chemical, the substance that is used when you're drilling to make the hole, is poisonous to animals and then after crude oil has been extracted there are left over after drilling has taken place

there's left over material, left over that also contaminates birds and or waterfowl and other animals and it's this substance that is used in the drilling process that is the substance that is poisonous.

Rossman Peetook 1982 NPR-A Barrow

And, last summer, he said, we went to Colville River in the summer time, and was fishing with hooks, and they were catching fish right away. But some people there told them when they were -- they said, this is a ... They were so glad they were catching fish, and they were catching a lot fish, but they said they were small in number now, so there must have a lot of fish there.

Raymond Neakok 1982 NPR-A Barrow

I myself will really suffer if I can no longer eat seal meat or caribou meat. More so, if we can no longer eat fish, Nuiqsut will be really affected. If the Colville River's water level becomes too low, then it will become impossible to fish. We all notice that salmon are becoming more plentiful in the rivers, which decreases the white fish population. We all know that even further upriver salmon are becoming more numerous, decreasing the white fish, cisco, and grayling populations. They are scared of the salmon. Even more so, if oil starts in on them, our fish will disappear quickly. And the fish that occupy the lakes; if they use water from those lakes, then those fish will have no water.

Johnny Aiken 1982 Sale 71 Barrow

MR. AIKEN: From Barrow. I used to be a bird hunter when I was a kid. I had five dogs and they were my dog team. I have grown up here hunting birds, lemmings, fish, caribou, whale, and as I have been growing up I thought I was losing my sight. I started losing what I was growing up with birds, lemming, fish. And those were my actual things I used to hunt. Now I am losing them from this oil drilling. And when I go up inland, go fishing, you start getting catfish. Those are unusual in our rivers up inland. You start getting these catfish. And those catfish are always on the ocean, not on rivers. And I was wondering why you start getting catfish in the rivers. I think some something's telling us that we're moving up instead of our original fish that are in the rivers.

Dorcas Maupin 1982 Sale 71 Barrow

MS. MAUPIN: Box 161. I'd like to say for the first five years of my life we lived up inland, and to make a long story short, I lived with my three aunts, grew up inland. When my grandfather died, we came back to Barrow. Up inland we have experienced starvation. For about four years we lived on fish alone, day in and day out. We had fish for breakfast, lunch, and dinner, and that's all we ate. None of this white flour, sugar; none of it existed, but we survived. That's what I remember from my childhood. And we lived totally on land. And when we came back, every summer we would go off-shore I mean on the coastal line for the hunting with my aunts. My grandmother was alive then. Every summer after school we go hunting seal, birds, fish, 'til school I was ready to go just about approach we came back to town. For most of my 17 years before I was married, that's what I experienced as an Inupiat here in Barrow.

Wilbur Ahtuananaq (Read by Thomas Napageak) 1979 Sale BF Nuiqsut

Wilber Ahtuananaq, Sr. of Nuiqsut, Alaska. Born at Colville River Delta. I, Wilber, have been fishing ever since I could remember. I believe the white fish here are not as many as used to be. Ever since the oil companies started drilling, I believe there's not much white fish since they have started drilling at Flaxman Island. I think since the oil companies, we start to have less animals such as ducks, seals, fish of all kinds. Also, in the fish, the Wildlife put tags on are not good to eat. For when they put the tags on the fish near the tail, these fish with tags, most of them always have pus on them.

Wilbur Ahtuananaq (Read by Thomas Napageak) 1979 Sale BF Nuiqsut

We fish for ikalukpik [coho salmon] from the ocean and the Sagavanirtuug River. We hook for graylings and net for anaaglik [broad whitefish] in the summer. We get all kinds of white fish by seining in the channels. The Savviugvik River is also abundant for grayling.

Nanny Woods 1979 Sale BF Nuiqsut

INTERPRETER: Her name is Nanny Woods. W-O-O-D-S. She had lived here in Nuiqsut in 1921. She had traveled east to Cross Island and that's where they got a whale. There was lots of people down in that area. Then they got separated. She traveled separately from her parents. She traveled east towards Bar Island. She was with her husband, separated from her parents and we lived on subsistence. Hunting caribou, fish whatever is on island. Then on up to river, Sag River. Used to be full of fish and all the rivers were full of fish. And she does not know if there are fish anymore in these rivers. This is how we traveled in our...at that time. She says she's going to be one of the people that's opposing to lease sale. She had observed, seen how life is in this area, where the area is in the lease sale. There were lots of caribou that we hardly see anymore. There's little bit of fish around here. And the fish come from ocean in the fall, travel up river, then in spring- time goes out.

Alice Woods 1996 Northstar Nuiqsut

ALICE WOODS: And if they are putting the pipe under, how much are they going to disturb the species underneath? Any answer for that? Because every year we all know they travel a lot toward here all the way from Mackenzie, Arctic cisco that we get in the month of October.

Alice Woods 1996 Northstar Nuiqsut

ALICE WOODS: I've got one more. Our fishing season wasn't very good this year. You know, there were a lot of men going down, put nets all 24 hours, some get one. A lot of them continue, continue, they finally quit.

TIM JENNINGS: This is for Arctic cisco?

ALICE WOODS: Ice netting, yeah.

TIM JENNINGS: Under the ice.

ALICE WOODS: Arctic cisco. Even though we are down below, there is so much activity on that side. It was terrible, because we shared those fish with the other villages. Behind the (inaudible) moose camp, that is where my son put a net. (Inaudible) He finally said I am tired of wasting my motor gas. I might as well take my net out. We have no idea that what you guys know they are scientists. They are all the time out there for species or they check them every five years or what. It's very--(Interrupted.)

ALICE WOODS: Yeah. My husband been here years and years. This is where he is raised and it is a terrible year for fishing. Logging them somewhere, or anybody anywhere can answer this one besides Tom? No answer. So there is something, funny thing going with these.

Nuiqsut Whaling Captains' Meeting 1996 Northstar Nuiqsut

Thomas Napageak: I think uh if we could confirm it up to really test out if the causeways are effecting the migration, what we should try to do is go back to the traditional fishing areas during the month of August. Inupiaq.

Thomas Napageak: Oliktok, that's number one that's where they used to fish, month of August.

Karen Shemet: Right here'?

Thomas Napageak yes, ya ya that point there.

Karen Shemet: What type of fish?

Archie Ahkiviana: Arctic cisco.

Karen Shemet: Char too?

Thomas Napageak: All these points, all the way to Beechey Point. Those are the points they used to do a lot of fishing.

Karen Shemet: So around each point?

Thomas Napageak: Yes, around the point, yeah.

Karen Shemet: And this point too?

Thomas Napageak Ya Beechey Point

Jon Isaacs: Do you sort of drift fish by boats or set it off from the shore with a set net?

Thomas Napageak Pardon me?

Jon Isaacs: Do you set net from shore going out or sort of drifting..

Thomas Napageak: Yes, because no ice in August. Set net. I've done fishing there.

Karen: Around?

Thomas Napageak: Just on the ocean side.

Karen Shemet: Am I cutting it short?

Thomas Napageak: Ya in the shore, in the shore.

Karen Shemet: Like that?

Thomas Napageak Ya but in the shore

Karen Shemet: Closer'?

Thomas Napageak: Ya.

Karen Shemet: And that's the same kind of fish?

Inupiaq

Karen Shemet: August also?

Inupiaq

Karen Shemet: So this was in August?

Thomas Napageak I fished at Cross Island during the month of July, Arctic Char, all around it.

Karen Shemet: And what was this one?

Thomas Napageak: Pardon?

Karen Shemet: What month was this one?

Thomas Napageak: Ah that was July.

Karen Shemet: And the same thing, char?

Thomas Napageak Ya: that was the same trip I had when I was in Bullen Point. Back in those areas. But we need to check those three locations to be definitely sure that the causeways are causing, see, Kuukpik used to be one of the most prime areas including Migaluk (Niglik?) is completely out. Now we, a lot of the fishermen claim because of the ice conditions, that formed in the fall might be the cause.

Jon Isaacs: What would the ice have done? This is in the Colville?

Thomas Napageak: Yes.

Jon Isaacs: Maybe the over wintering or some freezing on the bottom.

Thomas Napageak: We have northeasterly wind during the very early forming of ice. That thing breaks up and clogs the channel a lot of times. That could be one of the problems, but it should not happen every year.

Archie Ahkiviana: They're getting less and less though every year.

Thomas Napageak: They're getting less and less and that's the reason why we're blaming the causeway.

Inupiaq Patsy Tukle:

Thomas Napageak: got a good support that the ikoktuk (?) (qaataq) [arctic cisco] that he gets are tagged in McKenzie delta, they're caught over here.

Inupiaq Patsy Tukle:

Thomas Napageak Yeah, including the ones that were tagged at Oliktok they get them over at the Colville River.

Inupiaq Patsy Tukle:(Laughter)

Thomas Napageak: Maybe we should go out and get some tagged fish.

Jon Isaacs: Sounds like the halibut derby.

Karen Shemet: What kind of fish is that?

Frank Long: Arctic cisco, whitefish.

Inupiaq

Archie Ahkiviana: Those least cisco got those tags too and arctic cisco.

Jon Isaacs: It sounds like you haven't fished those areas regularly enough to see what the effect of the causeways been on those areas out along the ocean. More recently you've been sort of fishing more in the Colville and the channels.

Inupiaq Archie Ahkiviana, Patsy Tukle, Thomas Napageak

Thomas Napageak Because of the fact that our catch is getting smaller, we put the blame on the causeways. Although we're not really definite because these fishing areas, mainly those three locations, need to be tested out in order to prove that the causeways is the cause for the fish.

Inupiaq Archie Ahkiviana: west dock, Thomas Napageak: west dock, west dock

Jon Isaacs: When you've seen your catches down is it both summer and winter, year round or is it worse any particular time?

Thomas Napageak: Pardon me'?

Jon Isaacs: Your catch, because you fish both under the ice and you fish during the summer, during open water. When you fish the Colville do you fish both under the ice with nets and also fish open water?

Thomas Napageak These areas are in August, there's no ice forming, but in Colville, it's under ice. Month of October and November. Inupiaq

Jon Isaacs: That's when you are seeing that your catch is down in the under ice fishing?

Thomas Napageak: But they used to be up, before these causeways, used to be plentiful. And then people just quit fishing when they have enough. Now you can have your net out there until you can't get anymore, and you still don't get enough supply for winter.

Jon Isaacs: Do people ever go out and fish in the near shore water for cod and things like that. I know like in Kotzebue area they go out on the ocean ice.

Thomas Napageak No we don't go out for cod or anything. No we don't go out in the open. But I was thinking of taking my 5 1/2 inch net to Cross Island to test it out because he was saying that salmon were being caught in Fish Creek now. Used to be no salmon around here that much, but he's getting them. So, I'm kind of...

Jon Isaacs: Ya I've heard too that, 10 years ago we were working on the coastal management plan for the Borough and the salmon were kind of colonizing the streams and populations were moving east.

Archie Ahkiviana: I got dog salmon too, chum, the big one. I never got those before in Fish Creek and then those silvers started to come in now. All those years since I started fishing down there.

Jon Isaacs: Just for my knowledge...

Inupiaq Thomas Napageak:

Jon Isaacs: When you guys are out in the ocean do you ever see any large schools of fish on the surface areas where there's lots of fish concentrated in the near shore or the off shore area?

Thomas Napageak The wife and I at one time, yes, we witnessed a lot of that over this area.

Inupiaq

Thomas Napageak: We saw a lot of fish.

Inupiaq

Thomas Napageak But you know we just saw them, they were visible.

Karen Shemet: Do you know what they were?

Thomas Napageak I don't know, looked like cod, they were flashing. But we weren't there very long. We just got up and walked the beach for a while and then went on to Cross Island.

Karen Shemet: Do you remember what month that was?

Thomas Napageak: July.

Inupiaq Patsy Tukle:

Thomas Napageak: We were talking about fish, there's no bottom fishes that we go for here. There's a lot of shells, seashells. But we have never really concentrated on any of that stuff. But we're done with fish.

Nelson Ahvakana 1998 NPR-A Nuiqsut

Kowalski, Nageak, Obie (ph) all stated in the EIS that the Village of Nuiqsut hunt for fish and game at the Colville River. That is completely wrong because when the fish are there, all the way from where the boats are docking, that's down here. All the way down to the mouth of Nagaluk (ph) they put their nets. It's true that during the summer, that (Inupiaq) they put nets there, yes, but for whitefish, this is--this Nagaluk (ph) River is what they use the most. And then if they cannot do it there when the bay opens up, they go through the fish screen and use that area also for fishing. The Ulutuooh River which is really close from here and it bends like crazy like a snake, there's no fishing there. They don't fish there. It's the Fish Creek area is what they use so everything that has been stated in that EIS is completely wrong.

Noah Itta 2001 Liberty Nuiqsut

But later on, he found out there were some explosions being used on that river that they want, the hunters, to stay away, you know. They went against the wishes of those people that was guiding them, showing them to stay away from. That was a main river that they go fishing on, from way back, they live off. It was just like their garden. You know, like you people have your gardens growing, your vegetables. So that river was more like their garden. And then when the oil explorers, they used dynamite in that river.

Since then, since they used dynamite in that river, they never find no fish in that river again 'cause they were using dynamite right in the river. They were using dynamite in the river, and they disturbed the garden of where they live off of, and they were very hurt about that. They didn't -- there's a lot of people that disagree with that part. And there's even some people who were even living at Barrow at that time when they were using dynamite in that river, the main river where they go fishing 'cause it's closer to Barrow. And they used dynamite in it. And there's not -- there isn't any fish in that river now.

They waited three years in order to see some fish in that river, you know, that river that they hunt, get their supplies for the river, with the fish, you know. They had to wait three years. And now it's -- there are some fish in there now. That's why he's concerned about those animals, you know, in the ocean, that they live off up until now. He's concerned about

those animals, that they're going to be disturbed by the drilling or the hammering or whatever, all the noise that goes into it, you know. He's worried about that.

Rosemary Ahtuanaruk 2001 Liberty Nuiqsut

I wanted to add about -- you had talked about fishing and if we had been impacted. This is Rosemary Ahtuanaruk again. When there has been offshore activities and causeways were built and islands were built, it does affect our fishing. The sediment affects the way the fish move along the ocean. They go into the rivers, and we harvest them there. But when there's a lot of problems, because like you're pouring gravel in there, it changes everything, and the salinity and all that kind of junk is all affected.

We've gone without fishing. We go out there to put our nets, we might get few fish, not enough to sustain. We waste lots of gas still trying to harvest. But when we come to these meetings, they'll say, Where? Our project is not affecting your fishing. Our project is not affecting your fishing. Well, when we have no fish in our ice cellars, it is affecting our lifestyle. And it has been proven over and over, when there are offshore developments, it does affect our fishing.

With poor whaling season, without the fish to sustain our population, many people would starve, and there would be lots more problems than there are already. When there is a lot of activities related to development, the social ills are the most. When there's less development, the social ills also go away. The money that thrives on the drug and alcohol goes away with your development. But it follows your development activities.

Other communities that are nearby will be affected next. The foothills development, it hasn't even happened, but Anaktuvuk has been suffering the last few years. NPRA is just starting to get developed. Atqasuk has been having problems. Nuiqsut has been having tremendous problems. When our people can feed themselves, they're very happy. They don't care if they don't have a job as long as they're providing for their families, as long as they have the hope in their mind of the possibility to provide for their families. You take away that hope, and you're going to have many, many people that we lose to the ills of social ills. All of those problems.

Gordon Brower 2002 Point Thomson Barrow

One of the other concerns that I see is sensitive areas planning for these projects, especially for your dock near the Flaxman Island right there and your dredging to make it deeper for these modules to come in. I have had the privilege to attend some of the scientific advisory committee meetings in the past which related to fish movements from the McKenzie Delta over to the Colville Delta which were young of the year fish that migrated and that may become an issue because they are near shore migrations of that fish and they're basically fish fry that are trying to come into the Colville to grow up and then they head back into McKenzie for spawning again. It seems to me that is an issue there, for sensitive areas planning. The EIS scoping should take those into account because it is a sensitive issue.

East dock -- or west dock and Endicott causeways were all breached to better manage the fish movements, young of the year fish movements between the near shore migratory routes of that species.

Again, alternatives, we've pressed for that. I don't know if this can be one of those projects where alternatives such as buried pipelines or even putting some of that pipeline inside of the road and making it maintainable within inside of the road may be preferable for people that hunt in that area, if they were concerned about shooting the pipeline or shooting in the direction of the pipeline trying to hunt game from the Native allotment owners in those areas. Such alternatives should be considered like that.

Frank Long, Jr. 2003 ASDP Nuiqsut

And on top of that, in the area that CD-5, 6, and 7, especially 7, is a hunting area where we do our hunting inland and with furbearing animals. And CD-6 is the one that's close to the Fish Creek area which we do fishing during the summer.

When we can't get no fish in Nigliq Channel over here, then we slide over to the other channel. We think it has a lot of fish in it and the fish taste better than the Colville fish. So it's got a lot of potential there. And CD-5 is an area where caribou migrate on the coastal plain during summer. If we go that route and CD-5 and the bridge is down there, we will have the same problem we did in the Prudhoe Bay and the Kuparuk area with our caribou. Right now I call our caribou that are existing around here that don't go nowhere our "industrial dope addict caribou." They already sick and nobody's doing anything about them, although they done 10,000 pieces of study. Nobody studies sick animals nor sick people. So these are some of the things that I'd like to bring to you. Maybe I'll have more additional time later, and I will have a written comment either by mail or other means. Thank you.

Jimmy Nukapigak 2003 ASDP Barrow

MR. JIMMY NUKAPIGAK: Jimmy Nukapigak for the record on the region from Nuiqsut. So I have lived there and I'd like to know -- this is about the hunting area or fishing around Nuiqsut, especially on Fish Creek area. There's a lot of fish out there, especially Nuiqsut residents had used that for subsistence for more than thousands of years. Also around the east portion on this land where the Arctic ciscos are coming in through all the creeks over here. I fished with my mother for -- ever since I was a little boy. So there's hardly any Arctic cisco nowadays that used to be like 30 years ago. So ever since all this activity start happening around Alpine, the Nuiqsut have been impacted so much, by 100 percent, because all the birds that are around this area, they're nesting all over because I had experienced that before. (Delivers comment in Inupiaq)

I used to get a lot of Arctic cisco when I lived -- was a little kid with my mother, by hundreds and hundreds, and right now what my mother have been telling me, there's hardly any Arctic cisco nowadays ever since the Alpine has started about a few years ago. So it's really happening. Otherwise you oil companies are going to have to devastate our fishing ground, hunting ground. Our caribou migration will be impacted so high. Because I care for my people, like we all care for -- us Inupiaq had cared for this land for thousands of years. So now why there is the Alpine -- I mean a pipeline going over to the Nigliq Channel. That bridge ain't going to stand forever. It's going to collapse. So everything's collapsed. We all know that. So if you guys are going to build a pipeline, so try to make it into -- probably underground pipeline would be nice instead of -- otherwise when the ice starts breaking up, I seen that place -

- area can devastate -- when the ice start breaking up, it's going to devastate that bridge. Like Nate said back in Kuparuk that bridge had failed so many times. So you better discuss about this really hard. Otherwise on a caribou migration -- if you're going to build a pipeline, I'd like to see underground. There's all kinds of new technologies out there that need to be -- you know, so if you guys are going to build a pipeline, all that caribou migration won't be hurt.

So right now there's all kinds of new technology around the world that you can use. So it's a pretty long stretch from the CD-7 that that pipeline is going to be built. So that's all the caribou migration that's been migrated from east to west, they all go north to go to the sea. Especially when it's really hard, the caribou can migrate to the sea and go off.

So, anyway, so I urge Nuiqsut people to get together and --because Nuiqsut have been impacted by -- just by field, now you've got quite a bit of fields that's going to be happening, so it's going to be really impacted. So I urge to work together as a community, you know, work with one another like what Fred was saying, so we all must come together to resolve some problems because it will be -- that Fish Creek area is most popular fishing for Nuiqsut for the fall time. Summer time around Nigliq Channel. So it's most popular fishing. So if that's happened, if the oil -- if that bridge pipeline broke up, there will be more devastation on our fish out there, especially the seal on the mouth of the rivers. There's all kinds of seals out there, there's all kinds of birds. So if there's an oil pipeline break up on that bridge, boy, you're going to have -- devastate our wildlife out there. So let's all be careful. If you're going to be drilling or making pipelines, so let's all do a good job. You're going to develop this area, so let's all work together just like on what Nate was saying or Fred. Let's all come together instead of only few people over here that speak up for it, for that land. So that's my concern. Thank you.

George Olemaun 2003 ASDP Barrow

MR. GEORGE OLEMAUN: Yes. Good evening. George Olemaun. What they mentioned about the noise, and I guess that's why the fish are not coming back or they're depleting. That's one of the things you should study or monitor as you said. This drilling, you can barely hear it up, you know, up on the ground, but down it goes deeper and, you know, noise travels further especially I guess if it's close to the water.

And I'm just saying that that could be the cause. And, as you may or may not know, we all love ahnalik [broad whitefish] here and we need it, too. So we need that for our subsistence. But it's good to see everybody here, too, instead of just one company or BLM, I should say. The rest of you, it's good to see that others are listening at least. They talk about them, but they're not there. So thank you for that.

Birds

Arnold Brower, Sr. 1976 Federal Energy Barrow

MR. Brower, SR: At the time the Federal Energy people were here asking for testimony I did come up with one thing that was wildlife, such as ducks, birds and other species -we hunt them at the times when they are here even though we do not have any open season for them -that's one reason I brought it up -the protection of these -why we don't have a specific open season given to us -open season at the time they are here -the open season did occur after the water foul had left this area -and this is something I did bring up at that hearing for the reason I thought the Interior Department should recognize, should be aware of something of this nature-we do not have an open season -they could pretty well give it to us when the game are here -for instance the water foul season opens up when the trapping season opens in the North Slope.

Isaac Nukapigak 1997 NPR-A Nuiqsut

ISSAC NUKAPIGAK: Has the BLM ever studied any waterfowl species in the Teshekpuk area? Cause that's really heavy brant and geese nesting area, and different species of waterfowl.

YOKEL: There are annual waterfowl surveys that are done by the Fish and Wildlife Service. These were probably first done back in the 1980's.

ISSAC NUKAPIGAK: I know that the Fish and Wildlife the Federal Fish and Wildlife been maybe concentrating on the Colville site. The, east of the proposed NPR-A area.

ISSAC NUKAPIGAK: The Teshekpuk area is the one that's heavy, with it's heavy species of, the nesting areas, species of waterfowl and the caribou calving grounds, that should be considered to be protected. I don't know how... (inaudible)... about it.

Jenny Ahkivgak (Okkingak) 1982 NPR-A Barrow

In one month, September, October, and July, the animals start changing and the elders talk about this. In July, the birds will start having eggs, and the Inupiaq people start egg-hunting. After they have hunted eggs in July then they start fishing at a different time.

Laurie Kingik 1982 NPR-A Barrow

I know when I was a boy I used to hunt for birds. In my home where in the spring time they always clean out their (sigluaq) sitla (ph) and put the oils outside. And, when the oil getting sticky, the little birds, when they land on that oil one, they always stuck and die right there. And, I think the oil spill is no good for birds and the other animals going to be hurt.

Ross Ahngasook 1982 Sale 71 Barrow

MRS. SOLOMON: He said when they went to Cross Island; he knows he knows that place before and heard about it. He said Cross Island is small and narrow and there's and there is a lot of water from it towards the-shoreline, and in that wide area of water is where they--there is ooglook, seal, birds, small animals, white whale, all kinds of species that in the ocean, and that's where there's a lot of mammals gathered there. (Mr. Ahngasuk speaks Inupiat).

MRS. SOLOMON: He said during the springtime, the fall, the ducks stay there to hatch. That's where they have their habitat.

Kenneth Toovak 1982 Sale 71 Barrow

And I use this example about the- about these ducks, what they're called, stellar eiders. Back in when I was beginning to be a boy, my parents, they owned a canoe. So we have to go down the coast when the when they- - after all the ice caved. We had to haul some driftwood for when winter use, along the coast line. There used to be some these stellar eiders just bunched up in one spot, another bunch, another bunch, in the summer months, after they nesting in the in the up inland. They stayed along this coast line in a big bunch, you know, in bunches, bunch, bunch. But for the last years that I have known have seen my personally, I haven't seen any flock along this shoreline for the last few years. I don't know what became of those ducks. I got two years that I have hear that the barges have lost and lost some oil, transporting oil down south. I don't know what happened. It must be maybe the ducks got caught by this oil. I don't know. Who knows? I don't. Maybe some of know somebody denying from down south. Maybe these scientists would know. But they are I haven't heard any maybe the people deny for some reason, maybe. Same way with these little birds, snipes. Used to be in the fall, along the beach, just hundreds of it, along the beach, you know in the ocean. But same thing. They're gone. Maybe you'll see one or two there, this and there, but not hundreds anymore. Then again, maybe somebody denies to tell me. I don't know. Maybe it's something that maybe -- I'd like to see somebody tell me, wrote me a letter what happened.

Nuiqsut Whaling Captains' Meeting 1996 Northstar Nuiqsut

Thomas Napageak: I think we're pretty much of what we wanted to know from the captains I think we are... waterfowls ... there's a lot of eider ducks. That's where they nest, all those sand spits from Thetis Island to...? Inupiaq ... all those. One island, I think it's, it's Pole Island where there's a little bit of moss growing in the sand spit. Ducks, they pull their downs off when they fly they molt down fur ducks. When they are floating before they fly they are plenty ducklings, plenty ducklings. Lot of seagulls trying to eat them up too. Inupiaq. Including Jaegers.

Jon Isaacs: Sort of like the fish with the causeway, have you seen any changes in numbers of waterfowl over time?

Thomas Napageak Not waterfowl, I do not think the causeways are affecting the waterfowls because the ducks never change out there.

Karen Shemet: So there's still the same number of ducks as there always has been? They're doing well?

Thomas Napageak Ya, they're doing well.

Karen Shemet: Good.

Inupiaq

Thomas Napageak: I wish all the white people in Prudhoe Bay would be gone and take their seagulls with them. (Laughter)

Karen Shemet: Did they bring them?

Thomas Napageak: They bring them. There's too many of them.

Ruth Nukapigak 1998 NPR-A Nuiqsut

She alluded to other things that they are labeled duck hunters and even though she's been here from the beginning when ice melts and they'll go boating down towards the mouth of the river out to the delta at far as an hour out to the sea to get seals and things that are with animals or birds that are prevalent down there, but not old squaw ducks and those other little birds that were mentioned earlier. And sometimes when the route is good, they'll go to the Fish Creek and around - and especially through the Nugaluk (ph) Channel for these things. And they were - - she's talking about Alpine now that we came up as a result of not very much discussions but that these people already had a permit and where there was not too much rappature (sic) between the village and the industry but that it just went up there. So after the fact that things have been negotiated or discussed to see how to best determine what people of the area down in Alpine. She mentioned again that, like Thomas, that they don't hunt the old squaw ducks. Yeah, I don't know any Eskimo that hunts old squaw ducks or pintails around the Arctic Slope, even if they are plentiful, but these are not very collectible in our nutritional diet on the Arctic Slope and not just in Nuiqsut, but I think throughout the Arctic Slope.

And then the folks here have been labeled as egg poaching and things and that is not correct, the village does not get any eggs at all, that perhaps this information may have been misunderstood because much of these people that are doing research have been going to talk with the Helmet's, because when she goes down there to Helmet, she sees the evidence of a lot of - - what do you call those (Inupiaq) -- anyway, dead birds.....

MS. HARCHAREK: Stuffed animals.

MR. BROWER: Huh?

MS. HARCHAREK: Stuffed animals.

MR. BROWER: Stuffed ducks, stuffed birds. Stuffed ducklings. It's not stuffing anyway. But they know that birds, migratory birds nest quite a bit around the delta and this information have been misled by statements from them and the folks around in Helmet's Camp. Also, quite a bit of goslings and nestingers (ph) from Iysuk (ph) by Cape Halkett along the Harrison Bay to Fish Creek near the Ocean on those swampy areas. She's very concerned about that if the oil companies come. Although we will benefit for our economics, but we will benefit very little for our subsistence because of the pipeline and because it will up affect the caribou migration, it will displace - - may displace some of the nesting areas of the waterfowl, shoreline birds, that she mentioned from Cape Halkett around the Harrison Bay to Fish Creek and the Colville River delta. Although the money is good, it's good to receive it, but it goes really fast.

Noah Itta 2001 Liberty Nuiqsut

MR. ITTA: He remembers that oil, that oil spill in Valdez, and when that happened, there was hardly no small birds around here, that they never come back up here, even the pren (ph), you know, the keys (ph). The few come, but not like they used to. Lots of that killed the animals that used to come up here, too, you know. He remembers that. That's what he would like to see you guys do your drilling in those only three months. 'Cause in March, the animals start coming back out this way, and he'd much rather see that area be quiet for the animals to be back to, so they wouldn't have to wait for them when they disappear.

Terrestrial and Marine Mammals

Caribou

Luke Kagak 1998 NPR-A Atqasuk

And another thing is that the--presently there's been a lot of sick caribou being harvested. They don't know where this sickness comes from and why the meat is infected from whatever. If the industry would be allowed to have a possible, maybe some type of a scientific research on that type of a species that are affected by oil and gas. Something needs to happen because these are the livelihood of these people that Mr. Kagak had stated. These things should be included in EIS, in accordance with what I'm hearing.

Luke Kagak 1998 NPR-A Atqasuk

The caribou that we eat extend all the way to Point Hope. The caribou too that we caught this summer looked unusual, out of the ordinary. They appear to be sickly. You can tell there is something not right with them because it is obvious. Where is that starting from? Questions are being asked for obvious reasons now.

Johnny Brower 1997 NPR-A Barrow

JOHNNY BROWER (*Spoke in Inupiat, translated here through Jana Harcharek*): My name is Johnny Brower, for the record. That area, they used to take us out there for hunting, fishing, for like family recreation area. I had good teachers when I was growing up, I used what I learned in my adult life and learned more myself about hunting and fishing in the area. I use the general area around the Ikpiuk up to Navy Creek for the last 15 years I hunted caribou and reindeer, there's a lot of reindeer up in that area. Fishers in the area catch reindeer annually. There were about 1,000 of them around Chipp 9 [cabin] one time for about 3 days and my father who was up there, talked on the CB that they had been there and he scared them and they came down and I caught a few of them. Johnny also made reference to some activity in the area that spooked wildlife in the area including the reindeer, there was some seismic activity going on which they could hear from far off, so were already spooked.

Thomas Napageak, Leonard Lampe, and Arnold Brower 1997 NPR-A Nuiqsut

THOMAS NAPAGEAK: I'd like to add little bit onto the caribou question that she had, I just, Alaska Department of Fish and Wildlife Services and the Federal Fish and Wildlife, including the North Slope Borough Wildlife Management, are confused up to date why the Teshekpuk caribou herd has migrated all the way to the Kenai Peninsula, what is the cause for all this, I mean these got to be evaluated before any lease sale starts occurring. Are we out of caribou, or not, and for how long. These are questions that need to be answered, I understand that Taqulik indicated that there collared caribou and I think that's one of the reasons why this guy that I was talking with down in Anchorage, I can't think of his name right now, but he worked for Alaska Department of Fish and Wildlife, was telling me that some of the caribou from Teshekpuk Lake had migrated all the way to Kenai Peninsula, now caribou is the primary, of course there's a lot of species that's abundant for now, before any wells occurs, whales are valuable, but caribou has always been our primary source of subsistence, and it has got to be evaluated very carefully.

MORKILL: What are some of the problems that you've seen with caribou, say out in Kuparuk, do they not like the Pipeline? Or are there some specific problems you might be able to tell us about, that we can make note of?

THOMAS NAPAGEAK: Yeah, the problem is all the caribou down in Kenai. (laughter)

MORKILL: Why do you think they left? Is it warmer down there? (laughter)

ISSAC NUKAPIGAK: I think what caused the caribou from diverting from the Prudhoe Bay, Kuparuk area is the height of the pipeline due to the fact, the requirement, a minimum of 5 feet, and especially when there's winter months, where snow starts building up, I mean there's absolutely no way that caribou can go underneath the pipeline, I think that's what's causing some of the caribou to come towards the west, especially the part of the central herd. That's something to be considered strongly, and if there is to be development, within the NPR-A, there's a lot of ...(inaudible)... that needs to be looked into and identified.

MORKILL: Do you think the pipeline might need to be higher or bury the pipeline?

UNKNOWN: That's something that needs to be looked into.

ISSAC NUKAPIGAK: Well the recommendation from the community for outside development was either bury a good portion of the pipeline or elevate it high enough, I mean 5 feet is not adequate in the winter time. There's no way that you can cross, even with a snow machine, you have to follow the pipeline in order to get to an area where you can finally cross it, it may take you an additional 10 miles of the quickest route that you might be able to come home on, but because of the height of the pipeline and the snow drifts, that makes it that much harder, and I do think that the caribou have that same problem as like we do.

MORKILL: So it's a barrier to the people too.

LEONARD LAMPE: One solution that the government and ARCO tried to bring, was to have caribou crossings, and I don't think that's gonna work, I don't think the caribou knows where you're building the crossings, so I told them against having caribou crossings in certain areas because it should all be accessible instead of certain parts. I believe because of the increase as well on the Dalton Highway, the increase of traffic in the Prudhoe Bay, Kuparuk area, also the near shore development of North Star, all the activity happening at North Star area as well as Endicott, I feel cause of all the traffic between Fairbanks and Endicott, much more increased traffic that caribou are hesitant to cross the main roads because of all the traffic, I feel that has something to do with the caribou migration as well, because of increased traffic as well as air, not just ground, as well as air, seismic operations happening all over. I feel like when you, either it's dynamite blasts or it's the vibrating that goes into the tundra that might have some kind of effect on the food chain of the caribou, I feel that seismic also has something to do with it, with the caribou leaving this area.

MORKILL: When you talk about caribou crossings, are those ramps over the pipeline?

LEONARD LAMPE: No, it's actually where the pipeline elevates up higher and then goes back to normal, they call that the caribou crossing, the oil companies do, I told them that maybe they should put big neon lights up there so the caribou could know where to cross. (laughter)

ARNOLD BROWER, JR.: John's suggestion is to, when you do that crossing, through the pipeline, that you make, when you make it high, is to make the roads similar, so that the caribou is not fearful of being run over for example, but he would walk under the road. Like you should have an overpass or something.

Laurie Kingik 1982 NPR-A Barrow

LAURI KINGIK (Laurie) My name is Lauri Kingik from Point Hope. I'm not in NPR-A, all right. But, I have to say a few words what I know in my area. In Point Hope, we have a hunting ground just like that one over there. And, in our hunting ground the caribous always get down to Point Hope area. Moose and--there's lots of Musk Ox, too, in Point Hope area. And, these animals, when they are out of food, they always go away from that place so they can eat better. And, I want to know --oil companies, do they drill a hole. I don't want to see that leak in places. If the oil spills out, it's no good for birds and the other animals.

Rossmann Peetook 1982 NPR-A Barrow

ROSSMAN PEETOOK (cont) And, on caribou calving area, right on Utukok River--and I have learned that the calving area is the foothills from Barter Island down to Point Hope area. That's what I learned from the old people. They don't calve in certain area. They don't go all the way to Utukok from Barter Island to Utukok to calve. But, the foothills is the calving area.

Raymond Neakok 1982 NPR-A Barrow

The main problem for me is the seismic operation that is going to be done with dynamite. We know for sure, and it's a stated fact that the caribou does eat that powder comes out of that hole and they get rabid. Also, we know for sure that it does affect the bone structure of the caribou. Because of an incident in Atkasuk where a man seen a caribou walking and then fall down. He went to check to see what happen to it. He started to turn it over, the doggone the head come off but body did not move. Now, there's something wrong with that.

Raymond Neakok 1982 NPR-A Barrow

And, this waste material that has accumulated is quite a bit. We've seen too many caribous that have wires on their antlers. Some of them just die because they just happen to have a couple of them right around their feet or their legs, and a doggone leg drops off. I mean, these are the waste materials that we would like to be protected from as human beings and also our animals which can not protect themselves.

Rosemary Ahtuanguaruak, Mayor 2003 ASDP Nuiqsut

The caribou herds used to migrate through our village and now they migrate away from us. Last summer only three houses hung caribou. There are over 100 houses and most houses went hunting last summer. The offshore developments have caused problems with our fish. They are not coming. It's been eight years now. I know one family that hunted all summer, 80 days, and not one caribou. Where is the help for us when we go without?

The global need for energy is bringing this to us. We have to work to protect us to keep us safe. We have to monitor. We're seeing the changes. The caribou have problems. Lesions on the liver with a bad cover. They have lesions on the joints and internal organs. We asked the North Slope Borough about testing, but they said they have no budget for that. Where do we turn to identify the problems?

They claim that the caribou herd is healthy with numbers, but the only caribou I got last year was bad. Twenty caribou were harvested in October when we could access areas not accessible by boat. Seventeen were sick. When I went camping last year, I waited three days for the herd, to have a helicopter to divert them away from us. When they were diverted, we went without. We have had to deal with harassment. We had over-flights three times while trying to cut the harvest. It is disturbing. The next year we had a helicopter do the same thing, but it was worse. They were carrying a sling going from Alpine to Meltwater, another oilfield. It went right over us three times. The herd was right there and it put us at risk. I had my two young sons with me and it made me very angry. What am I to do when the activities that have been handed down for thousands of years to our people are being changed by the global need for energy? What if there is a severe icing event that the caribou die off by the thousands? What if the only way for us to have a chance is by reindeer herding? What if we have no resources to turn to because multiple resources are affected?

Before development started, our elders walked the land following the resources surviving. They told us to let some pass so that there will be some for next year, but work hard to fill the ice cellar to be ready for winter. They taught us to share with those who don't have, such as the elders, the widows, and the disabled.

Sam Talak, Mayor 1982 NPR-A Barrow

I am not even entering into the caribou situation with these road construction, for the reason your EIS is vague. You state that they may be hurt. To what extent they may be hurt is what? Nobody knows.

James Nageak 1982 NPR-A Barrow

And, all the effect of all of these things. It's going to be that they can't find any caribou. I understand on this statement that the pipeline that's going to go divide it from the Prudhoe Bay area to the NPR-A is going to the western herd in two. Those that are in the north and those are in the south, and if the division affects the caribou on the Anaktuvuk side, and the oil companies are gone it's not original with me-- He said that. If the oil companies are gone, and they're trying to care for themselves, and if they can't find the animals, what do they do? I don't think that any of the people are going to go to Fairbanks. It's too crowded there, already. Anchorage is too far away. So, how is it going to affect the caribou, not to mention the wolves that we use for ruffs and the foxes for the women making them beautiful in their coats? So, it's disheartening to even think about lease sale on these areas.

Walter Akpik, Sr. 1982 NPR-A Barrow

Up there, up there, they say, are important game habitat. Areas in which we have observed animals. These are areas which we, the Inupiat, already know about. I have already observed animals here on NPR-A, ever since I began hunting, because I often search for animals. Also listening in here are other hunters who will probably have something to say. The (caribou) animals don't calve just in this area here. We have listened to testimonies which says that caribou, brown bears, or ducks inhabit that area on this side. We all know that the animals do not inhabit just that area. When I, myself, became capable of searching for animals, when I traveled about within the NPR-A everywhere, using dog sled or going by boat in the summer-sometimes back-packing-I would observe animals within the NPR-A region.

Daniel Leavitt 1982 Sale 71 Barrow

MRS. SOLOMON: He wants to talk about how an Inupiat lives. (Mr. Leavitt speaks Inupiat)

MRS. SOLOMON: He was raised by Inupiat parents and he would like to get across how to the panel, how they lived in those days.(Mr. Leavitt speaks Inupiat)

MRS. SOLOMON: His grandfather taught him about the ocean and land and which one was better place to hunt .(Mr. Leavitt speaks Inupiat)

MRS. SOLOMON: He had he had told him that if he lived on the shoreline, it would be easier for him to survive because of the hunting habit.(ph. habitat) (Mr. Leavitt speaks Inupiat)

MRS. SOLOMON: And he told him if he hunt interior I mean in the land, he said there comes a time when the animals disappear. (Mr. Leavitt speaks Inupiat)

MRS. SOLOMON: Whatever he was taught by his grandfather he .has found to be true by going through it himself. (Mr. Leavitt speaks Inupiat)

MRS. SOLOMON: In his lifetime he had one time when he had to go without food for three days, and he realized it is unbearable to go without any, anything to hunt for. (Mr. Leavitt speaks Inupiat)

Edward Hopson 1995 Sale 144 Barrow

Let me say something about -- permit myself. It might be out of subject but, there is no calving grounds for caribou. Make a note, everyone of you. Like people claim, that on ANWR there's -- there's a calving ground for the porcupine herd. Caribou will have found -- wherever it -- what -- whenever it ready to -- ready for it and -- and -- and -- and then right there wherever they are. There is no calving ground for caribou. That's -- I'd like to make that understood.

Charlie Okakok 1995 Sale 144 Barrow

Displacement of caribou is expected during drilling activities. Caribou are the main staple of the diet of the proposed lease sale area inhabitants. The impact of displacement would be addressed as the subsistence hunter will have to go further to be able to catch the caribou. If and when there is drilling activities, the subsistence hunter should be compensated for extra gas and food that they will need to get the caribou.

Frederick Tukle, Sr. 2001 Liberty Barrow

If you -- with these animals already being displaced, now it's starting to be from Cross Island to Teshekpuk that I've noticed these animals, over a period of time, going away. And then there -- right now, we're having a real hard time 'cause of the pipelines from Oliktok to Kuparuk. There's a 13-mile pipeline that's about three-feet high that, itself, already has displaced our caribous in the village.

In addition to this 13-mile pipeline I'm talking about, with the new discoveries that already occurred south of the Kuparuk field, we have about another over 10-mile pipeline again, that that's three feet high. And then you look at the caribous when they -- when they're trying to get to the ocean side, they're always migrating, keeping away from these bugs and everything. They stop right at Oliktok. They -- we don't see those anymore, these thousands of migrating caribous. Now, at the same time, we're seeing hundreds.

MS. WILLIAMS: Do you know if there's any caribou crossings on those pipes by Oliktok?

MR. TUKLE: There is -- I've seen two caribou crossings, that there's two of them that I'm aware of. There was a joke made about it. Our Mayor, past Mayor, Leonard Lampe of Nuiqsut, made a joke that maybe we should tell the caribous the caribou crossing is over there and then they'll go over there and now and cross over there. But my relatives and my friends, they can attest to what I'm testifying to today, my elders. And I'm still going to continue my research with regards to our animals.

Nuiqsut Whaling Captains' Meeting 1996 Northstar Nuiqsut

Thomas Napageak: Very, very seldom the Porcupine [caribou] herd gets to our area, very seldom.

Jon Isaacs: Now the caribou that were around here this year was that Porcupine herd?

Thomas Napageak: No that was central. Central.

Archie Ahkiviana: They say they are about over 400,000 strong now. Some of them are dying off in the west though.

Karen Shemet: From what?

Archie Ahkiviana: Not enough feed. Too many.

Inupiaq Patsy Tukle (laughter)

Thomas Napageak: You want to know about animals just go up and drive the haul road. There's a lot of squirrels, rabbit, and pretty porcupines that haven't been run over by trucks.

Thomas Napageak: Lot of caribous, but very seldom we get the Porcupine [caribou]. If they do come in they'll get all the way up here if we have southwesterly wind blowing steadily for a week and hot. Lot of mosquitoes. They'll come, otherwise they will stop up there by Canning, not Canning but Sagavanirktok, and then move back east.

Inupiaq Patsy Tukle

Thomas Napageak: Ya that happens when they get together. The west, this central herd, Porcupine they meet together and they move inland. They don't go back this way. They get together and move inland.

Rosemary Ahtuanaruk (Ahtuanguaruk) 2001 Liberty Nuiqsut

Anaktuvuk couldn't ask us for caribou this summer because Nuiqsut didn't have caribou to give. Normally, we have competitions where we go try -- travel back and forth, and where we take pride in being able to bring fish to them and they give us caribou in return because the way they process their caribou is a little bit different than the way we process our caribou. And it's prepared in a means that we can take out with us during hunting without having to thaw it out and heat it up and cook it. It's already ready. You can just take it out of your knapsack, even if it's a little frozen, and get nourishment from it.

Jimmy Kasiluk 2002 Point Thomson Nuiqsut

MR. KASILUK: Jimmy Kasiluk (ph) is my name. And I was born and raised around here from the time of Pearl Harbor. And there are times when caribou went by here, a lot of time, every year, every summer, a whole lot of billions and billions of them. Now, I'm talking about caribou route, you're talking about caribou route, what they do. They go down to the water, to the ocean, to cool off during the day when it's hot and they spend the whole day down there in water. And you're talking about five feet high, the pipe. Yesterday, I was traveling from Deadhorse to here and I went under those pipes out there, the snowmachine about that high, the chair level and I had to go under, like this, and the caribou are not going to -- they're five, seven feet high, those bull caribou, they don't know how to bend like people. They don't do that. They don't know how. Hey, wait a minute, the pipeline is on the way. When it's hot, those caribou are running down to the water. Hey, we make a mistake, they separate us from the water. What's the matter with these people? That's what they're saying. It's hot during the day, mosquitoes are killing them, they have to get to the ocean. The caribou routes, we're talking about. You don't talk about the ocean. They have to get in the ocean to cool off. Five feet high, that's not high enough. That's my concern. Thank you.

Gordon Brower 2002 Point Thomson Barrow

We, for many years tried to have industry look at alternatives, just because of the studies that have accumulated over the past 25 years that we've looked at, primarily for the Central Arctic Herd which information is now starting to lead that there is now an impact of displacement. And current pipeline sprawl situations such as this and that may develop, if there's other areas that may attach to this particular project. Tom Lohman mentioned Slugger. And there are those concerns because caribou movements is one of our primary concerns because that is a subsistence resource, heavily used.

Pipeline height issues. We have current studies on pipeline heights that I think this project should be well apprised of. Meltwater is one of those projects done by Phillips that have pipeline heights as its primary study focus because of minimum pipeline heights; it's becoming an issue, five foot minimum. Studies related to that that I've kind of looked at and talked with the Fish and Game personnel, biologists on the type of studies conducted for a minimum of five feet which were related to mortality rates. And those seem to me weren't adequate types of studies for that minimum height. Our primary use for subsistence are caribou bulls and if you look at the size of the animals, from a calf to a bull there is a major difference. And that's how Meltwater became to be a minimum of seven feet, so these animals can get to where subsistence harvesting can occur without limiting the primary subsistence resource of that species is the bull. I mean we don't hunt the calves as much as we do for the bulls, for the meat. Those are issues.

Aesthetics. Aesthetics became an issue because pipelines over in Deadhorse have become an issue with the flashiness of the pipes. There's also a project, I think Drill Site 3-S, which has aesthetics as one of its primary studies and to develop that, some digi type of covering, it was just as durable as the flashy stuff so that pipelines are much more coexistent with wildlife.

Frank Long, Jr. 2003 ASDP Nuiqsut

So it's got a lot of potential there. And CD-5 is an area where caribou migrate on the coastal plain during summer. If we go that route and CD-5 and the bridge is down there, we will have the same problem we did in the Prudhoe Bay and the Kuparuk area with our caribou. Right now I call our caribou that are existing around here that don't go nowhere our "industrial dope addict caribou." They already sick and nobody's doing anything about them, although they done 10,000 pieces of study. Nobody studies sick animals nor sick people. So these are some of the things that I'd like to bring to you. Maybe I'll have more additional time later, and I will have a written comment either by mail or other means. Thank you.

Rosemary Ahtuanguaruk, Mayor 2003 ASDP Nuiqsut

They claim that the caribou herd is healthy with numbers, but the only caribou I got last year was bad. Twenty caribou were harvested in October when we could access areas not accessible by boat. Seventeen were sick. When I went camping last year, I waited three days for the herd, to have a helicopter to divert them away from us. When they were diverted, we went without. We have had to deal with harassment. We had over flights three times while trying to cut the harvest. It is disturbing. The next year we had a helicopter do the same thing, but it was worse. They were carrying a sling going from Alpine to Meltwater, another oilfield. It went right over us three times. The herd was right there and it put us at risk. I had my two young sons with me and it made me very angry. What am I to do when the activities that have been handed down for thousands of years to our people are being changed by the global need for energy? What if there is a severe icing event that the caribou die off by the thousands? What if the only way for us to have a chance is by reindeer herding? What if we have no resources to turn to because multiple resources are affected? What if a spill occurs during the whale migrations and they all die? What if there are no resources to get? What will you offer us? Hot dogs like at Prince William Sound? I don't want to see that.

Moose

Laurie Kingik 1982 NPR-A Barrow

In Point Hope, we have a hunting ground just like that one over there. And, in our hunting ground the caribou always get down to Point Hope area. Moose and--there's lots of Musk Ox, too, in Point Hope area. And, these animals, when they are out of food, they always go away from that place so they can eat better.

Amos Morry 1982 NPR-A Barrow

And sometimes he also knew that someone got a moose and just take head instead of the whole carcass. He said there are some people that comes around and hunt the animals in their area and they've seen this thing happen.

Nelson Ahvakana 1998 NPR-A Nuiqsut

When the moose season opens in 26(A), the village here goes for moose hunting, but in accordance with that EIS, it stated that the people hunt moose from July to October. The regulations states in 26(A), under Alaska Fish and Game, that the village residents would hunt moose in the month of August by boat only and then in September. But when September comes around, the people here usually don't hunt by boat because the winds are so severe that the river is not available to go hunting up in that area. They don't hunt if the river is shallow. They don't hunt by packing what they have all the way up to the mouth or the creeks up there. They don't do that.

Furbearers

Bessie Ericklook 1979 Sale BF Nuiqsut

Trapping was abundant east of here. Now, we don't go over because of the oil field. Just recently, it is known that the foxes are very dirty, discolored and rabid in that area. Trapping is done elsewhere. We used to see grizzly bears around. Now, they are not around. Where's the caribou now? One summer we when we used to walk miles looking for caribou, came across two dead caribou for unknown reasons. The animals have faced a change. We have faced a change since activity began. If there is to be further activity, the fish and the sea mammals will suffer and we will suffer too. We depend on the fish, wildlife and the birds, still, today. Oil development poses a threat to our lifestyle.

Walter Akpik 1982 NPR-A Barrow

Those white foxes which the Inupiat trap for in the winter do not inhabit just that area up there. Those persons who trap within this area are listening right now. They probably have something to say. We have all subsisted ever since way back when by trapping.

James Nageak 1982 NPR-A Barrow

And, all the effect of all of these things. It's going to be that they can't find any caribou. I understand on this statement that the pipeline that's going to go divide it from the Prudhoe Bay area to the NPR-A is going to the western herd in two. Those that are in the north and those are in the south, and if the division affects the caribou on the Anaktuvuk side, and the oil companies are gone it's not original with me-- He said that. If the oil companies are gone, and they're trying to care for themselves, and if they can't find the animals, what do they do? I don't think that any of the people are going to go to Fairbanks. It's too crowded there, already. Anchorage is too far away. So, how is it going to affect the caribou, not to mention the wolves that we use for ruffs and the foxes for the women making them beautiful in their coats? So, it's disheartening to even think about lease sale on these areas.

Walter Akpik 1982 NPR-A Barrow

ALICE SOLOMON FOR WALTER AKPIK: My name is Walter Akpik. I'm Land Chief at Atqasuk, I and -- something else. I don't get it. He was happy to be here to listen to oil companies -That's what he said meeting. He said the oil companies has marked places on the maps where animals are. He said at those designated places, for calving, where brown bear, and for the ducks up there, he said that's not the only place where the caribou are calving and where the birds are nesting. He said these animals, the caribous and brown bear calve every where on NPR-A. That land there. He said he has worked with seismic testing group. That work means that in previous years he worked with them and they have --He knows where all those places are --where there should be calving and birds nesting. He's been around ever since he was a boy traveling with dog teams and he knows where the caribou are migrating and where they calve. He said these people there's some people here who have hunted foxes on that NPR-A for a living to get what they need long ago by dog teams.

Harry Brower, Jr. 1997 NPR-A Barrow

HARRY BROWER, JR.: Good evening, Harry Brower again. I'm a whaling captain, also I work for the North Slope Borough Department of Wildlife Management, I already stated that earlier, but what I wanted to say was just to back up what Noah and Warren was saying earlier about the development happening here or the process of it, to go ahead and move forward on it but then I just wanted to add on a little more about what Noah said about using the lands out there about traversing over 400 square miles, I just come back from a week of hunting and that's just exactly what I did out there, you know just traversing out there trying to hunt for furbearers. You know I just wanted to mention what some of my personal observations with what's happening with that seismic out there and that seismic displacing the animals, I just wanted to pass this on for your information and I didn't see any furbearers except for the foxes, the red foxes and the different faces (phases) anyway. I didn't see no wolves out there, no tracks or anything like that. I was on my way back home just this Saturday and met up with my cousin and he just said, yeah I just ran into a set of wolverine tracks and followed them 26 miles one direction, and he didn't take a close look at the tracks and he started following the trail and it had just been scared away from where the activity was occurring, which was up on the tops against that southeast side of Teshekpuk up in this Pikes dunes out there and he found the den and the rig had just gone by. I just happened to be there when he was following the trail and coming back, he said he just followed the trail 26 miles one direction and the wolverine had just made a bee line from where the seismic activity was going on, it had been scared away from its den, it was just moving out. And there was no caribou in the area, well you know I'd seen that, I made these trips up to my cabin, it's up the Ikpikuk River and I've observed the displacement of the wildlife over the winter. I've been going back and forth since December to just last week and I've seen the different areas where they've been over the winter, and I just wanted to bring that out, of my personal observations where, and I just wanted to back up what Noah and what Warren was saying about, you know, I'm not going to be opposing any development or the different phases of the development. I just want to put that on record.

Arnold Brower, Jr. 1997 NPR-A Barrow

ARNOLD BROWER, JR.: Thank you Harry, I think I've heard that concern now from two other persons that directly told me that the existing seismic is already impacting subsistence hunters as we speak, that the seismic area has no game. The impacts, like Harry said, has scared and run the game off in one direction from that area already and numerous trips made by at least half a dozen hunters have attested that, that they've gone from the east side of the Ikpiukuk and Chipp River to the west side, where they're not there in that seismic area anymore. So these people have purchased gasoline and planned their trips just to find out that the seismic is in that area already and went up to those areas of normal hunting and the game is not there. So I just wanted to support Harry's comments in that sense.

Raymond Neakok 1982 NPR-A Barrow

Now for the trapping people that are here--where they make their livelihood they're going to not be able to trap at all in those areas that are designated for exploration. We know this for a fact because we're not able to trap around Prudhoe or any areas now being explored.

Any time there is any sites that are being put on, the animals are going to congregate around there. When they start eating all that stuff, you going to have a lot of rabid foxes, caribou, wolves, what- ever. Because they are going to get rabid like them They're going to eat around they're going to congregate around those places and they are going to be contaminated. And, that goes doubly for summertime when the birds migrate and come to nest.

Raymond Neokok (Neakok) 1982 NPR-A Barrow

I will say what I feel needs to be said in Inupiat. When one looks at their maps, it is understandable that they are thinking of the hunting areas of each village, to explore those areas, all the way up to Umiat. When one studies this paper of theirs,(one) finds that nothing is said about the foxes. They speak briefly about the fish, but they do not mention our ways of whaling in Barrow. or in Wainwright.

We are once again faced with something very dangerous. After they have put something all over the ground they have not come back to examine the effects of that chemical on the animals we hunt for food. First, when concentrated drilling is done, the animals that we depend on for food surround that area. If our fox population becomes rabid and the rabies spreads to our wolves and caribou, our dogs will certainly be affected by it since the drilling is going to be done not far from us.

Do not forget also, what happens to the ground where dynamite is used. We know that there is a poisonous substance in the dynamite. In Atkasuk a person saw a caribou grazing in an area which had been dynamited. When the caribou fell over for no apparent reason, the man walked over to the fallen animal to see what had happened. When he took the caribou by the antlers to examine it, the whole head come off. The caribou had just recently died.

They are once again planning to use a substance as poisonous as this, yet they have not even mentioned it here. The people involved with oil will really begin to destroy our lifestyle if they start on this lease without carefully examining the effects that drilling has had in Prudhoe Bay.

Those of you who are trapping, this also applies to you. They are marking all over your maps, on your trapping areas. When they start again, they will tell you, "Do not trap in that area, it is ours." Remember that when you begin trapping. They will prevent you from going into your trapping area. Thank you.

Sam Talak [Talaak], Mayor 1982 NPR-A Barrow

We'll take the fur-bearing animals which are one of the main cash economies of Nuiqsut. The wolverine, for the past two years there hasn't been much of those caught for the reason that was so much geophysical activity right around the boundaries of Nuiqsut.

Raymond Neakok 1982 NPR-A Barrow

If our fox population becomes rabid and the rabies spreads to our wolves and caribou, our dogs will certainly be affected by it since the drilling is going to be done not far from us.

Nuiqsut Whaling Captains' Meeting 1996 Northstar Nuiqsut

Thomas Napageak: Yes. Of all the animals that I've known, the wolves are, when you are hunting them, they're very noise sensitive, but more so are the bowhead whales.

Thomas Napageak: Ya I think we got a person that grew up in that area. He's an elder. I'm pretty sure he can tell a good story on tape. But he's a guy that hides out a lot of times. I do my, I catch wolves in area, but as far as further than Franklin Bluff, Franklin Bluff area lot of wolverines. That's the best place for arctic white fox is in that area.

Leonard Tukle: All along the coast.

Karen Shemet: They like to stay by the coast?

Leonard Tukle: Ya. Even to Prudhoe Bay ? They're like seagulls.

Muskox

Nuiqsut Whaling Captains' Meeting 1996 Northstar Nuiqsut

Thomas Napageak The musk oxen. When they wanted to transplant the musk ox, I told them to outlaw them automatically, shoot them on sight. They are, caribous and musk ox don't get along peaceful. They don't fight, but they don't get along. If a caribou see a musk ox a mile away, they'll head the other direction. I mean they're not..

Archie Ahkiviana: Pretty much territorial.

Inupiaq Patsy Tukle:

Leonard Tukle: Last year there was a musk ox right over here. See here's the camp, right on this side. It was a real big giant, large musk ox.

Karen Shemet: Right there?

Jon Isaacs: Along the western side there, the delta?

Leonard Tukle: Ya it was on this side of the river, we took a few minutes, slowed down and took a look at it, watched it.

Karen Shemet: Right here?

Leonard Tukle: Yeah, that was only one though. But most of them are out in the Itkillik River.

Inupiaq Patsy Tukle:

Thomas Ahtuanguaruk: Saw about 15 of them last week over there.

Inupiaq

Archie Ahkiviana: I see some down on Fish Creek too.

Jon Isaacs: Where's Fish Creek?

Archie Ahkiviana: Around this area here.

Karen Shemet: Here?

Archie Ahkiviana: Ya.

Marine Mammals

Nuiqsut Whaling Captains' Meeting 1996 Northstar Nuiqsut

Jon Isaacs: Do the seals have a lot of fish in their stomachs when you get them?

Thomas Napageak: Oh ya, when I put my net out at Cross Island and Tigamaruk? (Tiragroak?), the fish, I mean the seals, just come work on my net and steal my fish.

Jon Isaacs: So they'll probably eat almost anything. There's not any particular fish that the seals really like to feed on?

Thomas Napageak: Pardon me?

Jon Isaacs: Seals will eat any fish, there's not like any one or two types of fish that the feed seals eat on a lot?

Thomas Napageak: They eat any kind of fish I'm pretty sure. Because out on Cross Island I get only Arctic Chars and they were after them out there too, including oogruks. Bearded seals were after them also. Inupiaq

Nuiqsut Whaling Captains' Meeting 1996 Northstar Nuiqsut

Thomas Napageak: Polar bears, they're always visible. You have to shoe them out, get out of here, get. When we're pursuing whales.

Jon Isaacs: You see them on the islands or out on the ice?

Thomas Napageak: The island.

Jon Isaacs: Cross Island?

Thomas Napageak: Ya, ya.

Frank Long: It would be chewing at the house.

Archie Ahkiviana: . . .the houses.

Thomas Napageak: They're the ones that tear up our cabins.

Archie Ahkiviana: Yep. They're always around our cabins too in the middle of the night. Hear them walking. Playing with the buoys.

Inupiaq: Patsy Tukle:

Jon Isaacs: So it sounds like you pretty much see the polar bears when you're out whaling, but not during the summer otherwise?

Thomas Napageak: Pardon me?

Jon Isaacs: When you see the polar bears, is it mostly when you are whaling or do you see them, do you guys go sealing in June or July or August in the open water?

Inupiaq

Thomas Napageak: No we don't. We can't do too much month of July. August we start moving around, that's when the ice freeze, freeze up, stops hindering us. But, yes we see them when we're out there. Winter they looking for denning areas up here. We don't see them, but we always run into their tracks, looking for a good denning area for (cough)?

Inupiaq Archie Ahkiviana:

Thomas Napageak: When we have any left over meat at Oliktok Point, they're there tearing up our boxes and everything. They're a nuisance. I wish federal government would open this doorway with the sea mammal bill where we could sell the hide. We would like to get rid of them and make money at the same time.

Archie Ahkiviana: They're getting too many. Just like the brown bear they're getting too many.

Karen Shemet: Is there one place where there are so many polar bears? One place or all over?

Archie Ahkiviana: What did they say? One time they counted over 100 polar bears right down below Endicott In that area.

Jon Isaacs: Near Endicott?

Archie Ahkiviana: Ya below Endicott, down below those islands.

Thomas Napageak: Lot a polar bears out there, too many.

Jon Isaacs: How about cubs? Do you see cubs often?

Thomas Napageak: Pardon me?

Jon Isaacs: The polar bear cubs?

Thomas Napageak: Oh yeah.

Jon Isaacs: See them around there.

Leonard Tukle: We had a couple of young ones last year out on the ice.

Jon Isaacs: On Cross?

Leonard Tukle: Ya

Nuiqsut Whaling Captains' Meeting 1996 Northstar Nuiqsut

Thomas Napageak: Yes. Of all the animals that I've known, the wolves are, when you are hunting them, they're very noise sensitive, but more so are the bowhead whales. Any noise that they hear, they respond to that by going, moving away from it. A lot of times polar bears are different. Their curiosity can kill them very easy. They go toward the noise or anything that moves, they go for that.

Karen Shemet: And the whales go away from the noise.

Thomas Napageak: They'll just come over and... Inupiaq

Thomas Napageak: One of the things that you guys when you get to the legislators try to open the sea mammal bill.

Karen Shemet: Have you written some letters?

Thomas Napageak: No, one person was already mauled at the, inside of the Dew line station.

Karen Shemet: Inside?

Jon Isaacs: Ya came through the window.

Thomas Napageak: Ya came in through the window and mauled the guy.

Jon Isaacs: That guy was killed in Point Lay too, killed and partly eaten.

Archie Ahkiviana: Ya, part eaten?

Jon Isaacs: Is that who that was?

Archie Ahkiviana: Ya

Langston Chinn: Ya, I remember reading about that.

Karen Shemet: You mentioned you got some walrus? Where did you get those?

Jon Isaacs: Cross.

Thomas Napageak: Cross.

Karen Shemet: And what about this area? Do you use that area?

Thomas Napageak: There's a lot of open water. But when real windy and I just run the boat around, I go up there. She tells me a lot of times when boating up there, looking for those devil fish. (laughter) Inupiaq,

Karen Shemet: What are those devil fish? What do they call them?, oh ya the ugly ones, sculpins.

Jon Isaacs: Sculpins with the horns.

Thomas Napageak: Ya, these big things.

Karen Shemet: What do you do with those?

Thomas Napageak: I don't go up there anymore. I don't migrate through there but if he's going to be calling me over the CB and tell me I'm going to go looking for those again, oh shit, I better go down the other way.

Karen Shemet: I'm just hoping we didn't miss anything else important for subsistence and the sea here. Anything else? Because we didn't really talk about the land at all yet, but I thought we'd get the sea completed and maybe we can talk about land some other time.

Inupiaq Patsy Tukle:

Thomas Napageak: Ya I think we got a person that grew up in that area. He's an elder. I'm pretty sure he can tell a good story on tape. But he's a guy that hides out a lot of times. I do my, I catch wolves in area, but as far as further than Franklin Bluff, Franklin Bluff area lot of wolverines. That's the best place for arctic white fox is in that area.

Leonard Tukle: All along the coast.

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Thomas Napageak, Arnold Brower, Jr. and Nelson Ahvakana 1998 NPR-A Nuiqsut

MR. NAPAGEAK: Seventy-five to 100 miles east of here, McClure Island.

MR. AHVAKANA: Seventy-five to 100 miles east of Nuiqsut is where they hunt seals and oogalooks and these people had never been able to do that because at the time when the seals and oogalooks are harvested, this whole area is still full of ice in June so how could they be able to hunt seals in accordance with what Mr. Nashana (ph) had stated? That's completely wrong also. The seals that are harvested and the oogalooks are here and right in front of Harrison Bay, what little that they could get they harvest from there.

MR. A. BROWER, JR: In the Colville River delta.

Raymond Neakok 1982 NPR-A Barrow

Our whaling activities in Barrow have not been looked into. From that point, because any oil spills are going to affect them. Like the seal, for an example, when I had gone seal hunting in '72 and got me a 2 year old seal and it was tagged in Baffin Island in Frobisher Bay. Now it was less than, what, six months and he was able to make it to Barrow where I killed him. I reported it, I got the tag and then I got \$50 for that. I think I got I don't know what else a jaw, I think. They asked \$100 for the skin, but I said I use it.

Now, the activity of that seal tells us exactly how much migration these seals are doing. Then the bearded seal, the walrus, and the whale. They're already being contaminated in Canada, and here they're going to do it again in Barrow.

Laurie Kingik 1982 NPR-A Barrow

The animals are going to get hurt from the oil spill. How about on the ocean? That's no good for other kind of animals, too. The oil spill spread out on the ocean. When the seals come up, the crude oil gonna stick on the head and for their eyes, and for their ears, it gonna get in there. It's no good. I think the seal gonna be blind and die. I think that's all I have right now.

Amos Morry 1982 NPR-A Barrow

And, he also told of one time when he was helping, or he was raising seal pups or he was taking care of them himself. He found out that sea mammals can not live on artificial salt water. He said they took care of them using salt, put salt in the water, but those seal pups got sick and they had something in their eyes and couldn't live on artificial salt water.

Benjamin Nungasuk 1982 NPR-A Barrow

And he was wondering why the seals were as scarce this fall, as some of the people that went out hunting have told him about why the seals were Scarce. He would like to make a comment or a request: Why don't we stop the oil companies from drilling or seismic testing for 5 years to see what will happen in those 5 years. He said when the Navy first came up here and they were doing seismic testing up inland, he knew the animals were not --I think he meant the animals did not get scarce. They were still there even though they were doing the seismic testing at that time. But he said he noticed that, after the oil companies came up North, he know, also, that animals are getting scarce or even the ducks that fly through down the ocean have changed. And, he said that he was listening to these people he said they all know what they're talking about.

Ben Nungasuk 1982 NPR-A Barrow

The oil even threatens the ducks that are on the water. And even the animals that are in the water presently are rather different this year. The seals for example. The hunters that have been going out to hunt seals lately have said that there are no seals. I wonder why and for what reason the seals from here are scarce. Why can't you at least listen (to the people) who are living also on the land; stop the ones who are drilling, the ones that are looking for places to drill, for awhile if they can be stopped for five (5) years according to what I, myself am saying. To study and observe for five (5) years how the animals are reacting. When the (people from the) Navy first came and first started drilling, it did not make an impact then the way I see it. And then when these last oil companies came the animals are starting to change, animals that are in the water and even the caribou, I'm commenting on this so that they can study and observe the animals that we have always hunted on land.

Socioeconomics/Environmental Justice

Karen Burnell 1998 NPR-A Anaktuvuk Pass

The North Slope Borough operates on the property taxes which are coming from the oil companies. And while that is the case, it is also important to state how that area of land by Nuiqsut is more important to the Inupiat people because it would be directly impacted by oil drilling. The North Slope Borough feels that oil drilling should not be done in that area whatsoever. If it turns out that we cannot stop the oil companies from doing the drilling, we will do our best to control their operations through the North Slope Borough and the Coastal Management Program. We in the Borough have opposed any offshore oil drilling and been in support of drilling on shore. So we want them to be very careful if they are going to be looking for oil in this area because it will be affecting a lot of people.

Arnold Brower, Jr. 1997 NPR-A Atqasuk

ARNOLD BROWER, JR.: Earlier as we mentioned there was specific questions that would be related to this study or activity, how would we want to manage it. Well if I was from Atqasuk I would tell you that you find natural gas here first and do the rest of it and then so that you have these lingering problems in these remote villages that you overlook the real problem and try to meet the concerns of our nation and when we give you the blessing, the village is still overlooked and they're still left with this humongous energy crisis.

MORKILL: So Atqasuk would like a natural gas pipeline.

UNKNOWN: We agree with you Arnold, that's what we want a natural gas.

Luke Kagak 1997 NPR-A Atqasuk

KAGAK: Another one here on Native allotment here, I'd like to make people get their statements black and white because on their BLM site I just had an application stating that you got to answer this question within 30 days, otherwise you lose your Native allotment and I'd like to make sure the people who have allotments state it right and the signature is right for that. You know, people who have Native allotments, cause that happened 'to me before not too long ago and I had to fight you know legal service and BLM, they work together cause they're under Alaska.

MORKILL: So there are some paperwork that's required and they made a mistake and...

KAGAK: Well everybody got to know, I had to get an attorney or something to fight for my allotment.

Anne Morkill; Ben Nageak, Mayor; Luke Kagak; Arnold Brower, Jr.; Dee Ritchie; and Jana Harcharek 1997 NPR-A Atqasuk

MORKILL: I think that you can address this to the impact funds that are generated from development is that a use of those funds at times and request support from the industry...

MAYOR NAGEAK: Well, it's an impact funds I think by law is 50/50 to the state and to the local government, the borough, but then we'll have to go through the state to get that, to get the funding, I mean you know that goes clear up to the state fund(inaudible) ... development. And that was announced, I think that's a problem with that is that we have to ask for it from the state, I think it needs to be direct to the borough instead of to the state.

HARCHAREK (for Kagak): I think Luke's point was along the lines of why do we have wind up covering all the costs associated with the documentation of something we've known in terms of the use of the land and the resources to insure that we continue our way of life. Why do we have to prove something we know, I guess is ultimately the very...

ARNOLD BROWER, JR.: [This is likely Mayor Ben Nageak and not A. Brower, Jr.] Well because, I worked for Wildlife Management for, I was director for many years and the reason why we did it was because the federal government and the state wasn't doing anything at that time and so we needed to, for ourselves, for our purposes to prove how important the resources and the lands were with those studies and then the federal and state government it started them doing more work in the borough in the old days because nobody was doing anything. And then we

worked with the oil industry to have them do more of the research with the Endicott project and Prudhoe Bay, that is funded by the oil industry and there's some other projects funded by industry with the cooperation of the state and the commercial board.

RITCHIE: I think what Luke proposed is entirely possible here, you're gonna have just a little bit different funding situation as you come over on the NPR-A as far as impact funds go I think, we're not on state land there and I don't think, I might be wrong there, but I don't think that we have to share that with the state. I think the reason you have to in Prudhoe Bay is because those are some state lands that we're working on over there. Just one other thing, in response to hunting and limitations of that situation, we've noted that concern, but as we get into the mitigating measures, mitigating measures are things that we, I don't really know how to describe mitigating measures except that if the project is going to go on then they have to do something in order to make that happen, well, we have a pretty darn good, I think as a people, have a good in the stipulations if they're going to drill out there, then they're going to do something else and one of the things that I think that we can do as a group is say that the subsistence hunting can go on, and so I don't think that will be a problem as long as we recognize it up front and we plan for that and that everybody understands clearly that can go on. That's a use that has to happen here.

Bartz Englishoe 1998 NPR-A Atqasuk

I work with the Atqasuk Corporation and I've reviewed the EIS statement and quite a few of the comments the corporation submitted weren't covered or covered very lightly. One of the important issues is local hire. And we were hoping the Department of Interior would be a little creative, try to take steps to ensure that local residents, or specifically Native people had a priority in receiving work. There's really nothing in the EIS about that. We were hoping that BLM would send a message to oil companies and subcontractors that said, "look, if you want to (sic get) our oil in NPR-A you're going to have to bend over backwards to hire Native People." And just not a handshake, but maybe legislation that says a certain percent of local residents will be hired, there'll be training. None of that was in there.

I would also like to see maybe some of the royalties that BLM are going to get specifically tailored toward that. They can take five percent of the royalties and put it back into forcing job training, of local hire, social-economic studies, various things like this.

Also would like to see strong language where individuals don't have to negotiate with oil companies to hook into an oil field that's next to their village if there is one. We'd like to see federal legislation that says, absolutely if there's a gas field found close to this village, they're going to get hooked into that. And hopefully free. This free gas to a village would make tremendous economic-- provide tremendous economic benefit to the village. At \$4.00 a gallon for diesel up here it's expensive. We think the federal government can be very creative.

And let it be known if oil companies want to come into NPR-A they're going to have to do this and that, there hasn't been any of that in the EIS statement. Maybe we have to go to Washington, D.C., and work with our congressman and state legislators but we'd like to see the local office of BLM here take the lead in that. Put it in the EIS so it can be debated.

And my final comments is, I'd like to find a place to read all the other comments that people have submitted and will submit, and I'd like to see those on the Internet. There's a lot of, probably, ideas that will spark interest or can be further discussed and people can get behind.

And one more issue. If oil is found, let's say, three miles from Atqasuk lands and there's oil rigs there, pipelines, there doesn't seem to be anything that says how the corporation is going to benefit as a land owner. They're taking oil away from underneath the corporation's lands, although the corporation doesn't own subsurface, there should be some effort to guarantee that the village lands, which are going to be disturbed by oil development get a major boost in either subsurface royalties, close proximity royalties, rentals, various things like this. If oil companies aren't going to bend over backwards to put any money in the village unless they have to, BLM can ensure that, and they can be real creative.

Luke Kagak 1998 NPR-A Atqasuk

Mr. Ahvakana: Mr. Kagak just stated as an example, ever since utilizing Prudhoe Bay, as an example. When that area was opened for oil and gas, it was mentioned to the villages that the job opportunity is going to be there available for each village and presently there's hardly anybody working there. There's hardly any Natives that are working in the village. If NPR-A, Alaska, is going to be opened for oil and gas and EIS don't specifically indicate in writing exactly what Mr. Englishoe had mentioned earlier about job opportunities, it needs to be clearly mentioned and supported by some other documents available to make sure that job opportunities are available in that area.

Arnold Brower, Jr. 1998 NPR-A Atqasuk

What are we going to do in the area of cabins? Is BLM restricting the land? Are they calling us trespassers? These are some things that we have to take into consideration and BLM is taking onto consideration for land rights, not just for people from here, but from California, Florida, wherever they're from. They are making policies for that land right for the United States, not just Atqasuk and Barrow, but for everybody. What is our part going to be in the process? You have to be mindful of this and I think that the Mayor's comments are very strong, but we haven't had this public workshop as much as we need to because of the short duration of the EIS. We have not produced maps that we can do a workshop with the public. They're laid out back there.

Ben Nageak, Mayor 1998 NPR-A Atqasuk

But some day, you know, I might have the need for the cabin and, you know, if there's a restriction I won't be able to so, you know, those are some of the concerns that Arnold raised and we hope that dialogue stuff continues on the use of the cabins and cabins already in place and cabins that may come, you know, because of—you never know what's going to happen. Because we use those hunting areas and we're going to continue to use those hunting areas.

Luke Kagak 1998 NPR-A Atqasuk

That's the big question on this, what about our kids? Their kids? Why is the price on gas, oil, so expensive to make our living hard? Can it be more useful--can it be useful to our people?

Arnold Brower, Jr. 1998 NPR-A Atqasuk

For those of you who hunt up there and happen to go slightly within their boundary, Nelson knows what this is like because he experienced it when he caught a musk-ox, what happened is that the musk-ox cost him financially fighting through the courts. Will you be experiencing the same thing by entering their property just slightly unintentionally? We will probably be experiencing that yet. That is the reason why we urge you to speak up against it. Some of our land when the oil companies were told not to touch it, knowing that what was indicated on the maps owned by the village corporations giving them the right to do as they wanted and that it was unlawful for anyone to construct anything, like oil companies, is what is in Alternative A. I bring this out because from the way I see it, there is something wrong with the way it is written.

Arnold Brower, Jr. 1998 NPR-A Atqasuk

This is in reference to subsistence cabins. I will use an example. At this time, we, in the Mayor's office, the Planning Department, have been trying to draft a booklet. We stated about what would happen to those who have cabins on land. Lately there have been some people being told that they were trespassing property when they were only going to their cabin somewhere inland. They are asking what is going to happen to their cabins? That's what we're talking about. Take for example, these people have a cabin one mile, or a quarter mile from restricted property. Maybe some sort of a lease would take care of the matter or alleviate it somewhat. The surrounding area would be prohibited from hunting game though. Unless you, we, write specifically what we want them to know with our cabins, etc., they are going to write down what they want to. What do you people want them to state in the documents?

When I have gone to Ikpiqpak, I only stayed there to camp overnight sheltered from the wind. In the summer you can make dried fish there though from the fish that you have caught using a net. But in the winter months they were only good for camping overnight due to the unavailability of game in that area for many miles. That is the hardest part of the job that we are undertaking now. They aren't sure what is going to be done about those who have cabins within the NPR-A boundary but do not own their own native allotments. That is everywhere, north, south, east, west of the NPR-A boundary. Are there going to be restriction put on them or will NPR-A be unable to share with the local people who own cabins inland. We need to help each other because we love to go camping. Will it come to where we won't be able to utilize our cabins inland in the end? That is what these people are gathering so that when they come up with the final material, it will at least include the voices of the people up here. You are not naive. We have today people who aren't local that come on a regular basis via airplane with their kayaks and enter traditional hunting grounds of the people of the North Slope, sometimes, disturbing those who are subsisting. We really do not want to see that up here.

Karen Burnell 1998 NPR-A Atqasuk

For those who have cabins or traditional camping sites, the wording that is in these documents is that we can utilize them if we can give them access to a quarter of a mile in the area surrounding it. I don't think a quarter of a mile is much. Who is going to mind seeing a structure a quarter of a mile from their cabin or camping area? Not too long ago Arnold made us laugh when he told the audience that he personally did not want to see a structure so close to his cabin especially when he had to go use the restroom because they would see him. Think about those but I think a quarter of a mile is too close to be situated to a cabin or a camping area. If you want the distance to be further than that, state it after giving it some thought because you will have to clearly define your requests with respect to oil drilling and your traditional hunting and camping sites.

Sam Taalak 1982 NPR-A Barrow

I would like to come back and comment on the animals(ph) and the water and the fish of this area at a later date. But, I would like to insist on a three mile buffer zone where we must protect this. I am talking as an illustration: I do not want to pay \$25 for a single chicken, which we have do. This river is my store. I would like to protect it and the whole country would feel I can keep it.

Ronald H. Brower 1982 NPR-A Barrow

In reviewing this document here, it refers to, basically, oil and gas development and the impacts that are anticipated here. It says a lot of "ifs", "possible", and "it may". A lot of hypothetical features are presented here on the and low on both sides. At any rate, I'd like to look at the areas in which we are experiencing some impact from oil and gas development in the areas of socio-cultural resources. The oil and gas statements indicate that there is going to be a certain amount of depletion of our wildlife within NPR-A. And, that does not project any type of compensation, whatsoever, toward the people living in the Arctic in the type of impact that's created here versus the type of environmental uses that they are accustomed to, such as the acquisition of food. None of that is addressed in the EIS Statement except in oil and your gas leasing stipulations on Plate 9, in which you refer to valid existing uses. That does not cover any type of compensation moving toward a balanced Environmental Impact Statement.

The coverage on oil and gas leasing, and its detrimental effects are well mentioned. However, it makes no compensation to the people living in this environment whether it be socio-cultural, economic, or otherwise. Those are not addressed, or how they will be addressed is not mentioned in the EIS Statement. Because we will not have very much time, or no time in the future, once oil and gas leasing begins--any type of say so I think it is imperative that some form of Compensation be doubled(ph) up toward regenerating our species, such as caribou and fish. Fish, presently, has been major subsistence use in the absence of the larger sea mammal, the whale. And, that has caused a lot more of our people to rely on land-based species of food, game to substitute for the protein needs that are required to in the Arctic. I'm not sure what to it is in the system, here, in reference our Arctic species, that makes the people physically better. But, there's no mention of that here, nor is there any method which is addressed to compensate for such a change. The development of oil and gas, I feel, should be compatible toward meeting the needs of the people it

is displacing, besides the animals that are being displaced in their environment. And, I think it is imperative in the future that these be addressed much more strongly, instead of, "and if", "a possible", or "it may".

That type of language is not conducive toward reaching a compatible environmental use by both oil and gas development, and our subsistence user environments. Those being two different environmental uses, things should be more properly addressed to make sure that we have some form of a compatible relationship. Those, I feel, should be covered a lot better than what is indicated here.

The document seems to indicate that the eradication of a lot of the use, and its cumulative effect through the leasing and development periods, will have a much greater longer term impact upon our communities. And, there is no form or format for compensation addressed for mitigating the issues in that direction, either. Thank you.

Arnold Brower, Jr. 1982 NPR-A Barrow

Another factor that I see is our fuel heating problem. I think in your department, in your Energy Resource Committees this is something we can work out in cooperative efforts in our search for oil and gas for economical, feasible fuel heating systems for our homes. Each one of us here have to break our backs just to keep our homes heated, more or less, even have a home. And, those are some of the issues that are hindering us. The fuel costs, the high price that we have to pay for our new homes, can barely keep up with what we need for our nutritional needs from the store, which is not meeting our nutritional needs.

Sheldon Bogenrife 1982 NPR-A Barrow

Therefore, the question that I have is whether the work that is going to be made on exploration and, also, if there is findings of oil, the further development, and work that will proceed --I wanted to address the question to oil companies whether they were going to employ the local work force of the North Slope area. And, so, what percentage of hires will be derived from the villages and the type of jobs that they would be employed at?

And, I was concerned in that area because being a 3rd generation since pre-contact of Western civilization, I'm faced with the fact that I either have to subsist off the land, or take a 9:00 to 5:00 job. And, bring in some kind of cash income since I cannot, no further I mean I can't totally exist on subsistence anymore. It's an irreversible fact that I cannot totally subsist off the land anymore. I have bills to pay and property to acquire for my basic needs.

And, this affects me very harshly because the high costs of all these buildings, and these basic needs that I need are so expensive due to transportation of all these materials from clothing to housing to transportation.

And, even the food that we have to import if we don't subsist off the land. And, we are faced with a need for cash income with all these bills that we have to pay. So, what choices are there for us to make a living if we can't totally subsist anymore. And what chances do we have of getting the jobs that are coming up in the future? So, I was really concerned that a lot of the oil industry related programs hire from the "Lower 48" and, also, they require that you're qualified to do that certain job, which is another problem for the people. Because, they're not always qualified for them positions. So you run into all kinds of problems of trying to live in this land as far as the employment is concerned and the effect of a wildlife that supports our nutritional needs also.

The only renewable resource is the wildlife. And we have no trees or agriculture to speak of, so this is our only limited means of making a livelihood. So, all these things affected, there's very little alternative as to how to make a living. And we need these jobs. The high cost of living is three times more up here than any other place in the state, and we're the most highly impacted people with the fast development in our area. So, your getting us at all areas of our food source and the jobs.

Joash Tukle 1982 NPR-A Barrow

ALICE SOLOMON FOR JOASH TUKLE: Kuugaagruk, he would like to clarify what Noah said about Kugururok. He said what Noah said is just how it happens after the testing. You know, dynamite by that river. If the BLM are going to sell --If they are going to have a sale by somebody's allotment, they should have respect to the allottee, and discuss the sale with them. And, not just ignore what they would like to have done. And, he also mentioned the same thing, about other organizations that might be drilling right now-- That they should talk with the people of probability of putting up water to get water, 'instead of using the lake waters and the rivers.

JAMES NAGEAK: Okay. One other thing that he mentioned was that he's no policy maker. But, as a desperate person, desperate for his lifestyle, his subsistence way of living. The question he asked about, you know, he said: We can't control the lease sale. The question that he's asked is: If the lease sale happens, and there happens to be an allotment in that lease sale, is the allotment to be sold with that lease sale? That's his question.

Walter Akpik, Sr. 1982 NPR-A Barrow

Those white foxes which the Inupiat trap for in the winter do not inhabit just that area up there. Those persons who trap within this area are listening right now. They probably have something to say. We have all subsisted ever since way back when by trapping. Now that we no longer subsist on white foxes alone I don't like to oppose oil people who are our workers here because we need oil. The Arctic Slope needs oil. The job which needs to be done needs oil.

Because, you see, when one buys oil, at least, up there inland at Atkasuk -we really spend a lot on buying expensive oil. I, myself, spend \$163.90 every two weeks for a drum of oil. Sometimes this doesn't last two weeks when the weather get biting cold.

Sometimes, after buying oil at these prices I would sometimes yearn to have a gas pipeline going up there to Atkasuk, all right. Especially knowing that gas is near. Especially after having worked with them and knowing that oil and gas was nearby. These thoughts come to me sometimes and they sometimes aggravate me sorely, thinking; "What is it that is blocking this from us up there at Atkasuk?" Especially knowing that natural gas is there just waiting to be piped. I have an allotment up there at Atkasuk and just five miles from there is a drilling area all set, with pipes already erected. This I know of also.

Morgan Solomon 1998 NPR-A Barrow

But I'm also looking at the petroleum area here as one of the most unique parts of our country here in the North Slope. The reason I say that is because I have been around that country for many years since I came up here, going back and forth every other week working for Atlantic Richfield Company in my time. I work week on and week off for six and a half years Prudhoe Bay. That land in summertime is a land for our animals. Both the birds, caribous and it's also a land of opportunity for subsistence use of our people here in the North Slope and it was the only area where Nuiqsut people can hunt because they couldn't get on the east bank to hunt caribou openly and to hunt other animals openly because Prudhoe Bay was continuously developing towards the western part of that area.

The State also had some good statements but, you know, on the long run, as I know Prudhoe Bay, as when it was first developed, the promises are never kept. Under those circumstances you would have 4.6 million acres that must be developed under a control system. In other words, no more false promises made to the Native people by federal government, the state government. There should be an agency here, we have an agency called North Slope Borough. The North Slope Borough was developed so that we can take into consideration in providing ourselves some money to develop our villages, educate our people and be just like any cities within the state of Alaska that are entitled to such.

You know, I read here 50/50, the state 50 percent, the federal 50 percent and whatever is, left over is going to go into our -- part of our country up here, but that's not good enough. You know, before NPR-A this was our land, this country was our land, we had roamed this country all our lives. And then as soon as it was turned over to the federal government, the federal government turned around and start putting in regulatory system, so they could keep us away from our areas where we traditionally hunt and, again, you know, for the past year these colors over here scares me.

We were forgotten for the last 20 years because you will never see somebody retiring from that area with the exception of two people out of 80. And that's the kind of promises that the oil companies make to our Native people when they first started to develop Prudhoe Bay area. And I hate to see this again if it should be developed, that promises are broken overnight. They forget who lives up in this part of the country. (In Iñupiaq) And I'd like to thank for the opportunity to make this statement. Although I don't have written statement in front of me, but what I'm trying to address here, I believe, is something that's coming from my heart because I was one of the individual Natives that was promised a job of opportunity only to lose it six and a half years later because someone had more education than I did. Thank you.

Leonard Lampe 1998 NPR-A Nuiqsut

Impact funds have always been an issue with the City of Nuiqsut, knowing that this community is and will be affected the most of these proposed developments, we share all NPR-A impact funds with other villages that do not even see the effects of impacts on hunters and fishermen who harvest the animals of NPR-A and see the changes of lifestyle to the people. Yet, they are compensated the same as this most affected village.

Leonard Lampe 2003 ASDP Nuiqsut

When Alpine first started, we were promised jobs, we were promised programs from our -- assured by our corporation that this wouldn't be a significant impact on our village. It has. It has been a significant social, cultural impact on the village. Not only the residents, but the resources, the natural resources: the caribou, the Arctic cisco. I could go on and on. These are impacts that nobody is addressing. None of the agents, none of the industry. Everyone wants to point at each other, but no one wants to take the responsibility of the negative impacts/effects that we are facing in our village.

I hear the corporation practically begging for contracts when Alpine was first started. They were assured that they were going to get their share of work, their share of programs. Now today with these satellites, we're begging for those agreements to be in place, to make sure someone makes sure that the village corporation, village entities get their fair share of work. It's not fair to this village.

Not enough funding for observation and commenting on studies of subsistence resources. There's obviously not enough funding in the Kuukpik Subsistence Oversight Panel to do properly observation and proper commenting on resources that are being depleted or resources that are coming more. There is no properly funding for that. No one wants to take the responsibility once again. Neither you agents nor the industry wants to take the responsibility in looking at the best we have in this village, not only in its social culture impacts, but also its resources impacts. Once again, everybody wants the oil, everybody wants the money, but nobody wants to deal with the troubles that comes with this. We are here to let you know we are facing troubles financially with our entities and social, cultural with our people.

NPR-A Impact Funds? That's a laugh to me today. We've been informed -- the City of Nuiqsut was informed today you are not eligible. City of Nuiqsut, the most impacted village, will not see a dime in 2003 from all the billions of dollars they're going to lease out on NPR-A. You are the most impacted village. You are not getting O&M for your day care center. You are not getting O&M for your cultural center. All these things, these so-called all in black and white, is not going to happen if this continues the way it's happening. You are being shortchanged, village. I want you to know that.

Just like with Alpine. We thought we could have control. We thought we can -- it could be the best for the corporation, for its shareholders and residents. But look today, we're begging for contracts, we're begging for work and what little work they give us, we take because that's the way our business is today. But it shouldn't be like this when you're the landowner, you're the stakeholders here. It shouldn't be this way where you're begging for contracts.

And discrimination is very thick. It's among there at Alpine. It's very obvious. We have young workers that work there and I talk to these young workers all the time. If you are not a supervisor's son, if you are not a supervisor's brother or family member, you will not survive very long there. That's what everyone goes for. They hire their own sons, their own nephews and that's very obvious with Alpine. That's got to stop. What qualifications do these grandchildren have that our people here on the Slope that have education as well don't have? They've been up here all their life. They know the environment more than anyone. They want to see safe production. They'll take care of their

land and the sea as much as they can and you're hiring people from the Lower 48 that don't care about this environment, won't ever see this environment after their paycheck. It's not fair.

This village, we're given promises when Alpine was built, and yet to this day the village corporation, the city, everybody is seeing these promises being broken right in front of us. Like I said..... (Applause)

MR. LAMPE: Commenting on the subsistence resource, we can't give you adequate comments because we don't have adequate resources. We do not have scientists on board. We do not have lawyers and attorneys. We don't have the resources. The City of Nuiqsut, the Native Village of Nuiqsut do not have the resources. What little resources you give the corporation, they use a lot of it on protections of the lands and the sources that we depend on because they know they have shareholders to answer to, they have residents to answer to. So they spend a lot of what little resources that you give them to turn around and what should be your job in the first place, is protecting our resources and making sure these social impacts are addressed.

Rosemary Ahtuanguak, Mayor 2003 ASDP Nuiqsut

When the job came up, we moved to the village and we've stayed here since. I worked as a health aide for 14 years. When my daughter had problems with her kidney and liver, I had to travel to get health care and it took four months. When I came back, the village was facing the NPR-A Impact Grants and the mayor then, Leonard Lampe, asked me to help him with that. I did that and there were meetings scheduled to discuss Umiat, which is one of the early oil exploration and military sites on the Colville River upstream from Nuiqsut

There was a report that came out. It was called "The Health Consultation." It was discussed in Barrow and it trickled back to the community. What we got was very different. It was suggested that we not consume more than six burbot in a year as there are contaminants. They did not come to our village for a whole year after this report was released to discuss this. When they did come back, they said go ahead and eat the fish. We have other foods that have higher levels. They did not take into consideration the way we eat the fish, the quantities we eat, and how the liver is a delicacy that is shared with the elders and the children. We could serve six livers with one meal setting. The highest concentration of contaminants PCB and DDT was in the liver. The efforts of our people to share this delicacy was giving it to the people most at risk. We need to have independent interpretation of this consultation with our consumption styles and rates to see what our true exposures are. Not only that, but there are other persistent organic pollutants that are concentrating in our animals. There are studies of the polar bears that are showing these concerns. These pollutions from industry developed elsewhere are coming to our lands with the way the air currents are and the precipitation, they are coming to our lands and we did not have to identify the issues, but we have to deal with it. This adds to what is coming from the fields of Prudhoe Bay, Alpine, and Kuparuk. There are changes to the animals which are our resources for survival, the fish, the caribou, the whale, and others. I started commenting at our meetings about the concerns I had as a health aide. I saw increased rates to asthma, problems with thyroid disorders and I saw the lifestyle changes such as social ills. My worst years as a health aide were the years whaling was impacted. The whales were driven further from the shore with the seismic activity at Camden Bay. The whale behaviors were different. It was harder to harvest as we were further from the land; that led to increased towing times to land the whale to harvest. We had to cut one loose during the tow because the weather turned bad and the crews were at risk. That happens in the Arctic.

When I started as a health aide in 1985 I had one asthma patient. By the time I went to the University of Washington for my physician assistant certificate in 1989, I had 20 to 25. When I came back in '91, there were 35. When I quit in 2000, there were over 60. The village make-up has not changed; it is still mostly Inupiaq. What was contributing, the most overwhelming issue, was that oil development around the community had increased and gotten closer. The worst nights on call were nights with many natural gas flares occurring. We could see it in the flares or in the fields around us. They release particles and they travel to us. The chance of an inversion will affect us. An inversion is a bowl-like air trap with cold air trapped by warm air. Increased concentrations of particulate matter occurs during these episodes. I fear what has been reinjected into the ground. The oil percolates up through the land. One of our elders said: we new about the oil; it made a good light source. We could not carry enough of it as we followed our resources. When the substances that were put down come back up, what will be the effects? Are we just beginning to see them? What will happen with the global warming and the sink hole shows up and the erosion continues and the permafrost decreases? Has the permafrost protected us so far? In areas throughout the state, there were DEW line sites being cleaned up. The early defense warning sites. I notice that the worst levels of contamination are further south. Is that what we have to look forward to? When I asked about what was brought here, they do not compare with what the workers have stated what is there. What is there will come back to us through our resources, through our land and our water. The contaminants concentrate in us through our consumption of our food. They accumulate in our bodies, our livers, our kidneys, our breast milk into our children.

The caribou herds used to migrate through our village and now they migrate away from us. Last summer only three houses hung caribou. There are over 100 houses and most houses went hunting last summer. The offshore developments have caused problems with our fish. They are not coming. It's been eight years now. I know one family that hunted all summer, 80 days, and not one caribou. Where is the help for us when we go without?

We're having increased asthma rates with no assistance to get the supplies to care for them. As a health aide I was asked to decide on my supply order between nebulizer tubing and finger gauze. I refused to make this decision because both are important. One case of nebulized tubing had 50 kits and I had 60 people with asthma, and one man who froze his hands and all the fingers were involved. Both of these issues were important.

There are increases to diabetes and heart disease and hypertension. How will we deal with this in Rural Alaska with limits to health care and doctor visits? What about the young people who are getting bad backs because they have to travel farther and it's rough? They cannot work in jobs around us with bad backs. What can they do?

Nate Olemaun 2003 ASDP Barrow

During one of our hearings this was a statement. I kind of wrote it from memory by one the Nuiqsut residents. They said once they have a permit to operate, they can do whatever they want, meaning the oil company, winning a lease sale with no consideration for subsistence hunters. They want development versus local residents' subsistence way of life. They know that their regional corporation or local corporation or borough is promoting lease sale on their land in their region. They think they have the backing of the local people, which is not true. The local people want to continue living subsistence way of life, but their leaders or their corporation and their government want the lease sale. Thank you.

George Olemaun 2003 ASDP Barrow

And when I was with UIC, a couple of guys came up, vice presidents from Con -- not Conoco, but Phillips wanted to sit down and talk. We sat down and talked and told him that, you know, we've had problems with Nuiqsut all the time; that we try to do something, they try to stop us. Well, it's going to be the same here and there's going to be more of us. That's what, I guess, I want to try to do. There's going to be more of us then. And I do back up what they stated, everything that they've stated. I wrote them down and they pretty much said them all. But I just want to again voice the same concern that they've had. And I guess one of the things that -- on this NPR-A, the whole NPR-A, is talking about this one area, but the deadline -- I guess I'm saying deadline, but there's a reason for all this fast pace. I'm sure it's because of things that are happening elsewhere. And I just want to see what -- how much oil we have here so we don't have to depend on the other areas or outside of the other -- I mean the East over there where they're trying to start a war and everything.

Fred Kanayurak 2003 ASDP Barrow

MR. FRED KANAYURAK: Fred Kanayurak. I made comments earlier. Being involved with some organizations, I'm really a hard believer in training programs and jobs weren't even mentioned I don't think during this -- your thing here. So you got a 10-year plan here, seven years, six, seven years, but there's got to be room for training. We've got young people that may be interested, and we could research from each village, that are coming in to learn any kind of skill in the oilfields and training is very important. And I'd like to see that.

And then in some cases in the past, we've had -- I've always been a strong believer in having on-site participant. Maybe a young man that's going into some kind of field, some skills in oilfield operations. In other words, an observer maybe during the process of your development. And I'm really a strong believer on that. I'd like to see it not less than two people. It's so much easier to pair up and learn something on site, which one may not see like the other does. And I hate using "observer" on the site. I think a "participant" with your oil company, your personnel would be a good thing to do.

And Arnold mentioned the economic impact, and it's always been our concern as well. I want to thank Nate for bringing up the allotments and the hunting cabins and whatnot that weren't mentioned, and all the other remarks, good remarks, that these guys had made. Even though we don't live around the vicinity, but it will impact us in the long-run. Like I said before, it will have a domino effect on us, so it's best we know about what's going on over there now than later. So I really thank each and every one of you for coming up and taking part and giving us some information on your plans, and I wish you luck. I hope we can help some way, but like Arnold says, we want some kind of documentation within your EIS that will report. We have had this kind of problem before where there was so much omitted from the report that the comments -- from the comments that the Natives made or the people living around the vicinity

Arnold Brower, Sr. 1976 Federal Energy Barrow

I was drafted into the Service at that time, served three years of my time in the Army and. I came home in 1946 and I went to the Veterans Administration to see if I could get a job and was assured that I would have a job with the Navy located at the site now known as NARF -at that time it was some other companies that were actually managing this project known to be exploration -I think I would call number one exploration for NPR 4.

I reported for work -I was told I'd have a job there, I did work for one week only to get fired the next week for the reason that I was an Eskimo. I learned then that the Natives were not hired by any contractor for the Navy at the time just because they were Eskimos. This is how we were treated then. At that time I wrote to Secretary Grubb, Department of Interior, and also to Commander Greenman in the Navy stating just how the Eskimos were being treated -and I think this was the turning point when the Natives got together -and then they were hired about a year later, I recall that.

Raymond Neakok 1982 NPR-A Barrow

Now for the trapping people that are here--where they make their livelihood they're going to not be able to trap at all in those areas that are designated for exploration. We know this for a fact because we're not able to trap around Prudhoe or any areas now being explored.

And, I can't see how the law is working where they said, here's your boundary. And so this part up north, and yet able to come up there and take what ever they want. What law protects us? We don't have that. I may have missed couple of quick points, but I would like to say, for the record, that: Let these village know exactly what you are doing because it's going to affect their livelihood so much that they probably will have to move to Fairbanks if they're going to live there. Because up there you have to buy eggs for \$2 a dozen. And, it's, a 3 pound coffee, I think it's 10, 12. And, I don't think they're going to be living on fish anymore or caribou, because they're going to run out. Thank you.

Noah Itta 1982 NPR-A Barrow

Then the oil (people) came, even though they have supported us in a lot of ways by providing us things; they even provided us with houses which we did not have. Making our way of life easier but our food, the oil (people) do not actually know about how we, the Inupiaqs, get our food. The Inupiaqs actually treated this river like a garden from time immemorial.

And also, (you) have already heard about our villages that do not depend on (natural) gas as to how expensive a drum of oil is. People with no homes among us right now are getting numerous and because of them I have always wanted to voice out my concern all the way to Congress.

These oil people when searching for oil have sent a lot of oil and gasoline to the land east of us. And then all during the summer, on the out-skirts of Tasiqpaq where we camp, they burned a lot of oil by the hundreds. Why is it not open to the Inupiaqs who are struggling even at a cheaper rate? Why is it not given out.... End of tape: Off the record. Noah Itta cont.: I was talking about the drums of oil that were just thrown away. My son who worked with the clean-up crew has always told me that they burn three or five hundred drums of oil all the time. I, myself, found this out this summer when they were burning oil at Tasiqpaq. One gets to thinking that they could be of use, especially when your struggling, to sell them at a cheaper rate even to the Inupiaqs.

Or even the many people who do not have homes, if the Congress(people) do not know about the Inupiaqs (who do not have houses), instead of destroying the houses that could be of use, instead of letting the tractors trample on them and if there's a way to get those houses I would be most grateful.

Rosemary Ahtuanguaruak, Mayor 2003 ASDP Nuiqsut

We're seeing the changes. The caribou have problems. Lesions on the liver with a bad cover. They have lesions on the joints and internal organs. We asked the North Slope Borough about testing, but they said they have no budget for that. Where do we turn to identify the problems? The fish have problems with increased parasites, tumors in the muscles, stomachs, and ovaries.

They claim that the caribou herd is healthy with numbers, but the only caribou I got last year was bad. Twenty caribou were harvested in October when we could access areas not accessible by boat. Seventeen were sick. When I went camping last year, I waited three days for the herd, to have a helicopter to divert them away from us. When they were diverted, we went without. We have had to deal with harassment. We had overflights three times while trying to cut the harvest. It is disturbing. The next year we had a helicopter do the same thing, but it was worse. They were carrying a sling going from Alpine to Meltwater, another oilfield. It went right over us three times. The herd was right there and it put us at risk.

What if there is a severe icing event that the caribou die off by the thousands? What if the only way for us to have a chance is by reindeer herding? What if we have no resources to turn to because multiple resources are affected? What if a spill occurs during the whale migrations and they all die? What if there are no resources to get? What will you offer us?

Last summer the water near Alpine in the Colville River delta was 70 degrees. What is happening?

Joash Tukle 1982 NPR-A Barrow

Richard Tukle who would not be thought of as an important person to the people, including myself. Even though I don't live for the people, but have great concerns, and not being a law maker myself now, if they go ahead and drill or start leasing the land without listening and heeding our testimonies, if our leaders have told them to go ahead (and drill) and if they really have to, even though the people who have come here (to listen) now do not know if there will be a lease sale, if they should sell a piece of land and it is inside a person's allotment or if it is even surrounding the allotment, (someone) should ask if that person's allotment will be sold along with the lease sale or will it be sold individually. If the State of Alaska or if whoever is going to lease the land or if they (the panel) know, instead of leaving it right in the middle (where the lease sale will be) ask them if they will approach that individual (on his allotment) if that could be sold along with it. Instead of looking at the person with an allotment as a nothing and it's surrounded by or within the land that will be leased, or if ASRC has already worked it out this way, (approach) the person and talk to him about this.

And also in trying to help the Corporation by asking them, "If you make your well right by your side where the ocean water is the deepest, and using this water that you have purified, I would help by paying for the water that you have purified.

Frank Long, Jr. 2003 ASDP Nuiqsut

MR. LONG: Again, my name is Frank Long, Jr., and I'm with the North Slope Borough. Also KSOP, Native Village of Nuiqsut as vice president. And in this -- this time, I'll be talking for myself and my fellow resident members of this community. We've heard a few testimonies about what could happen, what we should do, and how we should do it. I don't think anything can be done if we don't work together as an equal opportunity. We are -- we have been discriminated by the industry. Employment-wise, we have been discriminated by our own corporation, employment-wise, and the only people that benefit is the president, the treasurer, and the CEO. Nobody else benefits. Nobody get a job. And the only people that are working at Alpine now are nonshareholders, young kids that just got of school last year and there's only two of them. Out of all four hundred and some odd community members here, we only have two people employed in the industry. And that's embarrassing. We are the laughingstock of the world.

We're not benefiting any. Not a penny, not jobs. We are given -- we have been given hand-outs because Kuukpik and ConocoPhillips agreement does not comply with each other. When ConocoPhillips took over Phillips, Phillips inherited an agreement from Kuukpik Corporation that the Natives would be employed, also trained, but they have been disregarded. And I don't know what you guys are going to do when you get out of here. Are you going to help us, like the book says in the federal government? You have the first right to protect us Natives. But you're not using that either. You're protecting the industry before the people. What's there in the industry that needs protecting? Are they going to run out of jobs? Are you going to get broke tomorrow? No. The oil industry is so doggone rich that they don't know what to do with their funds anymore. Leaving us out in the cold, and I don't think this proper. I was living up here 365 days a year trying to survive and strive with high cost of living. Our diesel this winter went up; our gas went up pretty close to five dollars a gallon. Our diesel went up including buying air. You ever heard of converted fuel? We are purchasing converted fuel. And here we're sitting on it and we're paying a high price of fuel that nobody

in the world has to. If this happened elsewhere, there would be demonstrations they do to get across their point with their own people. They demonstrate. If we do that up here, what would you guys be doing? You wouldn't have a job, any of you. And then we'd be a different way along.

Bernice Kaigelak 2003 ASDP Nuiqsut

MS. BERNICE KAIGELAK: I'd just like to add that what Leonard was saying that someone needs to address the funding for resources to meet the requirements of the industry to be able to work and be qualified for the job. Because in the beginning, the only qualification was that you pass the UA. Right now in order to get just a regular labor job or driving job, you need a clean UA, a driver's license or a CDL, unrestricted, and NSTC card and, you know, it just keeps piling up. Piling. Any way to -- you know, for our people not to be able to fulfill the requirements to work in the industry is what I feel it is.

And like he said, the impact funds that needs to be addressed, I know that needs to be addressed with our congress with the senate. That's the only way I feel we'll get anywhere. No matter what we say or do I'm sure it won't get done unless we speak with our congress. But, you know, I feel we're not going to get anywhere because they're competing for their funding. The state is, you know. That's how they pay for everything is with the oil industry. The whole state depends on this oil production and I don't see how they'll, you know, give more of the pie to the community that's most affected. And I'm not sure where you guys are from.

MR. DUCKER: I'm with BLM.

MS. BERNICE KAIGELAK: I mean where do you live?

MR. DUCKER: Fairbanks, Anchorage.

MS. BERNICE KAIGELAK: How much a gallon do you pay there of gas?

MR. DUCKER: Less than here. What is it?

MS. KAIGELAK: \$1.64?

MS. BROOKS: Yeah, about \$1.67.

MS. KAIGELAK: \$1.64 to \$1.67.

MR. SCHULTZ: I haven't looked in a few days, but probably a buck-eighty or so.

MS. BERNICE KAIGELAK: A buck-eighty? Well, here, miles from Alpine, from the biggest oilfield of the whole United States of America, we pay here \$4.20 a gallon. That's how much we pay here, and that's just at cost and it's basically a service for our people. Corporation didn't make no money out of it. It's just a service for our people that they have motor gas here. And, you know, I wonder if we let CNN know and the whole United States know how much we pay a gallon or what that would do with the economy or what that would do with Wall Street. I don't know. It's just a community of people. But what's wrong with that picture? We're the closest community to the largest oilfield in the whole United States and yet we pay the highest price within the whole United States of America. There's something wrong with that picture there. Thank you.

Nate Olemaun 2003 ASDP Barrow

MR. NATE OLEMAUN: Thank you. Nate Olemaun, Jr., for the record again. Just a few items I want to bring out. We have such a short notice, less than a month to bring items out. Some of the items that were not mentioned on your presentation were Native allotments, subsistence cabins, cultural sites, burial sites, et cetera. They weren't brought up on the proposed area. BLM can make a guideline from scoping to final like what you're doing right now, proposed to do in one year. So BLM should settle the Native allotment issue like what they have done for the lease sale and for exploration. Closing up the Native allotment have been over thirty years now and they should establish funding to close out allotments versus waiting for BIA to come down with the funding. BLM, Army Corps of Engineers, State of Alaska, the oil companies, they should establish that so we won't keep coming back and saying we have pending Native allotments in the area. Just in NPR-A alone you have over 500 Native allotments and not even a quarter of that or one-eighth has been certified. So we need funding to close up the Native allotments. That's just NPR-A; that's not Slope- wide. The establishment of funds I want to see used for Slope- wide.

Johnny Brower 2003 ASDP Barrow

MR. JOHNNY BROWER: Yeah, one last comment. What time are we going to have breakfast? When things get too effective, sometimes when I do hunting when I'm capable, sometimes I travel one direction hours just to find harvestable game. In that hours travel sometimes, just filling up gasoline on my snowmachine, when I'm heading home from the Valley of the Willows or further south from there when the games are hard and scarce, that's how far south I go to get some of the games I need to bring home to eat.

The furthest south I ever went was to maybe the creek and that -- when I reached that area, Omardy (ph) is only like a walking distance to the point from where I go when I get there. After harvesting games, it's not exactly fun to try to travel home when the weather gets extreme temperatures where you have to take your game home at below zero when it's not so cold and that extreme most temperatures not bearable for traveling, but sometimes you have to travel. It gets down to below zero up in those hills up in that way.

And I'm interested in who all can qualify for impact fund money. I don't have a job and I would like to keep busy doing something and if I could qualify to get some of that impact fund money, I'd like to go out and just run around the country and just move some reindeer around so I could do things. I think that should be able to qualify me to get some impact fund money. I would appreciate it if somebody can deliver that to me. Thank you.

Cultural Resources

NA

Subsistence

NA

Hazardous Materials

Thomas Brower, Jr. and James Aiken, Sr. 1997 NPR-A Atqasuk

I have gone how many times to Inigok where there was some drilling that took place, and I have seen bones from birds that have been killed from the, from after they drill a hole, the stuff they leave behind, the fluids. I don't want to see that kind of thing happening where we see our wildlife and waterfowl dying from contaminants being left after having conducted drilling activity, I don't want to see that kind of thing. And leaving an area without having done some kind of thing to put it back into the shape it was before the drilling took place.

JAMES AIKEN, SR. - ATAQSUK: There is a chemical, the substance that is used when you're drilling to make the hole, is poisonous to animals and then after crude oil has been extracted there are left over after drilling has taken place there's left over material, left over that also contaminates birds and or waterfowl and other animals and it's this substance that is used in the drilling process that is the substance that is poisonous.

Karen Burnell 1998 NPR-A Atqasuk

Another thing too Arnold is a request that was made dealing with their request to see that the area of Umiat is cleaned up by the oil companies that got damaged before going forward with this document. I think that person who said that has since left the meeting but he said that when he went to Endicott, debris could still be seen on the ground that the oil companies left.

Amos Morry 1982 NPR-A Barrow

Inland, when there's oil spill on ground, it does not dissolve or go in the bottom of the ground. It's there and that has a lot to do with animals. They cannot go around them. It's there so it's very harmful to have oil spill even on the land. When the oil companies are gone, and there is no way of making money, and the prices in stores are so high, and when you're buying groceries--he said the people that are doing drilling, and oil companies, and anybody--BLM --anybody -- he said they hurt people. They will not be worried about our livelihood. They will just leave us and we will have the most hardships in our lives trying to survive when this happens.

And, he said the fish, when they're drilling by the rivers, the oil seepage from the --If there should be oil struck and there is damage --When something happens to oil rigs and there's spillage, then he said the same thing will happen to the fish. The rivers will all be filled with oil spills and he said that the fish wouldn't be there like they used to be.

Raymond Neakok 1982 NPR-A Barrow

Raymond Neakok. N-e-a-k-o-k. Now, going through the conservation, or the subsistence way of life, there seems to be very much lack of the toxic mud and the waste materials that are going to be accumulated in the of all these lands for exploration. Now, we'd like to have a better protection on the toxic muds placements, for one thing. Because, I know for sure, it's already being dumped right into our rivers and into our oceans. These toxic muds, I have worked with, because I have worked on oil rig. Now, I've worked with the, caustic sodas. You know you're going to get rashes. These toxic muds are going to be like that for years. The strength of the toxicity of these muds is not going to go away in just a hundred years. It already didn't go away in 2000 years. We know that for a scientific fact. And, also the waste materials that are being accumulated by the exploration, they going to dump them? Like they did with most of them, where they dumped them in the rivers? Or, are they going to dump them in the lakes nearby, and then put gravel over them, and hoping that they won't see? Most of the abandoned oil rigs I have worked on, the toxic muds are put in good little cubes, like you go out in (indiscernible) with about 5,000 square yards of toxic mud that just laying there with no cover. And, any animal, because be it a mosquito, fox, polar bear, foxes, caribou, hey, they're going to get into them. They're not going to say, hey, that's toxic, man, I got to keep away from it. They're going to walk into them. And, this waste material that has accumulated, is quite a bit. We've seen too many caribous that have wires on their antlers. Some of them just die because they just happen to have a couple of them right around their feet or their legs, and a doggone leg drops off. I mean, these are the waste materials that we would like to be protected from as human beings and also our animals which can not protect themselves.

I'd like to be able to go to Washington, and drill a well in there, and spray mosquito--whatever you call it down there, like you do anyhow --But just go ahead and spill all that toxic materials all over your streets. And, that's exactly what you're doing here. Because, we have to travel in all of these villages, and any spills, that's exactly what you're doing. You're spilling toxic muds, whatever, oil, right in our streets. That's no different.

Archie Ahkiviana 1997 NPR-A Nuiqsut

ARCHIE AHKIVIANA: There's two locations where we buried some old barrels, oils and whatnot there on the Chandler River, there's one close to the mouth and one upper, that was way back about 10, 15 years ago.

ARNOLD BROWER, JR.: Who were you working for?

ARCHIE AHKIVIANA: I don't want to tell. (laughter)

ARNOLD BROWER, JR.: He was working for a company that did this.

MORKILL: They were buried there?

ARNOLD BROWER, JR.: Some waste and stuff in barrels that I guess they just buried them by the river. By the Chandler River, by the mouth of the river and upper Chandler.

ARCHIE AHKIVIANA: They were close by the river too, at Kuparuk, we did it in the winter time, where we had to, had like

Rossman Peetook, Mayor 1998 NPR-A Wainwright

MR. AHVAKANA: Mayor Rossman Peetook indicated that that he would like to talk about the area that is being used for NPR-A, Alaska EIS. That area is being used for subsistence area uses and will probably be polluted if the industry takes over the land. He's very concerned about that because he wanted to use the example that the DEW line sites have been left vacant. There's pollution there that's never been cleaned up, and he feels that that same thing will probably be there if the industry or the seismic people use that area oil and gas.

He is not against oil and gas leasing. But that he feels that until such time that better technology is available to be used in order to safeguard the area for fish for the caribou, for water fowl, these are very important to the lifestyle of our people. He knows also that Teshekpuk Lake, there's all kinds of various fish there available. And what it would what would happen if something drastic happened there, and then the livelihood of the people that are dependent for subsistence what will happen to them.

Charlie Edwardson 1976 Federal Energy Barrow

Mr. EDWARDSON : I'm a little concerned about this environment deal that's going on. I've been with the drilling crews just about every well they've drilled but the last well we drilled that is something. There's the environmental guy here but I'd rather see him go see that site cut there, it's not cleaned up, And another thing, they put a dump right on a swamp where the brants nest and I don't think there's any brants nests there any more.

CHAIRMAN ROBERTSON: When was that well drilled, approximately?

Mr. EDWARDSON : Echo Bay, it's about twenty miles out of here.

Chairman ROBERTSON: How long ago was it drilled?

Mr. Edwardson: Couple of years ago -one year ago, and that place is not cleaned up yet and it was supposed to be cleaned up right after it was done -and that's how it was left.

Laurie Kingik 1982 NPR-A Barrow

And, I want to know --oil companies, do they drill a hole. I don't want to see that leak in places. If the oil spills out, it's no good for birds and the other animals.

I know when I was a boy I used to hunt for birds. In my home where in the spring time they always clean out their (sigluaq) sitla (ph) and put the oils outside. And, when the oil getting sticky, the little birds, when they land on that oil one, they always stuck and die right there. And, I think the oil spill is no good for birds and the other animals going to be hurt. The oil spill, when it spill out to the ground, the ground never grow again. The grass never grow. I know that. I don't want to see that. The animals are going to get hurt from the oil spill. How about on the ocean? That's no good for other kind of animals, too. The oil spill spread out on the ocean. When the seals come up, the crude oil gonna stick on the head and for their eyes, and for their ears, it gonna get in there. It's no good. I think the seal gonna be blind and die. I think that's all I have right now.

Ron Nalikak 1982 NPR-A Barrow

RON NELIKOK (NALIKAK) Name is Ron Nelikok from the North Slope Borough EPO. I've got a question on what you just said. Okay. How would the people of the North Slope be compensated for subsistence species in the event of an impact due to disturbance or oil spills? Okay, for example: The people of Nuiqsut--okay, we brought this up the last time we met --how are they going to be compensated for the loss of grayling in Fish Creek? I don't think a \$100,000 bond is enough. That's my feeling. Why not make it a million dollars?

TOM DEAN: Are you asking me, or...

MR. NELIKOK(NALIKAK): I'm asking you.

MR. WOLF: All right, Tom?

MR. DEAN: Well, if you can put a dollar sign on the fish for their value, then I would agree with you. If the oil company or the geophysical company is responsible for it. But...

Tom Albert 1982 NPR-A Barrow

What happens if you put a pipeline across Fish Creek or Colville River, drill a well near it and something does happen to that stream? The potential is there to kill almost everything in it. That's not very likely, but it certainly is a potential. Just like bowhead whales swimming through an oil slick, it's not likely, but it certainly is a potential thing. What is going to happen? What is going to happen so that the precautions that have to be put in to this have to be very great.

Raymond Neakok 1982 NPR-A Barrow

The main problem for me is the seismic operation that is going to be done with dynamite. We know for sure, and it's a stated fact that the caribou does eat that powder comes out of that hole and they get rabid. Also, we know for sure that it does affect the bone structure of the caribou. Because of an incident in Atqasuk where a man seen a caribou walking and then fall down. He went to check to see what happen to it. He started to turn it over, the doggone the head come off but body did not move. Now, there's something wrong with that. We reported it. It took them three weeks, in fact. I remember I was involved in the reporting of that incident. And, nobody wanted to come in and make sure that it did happen. They waited three weeks. Now, the other thing.

Any time there is any sites that are being put on, the animals are going to congregate around there. When they start eating all that stuff, you going to have a lot of rabid foxes, caribou, wolves, what- ever. Because they are going to get rabid like them They're going to eat around they're going to congregate around those places and they are going to be contaminated. And, that goes doubly for summertime when the birds migrate and come to nest. Our whaling activities in Barrow have not been looked into. From that point, because any oil spill are going affect them. Like the seal, for an example, when I had gone seal hunting in '72 and got me a 2 year old seal and it was tagged in Baffin Island in Frobisher Bay. Now it was less than, what, six months and he was able to make it to Barrow where I killed him. I reported it, I got the tag and then I got \$50 for that. I think I got I don't know what else a jaw, I think. They asked \$100

for the skin, but I said I use it. Now, the activity of that seal tells us exactly how much migration these seals are doing. Then the bearded seal, the walrus, and the whale. They're already being contaminated in Canada, and here they're going to do it again in Barrow.

Othniel Oomittuk 1982 NPR-A Barrow

Othniel Oomittuk, from the North Slope Borough EPO. I was just concerned with the seismic operation when the lease started in the future. When the seismic has been, we have seen the caribous with the seismic wire. Is there a possibility for BLM to identify, or color code their seismic wire so we could identify who has not coincided (ph) with the stipulations of cleaning up after the seismic operations?

Raymond Neokok (Neakok) 1982 NPR-A Barrow

We are once again faced with something very dangerous. After they have put something all over the ground they have not come back to examine the effects of that chemical on the animals we hunt for food.

First, when concentrated drilling is done, the animals that we depend on for food surround that area. If our fox population becomes rabid and the rabies spreads to our wolves and caribou, our dogs will certainly be affected by it since the drilling is going to be done not far from us.

We all know that if one species of the game we depend on for our livelihood is depleted, then it upsets the entire system. And if they once again conduct their exploration using dynamite, from experience that if a caribou feeds on the same area which the head of the caribou will fall off if a person simply pulls horns.

They are once again trying to lease your land without discussing any of the effects that past drilling has had on our habitat.

While I was hunting seals as I always do in Barrow, I caught a two year old seal. I found that it had been tagged at Baffin Island, at Frobisher Bay. It had been tagged that summer as a two year old seal. The following winter I caught that seal in Barrow. If the seals can travel that far in such a short time, then our bearded seals, our walrus, our whales, and our fish will be affected as quickly as they are being affected in Canada.

When one keeps an eye on these things, they have said in their laws, here are the fish, even the seals, in an area where there hasn't been an oil spill. Within one quarter of an oil drill, whether or not it is on land or sea, the fish or seals come into contact with oil. These things have already been marked down and yet are considered lightly by (them); things which we should be concerned about.

We know that there is a poisonous substance in the dynamite. In Atqasuk a person saw a caribou grazing in an area which had been dynamited. When the caribou fell over for no apparent reason, the man walked over to the fallen animal to see what had happened. When he took the caribou by the antlers to examine it, the whole head came off. The caribou had just recently died.

They are once again planning to use a substance as poisonous as this, yet they have not even mentioned it here. The people involved with oil will really begin to destroy our lifestyle if they start on this lease without carefully examining the effects that drilling has had in Prudhoe Bay.

Noah Itta 1982 NPR-A Barrow

I just wanted to explain that while I was aware of things and growing up, the oil people came. I have seen them, the first being; when the oil (people) came up on one of the Liberty Ships and got stuck by the Point because of the shallow water, and in order to get out it spilled its oil into the ocean and they floated. Right then and there, a lot of us saw the animals, ducks and even seals die caused by a small amount of oil.

These oil people when searching for oil have sent a lot of oil and gasoline to the land east of us. And then all during the summer, on the out-skirts of Tasiqpaq where we camp, they burned a lot of oil by the hundreds. Why is it not open to the Inupiaqs who are struggling even at a cheaper rate? Why is it not given out....

End of tape: Off the record. Noah Itta cont.: I was talking about the drums of oil that were just thrown away. My son who worked with the clean-up crew has always told me that they burn three or five hundred drums of oil all the time. I, myself, found this out this summer when they were burning oil at Tasiqpaq. One gets to thinking that they could be of use, especially when your struggling, to sell them at a cheaper rate even to the Inupiaqs. Or even the many people who do not have homes, if the Congress(people) do not know about the Inupiaqs (who do not have houses), instead of destroying the houses that could be of use, instead of letting the tractors trample on them and if there's a way to get those houses I would be most grateful.

Amos Morry 1982 NPR-A Barrow

Inland, when there's oil spill on ground, it does not dissolve or go in the bottom of the ground. It's there and that has a lot to do with animals. They cannot go around them. It's there so it's very harmful to have oil spill even on the land.

And, he said the fish, when they're drilling by the rivers, the oil seepage from the --If there should be oil struck and there is damage --When something happens to oil rigs and there's spillage, then he said the same thing will happen to the fish. The rivers will all be filled with oil spills and he said that the fish wouldn't be there like they used to be.

Rosemary Ahtuanguaruak, Mayor 2003 ASDP Nuiqsut

There was a report that came out. It was called "The Health Consultation." It was discussed in Barrow and it trickled back to the community. What we got was very different. It was suggested that we not consume more than six burbot in a year as there are contaminants. They did not come to our village for a whole year after this report was released to discuss this. When they did come back, they said go ahead and eat the fish. We have other foods that have higher levels. They did not take into consideration the way we eat the fish, the quantities we eat, and how the liver is a delicacy that is shared with the elders and the children. We could serve six livers with one meal setting. The highest concentration of contaminants PCB and DDT was in the liver. The efforts of our people to share this delicacy was

giving it to the people most at risk. We need to have independent interpretation of this consultation with our consumption styles and rates to see what our true exposures are.

Not only that, but there are other persistent organic pollutants that are concentrating in our animals. There are studies of the polar bears that are showing these concerns. These pollutions from industry developed elsewhere are coming to our lands with the way the air currents are and the precipitation, they are coming to our lands and we did not have to identify the issues, but we have to deal with it. This adds to what is coming from the fields of Prudhoe Bay, Alpine, and Kuparuk. There are changes to the animals which are our resources for survival, the fish, the caribou, the whale, and others. I started commenting at our meetings about the concerns I had as a health aide. I saw increased rates to asthma, problems with thyroid disorders and I saw the lifestyle changes such as social ills.

When I started as a health aide in 1985 I had one asthma patient. By the time I went to the University of Washington for my physician assistant certificate in 1989, I had 20 to 25. When I came back in '91, there were 35. When I quit in 2000, there were over 60. The village make-up has not changed; it is still mostly Inupiaq. What was contributing, the most overwhelming issue, was that oil development around the community had increased and gotten closer. The worst nights on call were nights with many natural gas flares occurring. We could see it in the flares or in the fields around us. They release particles and they travel to us. The chance of an inversion will affect us. An inversion is a bowl-like air trap with cold air trapped by warm air. Increased concentrations of particulate matter occurs during these episodes. I fear what has been reinjected into the ground. The oil percolates up through the land. One of our elders said: we new about the oil; it made a good light source. We could not carry enough of it as we followed our resources. When the substances that were put down come back up, what will be the effects? Are we just beginning to see them? What will happen with the global warming and the sink hole shows up and the erosion continues and the permafrost decreases? Has the permafrost protected us so far? In areas throughout the state, there were DEW line sites being cleaned up. The early defense warning sites. I notice that the worst levels of contamination are further south. Is that what we have to look forward to? When I asked about what was brought here, they do not compare with what the workers have stated what is there. What is there will come back to us through our resources, through our land and our water. The contaminants concentrate in us through our consumption of our food. They accumulate in our bodies, our livers, our kidneys, our breast milk into our children.

The caribou have problems. Lesions on the liver with a bad cover. They have lesions on the joints and internal organs. We asked the North Slope Borough about testing, but they said they have no budget for that. Where do we turn to identify the problems? The fish have problems with increased parasites, tumors in the muscles, stomachs, and ovaries. We do not do the monitoring -- oh. We need to do the monitoring with the technicians that come. They are not from home. They do not know who we are, what are important to us.

We're having increased asthma rates with no assistance to get the supplies to care for them. As a health aide I was asked to decide on my supply order between nebulizer tubing and finger gauze. I refused to make this decision because both are important. One case of nebulized tubing had 50 kits and I had 60 people with asthma, and one man who froze his hands and all the fingers were involved. Both of these issues were important.

In the paper they brought about Umiat, they said it started in 1923. They came in 2000 to discuss the clean-up. What about future changes? Now they say there are particles that are coming to our areas from other things. What changes will occur? What will we see?

Arnold Brower, Sr. 1976 Barrow

Now during the first exploration I sensed because of my own backing to my own livelihood around in the Tripp [sic - Chipp?] River area that there was tremendous damage in the fishing areas where I used to fish and the river was contaminated with diesel oil that was actually being distributed along there and I do not wish to have these same incidents in the exploration number two which is now going on.

Martha Stackhouse 1979 Sale BF Barrow

MARTHA STACKHOUSE: My name is Martha Stackhouse. I'm a Barrow resident and I don't belong to any one group and this is my own testimony. We are here to discuss a problem of the possibility of the lease sale in Beaufort Sea and also the possibility of an oil spill. Let's take a look at other areas which endangers lives because of pollution. There are reports of large amounts of oil floating in middle of the Pacific Ocean. There are remnants of tar on the California beaches due to oil spills, which they say they have cleaned up. But the tar is still there. These are only a couple of examples of oil spills where there is not even a danger of moving Arctic polar ice conditions. There are more pollution problems due to smog created by cars in the large cities which cause lung cancer. Most of the people in the Lower 48 eat store bought foods which are so full of preservatives that after years of eating this type of foods, also causes cancer. The rivers are almost all polluted causing drinking water shortage. We are fortunate enough not to be in this situation. Our air is clean, our oceans not polluted, we eat natural foods from this ocean. This we have done for thousands of years, living in harmony with nature. Now, the oil companies want to drill offshore and some have even started without our permission, which, in fact, endangers our lives. As I view the world today, I see a sad situation which endangers the whole world. We are ruining the air, the oceans, and the rivers. The ecosystem is broken.

Arnold Brower, Sr. 1979 Sale BF Barrow

This year we've found some indication that rivers that where was blasted with dynamite and evidence in the lakes blasting cap material was thrown, in that area of blasts. I don't know how to put that in... If the compressor was used, these evidences would never have been left in the middle of the lakes. We have proofs; we've been there, we've examined them and I think some of these Federal commitments, State commitments, what evidence *do* we have besides words, that this Impact Statement, *so* nicely worded, that it will be used in this off shore lease sale?

George Edwardson 1979 Sale BF Barrow

GEORGE EDWARDSON: And this is the workers themselves. This is the technology going off shore. I was also with Pan American Petroleum in Kenai in charge of their first skimmer boat that ever came up to Alaska. The way it

was explained to me then was, it had to be; the skimmer boat had to be put in the water to operate in order to satisfy the public. It wasn't really important if it worked or not; but you have to at least attempt to make it work.

Amos Morry 1982 NPR-A Barrow

Inland, when there's oil spill on ground, it does not dissolve or go in the bottom of the ground. It's there and that has a lot to do with animals. They cannot go around. It's there so it's very harmful to have oil spill even on land.

...And, he said the fish, when they're drilling by the rivers, the oil seepage from the -- If there should be oil struck and there is damage -- When something happens to oil rigs and there's spillage, then he said the same thing will happen to the fish. The rivers will all be filled with oil spills and he said that the fish wouldn't be there like they used to be.

Othniel Oomituk 1982 NPR-A Barrow

Othniel Oomituk, from the North Slope Borough EPO. I was just concerned with the seismic operation when the lease started in the future. When the seismic has been, we have seen the caribous with the seismic wire. Is there a possibility for BLM to identify, or color-code their seismic wire so we could identify who has not coincided (ph) with the stipulations of cleaning up after the seismic operations?

Jenny Ahkivgak (Okkingak) 1982 NPR-A Barrow

And, then she went to another place where she used to pick berries and there were no berries. And, she had heard that the people there had sprayed some kind of thing to kill mosquitoes with. We human beings get sick when we drink water which has been polluted by activities or anything. And, how much more of the animals would get sick if they drank from that water? The white people think that the animal inland stay in one place, but they don't. They migrate wherever they want to go, and they can go so far away in just one day.

Noah Itta 1982 NPR-A Barrow

There was Liberty Ship at Noorvik (ph), and had a wreck at Noorvik. And, he knows that for sure. And, after that wreck, there was oil or gas spillage and the sea mammals and birds died when there was a wreck there.

James Nageak (for Noah Itta) 1982 NPR-A Barrow

And, one other thing that Alice..... The Liberty Ship that got stuck aground, it wasn't such that the ship was damaged. Okay? Shallowed out. The only way that they could get that Liberty Ship out was to dump the oil into the ocean. And, the effect of that oil, he has seen it with his own eyes. The effect, of that oil that was dumped, on the ducks and the seals -- They were dead all along there. So, those are the two things that I wanted to reiterate.

Raymond Neakok 1982 NPR-A Barrow

When one keeps an eye on these things, they have said in their laws. Here are the fish, even the seals, in an area where there hasn't been an oil spill. Within one quarter of an oil drill, whether or not it is on land or sea, the fish or seals come into contact with oil. These things have already been marked down and yet are considered lightly by (them); things which we should be concerned about.

Charlie Edwardsen, Sr. 1982 Sale 71 Barrow

And see, like we heard about the oil spills they had, what amount. That's crude oil. And they didn't he didn't even mention the oil spills in diesel they had. I was trapping up there. I was under ARCO. I was trapping. They hired me to trap and I trapped. And I saw a tanker tip over alongside the road. I don't know how many thousands, maybe a couple five thousand gallon tankers. It tipped right over right down by the dock. They didn't get all that oil out of the ground. They didn't even burn it right there. It was in the fall time, during ship season. (Ph) And it went in the water took it out. It was pretty rainy. Most of it went out on out the bay. And also, I was when I was trapping up at Foggy Island, I don't know what company was that, they had platters, big platters on the beach, and them platters was full. And one guy with a dozer came along and he ripped the end off the platter. And this instead of reporting it, he covered it up, and I wonder how much of that platter went out.

Charlie Edwardsen, Sr. 1982 Sale 71 Barrow

The oil companies are using some of a chem- some chemical. If they have an oil spill, they'll have it with their drilling mud. That's- that'll sink the oil down, crude oil down. And once that once they if they use that chemical, that's gonna I don't think there will be any shrimps or no fish, and that is the current takes carries that all over.

Thomas Nusunginya 1982 Sale 71 Barrow

In the event of a blowout, how can you contain, how can you get your scrubbing up operations going if you have currents going in all erratic directions, you know? One current which could be on the surface could go in one direction. Another subsurface current can go in a complete, completely the other way around. But with these conditions, I can't see how you can get your scrubbing operations going to a point where it's feasible. (Speaks Inupiat)

Horace Ahsogeak 1982 Sale 71 Barrow

MRS. SOLOMON: He watch movie on in Mexico that were washed ashore and saw some ducks that were slaughtered by oil spill, killed by oil.

MR. AHSOGEAK: A few years ago. (Speaks Inupiat)

MRS. SOLOMON: And he also watched when there was an oil spill, the whales were, had to go through that area, and they didn't go through because of the oil spill.

MR. AHSOGEAK: Well, it's a hundred mile long, thirty mile wide, three hundred feet deep, having (ph) cross there, couldn't make it, because the whale that died. It cost (ph) forty whale, maybe more that whale, you know. A lot of whale. No more whale to hunt under the ground. (Ph) Mexico. -- in Mexico man coming to here to here (indiscernible) from Mexico. He talk about, they had lots of whale on the beach all day long. That's what he say. (Speaks Inupiat)

MRS. SOLOMON: He wants to get this across to young people, what he saw on the TV movie, because it is what the young people should see, what was what happened over there. And they could order the film, because he wants them to remember what he saw in that movie. And if they want to see it, they can order if they can order the movie, the film. (Mr. Ahsogek speaks Inupiat)

MRS. SOLOMON: And he said if there should be an oil spill, the same thing will happen like it did in Mexico. But he said if there's an oil spill, it will go clear up to Canada.

Warren Matumeak 1982 Sale 71 Barrow

Regarding the claim that ABSORB can clean up the oil spills, we feel that they can handle the small ones okay, but not the larger ones. They have chemicals -- the absorbents the ABSORBS -- planned to use on some oil spills, and these dispersants (ph). Now, dispersants can disburse the oil, but it doesn't clean it up. It's dirty. It will -- it will stick to other animals that that are in the water, the fish, and whatever the mammals eat. So this -- this type of cleanup is no good. It -- it just -- it just -- it'll just hurt the animals. We want to work with the industry so that they may better understand what we are talking - - talking about and so that we may feel comfortable in the extent of their knowledge and capabilities. We are working on a coastal management plan for our area and feel that the very minimum you should do is to allow us to complete this plan before you lease any areas beyond the 12-meter water depth. Thank you.

Warren Matumeak 1983 Endicott Barrow

MR. MATUMEAK: That was my concern is that anything covered under the surface is risky, you know. If you have a leak down there you won't know it in the wintertime until maybe after much of the oil has spread, whereas, if it was visible, and if there's a leak, you could detect it fairly quickly.

Dorcas Maupin 1983 Endicott Barrow

There was much concern about the trash that the rig builders throw around and the caribou got tangled in a wire -- now they're studying about it. That was dead for so many years. Somebody found it. The wires were dangled with this.

Lauri Kingit 1983 Sale 87 Barrow

When he was a boy he -- I guess in the summertime some of the oil from the animals collects in an area and he has seen a bird landing in that puddle of oil and has seen that the bird could not take off and it finally died as an effect of the oil that was on it. And he has seen a specimen of crude oil, he has taken a piece of the crude oil in his hand and he knows that it sticks to your fingers, not only a specimen from the Prudhoe Bay area but a specimen from the Kenai oil fields down there. And he knows that crude oil would have the same effect as the oil that he has observed when he was a boy. From his understanding, the muktuk of the whale has some area where it's rough and there are areas where it's smooth, so undoubtedly he's thinking that it probably would not stick on there but in an area where it's rough, especially around the blowhole, he knows that the oil would stick to those areas. And so that's what he's really concerned about, that the animals that we have, seals, polar bears -- his idea, you know, that animals will be affected through an oil spill.

Heather Noble 1983 Sale 87 Barrow

The Draft EIS talks about what will happen to whales if they swim into an area where there's an oil spill. They don't think the whales will be hurt too much by the oil. They think that although whale skins are sensitive, that they wouldn't be hurt for very long. They say that although the whales might get oil in their baleen that the baleen would get cleaned pretty quickly. They don't think that whales would be hurt by swallowing oil. Other animals would also be hurt by the oil. Seals would be hurt because they would get it on their fur and might die of cold. But an oil spill would only be on one part of the coast and seals are all over so not all of the seals would be killed. Oil spills would also kill fish. But the fish are all over, just like the seals. Laurie already talked about how oil can kill birds. And the Draft EIS admits that oil would kill a lot of birds. But the DEIS says the birds are all over the place and the oil would only be in one area. And so not all the birds on the North Slope would be killed. If there were oil development in this area there would also be a lot of noise and traffic and drilling and helicopters and boats and all sorts of things going on. All this activity would disturb the animals. The Draft Environmental Impact Statement says that they're not sure whether whales would be hurt by the noise....

MS. NOBLE: They don't know if whales are affected by noise. Seals and birds are both disturbed by noise. But they don't think that there will be a lot fewer seals or birds because of the noise and the activity.

Daniel Leavitt 1983 Sale 87 Barrow

And from experience when the Navy first came around here, there was a tanker that was grounded and because they wanted to get that tanker out they had to spill some of the oil out so it would be lighter for them to pull it out. And just from the spillage from that tanker on the shore, birds and ducks and seals were killed, just from that leakage. In this case I guess it was intentional spilling of that oil from the tanker. He knows that these things will happen. If there is development, oil spill is going to have to happen.

He mentions that maybe just the noise itself doesn't necessarily do havoc to the whales especially, but the oil spreading on the ocean would probably have an effect on the beluga, the whales, and the seals, because they will have to come up for migrating.

Norman Solomon 1983 Sale 87 Barrow

Now, on that lease area, you said a portion of that would be deleted, just from Camden Bay on to Demarcation Point. All of our food come from the Camden Bay area. The migration of ducks and fish come from that area and what would happen if there's an oil spill of some sort, from that area to our area it would wipe out everything.

Lucy Ahvakana 1983 Sale 87 Barrow

So, also my husband and I were working at part-time job working for environmental people two summers on small contract. And we had a lot of experience cleaning up the mess they made. And one day we tipped out -- how many barrels of oil -- 200 and some barrels, some of them jet fuel, some of them stove oil, some of them oil, about 30-some

odd drums was just dumped in that lake a few miles from (indiscernible). And when I talked with environmental people, those jet fuel never evaporate when it freeze on the ground. Gasoline, yes, that evaporates. And we also tipped out some of these seismic mess and powder and all that stuff, you know, a real mess, until they got more crews cleaning up. I think up to date they've been careful. I understand that. But if they ever -- if something happen out there -- just like the one in Mexico, somewhere out there, no way they can avoid that hurting our food.

Warren Matumeak 1990 Sale 124 Barrow

And also frown at using dispersants because it only turns transfer of that dispersant into the water, which would then go into the ecosystem that the larger animals eat and then it could pass on to us. You know, these things are going to be done without having a full knowledge of what effect it will have on human consumption, or at least these are -- these fears are real to me.

Daniel Leavitt 1990 Sale 124 Barrow

THE INTERPRETER: I am very concerned on how much -- how -- what should be done on how to stop should there be a -- to stop the blowout if it should happen.....

MR. LEAVITT: (In Inupiat)

THE INTERPRETER: Because I have seen in my life....

MR. LEAVITT: (In Inupiat)

THE INTERPRETER:there is what we call the pitch. There was a place not too far from here that has some still in it, and the sea beach has -- has turned out to be pitch.

MR. LEAVITT: (In Inupiat)

THE INTERPRETER: There is -- I never knew of a time when they were moving around, but I do know that when animals, any kind of animal, get their (indiscernible) always caught in mire.

MR. LEAVITT: (In Inupiat)

INTERPRETER: And should there be a blow-out in one of the oil rigs, it is very possible that much of the oil will spread out in the water before it goes out in the open air.

Nate Oleman (Olemaun) 1990 Sale 124 Barrow

I'm going to use as an example of what's in our background right now, in our backyard, of what the federal government has done. At Shooting Station, they have buried their debris in to the spit going to the Point and sank some of the metal and other debris into our lagoon out there. We use that lagoon to go inland and to go hunting. We use the Shooting Station all summer for hunting in our ocean, in the lagoon, and on the land.

(Off record): Tape Change Tape No. 3)(On record)

MR. OLEMAN: By not cleaning up the debris, we the community have to suffer, and we see it every summer. (In Inupiat) Back in '77, through a request from the community, I wrote a letter to the Navy since USE was run by the Navy -- not USE, USE now was run by the Navy, and we knew it as a Navy camp. The Navy respond and pass it down to U.S. Air Force at the DEW line site saying it was their responsibility to clean up the debris in the lagoon and along the spit since they were running the DEW line site. The Air Force in turn respond and said that the debris was cleaned up around the DEW line site and their responsibility wasn't the bay or the spit, it was the coast Guard's responsibility. And the Coast Guard looked into the matter because they mentioned the lagoon quite a bit, but when they investigated, some of the debris was along the coastline, both in the ocean and the lagoon and buried along the spit. So they determined that the responsibility lay on the U.S. Army Corps of Engineers to be cleaned up. The Corps did the same thing; they investigated and reported back that since the property was designated to the Navy and was under the jurisdiction of the Navy, and it was the Navy's responsibility to clean up the debris.

To this day, the debris is still out there, and that's just a example of how the government's version of coming in and saying they have the technology to clean up before they leave. The only technology they have is they know how to pass the buck. They know it's the government's responsibility, but they don't know who to blame it on. The oil spill, if it occurs out in the ocean, is going to be routed the same way.

George Edwardson 1990 Sale 124 Barrow

And if you want some facts on this matter, where you're going to go drill that is the ice that feeds one -third of the world's fish, between Greenland and Canada, the currents flowing that way. You make a mess, you lose-- you lose some oil, the toxicity of the oil does not deteriorate because it's cold. We don't have the warm weather like down in Valdez or down in Mexico where you lost it before. The -- the toxic gases will not disappear; they will stay there. And every time the ice rotates, we're going to get hit with it again. You're- talking about threatening two-thirds of the world's fisheries, you know, identified by the International Beaufort Sea synthesis that was conducted in Seward a few years ago.

Nate Olemaun 1996 Five Year 1997-2002 DEIS Barrow

And we heard from Nuiqsut about not having anything done in Colville River Delta, keeping it off limits for whaling -- I mean for oil development. Not too long ago we had an oil spill in Russia. Same area we're in, you know in Arctic Colville River? It would have wiped out their whole lifestyle. They moved from here to Barrow to be in their former village, to live off the land because they knew what it was. But if you have a big oil spill in that river, there's no place but in that river like in Russia. They're going to have to move some place again. (In Inupiat.).

Also recently, you had a oil slick that killed over thousand King Eiders. The same birds that we hunt up here during our spring hunt. But they were able to save a little bit over 200. It affected over a thousand birds. And they traced that to a tanker. If they drill offshore up here, it won't be coming from a tanker. It will be coming from underground. At

least a tanker, you could hold it, you could pump it out, but I don't know what you're going to do with the oil that's coming off from the bottom of the ocean. You have no technology. (In Inupiat.)

Frank Smith 1996 Five Year 1997-2002 DEIS Barrow

The impact survey that I've seen kind of ignores any impact on this benthic community on which the cetaceans are dependant for their food. It ignores the effects of drill waste, of platform anchors, of spills, cuttings. Just seems to totally ignore it as if these were of no consequence whatsoever. I point out that the oil companies on the North Slope, for instance in Flaxman Island, one oil company intentionally destroyed 40,000 gallons of drill waste, cuttings and blow out, rather than containing it within a holding pond just to conceal the amount of their strike from the competition.

Many, many years later, when the state finally located enough witnesses that hadn't been spirited away far enough by this oil company, I think the fine to the company was about \$5,000. Talking about priceless resources. Priceless resources on which this culture depends that state put a value of \$5,000 on it. When this suit was finally settled for the blow out, the deliberate discharge of a thousand barrels of waste and petroleum. And then the deliberate concealment of that blow out and the witnesses to it.

Bill Tegoseak 1998 NPR-A Barrow

One packet, prepared by the military, outlines the tremendous amount of contamination, toxic and hazardous waste, in many cases, extremely hazardous materials left by the military in the wake of oilfield exploration.

Ronald Brower, Sr. 2001 Liberty Barrow

As I look through your proposal, I notice that you anticipate, over time here, small oil spills averaging to about 29 gallons of fuel. I assume, in reading your document here, offshore or onshore oil spills, we find 53 spills equaling to 29 gallons. That's small, but when you're looking at the large oil spills, this is one of the most dangerous effects that will - (clearing throat) excuse me -- that will impact our marine mammal systems.

And I was looking at your -- the impact on the bowhead whale, reading, "Some of these whales likely would experience temporary non-lethal effects, including one or more of the following symptoms..." Reading from your document: "...oiling their skin causing irritation." It will not just cause irritation. It will remove and eat the skin of the whale. Look at what other oil spills have done to other animals, and that should be a clear lesson. It's been proven.

I don't concern too much with inhaling hydrocarbon vapors. That is also lethal. If whales are around this oil spill, and if they're entrapped in it, whales and other marine mammals certainly will die. And there's no question. Sea otters have proven that in the Exxon Valdez oil spill. Ingesting contaminated prey kills any other living form, especially if it's oil. Fouling of whale baleen of the bowhead whale certainly will kill that animal, not only by ingestion and poison, but also by starvation. So these are not symptoms per se as they're described here. This document minimizes the true effect to be symptoms when they are, in effect, lethal and deadly. The only symptom we're going to see is a dead animal. And I think this is very wrong to minimize the potential impacts of a large oil spill.

Gordon Brower 2001 Liberty Barrow

Having watched those for a number of years, and the amount of oil spills that occurs out in the oil fields is something I've seen over the time I've been in Planning. And oil spills at the -- the size ranges that are predicted to happen, 29 gallons, or another scenario of some sort, I think those are downplayed too much to try to minimize and make an acceptable EIS. When you have this kind of event on land that happens, things that you can inspect, things you can see, and a lot of them deal with human error, a lot of them deal with equipment failure, valve failure, and corrosion and stress on pipes.

And just an example, the recent oil spill at Drill Site -- or D-Pad and Drill Site 7, even Drill Site 4, the injection well, one of them -- I think D-Pad, in excess of 11,000 gallons spilled. And, you know, it's just a good thing it's onshore because you can clean that up. And the Drill Site 4 injection well, where injection wells are actively taking place to get rid of drilling muds and all that stuff and putting them down-hole, and a large amount of spilled mud and cuttings occurred again there. And in a short period of time, it's just -- to say that they're -- they do occur. These are not something that, you know, you use statistics to determine the probability of a spill to occur.

Frederick Tukle, Sr. 2001 Liberty Barrow

And it came out in the newspaper several weeks ago that these mercury -- that the mercury they're finding around the Arctic is a direct result of the industrial activities that our animals are ingesting. And we're eating those animals. There's people dying from cancer, this cancer-causing agent. I heard testimony a while ago, a little bit of the Colville River being contaminated. I was one of those people, the Mayor of Nuiqsut selected me to go see that contaminated site where the oil exploration, one of these where the rigs were dismantled. An estimated 10,000 barrels, dismantled rigs, all the vehicles that were used to find the oil up here got buried alongside of the Colville River.

Over a period of time, by luck, I ran into the dinosaur diggers up there, and I happened to start asking questions with one professor, Olan Ganglof (ph) (Roland Gangloff) out of the University of Fairbanks. He's been observing the Colville eroding -- with satellite photographs -- eroding to this contaminated site, and the result is two of these pipelines are now under the Colville. And it's not proven yet whether there was a mile-and-a-half lake -- a mile-and-a-half-long streak of oil monitored by aircrafts flying over the Colville. Part of this -- it's part of this oil exploration that that occurred. Now we have DDTs and PCBs flowing right into the river, and then we're starting to see contaminated fish. The contaminants are now being found in our fish in the Colville. You look at our geese, our caribous, our fish, our whales, that they are being affected dramatically. They're not being killed, they're being displaced, and no one knows the outcome of this.

You spoke a while ago of the injection, that that's going to occur on the Liberty Project. These seawater treatment plants, I had a chance to work in these seawater treatment plants over a period of time, adjusting the valves on them. I seen myself firsthand those animals being sucked in. Now these plants are being set up from Canada now to the -- right

in the vicinity of Cross Island. Those are what I'm requesting immediately be looked at, this seawater they're using to inject back in to push the oil out, and these flare pits that's consistently, year-around, dripping oil.

Arnold Brower, Sr. 2001 Liberty Barrow

I've observed some oil spill here, and that during the Navy exploration, I was with them. And the cause of that oil spill was caused by one of the tankers grounding in the eastern -- shallow waters of eastern Powder Point. And after discharged oil out into the ocean, it's refined diesel, to get themselves floated back up. And the results of that I see. You're talking about steller eiders, spectacled eiders, halirokes (ph), all species of waterfowl that comes through migration. Believe it or not, that's all of the United States waterfowls coming through here for practically the biggest portion of -- for nesting purposes.

And if this happens, not only these that we have, very few animals will survive, though, that stays with us year around. Whale is migratory, go through here in the spring and heads back in the fall. We catch it; we have to hunt it on time. Time is of essence. If we don't do it right, and if time is not with us, we suffer. I've seen this village of Barrow suffer more than once for lack of catching those whales. And that's with nature. The nature takes sometimes a big part in playing for our hunting.

Arnold Brower, Sr. 2001 Liberty Barrow

But observing that oil spill, even in windy day, it is calm, and the birds like to land there. The waterfowl stampede in there, big flocks of waterfowl, coming through land there, never take off again at some point. They're just soaked up with oil. The beach was covered up three feet high with those waterfowls, birds, and species. Nobody ever knew. No reporter ever gone through. I've seen what can happen on an oil spill of a great caliber, and then it would be worse.

Thomas Napageak 1979 Sale BF Nuiqsut

We know that the technology has not been developed to clean oil spills under the ice. As I understand, the oil spill in the sea ice from an ice breaker last year can't even be located by scientists or technicians, even to clean it up.

Wilber Atuananuag (Read by Thomas Napageak) 1979 Sale BF Nuiqsut

Also, traveling through dog sled and snow machine, I have seen copper wires which were put out by surveyors are damaging our animals. I have traveled from here down near Wainwright by dog sled and snowmachines. Through this area, all the oil camps that I have went through have drums that drains oil and prestone to the ground. Never clean the area that they leave behind. If they should start drilling on any part of the land or the sea, my wish is that they clean the areas first before they do anymore drilling. Signed, Wilber Atuananuag.

Rosa Kaigelak 1979 Sale BF Nuiqsut

Since they have started drilling, there has been a lot of damage to our rivers, our fish, our caribou and everything else. Like I saw in pictures of Chandler Lake. That was a horrible picture I saw. That lake is a seven foot lake. Just last year those drillers went up in there and what they did was blasted in that lake and in the pictures you could see dead fish all over that lake and all this garbage they had floating. That's where my Grandpa is buried too.

Thomas Napageak 1979 Sale BF Nuiqsut

And as I go further along, on page 162. Adequate technology, it says here, take care of problems of soil sinking from permafrost. I'd like to know the answer on that one because the testimonies that were given earlier. Due to the exploration activities on FDRA (NPR-A) and the State lands, a lot of barrels being left behind, left open. All the oil draining from the tanks, just smearing up the land and they've got technology. Why don't they take care of this?

Ruth Nukapigak 1979 Sale BF Nuiqsut

RUTH NUKAPIGAK: My name is Ruth, again. (Inupiat)

INTERPRETER: Her name is Ruth Nukapigak. She says a lot of times she has talked about oil company's exploding dynamite. (Inupiat)

RUTH NUKAPIGAK: (Inupiat)

INTERPRETER: Dynamite was left at the mouth of the Itkillik River. And they are visible from their camping area. She says there was lots of them. And she's concerned when the people from this area, either old or young people, when they go hunting, somebody's bound to get hurt. Oil companies are around it, dynamites have been exploded several times when they were building Prudhoe Bay. They are widely scattered which is dangerous when we go out snowmachine, by snowmachine. They're very dangerous and there are no trails for them to follow anymore because of these wires scattered all over the place. Here at Nuiqsut, we have land that was given us for us to keep and for us to care for. She's stating that the oil companies should start paying, should start compensating for tracking on our land. She said she is not educated and little English is spoken. She speak little English but she does talk. If the oil companies are going deal with this oil, they should clean up good around our area. We should not leave dynamites left behind. There are barrels, a lot of them, that are left behind. They say that they clean up; but they don't actually clean up. She says people from outside our area do not know about this. Land is destroyed and she had been observing these years, from looking at the tracks. Her husband and herself had traveled and observed these areas very carefully. Dynamite has been exploded. They have dug deep into the earth building highways. Building roads and are not very far from us. Why are people treating Inupiat this way? We have a hard way of life. We have no airport, that you see, the strip that you saw is just a small strip. And we had asked for help from Juneau to build us an airstrip, as but we have not heard anything of yet.

Joe Kasak 1990 Sale 124 Nuiqsut

MR. KASAK: Yes, I'd just like to point out what -- had a question. What was causing all these caribous to die off like last summer and this summer -- and, I mean, this winter too? And how much relationship you got with the Fish and Game personnel? And what developments they give you from all the findings they have been finding from these dead caribous? Like last summer, there was a herd of caribous coming out from the east and they were crossing the Nerluk

(ph) (Nigeluk) Channel, and some people were killing some caribous. And they find that the-- the skinny ones they found were discolored on their meat. And what would cause that discoloration of the meat they found? And what I guess would be caused by that laying around over there by Prudhoe Bay where all that burning that gas with their chemical mixed with it may have caused that or something. And some of these-- when the people go out to Prudhoe Bay for a clean-up job, you know, volunteer type, you know, with small pay, they always have something to say about these birds being dead out there.

Joe Kasak 1990 Sale 124 Nuiqsut

And what I guess would be caused by that laying around over there by Prudhoe Bay where all that burning that gas with their chemical mixed with it may have caused that or something. And some of these-- when the people go out to Prudhoe Bay for a clean-up job, you know, volunteer type, you know, with small pay, they always have something to say about these birds being dead out there.

Joe Nukapigak 1995 Sale 144 Nuiqsut

(Indiscernible) no matter what village that you may be at, we people depend on the sea animals. When we're hurting for -- sometimes we have a crash in some other animals that we depend on, like fish that sometimes that we don't know what caused it. Is it from drilling mud? We don't know. These are the things that should be monitored from time to time if it's going to -- if there's going to be a responsible -- if there's an oil find out in the ocean.

Joseph Akpik 1995 Sale 144 Nuiqsut

NOW, I've seen them when they are extracting and dumping baroid bar (ph), caustic soda. That's the most deadliest toxin that can be mixed in with the drilling mud. And I've seen them mix that Macobar (ph) gel, and then you're mixing it with hydrocarbon, which is oil, then you got 20 different various toxic chemicals that you add onto your drilling mud. And I've seen them dump all of that drilling mud over the causeway right onto the path of the cisco fish. I don't know if anybody's aware of what effect it would have, but I'm sure there is somewhere along the line on our bottomfish here in the Beaufort Sea.

And there's another good example, too, that there's a hydrocarbon fallout that is going on that Frank Long has mentioned. I've seen it; it's just like smog out there. The cold weather sets in from the air, and it keeps that hydrocarbon fumes coming out, and it falls out to the tundra and the waterways. Now, these are some of the research that never has been done, and it's affecting our caribou, and it's affecting our fish.

These are some of the small portion of these chemicals that are being -- that will be being dumped out that your office can regulate that. There should be monitoring of how much chemicals are being dumped out in case there -- if it goes through on this offshore exploration, there are the effects that will come within our environment. But anyway, there it goes again on part of the summary.

Issac Nukapigak 1997 NPR-A Nuiqsut

ISSAC NUKAPIGAK: I've got another good question, I think keeps popping up, this is Isaac here again, as you all know we've had pollution that's been identified and that needs to be cleaned up, in part of the NPR-A I here's a rare potential pollution contaminating material that were buried by the Air Force, needs to be considered looking at too, the possibility of the whole Colville, cause of that possible of effecting all of our species, there's been some areas, you probably heard a couple, last year, they had found pretty close to over 30 moose carcasses that were unknown causes of death. And I'm kind of wondering if it's coming from that contaminated site. And these are some of the issues that need to be clarified before the proposed NPR-A lease.

MORKILL: That was in Umiat?

ISSAC NUKAPIGAK: Yes, cause I know once if we'd got some material information about the Umiat contaminated, so much material that'd been buried during the time that the United States Air Force used that as their, one of their stations.

MORKILL: The concerns about contamination getting in the river?

ISSAC NUKAPIGAK: Cause of the fast motion of the Colville, that's getting close to where the contaminated buried sites, cause each year, the erosion on the Colville seems to be faster every year. I travel a lot on the Colville during the summer months, especially when the moose season's opened up and we noticed that the erosion, every year it's faster.

KAREN BURNELL: What you are saying is that you'd like to see the Colville River deferred because the same thing could happen that's happening in Umiat, right?

ISSAC NUKAPIGAK: Right.

ARNOLD BROWER, JR: No river drilling.

RITCHIE: I think I heard Isaac a little bit, there's several spots around that need to be cleaned up, that's a good example of one, there's several others, and I think that might be something that ought to be listed in there and we need to work with the other agencies that are, made that happen and get it ... (inaudible) ... we know of a couple of other sites and so that's really a good comment, I for one appreciate it.

ISSAC NUKAPIGAK: I appreciate that but the only site within the NPR-A the potential contaminated site, that needs to be look into and cleaned up.

RITCHIE: We've been working really hard on the old DEW Line sites that are also, some in that area, while George ... (inaudible) ... get support from the Department of Defense to the exactly what you're talking about.

Joseph Akpik 1997 Sale 170 Nuiqsut

MR. AKPIK: NO, I'm talking about the drilling fluid that would be disposed in with the -- out to the sea. I don't know where they were disposing drilling fluid, they use a cutting fluid. That's what the mosthing that would probably impact our Cisco fish.

BY MR. AKPIK (Resuming): As I have seen it out at Endicott where they have extracted -- they used drilling fluid out in the -- in the sea. This is what I'm really concerned about is our fish -- fishery, because it might contaminate the fish. And that would bring, probably, cancer causes toward our people that we consume very fish. That's one of the things I'm really concerned about. And there's some development going on that we have this west- -- north-northeast westerly prevailing wind and coming across our land where it would affect our caribou. think this -- I have the testimony prior before one of our meetings on the public hearings on this, then I will again bring up this hydrocarbon fallout that would contaminate our caribou and calving area. So this is some of the things that I would like -- yes.

Rosemary Ahtuanguaruk 1997 Sale 170 Nuiqsut

There has been many problems with various developments. And there is byproducts left all around, areas where you have worked and got your oil and it's left over. We go out and we travel around our land. We go hunting in this land. The by-products of these developments are definitely hurting us. We state that. But yet, in your book it says it's not to a level that's acknowledged as being harmful. Well, we are definitely being harmed by this development.

Many of our people get sick a lot easier than they used to. I wish we had the local resources to get the studies done to document what isn't hurt. We don't have a staff to in to look at the numbers and give them to you so you can say, but these are other factors that affect it. It's not just this development.

You have options listed in the front of the book; the option of no development in this area is the best option. Our people will continue to have to deal with what's already occurred, but sooner or later one of those wells is going down. Just like a plane can go down anywhere. So far things have been lucky, but there have been problems. So far they've been hitting pretty good. We cannot accept one well being wrong and a leakage occurring. You can say in your book their effects will be one year. No, it will not. They will be there for a longer time than one year. It will affect us until we cannot live here. That's not acceptable. We will want and do everything we can to stay in this land. But if every resource that we rely on is erased because of a spill, we have no choice but to leave.

Where are your stipulations and mitigation measures that will say you will help us relocate to an area that is not damaged and then relocate us back when the land is better? There is nothing like that.

Leonard Lampe 2001 Liberty Nuiqsut

MR. LAMPE: I wanted to add a comment to Tom Lohman's -- just, you know, to elaborate a little bit more. We're already a living example of if you would eat contaminated animals or fish. Right now, our burbot is contaminated with PCP from the contaminants in Umiat. And we're -- I'd say like 60 percent of the village used to harvest burbot. Now I'd say only 10 percent, if even any 10 percent. I think only two families now go out and hunt burbot. I'm one of them, and then there's another one, and then there's a couple, maybe three or four guys that sit -- but that gives you an example that no one wants to eat contaminated fish, or even wants to risk it. But, you know, that gives you an example there.

Noah Itta and Tom Lohman 2001 Liberty Nuiqsut

MR. LOHMAN: Tom Lohman, for the record. I just feel like saying that. Tom Brower in Barrow once told me about an incident where a Navy ship got hung up near Nelson Lagoon on a sandbar and let go of a bunch of oil to get off the sandbar. And that people didn't see birds and fish in that area for three or four years afterward -- or whales, in the lagoon area for three or four years afterward. And since Noah mentioned the Navy ships, I wondered if he knew about that incident. (Translation by and through Translator)

MR. ITTA: Yep, he remembers that. He knows about that.

MR. LOHMAN: And is it true they didn't see animals for -- for how long afterward?

(Translation by and through Translator)

MR. ITTA: There were lots of seals and lots of ducks and all kinds of animals that was killed by that oil they spilled in the ocean. That small portion of that oil they spilled in the ocean, that time when they just spilled it out of that ship, killed lots of seals, lots of ducks. But they seemed to come back right after they cleaned it up. That small portion of that oil got in the ocean, caused lots of animal problems. You know, they killed lots of animals on there. But then they cleaned up all summer long, but after they cleaned it up, they seemed to come back. There are still some around there, but then that oil is no good for any kind of animals in the water, any kind of water. There's -- it kills.

MR. LAMPE: He said the environment was never abundant like it was.

Rosemary Ahtuanaruk (Ahtuanguaruk) 2001 Liberty Nuiqsut

The fish has changed. Our elders have talked about the taste, the quality of their fish. Arctic cisco is a very oily fish, but you cook the fish and they've got a yellowish appearance to the meat that was never there before. Even my fish. I was very appalled.

I have acquired the taste of arctic cisco. It was not something I grew up on. My husband was here when the tent city first established. There were many elders that were here before the formal establishment of Nuiqsut. The City has taken on a project to do a oral history and cultural preservation. We've interviewed elders of the area concerning Umiat in the development. One of the strongest concerns that they have brought out is clean up the trash you left behind from all of these other explorations and development before you go open anything further. There's a lot of trash, a lot of barrels.

Environmental Consequences

Luke Kagak 1997 NPR-A Atkasuk

LUKE KAGAK: On some seismics, we happened down south of Wainwright, we happened to find some dead caribou and dead fish. Can they avoid like from the edge of the ocean and the land at least 10 15, 20 miles away from where they lay eggs? Can they do that?

Arnold Brower, Jr. 1998 NPR-A Atkasuk

What are we going to do in the area of cabins? Is BLM restricting the land? Are they calling us trespassers? These are some things that we have to take into consideration and BLM is taking onto consideration for land rights, not just for people from here, but from California, Florida, wherever they're from. They are making policies for that land right for the United States, not just Atkasuk and Barrow, but for everybody. What is our part going to be in the process? You have to be mindful of this and I thank that the Mayor's comments are very strong, but we haven't had this public workshop as much as we need to because of the short duration of the EIS. We have not produced maps that we can do a workshop with the public. They're laid out back there.

Luke Kagak 1998 NPR-A Atkasuk

I've always thought of any catastrophe that were to occur, it would directly affect the game that we hunt where they would be killed off. If scientific studies were done to find out the possible damages to occur, that might be fine. We know what the outcome is going to be if anything went wrong with the oil drilling. The caribou that we eat extend all the way to Point Hope.

The caribou too that we caught this summer looked unusual, out of the ordinary. They appear to be sickly. You can tell there is something not right with them because it is obvious. Where is that starting from? Questions are being asked for obvious reasons now.

Arnold Brower, Sr. 1976 Federal Energy Barrow

Now during the first exploration I sensed because of my own backing to my own livelihood around in the Tripp [sic – Chipp?] River area that there was tremendous damage in the fishing areas where I used to fish and the river was contaminated with diesel oil that was actually being distributed along there and I do not wish to have these same incidents in the exploration number two which is now going on.

I said this last fall that the fishing was poor and the exploration has gone through the same area. It is my understanding that the lakes that have now re-established their fish within a period of ten to twelve years were in the same situation because I could not find any fish in the ponds.

FLOSSIE: Do you want to name those lakes where the fish aren't any more?

Mr. BROWER: Yes, I recall one that's called Finmore Rock, Sitkulik, and the rest of the lakes that are in the Tripp [sic – Chipp?] river area, they do not have names but they are the fish rearing ponds. I notice that these fish we have, the whitefish, have not migrated out into the ocean, they just migrated back into these lakes and stayed there for the winter, they are locked in for the winter when they get there.

Some of these lakes that I named as the rearing ponds are also the wintering areas for these fish. As far as I know there has been hardly any research in these lakes but any biologist or Fish and Game Department people to know which lakes have the fish, even though they have been in this land for a number of years -it's pretty hard.

I noticed in the first exploration that some of these lakes, especially Shinmar rock have dropped about two to three feet loss of water, a depth which is known to be eight feet. At the time I noticed it-it went down to about five to six feet -and therefore it cannot support any more fish. because a tremendous amount of water has been lost in that first exploration at Shinmar-Rock. We enjoy these fish because we know where they're at -and during the winter whenever we need them we can go and get them but these lakes that I mentioned I would say they are zero fish in them -and even if I was to go in an emergency to survive on these fish I wouldn't be successful.

I notice that these seismic have dealt with some tremendous amounts without even knowing they are on some of these lakes -and I think there is no one that can say I am out of order when I mention that because there are indications where the blasting has been done in these lakes and no research of any kind had been done to find out if these lakes did have fish in them -they were used as that source

Flossie Hopson: Did you know of some of the locations that the Navy people- the locations you know of, the ones that you mean, these are the locations that they did some seismic operations on?

Mr. Brower, Sr.: Those lakes actually have no more fish in them-I cannot recall--they tell me these trails were made through them but to follow through would take time to follow the course of the seismic crew to see where the actual explosion was done-I cannot pinpoint the explosions that were being used at these lakes are of good size and you cannot miss them if you are to go on a site seeing.

Ms. Hopson: In location to these lakes your camp is located not far from Alaktak--

Mr. Brower, Sr.: --my cabin is located in the Chipp River, and it's marked by a little diamond so you can locate it on the map. There are various other fishing camps on the Chip River but not marked here on this map. Some of these since last year (right next to my fish camp) the seismic crew had crossed and blast in the Chip River-Whether they knew it or not. I don't know but they had blast right in the river itself. That's about a mile and a half from where my cabin is.

All along the chip river area there's indications where-even though you were not looking for the place where they had detonated the charge there were indications where the water had been heaved up in the lake where indications that it might have been drilled and the pressure where the water had come right up.

Charlie Edwardson 1976 Federal Energy Barrow

Mr. EDWARDSON : I'm a little concerned about this environment deal that's going on. I've been with the drilling crews just about every well they've drilled but the last well we drilled that is something. There's the environmental guy here but I'd rather see him go see that site out there, it's not cleaned up, And another thing, they put a dump right on a swamp where the brants nest and I don't think there's any brants nests there any more.

In one where mentioned over there -you see that lake just for checking it -I fished there for eight hours and I got over a thousand fish with one net -and right now you can't catch a thing in it. There's no creeks out of it -it's a big lake. After

PET 4 seismograph party went through -the depth of the lake is a little over eight feet -and a few blasts would clean the whole thing up around the lake. During those days, we never blasted but they'll just blast anyplace -and I've been with them. Last year up at our fish camp (I've got a couple of fish camps) and Arnold Brower has one, there's about five fish camps up there and just right about my fish camp they had their line, seismograph line, and they went right along the river, on the edge of it, on the ice -and the impact of every blast can kill all the fish on that side of that river.

I asked one of the seismograph guys 'how far do you get from the edge of the lake to blast' and he said 'right on the edge where the water comes'. Now that blast can kill a lot of fish -it don't take much to kill the fish in the water with blasts.

I guess that's what's happening to our fish. We had some good fishing grounds up there and this fall we hardly even caught any. I followed the trail of the seismograph last spring, checking on it with a Skidoo -and I wasn't alone, there were three Skidoos together. We followed that trail and we followed it right across the lakes. You never go around them you go right straight across -some of the lakes is better than a mile across, and they are deep. And there's a lot of fish right above too -I hope they don't do any blasting there. That's what's happening -and that's what we live on. We don't just go out here and kill a beef as we please like the outsiders or dig in the ground and get some potatoes, that's a little hard for up here. I'd like to see the environmental guys get a little strict on the seismograph parties. That might kind of slow them down but -you can't replace them fish or caribou. They're caring quite a bit about the oil but they're not caring what those caribou are going to eat, they can burn anything up but they're not thinking what we're going to eat -that's a fact and that's why I'm here

Laurie Kingik 1982 NPR-A Barrow

And, I want to know --oil companies, do they drill a hole. I don't want to see that leak in places. If the oil spills out, it's no good for birds and the other animals.

I know when I was a boy I used to hunt for birds. In my home where in the spring time they always clean out their (sigluaq) sitla (ph) and put the oils outside. And, when the oil getting sticky, the little birds, when they land on that oil one, they always stuck and die right there.

And, I think the oil spill is no good for birds and the other animals going to be hurt. The oil spill, when it spill out to the ground, the ground never grow again. The grass never grow. I know that. I don't want to see that. The animals are going to get hurt from the oil spill. How about on the ocean? That's no good for other kind of animals, too. The oil spill spread out on the ocean. When the seals come up, the crude oil gonna stick on the head and for their eyes, and for their ears, it gonna get in there. It's no good. I think the seal gonna be blind and die. I think that's all I have right now.

Rossman Peetook 1982 NPR-A Barrow

Since we are talking about the valuable subsistence land area, the NPR-A, we need a protection. If the seismic exploration happen to violate or did not follow the stipulations that they have, we need a protection, too for our rivers, nesting areas. I do not oppose the seismic exploration on land, but I don't want to see violators while they are exploring right on the river or on the lakes where the fish are.

And, I want to clarify one-- I want to ask you a question that --If the violators happen to start exploring right on the fishing areas, do they have some kind of a punishment?

Ron Nalikak 1982 NPR-A Barrow

How would the people of the North Slope be compensated for subsistence species in the event of an impact due to disturbance or oil spills? Okay, for example: The people of Nuiqsut--okay, we brought this up the last time we met --how are they going to be compensated for the loss of grayling in Fish Creek? I don't think a \$100,000 bond is enough. That's my feeling. Why not make it a million dollars?

Tom Albert 1982 NPR-A Barrow

Nuiqsut has got Sale 39 on one side, Kuparuk on the other side and NPR-A on two other sides. It's almost as though someone had set out to really do a job on that little village.

What happens if you put a pipeline across Fish Creek or Colville River, drill a well near it and something does happen to that stream? The potential is there to kill almost everything in it. That's not very likely, but it certainly is a potential. Just like bowhead whales swimming through an oil slick, it's not likely, but it certainly is a potential thing. What is going to happen? What is going to happen so that the precautions that have to be put in to this have to be very great. And, the people in Nuiqsut, like the Mayor just said, want that stream, that Fish Creek protected somehow.

It's just a shame that the two real sources of food, fish in this case, are just going to, you know, really seem to be attacked almost. And, then, the caribou that is the other food source in that area, or heavily used food source, is probably going to be disrupted by these pipelines. It's not much real bad about that especially if Sale 39 turns out to have oil in it.

Another thing that sort of mystifies me about all of this is: Where, in any of these documents, are cumulative effects adequately considered? Whenever we ask this question at any EIS hearing, or whatever, the answer usually is, Well, we're only here concerned with Sale X-Y-Z in this little area. But next year or next week it'll be another Y-Z sale in another area close by. So that, somewhere somebody has to take the bull by the horns and get at this cumulative effects thing. And, this really be a good place. Nuiqsut might be a place to begin because they are going to be, in a few years, really impacted from the cumulative effects of Sale 71, Sale 39, NPR-A, Kuparuk, Prudhoe Bay. They just seem to really be heading for real problems. So that, what is being done to address the cumulative effects of all this development on subsistence? Could anybody give me an answer to that?

Raymond Neakok 1982 NPR-A Barrow

RAYMOND NEAKOK Well, for one thing beyond, probably, from what my feelings are, I am mad for one simple reason. You have not taken into consideration the villages that are going to be affected by oil exploration (ph) of the areas that are pointed up here. Number 1 is: All drilling operations, will take a lot of water. That means the same thing

will happen Sagavanirktok like they did in the Sagavanirktok (ph) River. They ran it dry, completely dry twice in one year. And, if that happens in the Colville River or any of these places that are printed up here--like the lakes, the big lakes and river -any one of those go dry, the animals are goi-the fish are not going to be there. That's destroying the villages.

The main problem for me is the seismic operation that is going to be done with dynamite. We know for sure, and it's a stated fact that the caribou does eat that powder comes out of that hole and they get rabid. Also, we know for sure that it does affect the bone structure of the caribou. Because of an incident in Atkasuk where a man seen a caribou walking and then fall down. He went to check to see what happen to it. He started to turn it over, the doggone the head come off but body did not move. Now, there's something wrong with that. We reported it. It took them three weeks, in fact. I remember I was involved in the reporting of that incident. And, nobody wanted to come in and make sure that it did happen. They waited three weeks.

Any time there is any sites that are being put on, the animals are going to congregate around there. When they start eating all that stuff, you going to have a lot of rabid foxes, caribou, wolves, what- ever. Because they are going to get rabid like them They're going to eat around they're going to congregate around those places and they are going to be contaminated. And, that goes doubly for summertime when the birds migrate and come to nest. Our whaling activities in Barrow have not been looked into. From that point, because any oil spill are going affect them. Like the seal, for an example, when I had gone seal hunting in '72 and got me a 2 year old seal and it was tagged in Baffin Island in Frobisher Bay. Now it was less than, what, six months and he was able to make it to Barrow where I killed him. I reported it, I got the tag and then I got \$50 for that. I think I got I don't know what else a jaw, I think. They asked \$100 for the skin, but I said I use it. Now, the activity of that seal tells us exactly how much migration these seals are doing. Then the bearded seal, the walrus, and the whale. They're already being contaminated in Canada, and here they're going to do it again in Barrow.

Warren Matumeak 1982 NPR-A Barrow

WARREN MATUMEAK: My name is Warren Matumeak. I would just like to point out that there should be buffer area in all navigable rivers. And, also, the area shown as Admiralty Bay, a buffer area. That would be about three miles from the shore so that all the subsistence hunters will have no restrictions in their usual hunting areas.

Knowing that whenever a structure is set up by the industry, the prohibitions, then, become effective where nobody can hunt in the area. So, these are the main important things that I'd like to bring out. I guess the people before me, probably have mentioned that, fishkin (phonetic) containing lead should have a buffer zone where the fish habitat be protected. And, I'd like all this to be considered wherever there's navigable waters that they retain a buffer zone. Thank you.

Amos Morry 1982 NPR-A Barrow

Inland, when there's oil spill on ground, it does not dissolve or go in the bottom of the ground. It's there and that has a lot to do with animals. They cannot go around them. It's there so it's very harmful to have oil spill even on the land.

When the oil companies are gone, and there is no way of making money, and the prices in stores are so high, and when you're buying groceries--he said the people that are doing drilling, and oil companies, and anybody--BLM --anybody -- he said they hurt people. They will not be worried about our livelihood. They will just leave us and we will have the most hardships in our lives trying to survive when this happens.

He says the animals are now, also, getting smaller in numbers for some reason. And sometimes he also knew that someone got a moose and just take head instead of the whole carcass. He said there are some people that comes around and hunt the animals in their area and they've seen this thing happen.

And, he said the fish, when they're drilling by the rivers, the oil seepage from the --If there should be oil struck and there is damage --When something happens to oil rigs and there's spillage, then he said the same thing will happen to the fish. The rivers will all be filled with oil spills and he said that the fish wouldn't be there like they used to be.

Othniel Oomittuk 1982 NPR-A Barrow

Othniel Oomittuk, from the North Slope Borough EPO. I was just concerned with the seismic operation when the lease started in the future. When the seismic has been, we have seen the caribous with the seismic wire. Is there a possibility for BLM to identify, or color code their seismic wire so we could identify who has not coincided (ph) with the stipulations of cleaning up after the seismic operations?

James Nageak 1982 NPR-A Barrow

One of the things that Amos Morry made a comment on was the impact of an oil spill even away from a waterway like the Colville River. There are small creeks that tend to develop from an area where there's pad (ph) development. It gets higher, and from that high area, the small creeks tend to go toward the bigger river. And from the bigger river, into the ocean. And one of the thing she's concerned with is that the water that the animals drink, the caribou and the foxes, the wolves, those that are on land --if that water is polluted, the effect on the animals would be such that it would affect the lifestyle of the North Slope people. Not only up in the areas near Anaktuvuk Pass, but all along the coast. With that in mind, then I begin to wonder if there are oil activities within these leases, it would affect the people in Anaktuvuk Pass, the trapping, and if it affects the trapping, then the clothing of the North Slope people will also be affected. If the caribou --for the skins, the wolves for the ruffs along the hood, the clothing and the lifestyle You wouldn't be able to see an advertisement on the TV. with the person with the wolf ruff on that specifically states that that person is an Eskimo. Whether the person underneath that clothing is a Japanese, it doesn't make any difference. But it's the distinction of the Inupiat people that would be affected. And, it's disheartening to see all of this development.

One of the things that we haven't even covered is: How is the gravel exploitation going to affect the caribou? I read in here someplace that the effect of the gravel movement to make paths would permanently affect that area where they have taken the gravel out. And we know that on top of the gravel is the soil that perpetuates the lichen. And if that area

such that it's no longer there, and the caribou comeback to that certain area at a certain time they usually come back to that area--after they have waited a while to wait for the lichen to grow back --and they find that there's nothing, then how are they going to be affected? I have not heard any biological statements to that that can affect an animal --goes to an area knowing that, maybe seven years before, that there was lichen there, and they enthusiastically go to that area and find that area with no soil, just gravel. I don't know how --I haven't seen any statements, I don't think, to the effect that how is going to affect the caribou. Are they going to stay along there and eat gravel, or are they going to go to an area where there isn't any affected, or, you know... They probably won't find anything along so that's going to make my lifestyle a lot different, and my subsistence way of living.

So the things that we are talking about, the environmental impact that it's going to have on these leases, it's... Even though, you know, Amos forgot to tell you that \$169.90 is a pittance for a drum of oil as compared to those that have to buy it in Anaktuvuk Pass. And, all the effect of all of these things--It's going to be that they can't find any caribou. I understand on this statement that the pipeline that's going to go divide it from the Prudhoe Bay area to the NPR-A is going to the split the western herd in two. Those that are in the north and those are in the south, and if the division affects the caribou on the Anaktuvuk side, and the oil companies are gone it's not original with me--He said that. If the oil companies are gone, and they're trying to care for themselves, and if they can't find the animals, what do they do? I don't think that any of the people are going to go to Fairbanks. It's too crowded there, already. Anchorage is too far away. So, how is it going to affect the caribou, not to mention the wolves that we use for ruffs, and the foxes for the women making them beautiful in their coats? So, it's disheartening to even think about lease sale on these areas.

Benjamin Nungasuk 1982 NPR-A Barrow

And he was wondering why the seals were as scarce this fall, as some of the people that went out hunting have told him about why the seals were scarce. He would like to make a comment or a request: Why don't we stop the oil companies from drilling or seismic testing for 5 years to see what will happen in those 5 years. He said when the Navy first came up here and they were doing seismic testing up inland, he knew the animals were not --I think he meant the animals did not get scarce. They were still there even though they were doing the seismic testing at that time. But he said he noticed that, after the oil companies came up North, he know, also, that animals are getting scarce or even the ducks that fly through down the ocean have changed.

Sam Talak (Talaak), Mayor 1982 NPR-A Barrow

You have three proposed roads outlining the NPR-A. The proposed roads are a duplication of efforts three times. I don't have to emphasize much of the risk. But, what we could possibly do, would be to build one corridor, the main corridor across from the Colville River. There we are --you are vague for one thing, of where you are going to get your gravel from. The entire coast leads toward the --where the roads are proposed through these millions, trillions lakes. Now, the supply that you are asking for, you are still vague on the supply demand. It all is based on a ground rape of the surface land. Now, there's one small illustration of the Sik Sik (ph-Sik Srik) proposed drilling at Fish Creek. There's some stipulations where they will use ice unless the Act of God (ph) states that they will get gravel. Then they will use gravel as a last resort. But there is a big word in the EIS Statements that: Unless. And, you know and I know that they will be utilizing that word "unless" every time we look around. And, therefore your roads, your proposed roads, the demand must be made definitely where you are going to get your supply from.

Now on your --I want to get back to the rivers again, because it involves deeply into our livelihood. That's 99.9 base of --our subsistence lands are along the rivers, Way up to the point of the start of the Colville River, you make a break there, it'll involve way to Nuiqsut Village. The same way with the Fish Creek Area. It don't matter where it starts feeding from, it drains down to the ocean where our fish are.

There's got to be a creation of a buffer zone. I don't know how to put it in English, but there has to be a buffer zone so we can protect the rivers, the livelihood. And, I pray that you will not be vague in determining where your supply of gravel is coming from on these proposed roads.

I am not even entering into the caribou situation with these road construction, for the reason your EIS is vague. You state that they may be hurt. To what extent they may be hurt is what? Nobody knows. We'll take the fur-bearing animals which are one of the main cash economies of Nuiqsut.

The wolverine, for the past two years there hasn't been much of those caught for the reason that was so much geophysical activity right around the boundaries of Nuiqsut. These are the factors that we must look at when we say there's got to be a buffer zone leading to all the major rivers of the Colville area.

Jenny Ahkivgak (Okkingak) 1982 NPR-A Barrow

She was pleased when Raymond says that the people that oil companies, or who ever they are, won't let people come into their camps --the Eskimo people.

She took her sons one time to see how her growing --when she was --she went up to see, at Prudhoe Bay where she was raised, to see how it was, with her two sons. And when they got there they put out a net for fish, and it was there overnight but there was no fish where her father, before, used to get numbers of fish.

And, then she went to another place where she used to pick berries and there was no berries. And, she had heard that the people there had sprayed some kind of thing to kill mosquitoes with. We human beings get sick when we drink water which has been polluted by activities or anything. And, how much more of the animals would get sick if they drank from that water?

And, she also mentioned that the white people think that our way of living, our subsistence way of living, is easy. Because they have farms and gardens where they grow their own produce.

Ronald H. Brower 1982 NPR-A Barrow

I'm sure you are beginning to be aware of the drastic effects, physical effects that our people are experiencing in the Arctic with reference to a change of diet. I'm sure that you're getting to understand that perspective. All right, in

looking at the Draft Environmental Impact Statement in reference to oil and gas leasing and development, there's a number of different kinds of environments which are not discussed. Especially in relation to human environment. I would like to make a request of any Draft Environmental Impact Statements related to subsistence lifestyle in the Arctic in opposition to oil and gas leasing and development, or the impacts created there from. In reviewing this document here, it refers to, basically, oil and gas development and the impacts that are anticipated here. It says a lot of "ifs", "possible", and "it may". A lot of hypothetical features are presented here on the and low on both sides. At any rate, I'd like to look at the areas in which we are experiencing some impact from oil and gas development in the areas of socio-cultural resources. The oil and gas statements indicate that there is going to be a certain amount of depletion of our wildlife within NPR-A. And, that does not project any type of compensation, whatsoever, toward the people living in the Arctic in the type of impact that's created here versus the type of environmental uses that they are accustomed to, such as the acquisition of food. None of that is addressed in the EIS Statement except in oil and your gas leasing stipulations on Plate 9, in which you refer to valid existing uses. That does not cover any type of compensation moving toward a balanced Environmental Impact Statement.

The coverage on oil and gas leasing, and its detrimental effects are well mentioned. However, it makes no compensation to the people living in this environment whether it be socio-cultural, economic, or otherwise. Those are not addressed, or how they will be addressed is not mentioned in the EIS Statement. Because we will not have very much time, or no time in the future, once oil and gas leasing begins--any type of say so I think it is imperative that some form of compensation be doubled(ph) up toward regenerating our species, such as caribou and fish. Fish, presently, has been major subsistence use in the absence of the larger sea mammal, the whale. And, that has caused a lot more of our people to rely on land-based species of food, game to substitute for the protein needs that are required to in the Arctic. I'm not sure what to it is in the system, here, in reference our Arctic species, that makes the people physically better. But, there's no mention of that here, nor is there any method which is addressed to compensate for such a change. The development of oil and gas, I feel, should be compatible toward meeting the needs of the people it is displacing, besides the animals that are being displaced in their environment. And, I think it is imperative in the future that these be addressed much more strongly, instead of, "and if", "a possible", or "it may".

That type of language is not conducive toward reaching a compatible environmental use by both oil and gas development, and our subsistence user environments. Those being two different environmental uses, things should be more properly addressed to make sure that we have some form of a compatible relationship. Those, I feel, should be covered a lot better than what is indicated here.

The document seems to indicate that the eradication of a lot of the use, and its cumulative effect through the leasing and development periods, will have a much greater longer term impact upon our communities. And, there is no form or format for compensation addressed for mitigating the issues in that direction, either.

Raymond Neokok (Neakok) 1982 NPR-A Barrow

We are once again faced with something very dangerous. After they have put something all over the ground they have not come back to examine the effects of that chemical on the animals we hunt for food.

First, when concentrated drilling is done, the animals that we depend on for food surround that area. If our fox population becomes rabid and the rabies spreads to our wolves and caribou, our dogs will certainly be affected by it since the drilling is going to be done not far from us.

And when they drill, they use water. They use a lot of water. They will deplete our streams and lakes of water. The Sag River went dry when they drilled only twice over there. Anyone who is familiar with the Sag River knows that it is a fairly long river, and that the water level does not go down quickly. The water level of the Colville River and Utukok River has gone down considerably, and if the same happens here, we certainly won't have any game in the area.

We all know that if one species of the game we depend on for our livelihood is depleted, then it upsets the entire system. And if they once again conduct their exploration using dynamite, from experience that if a caribou feeds on the same area which the head of the caribou will fall off if a person simply pulls horns.

They are once again trying to lease your land without discussing any of the effects that past drilling has had on our habitat. Although the United States government has told them that the NPR-A has been leased they have not told you who they are leasing the land from. And when the lease expires, they claim the land to be theirs, even though we (the Inupiat) are in the middle of a lawsuit claiming that the land does not, in fact, belong to the white people. They themselves have discussed the BYK Line excluding the NPR-A. Lands which we never touched because the United States had leased it.

If the BYK Line is no longer in effect and we put it in legal perspective, let us understand the BYK Line. When Alaska was going into Statehood, this was talked about in Section 10(b), "I am now a state, and here are my boundaries. Let the United States understand this clearly." They themselves tried to change the boundaries, but this has not happened yet. The D-2 legislation also tried to change it, but it has not. Other land bills have tried to change the initial boundaries of the state upon Statehood.

But take BLM itself. They are trying to lease land without notifying those with deeds to allotments. Around Barrow and Wainwright, there is quite a bit of land which was claimed under the Allotment Act but will be leased by BLM without regard to the people who claimed those lands because the BLM does not want to give deeds to the allotments. The allotments have been marked on maps and have also been surveyed.

Our seals, our fish, our caribou, all of them will become rabid. Rabies will affect every living thing except for us.

While I was hunting seals as I always do in Barrow, I caught a two year old seal. I found that it had been tagged at Baffin Island, at Frobisher Bay. It had been tagged that summer as a two year old seal. The following winter I caught that seal in Barrow. If the seals can travel that far in such a short time, then our bearded seals, our walrus, our whales, and our fish will be affected as quickly as they are being affected in Canada.

When one keeps an eye on these things, they have said in their laws, here are the fish, even the seals, in an area where there hasn't been an oil spill. Within one quarter of an oil drill, whether or not it is on land or sea, the fish or seals come into contact with oil. These things have already been marked down and yet are considered lightly by (them); things which we should be concerned about.

I myself will really suffer if I can no longer eat seal meat or caribou meat. More so if we can no longer eat fish, Nuiqsat (Nuiqsut) will be really affected.

If the Colville River's water level becomes too low, then it will become impossible to fish.

We all notice that salmon are becoming more plentiful in the rivers, which decreases the white fish population. We all know that even further upriver, salmon are becoming more numerous, decreasing the white fish, cisco, and grayling populations. They are scared of the salmon.

Even more so, if oil starts in on them, our fish will disappear quickly.

And the fish that occupy the lakes; if they use water from those lakes, then those fish will have no water. Do not forget that when drilling is begun, much water is used.

Do not forget also, what happens to the ground where dynamite is used. We know that there is a poisonous substance in the dynamite. In Atkasuk a person saw a caribou grazing in an area which had been dynamited. When the caribou fell over for no apparent reason, the man walked over to the fallen animal to see what had happened. When he took the caribou by the antlers to examine it, the whole head came off. The caribou had just recently died.

They are once again planning to use a substance as poisonous as this, yet they have not even mentioned it here. The people involved with oil will really begin to destroy our lifestyle if they start on this lease without carefully examining the effects that drilling has had in Prudhoe Bay.

Those of you who are trapping, this also applies to you. They are marking all over your maps, on your trapping areas. When they start again, they will tell you, "Do not trap in that area, it is ours." Remember that when you begin trapping. They will prevent you from going into your trapping area.

Ben Nungasuk 1982 NPR-A Barrow

The oil even threatens the ducks that are on the water.

And even the animals that are in the water presently are rather different this year. The seals for example. The hunters that have been going out to hunt seals lately have said that there are no seals. I wonder why and for what reason the seals from here are scarce.

Why can't you at least listen (to the people) who are living also on the land; stop the ones who are drilling, the ones that are looking for places to drill, for awhile if they can be stopped for five (5) years according to what I, myself am saying. To study and observe for five (5) years how the animals are reacting. When the (people from the) Navy first came and first started drilling, it did not make an impact then the way I see it.

And then when these last oil companies came the animals are starting to change, animals that are in the water and even the caribou, I'm commenting on this so that they can study and observe the animals that we have always hunted on land.

Joash Tuke 1982 NPR-A Barrow

Since you already explained, I will say that what Ben Nungasuk said is right. When the Navy (people) first came there was no impact on the animals. The Navy (people) that first came to drill for oil did not use and place dynamite into the land nor did they use compressors in the water. And now these present oil (companies) that have been drilling, ever since oil was found, use explosives during the winter.

This is how the (people) that are drilling, using explosives on land during the winter near the lakes, kill the fish. And also in the ocean when they are using compressors, it is no different.

A compressor which sends off a very loud noise (and vibrations) can also kill a lot of fish.

If they are going to drill near the river, don't use the water in that river. The (abundance) of fish will change.

We did not want to be forced to have any drilling done, but if they go ahead and drill then let them use water from the ocean by (purifying) it. Not from the lakes up there for they will kill the fish from the lack of water. Don't use the water in the rivers till their empty. If they pump the water and empty it, all the fish will die due to the lack of water.

If they're going to haul gravel, they should not get it from the river. They should not bother (disturb) the path of the fish. They should haul gravel where there are no fish to disturb.

Together with our neighboring (villages) and people we always camp with, we want to protect our animals but we are forced to yield to pressure maybe because our leaders are not really helping us. Maybe this is so. Our leaders who act on our behalf probably have urged them to go ahead which makes it worse on us, and they have not attended the meetings with us who are against it. We who are speaking against the (destruction) of the animals migration route are running out of help. I want both my comments to be utilized: Don't use the water at all from the land but (purify) the ocean water and use it. They will let us run out of fish by doing this. When observing during any time of the year, where they have used explosives, there's not a fish in (sight), wherever they relocate. And then the next year, after they have used explosives in that (certain) area and have moved a little ways, one hears reports of our land acquiring fish again, fish which are fleeing from where they are using explosives. The (people) that are using explosives are getting closer to Barrow, when we were out whaling this year, even though (they) are not talking about the ocean, I will talk about the ocean.

I think they wanted to know more about the land during the fall time, ever since they started using compressors, our whales that use to come through before the ice started to come in, have started reaching Barrow when we can't reach them anymore, after (the whalers) have gone ashore.

They should take extreme caution not to use the water from the lakes and the rivers after we have been forced to yield to pressure, after we (have repeatedly) told them not to drill.

Jenny Ahkivgak (Okkingak) 1982 NPR-A Barrow

Having been raised at Prudhoe Bay. I took my (2) sons there when they were able to do things, to let them see where I had been raised. When I reached there with them, I set up a net for them where we use to fish near the ocean. There were places where they had drilled, right beside the place where our house use to be. I placed a net for them in the lagoon near the ocean where my Dad use to catch Arctic char and there use to be a lot of fish here, and this is where they had drilled, on the side and even on land but also touching that area. Even though we had the net overnight it did not get any fish at all.

I practically ran sometimes to where the berries used to grow, but there were only small ones that had not grown. I got to thinking. (I had heard) that they spray mosquito repellent on this area. I tried to eat the berries, but only the pit of the seeds were just about to grow but had not. I got to thinking that they had let the plants die by trying to spray the repellent on the mosquitoes. (I had heard) that they use a helicopter to spray the mosquitoes. I did not have any berries even though I was dying for some because they had not even grown. But I thought to myself that the people who sprayed on the mosquitoes must have killed the berries.

Even the fish are real easy to die, for example: if the water had something in it it is very hard to drink. Even the animal makes tracks when they're just walking. They are not like us human beings. They must have run away when they smell something that they don't want to smell like oil, grease, or a smell that the oil drillers have left behind.

Also the Game Wardens, where the areas have Game Wardens, have helped stopped the hunting.

They will go there to drill then say that there are no animals... In one month, September, October, and July, the animals start changing and the elders talk about this.

Rossman Peetook 1982 NPR-A Barrow

Also the places that are located in the southwestern part that we still can reach now can be seen on the map up there. Even now we still can reach Colville and still is our hunting place. During the winter, we still reach it, and I finally made it there during the summer by boat. After we set up camp, not even 5 minutes would lapse by the fish would be biting just by using hooks. There was an abundance of fish during the summer when you look at it right now. But, even then, one of the people said that the fishes were getting fewer right now. There must have been an abundance of fish then before any had been taken.

These areas look so small to me, that when you look at the map that one (hunter) gets the feeling that you have not moved around but seem like the only spot where people hunted. Right now, they are talking about the places up there that our parents have traveled, from time immemorial, wanting to have it. They ate plants from the ground itself; berries, tubers, even sourgrass (wild rhubarb).

I am deeply concerned in protecting the fishing areas. They want to work right where the ducks lay their eggs. Then after they have damaged them, they will not put it back the way they were. After they have done damages to us they will leave us; they will not have anything to do with us.

Noah Itta 1982 NPR-A Barrow

I just wanted to explain that while I was aware of things and growing up, the oil people came. I have seen them, the first being; when the oil (people) came up on one of the Liberty Ships and got stuck by the Point because of the shallow water, and in order to get out it spilled its oil into the ocean and they floated. Right then and there, a lot of us saw the animals, ducks and even seals die caused by a small amount of oil.

On one of my fishing trips, I saw the markers of the sounders(?) that had been placed there following the river. From that time on, the fishes in that river changed and are not there anymore right now. The river being like this. Every springtime, a lot of the rivers clean-up by the full force of their break-up, whatever trash is in there is taken out then its clean. And the stream that does not break-up is where the animals and the fish are because it does not break-up. Since it does not (break-up and) throw out any trash, a lot of the fishes that were killed by the sounding(?) and could not get out being at the bottom, and the fishes always wanting to be in clean water did not want to go there anymore. The sounders (?) having killed the fish that were at the bottom of the stream.

It is also knowledgeable that this has occurred in other areas that the dead fish look like driftwood, right on the path of the sounders (?). They look like driftwood washed ashore. I want to testify because it is a true fact that the fishes can be killed wherever the oil people are.

And then all during the summer, on the out-skirts of Tasigpaq where we camp, they burned a lot of oil by the hundreds. Why is it not open to the Inupiaqs who are struggling even at a cheaper rate? Why is it not given out....

End of tape: Off the record. Noah Itta cont.: I was talking about the drums of oil that were just thrown away. My son who worked with the clean-up crew has always told me that they

burn three or five hundred drums of oil all the time. I, myself, found this out this summer when they were burning oil at Tasiqpak. One gets to thinking that they could be of use, especially when your struggling, to sell them at a cheaper rate even to the Inupiaqs. \

But, know this, the Inupiat do not want to have any drilling to take place in the ocean because this concerns our way of life and because we like the Inupiaq way of life and the food and not wanting to lose this.

Joash Tukle 1982 NPR-A Barrow

My name is Joash Tukle again. I want to add, since Kuugaagruk was brought up by Noah Itta. Since (I) fished in this area and still do fish there a number of times so last year we were there for two weeks and did not get any fish even though the hook was visible the fish were not biting; acting strange as if they were not aware of anything and we did not get even one little fish.

Then moving back to what I said earlier, use the water from the ocean instead of the lakes or the rivers. They should go to the nearest Region which have Corporations and ask where from the ocean without bothering the fish could we put up our wells for water. By asking them. The water is very precious. The people and I have come to know just how much water is being used by the drillers nowadays here, because they're drilling just east of us. Having heard about how much water they are using, we do not want them to use the water from the land.

Charlie Brower 1997 NPR-A Barrow

Until recently, traditional knowledge has not been incorporated into previous EIS's, this has been very discouraging for local people who attend meetings such as this meeting and to share their traditional knowledge about environmental they know so well. Many local people have stated they're tied of coming to find out that their comments are never considered into EIS. The outside agencies people who live here have important traditional knowledge which can be incorporated into EIS. Number two, I have Taqulik Opie and Harry Brower to give a outline of this subsistence hunting and fishing areas for each community within or near NPR-A needs to be documented and included in EIS.

Bernice Kaigelak 1998 NPR-A Nuiqsut

I'm not affiliated with Kuukpik Corporation or with our Native Village of Nuiqsut and I strongly feel that we don't have a neutral party in our community to better represent us.

I oppose the Alternatives of B, C, D and E because it does not protect our land and our area. In the past, when Bruce Babbitt was here, I let it be known that I oppose the opening of NPR-A and I still feel strongly about that because we haven't feel the effects of the Alpine development. It's too soon. It's too early. The people of this community need to feel what it's like to be that close to a developing oil field. And then I think they could better decide what's best for them instead of doing it now when they don't even know how much that field over there is going to ~ affect this community.

...I feel very strongly that it should be slowed down, this process, this opening of NPR-A. Maybe somewhere down the line when people understand how it affects us, that field over there, then maybe I would feel comfortable deciding somewhere down the line it maybe okay, we can work together.

... I feel I need to stand up, because my father didn't stand up for himself. He already lost his right to his land out in Prudhoe Bay. My grandparents had a sod house and a cellar there. Now we can't even go over there. We have no right to it even though my ancestors were there before the oil fields were. And for some of the sites on NPR-A that maybe you don't know about any unmarked graves or whatever and Native allotments that are pending and not going nowhere. I think we've lost enough already. It's time to stand up and say, no, or slow down.

With these Alternatives of B, C, D and E, the reason why am I opposing them is what do I know about designating the Colville River, a wild and scenic river. Are they going to stipulate fishing regulations on it? How do I know it's not on the dotted line of your EIS draft there?

What about this proposing of a bird conservation area? Is that going to limit me from hunting the geese and ducks that I do so freely? And the 50 percent of the area where it's covered, it's not even close to where we should be. I mean, where are we protected?

Nate Olemaun 2003 ASDP Barrow

And we keep talking about airplanes that -- but we didn't bring up the helicopters or Rolligons or whatever that's going to be disrupting the subsistence hunting. Like it's been brought out they had a limit of 150, but 1000 was actually used.

One thing I'd like to bring out is the Sag River. Prudhoe been in existence over a year -- over 30 years and it's a yearly event of for over 30 years now for Sag River to have a wash-out. No matter how high, how strong they make that crossing, after the bridge they put in there in Sag River, it always washing out. So it's unpredictable. It's not in the same place the strength is going to be during wash-out; it's all over the tundra, all over the channels of the river. You don't know, so those has to be looked at.

Marjorie Angashuk 1998 NPR-A Wainwright

Before he died he used to-- ask me to the land's going to change people nowadays, I finally believe what he told me. But now it's changed so much, I just don't know why. December I walked down the creek, I find a dead animal, a walrus. When I take a little walk up north and I find a dead animal, a bird. So everything's changed around nowadays, so I really believe what my dad told me when I was growing up. Thank you.

Rossman Peetook, Mayor 1998 NPR-A Wainwright

MR. BROWER: Rossman is saying that NPR-A, if in the event that it was open and we have no other recourse and for designations of other lands for recreation or otherwise, whether it be wilderness and scenic things, that designations should be should come about. That he really supports the position --no designation position policy by the North Slope Borough. He's concerned that these will perhaps interfere with subsistence hunting by people who are primarily for purposes of sports or recreation.

Walter Akpik, Sr. 1982 NPR-A Barrow

There are fish in lakes too in the summer. Fish are the one most important thing to watch for because of their characteristics. Although there are caribou which run everywhere along the top of the ground too, and although they, too, need to be provided for, I would be most grateful to the oil people if they would stay away from the lakes and rivers inhabited by fish when they begin using underground explosives in their search. These are much used by us who have subsisted by fishing.

Ruth Nukapigak 1997 NPR-A

ARNOLD BROWER, JR.: Thank you Ruth. That was Ruth Nukapigak, she often speaks at these meetings since her current primary concerns are, a couple of concerns since you folks deal with land, these issues, one is allotment, her

husband's allotment, it's on, I think south side of Meade River. Barrow resident Kara Beeters has some property near hers, her husband's allotment that was willed to her and her kids, and someone has built a house on the allotment and she doesn't like that, nobody's told her about it, and she has document of this allotment, she has papers with a serial number on file and this was, considers it a trespass, and she don't know who to talk to about this, and would like some assistance. She'd like for BLM to address this for her, since it has to do with allotment, she also has a lot in Barrow, a similar trespass case, she has a deed on the one that's had a trespass also, she has a restricted deed. As she spoke she said, since they came to Nuiqsut here, caribou is one of her concerns, here in Nuiqsut, today, not too much caribou because of industrial impacts, she has, when there was very little industrial influence around here she enjoyed serene living, just nobody harassing them and nobody encountering any type of seismic in the village or near the village, when they first came the kids were young and now they have their own kids, now the land is in question. No matter how much they speak, she's been at public speaking before and the United States agents who are people from the United States government don't listen, that they think that it's, that they're the government, and they have the right to come in and do this and they just tell people this is what's going to happen and they come and inform them and just leave and just, and although people here claim that this is their land and the other people wants to, seem to want to claim the right to the land for their own development. And this has come, made things more worse because of the lack of caribou today, she's very concerned in that the impacts is disrupted, displaced caribou, and also seeks that, she says there's no caribou, the people don't go seal hunting, and no ducks are here in the winter, so they don't rely on plants like other folks do down south, Anchorage or elsewhere or where people have vegetables, only in the summer can they go out, so far out in one hour from the mouth of the river out to the sea, to catch any seals in the summer. The village is not like any other coastal village because it's unique, that it's different because of it's location, it's inlet and that today that the food and the meat is lacking because of the caribou have gone elsewhere, is not here, and her other thoughts are that seismics are conducted too quickly without informing the public here in Nuiqsut and they do it quickly in that they off set the renewable resources from where they're supposed to be and she's concerned along in the summer time that from Cape Hopkins to in the Harrison Bay area that there's goslings, baby goslings, ducks, geese, whatever, that these impacts may harm these renewable resources, and want to know what, if the documentation has made provisions to protect these things. That if there is no documentation that this is a potential impact is that these will diminish, vanish, because of oil and gas development, and how we will restore the caribou that is not going to be there when development comes in this impact area in the northeast district of NPR-A. And the fish, and renewable resources, aquatic and what is the mitigation, how are you going to mitigate these if you kill them off as they're near shore and things, oil spills and other issues that or seismic may kill when the arctic least cisco for example may have eggs in the summer rather than, they are not like any other fish, that they probably have their eggs in the summer, and she's very concerned about these things for her kids and the future generations of Nuiqsut. And your timeline for this EIS, seems to be too short from what she understand that, she would like that to be extended so that a proper EIS would be done to adequately address these grave concerns that she's made. And would like to know how you can respond to these; otherwise, that she's welcomed the party to Nuiqsut, graciously and glad that you folks are here to inquire about the concerns of the Nuiqsut residents. Welcome to Nuiqsut.

Noah Itta 1997 NPR-A Barrow

NOAH Itta (Spoke in Inupiat, translated here through Jana Harcharek): This is a very good, very opportune for a meeting of this nature, if I can be of help, that's why I am here. That's why I have come here to speak. I've learned, now here people here have lived since 1928 and '29 when I became aware and I remember everything since then of people hunting in this general area, they came from as far as Point Hope and even as Canada and I haven't ever forgotten that. People back then lived a very hard life, there were no white people, the commercial whalers had already come and gone after having decimated the whale population because of the benefits they gained by the sale of baleen. I can say that this meeting is sorely needed, but I must say that it must not be rushed, there are many people out there who must be given the opportunity to voice their concerns and their thoughts and their opinions, there are many people out there who can say things that will contribute to this process. As far as industry, I'm glad they came, before we had oil and gas development here we had a very hard time heating our home or heating in general. Then industry came and development took place and now we have, and provided heat and now we're very grateful for that because it never goes off.

Industry isn't here to ruin anything, through these years I cannot anymore live without petroleum products because I don't travel by using dog teams anymore, I need fuel for snow machines and for heating. As far as the area surrounding Teshekpuk, it's not only that people can live there but within a 400 square miles for an individual who travels the country hunting is small, 400 square miles is nothing to a person who goes out and travels and hunts when they're looking for game. I'm glad for the biologists who assisted us and were instrumental in helping us bring about a change in the way hunting and fishing was regulated, I'm grateful for them because there was a time when laws and regulations were such that we were almost prevented from continuing the practicing of our way life as far as hunting and fishing and subsistence goes, and they were instrumental in assisting us in that we had been living for a long time. I'm not here to try to stop the industry, thinking they would ruin our land and resources, but rather to approach it from a stance of working together with them. Our way of life has improved since they came (and in particular he referenced when the Navy first came and he got his first job and earned money for the first time). If industry needs to find more oil we should let them because we cannot live without it anymore. But it's really sad when we learn or it's said that any of our wildlife are dying for whatever reason (he brought up the example of caribou or other animals when for some strange reason they appeared to die for some strange causes). When a hole is dug and then it's allowed to spray all over (the example he used was natural gas) out into the environment we must be cautious of where it goes, if it goes to the air and then gets spread and then on to the land and then it lands on the land and then the wildlife come and they eat and it gets into the food chain and then our wildlife is affected. We have to check to see that these kinds of things don't happen, and if it does happen we must follow up by studying to make sure to what extent the food chain is effected or to make sure, we have to take every precaution to make sure the food chain of our wildlife is not effected by any development. I don't agree with those who say don't explore or develop, but we have seen an area greatly devastated

and ruined by the oil spill, there was major impacts to wildlife and the land a documenting what populations actually were so that we could maintain a way of life and the ocean and we have to have in place ways to address this kind of thing should it happen. I recall one year somewhere there was a spill because Steller's and eiders, those two bird populations, they a result of a spill that happened somewhere (and then there was a case he referred to when they were doing that seismic activity where they saw that fish populations disappeared for 3 years and they don't do it like that anymore). I'm told that techniques have improved and they don't have to resort to those techniques anymore that have such devastating impacts on fish populations. If they want to know about wildlife calving and nesting areas I volunteer, I really have sympathy for those people who are affected by so many regulations that it prevents them from carrying on with a way of life centuries old but I believe that us as Inupiat and industry as the developers of oil and gas should pursue development with the thought in mind of assisting those villages located close to these resource for heating. If there's a village nearby where there's development occurring then we should take steps to assist that village in securing heating energy.

Leonard Lampe 1998 NPR-A Nuiqsut

Back in April and August, the community felt very strongly against the time limit of this proposal of the development of NPR-A. We all stated that 18 months is too short for the period of an impact statement to be made. We're seeing proofs of that today of our statements not being in this Draft EIS.

We give the same information, testimony, as been given to this body and other panels of the government agencies for 20 some years and these - - and our vital comments and concerns are not documented in your Draft EIS. For many years, we've said these comments and concerns, yet, they're not put in black and white in your 720 page document.

If oil companies -- the big two oil companies tell us all the time they will not prohibit us from using firearms, but these restrictions and laws are beyond their control, they're on the government agencies that restrict firearms.

Impact funds have always been an issue with the City of Nuiqsut, knowing that this community is and will be affected the most of these proposed developments, we share all NPR-A impact funds with other villages that do not even see the effects of impacts on hunters and fishermen who harvest the animals of NPR-A and see the changes of lifestyle to the people. Yet, they are compensated the same as this most affected village.

Leonard Lampe 2003 ASDP Nuiqsut

One of the big things I see in the village ever since Alpine was built is a sociocultural impact. No one has ever adversely addressed the issues of the impacts of this village. People in this village are starting to label each other, label one another, label other organizations. This is not the Inupiaq way of life we grew up to be. This is not the lifestyle that we learned. But we're learning that because that is your way. That is your way of getting ahead in the world, being competitive, and that's what we're learning to be. It's very hard to learn your society way of competing in jobs. When Alpine first started, we were promised jobs, we were promised programs from our -- assured by our corporation that this wouldn't be a significant impact on our village. It has. It has been a significant social, cultural impact on the village. Not only the residents, but the resources, the natural resources: the caribou, the Arctic cisco. I could go on and on. These are impacts that nobody is addressing.

Alpine, when it first started, everybody painted it as a footprint, a minimum impact to the environment. With these satellites, this is no longer a footprint. This is now becoming a trail of footprints, connecting to the sidewalk of Prudhoe Bay of all the footprints up over there, which I call sidewalk, where whole bunch of people tramp all over over there. And now Alpine is going to be just like that; we're just going to be a suburb of what's happening out here.

Like we see today, elders against elders, youth against youth, labeling people, who's good and who's bad. You know, we all thought we were prepared as a village to face the social, cultural impacts, but today that's proof that we are not. We are getting against each other. We are getting against each other's organizations. We are not working together. They are being an impact on us. We are not strong as we thought we were going to be five years ago today. Look what's happening today. Everyone's getting against each other and it all comes down to money. That's what it all comes down to. We all seem to forget where we come from. We all can't move back -- the clock back like people are saying. We cannot move and live in the past. But we need to remember that, you know, the Inupiaq way of life is working with -- together and we need to teach you that as well.

We are here to let you know we are facing troubles financially with our entities and social, cultural with our people. What more impacts do you need upon this village to show to the world that we are being impacted? I don't know what else.

NPR-A Impact Funds? That's a laugh to me today. We've been informed -- the City of Nuiqsut was informed today you are not eligible. City of Nuiqsut, the most impacted village, will not see a dime in 2003 from all the billions of dollars they're going to lease out on NPR-A. You are the most impacted village. You are not getting O&M for your day care center. You are not getting O&M for your cultural center. All these things, these so-called all in black and white, is not going to happen if this continues the way it's happening. Just like with Alpine. We thought we could have control. We thought we can -- it could be the best for the corporation, for its shareholders and residents. But look today, we're begging for contracts, we're begging for work and what little work they give us, we take because that's the way our business is today. But it shouldn't be like this when you're the landowner, you're the stakeholders here. It shouldn't be this way where you're begging for contracts.

And discrimination is very thick. It's among there at Alpine. It's very obvious. We have young workers that work there and I talk to these young workers all the time. If you are not a supervisor's son, if you are not a supervisor's brother or family member, you will not survive very long there. That's what everyone goes for. They hire their own sons, their own nephews and that's very obvious with Alpine. That's got to stop. What qualifications do these grandchildren have that our people here on the Slope that have education as well don't have?

Karen Burnell 1998 NPR-A Anaktuvuk Pass

Teshkepuk Lake is the one area that we do not want for the oil companies to touch because we do not know fully the damage a mishap could cause if it were in that area. They talk about drilling oil from underneath and going through below that Lake but because we do not know the full extent of the possible damages that could occur, it is our opinion that it would be directly impacted negatively. So we are prohibiting that area from becoming available when the lease sales begin. The oil companies have done a lot of damage to our land already.

Take for example, the area in Umiat. All they did was clean up the surface before they left. What happened was the whole area was damaged and started leaking to Kuukpik river. We have also heard that the fish in that area were affected. When they went to examine the area, it had already done some damage to the fish that were in that area.

Frank Long, Jr. 2003 ASDP Nuiqsut

MR. FRANK LONG: My name is Frank Long. I'm with the North Slope Borough Assembly, also KSOP office manager here in Nuiqsut. And my comment tonight is in regards of what brought forward before us here in the planning area of NPR-A and Alpine area. I think, Sally, in the future, to start with, your bridge is in the wrong place. What happened to the other two alternative bridges that were proposed?

MS. ROTHWELL: They're still proposed.

MR. LONG: They're still proposed?

MS. ROTHWELL: I was just showing that one location because that's our preferred location.

MR. LONG: Yeah. The reason I'm saying that is because you're in the widest part of the river, to start with. And I don't think your bridge will withstand the strength of the ice each summer or spring break-up unless you have diamond-type like legs that will not be demolished by ice packs. And another comment that you said, it would benefit financially and with jobs. Who is going to be financially benefited? BLM or the State of Alaska or the industry? We haven't benefited anything from industry since they started. So who's kidding who?

And on top of that, in the area that CD-5, 6, and 7, especially 7, is a hunting area where we do our hunting inland and with furbearing animals. And CD-6 is the one that's close to the Fish Creek area which we do fishing during the summer.

When we can't get no fish in Nigliq Channel over here, then we slide over to the other channel. We think it has a lot of fish in it and the fish taste better than the Colville fish. So it's got a lot of potential there. And CD-5 is an area where caribou migrate on the coastal plain during summer. If we go that route and CD-5 and the bridge is down there, we will have the same problem we did in the Prudhoe Bay and the Kuparuk area with our caribou. Right now I call our caribou that are existing around here that don't go nowhere our "industrial dope addict caribou." They already sick and nobody's doing anything about them, although they done 10,000 pieces of study. Nobody studies sick animals nor sick people. So these are some of the things that I'd like to bring to you. Maybe I'll have more additional time later, and I will have a written comment either by mail or other means. Thank you.

Rosemary Ahtuanguaruk, Mayor 2003 ASDP Nuiqsut

There was a report that came out. It was called "The Health Consultation." It was discussed in Barrow and it trickled back to the community. What we got was very different. It was suggested that we not consume more than six burbot in a year as there are contaminants. They did not come to our village for a whole year after this report was released to discuss this. When they did come back, they said go ahead and eat the fish. We have other foods that have higher levels. They did not take into consideration the way we eat the fish, the quantities we eat, and how the liver is a delicacy that is shared with the elders and the children. We could serve six livers with one meal setting. The highest concentration of contaminants PCB and DDT was in the liver. The efforts of our people to share this delicacy was giving it to the people most at risk. We need to have independent interpretation of this consultation with our consumption styles and rates to see what our true exposures are. Not only that, but there are other persistent organic pollutants that are concentrating in our animals. There are studies of the polar bears that are showing these concerns. These pollutions from industry developed elsewhere are coming to our lands with the way the air currents are and the precipitation, they are coming to our lands and we did not have to identify the issues, but we have to deal with it. This adds to what is coming from the fields of Prudhoe Bay, Alpine, and Kuparuk. There are changes to the animals which are our resources for survival, the fish, the caribou, the whale, and others. I started commenting at our meetings about the concerns I had as a health aide. I saw increased rates to asthma, problems with thyroid disorders and I saw the lifestyle changes such as social ills. My worst years as a health aide were the years whaling was impacted. The whales were driven further from the shore with the seismic activity at Camden Bay. The whale behaviors were different. It was harder to harvest as we were further from the land; that led to increased towing times to land the whale to harvest. We had to cut one loose during the tow because the weather turned bad and the crews were at risk. That happens in the Arctic.

Not long after that, we had another bad season when one of our whaling captains was killed. We sent supplies to Prudhoe Bay because if you do not bring it to the island, you go without. When the captain went to pick them up, the weather turned bad. The captain was lost after a conflict with the manager at the camp there did not know about our lifestyle and us. The whalers were unwelcome at the camp and tried to return to the island, but they struck an iceberg and took on water. They called for help and they came with a helicopter to rescue them, but that captain was lost. The helicopter was not designed for the rescue. All the whalers came back to bury their fellow captain. The weather did not allow them to return to finish the season. Both seasons caused us to lose out on subsistence resources. The people were hurting. They had no jobs and they had no food in the ice cellars. They were suffering as seismic activity continued around our land and resources had gone with them. No alternatives; no income to buy from the store. I saw the effects of alcohol or drug abuse, domestic violence, suicide attempts and successes, conflict amongst the people with only a few jobs and every house had bills, but many houses had only one member working and most were seasonal short-term jobs.

When the sun goes down in the north, the subsistence resources go with it. They may take many months to come back. The people suffered waiting for the sun to return and the subsistence resources with it. Some lost hope and they could not wait.

When I started as a health aide in 1985 I had one asthma patient. By the time I went to the University of Washington for my physician assistant certificate in 1989, I had 20 to 25. When I came back in '91, there were 35. When I quit in 2000, there were over 60. The village make-up has not changed; it is still mostly Inupiaq. What was contributing, the most overwhelming issue, was that oil development around the community had increased and gotten closer. The worst nights on call were nights with many natural gas flares occurring. We could see it in the flares or in the fields around us. They release particles and they travel to us. The chance of an inversion will affect us. An inversion is a bowl-like air trap with cold air trapped by warm air. Increased concentrations of particulate matter occurs during these episodes. I fear what has been reinjected into the ground. The oil percolates up through the land. One of our elders said: we knew about the oil; it made a good light source. We could not carry enough of it as we followed our resources. When the substances that were put down come back up, what will be the effects? Are we just beginning to see them? What will happen with the global warming and the sink hole shows up and the erosion continues and the permafrost decreases? Has the permafrost protected us so far?

In areas throughout the state, there were DEW line sites being cleaned up. The early defense warning sites. I notice that the worst levels of contamination are further south. Is that what we have to look forward to? When I asked about what was brought here, they do not compare with what the workers have stated what is there. What is there will come back to us through our resources, through our land and our water. The contaminants concentrate in us through our consumption of our food. They accumulate in our bodies, our livers, our kidneys, our breast milk into our children.

The caribou herds used to migrate through our village and now they migrate away from us. Last summer only three houses hung caribou. There are over 100 houses and most houses went hunting last summer. The offshore developments have caused problems with our fish. They are not coming. It's been eight years now. I know one family that hunted all summer, 80 days, and not one caribou. Where is the help for us when we go without?

There are increases to diabetes and heart disease and hypertension. How will we deal with this in Rural Alaska with limits to health care and doctor visits? What about the young people who are getting bad backs because they have to travel farther and it's rough? They cannot work in jobs around us with bad backs. What can they do?

In the paper they brought about Umiat, they said it started in 1923. They came in 2000 to discuss the clean-up. What about future changes? Now they say there are particles that are coming to our areas from other things. What changes will occur? What will we see? We have lost some of our elders that could help us document the changes and we have few left. We need their stories, as they are different than the stories I tell, what my children will tell. It is also different from the archival information that -- of what has been done around us. I thank my elders, Ruth and Sarah, who have pushed me to prepare for the Umiat meetings and the National Research Council and now NPR-A. They have names for the land in our language and the names to the east of us are not known to me as we do not hunt there anymore. The land they used is not the land I use and it will not be the same for our children.

Jimmy Nukapigak 2003 ASDP Barrow

MR. JIMMY NUKAPIGAK: Jimmy Nukapigak for the record on the region from Nuiqsut. So I have lived there and I'd like to know -- this is about the hunting area or fishing around Nuiqsut, especially on Fish Creek area. There's a lot of fish out there, especially Nuiqsut residents had used that for subsistence for more than thousands of years. Also around the east portion on this land where the Arctic ciscos are coming in through all the creeks over here. I fished with my mother for -- ever since I was a little boy. So there's hardly any Arctic cisco nowadays that used to be like 30 years ago. So ever since all this activity start happening around Alpine, the Nuiqsut have been impacted so much, by 100 percent, because all the birds that are around this area, they're nesting all over because I had experienced that before. (Delivers comment in Inupiaq)

I used to get a lot of Arctic cisco when I lived -- was a little kid with my mother, by hundreds and hundreds, and right now what my mother have been telling me, there's hardly any Arctic cisco nowadays ever since the Alpine has started about a few years ago. So it's really happening. Otherwise you oil companies are going to have to devastate our fishing ground, hunting ground. Our caribou migration will be impacted so high. Because I care for my people, like we all care for -- us Inupiaq had cared for this land for thousands of years. So now why there is the Alpine -- I mean a pipeline going over to the Nigliq Channel. That bridge ain't going to stand forever. It's going to collapse. So everything's collapsed. We all know that. So if you guys are going to build a pipeline, so try to make it into -- probably underground pipeline would be nice instead of -- otherwise when the ice starts breaking up, I seen that place -- area can devastate -- when the ice start breaking up, it's going to devastate that bridge. Like Nate said back in Kuparuk that bridge had failed so many times. So you better discuss about this really hard. Otherwise on a caribou migration -- if you're going to build a pipeline, I'd like to see underground. There's all kinds of new technologies out there that need to be -- you know, so if you guys are going to build a pipeline, all that caribou migration won't be hurt.

So right now there's all kinds of new technology around the world that you can use. So it's a pretty long stretch from the CD-7 that that pipeline is going to be built. So that's all the caribou migration that's been migrated from east to west, they all go north to go to the sea. Especially when it's really hard, the caribou can migrate to the sea and go off.

So, anyway, so I urge Nuiqsut people to get together and -- because Nuiqsut have been impacted by -- just by field, now you've got quite a bit of fields that's going to be happening, so it's going to be really impacted. So I urge to work together as a community, you know, work with one another like what Fred was saying, so we all must come together to resolve some problems because it will be -- that Fish Creek area is most popular fishing for Nuiqsut for the fall time. Summer time around Nigliq Channel. So it's most popular fishing. So if that's happened, if the oil -- if that bridge pipeline broke up, there will be more devastation on our fish out there, especially the seal on the mouth of the rivers. There's all kinds of seals out there, there's all kinds of birds. So if there's an oil pipeline break up on that bridge, boy, you're going to have -- devastate our wildlife out there. So let's all be careful. If you're going to be drilling or making

pipelines, so let's all do a good job. You're going to develop this area, so let's all work together just like on what Nate was saying or Fred. Let's all come together instead of only few people over here that speak up for it, for that land. So that's my concern. Thank you.

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- 2001 Official Transcript, Proceedings of Public Hearing, Draft environmental Impact Statement for Liberty Development and Production Plan (OCS EIS/EA MMS 2001-001), Barrow, Alaska, March 21, 2001: Anchorage, AK, Executary Court Reporting.
- 2001 Official Transcript, Proceedings of Public Hearing, Draft environmental Impact Statement for Liberty Development and Production Plan (OCS EIS/EA MMS 2001-001), Kaktovik, Alaska, March 20, 2001.

**TRADITIONAL KNOWLEDGE/PUBLIC TESTIMONY APPENDIX – ALPINE
SATELLITE DEVELOPMENT PLAN (ASDP)**

Acronyms and Abbreviations

Birds	Birds
CRM	Cultural Resource Management
EC	Environmental Consequences
EJ	Environmental Justice
Fish	Fish
FWR	Freshwater Resources
HAZMAT	Hazardous Materials
Ice	Ice
MM	Marine Mammals
Noise	Noise
OthEnv	Other Environmental
POCWQ	Physical Oceanography and Coastal Water Quality
SE	Socioeconomics
SUB	Subsistence
TM	Terrestrial Mammals
Vis/Aes	Visual and Aesthetic
WCEC	Weather/Climate/Environmental Changes

List of Testifiers for Testimony Used in Traditional Knowledge Sections

	<u>Year</u>	<u>Subject</u>	<u>Hearing</u>	<u>Community</u>
Ahgook, Delia	1998	SUB	NPR-A	Anaktuvuk Pass
Ahkivgak (Okkingak), Jenny	1982	Birds	NPR-A	Barrow
	1982	EC	NPR-A	Barrow
	1982	Fish	NPR-A	Barrow
	1982	HAZMAT	NPR-A	Barrow
	1982	SUB	NPR-A	Barrow
	1982	TM (furbearers)	NPR-A	Barrow
Ahkiviana, Archie	1997	HAZMAT	NPR-A	Nuiqsut
	1998	SUB	NPR-A	Nuiqsut
(read by Maggie Ahmaogak)	2001	Fish	Liberty	Barrow
	2001	POCWQ	Liberty	Barrow
	2001	WCEC	Liberty	Nuiqsut
Ahngasook, Ross	1982	Birds	Sale 71	Barrow
Ahsogeak, Horace	1982	HAZMAT	Sale 71	Barrow
Ahtuananaq, Wilbur				
(read by Thomas Napageak)	1979	Fish	Sale BF	Nuiqsut
Ahtuanaruk, Johnny	2001	Noise	Liberty	Nuiqsut
Ahtuanaruk, Rosemary	2001	Fish	Liberty	Nuiqsut
Ahtuanguaruak, Rosemary	1997	HAZMAT	Sale 170	Nuiqsut
	2001	TM (caribou)	Liberty	Nuiqsut
Ahtuanguaruak, Rosemary, Mayor	2003	EC	ASDP	Nuiqsut
	2003	HAZMAT	ASDP	Nuiqsut
	2003	OthEnv	ASDP	Nuiqsut
	2003	SE/EJ	ASDP	Nuiqsut
	2003	SUB	ASDP	Nuiqsut
	2003	TM (caribou)	ASDP	Nuiqsut
Ahvakana, Lucy	1983	HAZMAT	Sale 87	Barrow
Ahvakana, Nelson	1998	Fish	NPR-A	Nuiqsut
	1998	SUB	NPR-A	Nuiqsut
	1998	TM (moose)	NPR-A	Nuiqsut
	<u>Year</u>	<u>Subject</u>	<u>Hearing</u>	<u>Community</u>

Ahvakana, Nelson, Thomas Napageak and Arnold Brower, Jr.	1998	SUB	NPR-A	Nuiqsut
Ahvakana, Winifred	1998	SUB	NPR-A	Wainwright
Aiken, Johnny	1982	Fish	Sale 71	Barrow
	1997	Fish	NPR-A	Barrow
Akootchook, Isaac	2001	WCEC	Liberty	Kaktovik
Akpik, Joseph	1995	HAZMAT	Sale 144	Nuiqsut
	1997	HAZMAT	Sale 170	Nuiqsut
Akpik, Walter	1982	TM (furbearers)	NPR-A	Barrow
Akpik, Sr., Walter	1982	EC	NPR-A	Barrow
	1982	Fish	NPR-A	Barrow
	1982	SE/EJ	NPR-A	Barrow
	1982	TM (caribou)	NPR-A	Barrow
Albert, Tom	1982	EC	NPR-A	Barrow
	1982	HAZMAT	NPR-A	Barrow
	1982	SUB	NPR-A	Barrow
Angashuk, Marjorie	1998	EC	NPR-A	Wainwright
Atuananuag, Wilber (read by Thomas Napageak)	1979	HAZMAT	Sale BF	Nuiqsut
Atuanaruk, Rosemary	2001	HAZMAT	Liberty	Nuiqsut
Bogenrife, Sheldon	1982	SE/EJ	NPR-A	Barrow
Brewster, Karen	1997	CRM	NPR-A	Barrow
Brower, Charlie	1997	EC	NPR-A	Barrow
	1997	SUB	NPR-A	Barrow
Brower, Gordon	2001	HAZMAT	Liberty	Barrow
	2002	Fish	Pt. Thomson	Barrow
	2002	TM (caribou)	Pt. Thomson	Barrow
Brower, Johnny	1997	TM (caribou)	NPR-A	Barrow
	1998	SUB	NPR-A	Barrow
	2003	SE/EJ	ASDP	Barrow
Brower, Johnny Konuk	2003	SUB	ASDP	Barrow
Brower, Ronald H.	1982	EC	NPR-A	Barrow
	1982	SE/EJ	NPR-A	Barrow
	1982	SUB	NPR-A	Barrow
Brower, Jr., Arnold	1982	Fish	NPR-A	Barrow
	1982	SE/EJ	NPR-A	Barrow
	1997	SE/EJ	NPR-A	Atqasuk
	1997	SUB	NPR-A	Atqasuk
	1997	TM (furbearers)	NPR-A	Barrow
	1998	CRM	NPR-A	Atqasuk
	1998	EC	NPR-A	Atqasuk
	1998	SE/EJ	NPR-A	Atqasuk
	1998	SUB	NPR-A	Anaktuvuk Pass
Brower, Jr., Harry	1997	TM (furbearers)	NPR-A	Barrow
Brower, Jr., Thomas and James Aiken, Sr.	1997	Fish	NPR-A	Atqasuk
	1997	HAZMAT	NPR-A	Atqasuk
	<u>Year</u>	<u>Subject</u>	<u>Hearing</u>	<u>Community</u>
Brower, Sr., Arnold	1976	Birds	Federal Energy	Barrow

	1976	CRM	Federal Energy	Barrow
	1976	EC	Federal Energy	Barrow
	1976	Fish	Federal Energy	Barrow
	1976	FWR	Federal Energy	Barrow
	1976	HAZMAT	Federal Energy	Barrow
	1976	SE/EJ	Federal Energy	Barrow
	1979	HAZMAT	Sale BF	Barrow
	2001	HAZMAT	Liberty	Barrow
Brower, Sr., Ronald				
	2001	HAZMAT	Liberty	Barrow
Burnell, Karen				
	1998	EC	NPR-A	Anaktuvuk Pass
	1998	HAZMAT	NPR-A	Atqasuk
	1998	SE/EJ	NPR-A	Anaktuvuk Pass
Edwardson, Charlie				
	1976	EC	Federal Energy	Barrow
	1976	Fish	Federal Energy	Barrow
	1976	HAZMAT	Federal Energy	Barrow
	1976	SUB	Federal Energy	Barrow
	1982	HAZMAT	Sale 71	Barrow
	1979	HAZMAT	Sale BF	Barrow
Edwardson, George				
	1990	HAZMAT	Sale 124	Barrow
Englishoe, Bartz				
	1998	SE/EJ	NPR-A	Atqasuk
Ericklook, Bessie				
	1979	FWR	Sale BF	Nuiqsut
	1979	TM (furbearers)	Sale BF	Nuiqsut
Hopson, Ben				
	1998	SUB	NPR-A	Anaktuvuk Pass
Hopson, Edward				
	1995	TM (caribou)	Sale 144	Barrow
Ipalook, Flora				
	1979	FWR	Sale BF	Nuiqsut
Itta, Noah				
	1982	EC	NPR-A	Barrow
	1982	Fish	NPR-A	Barrow
	1982	HAZMAT	NPR-A	Barrow
	1982	SE/EJ	NPR-A	Barrow
	1997	CRM	NPR-A	Barrow
	1997	EC	NPR-A	Barrow
	2001	Birds	Liberty	Nuiqsut
	2001	Fish	Liberty	Nuiqsut
Itta, Noah and Tom Lohman				
		2001	HAZMAT	Liberty Nuiqsut
Itta, Sr., Thomas				
	1998	CRM	NPR-A	Atqasuk
	1998	Fish	NPR-A	Atqasuk
	1998	SUB	NPR-A	Atqasuk
Kagak, Luke				
	1997	EC	NPR-A	Atqasuk
	1997	SE/EJ	NPR-A	Atqasuk
	1997	SUB	NPR-A	Atqasuk
	1998	EC	NPR-A	Atqasuk
	1998	SE/EJ	NPR-A	Atqasuk
	1998	SUB	NPR-A	Atqasuk
	1998	TM (caribou)	NPR-A	Atqasuk
Kaigelak, Bernice				
	1998	EC	NPR-A	Nuiqsut
	1998	SUB	NPR-A	Nuiqsut
	2003	SE/EJ	ASDP	Nuiqsut
	2003	SUB	ASDP	Nuiqsut
	<u>Year</u>	<u>Subject</u>	<u>Hearing</u>	<u>Community</u>
Kaigelak, Isaac				
	2003	SUB	ASDP	Nuiqsut
Kaigelak, Rosa				
	1979	HAZMAT	Sale BF	Nuiqsut

Kanayurak, Fred	2003	SE/EJ	ASDP	Barrow
	2003	SUB	ASDP	Barrow
Kasak, Joe	1990	HAZMAT	Sale 124	Nuiqsut
Kasiluk, Jimmy	2002	TM (caribou)	Pt. Thomson	Nuiqsut
Kignak, Herman (Mayor)	1997	CRM	NPR-A	Atqasuk
	1997	SUB	NPR-A	Atqasuk
Kingik, Laurie	1982	Birds	NPR-A	Barrow
	1982	EC	NPR-A	Barrow
	1982	HAZMAT	NPR-A	Barrow
	1982	MM	NPR-A	Barrow
Kingik, Laurie	1982	TM (caribou)	NPR-A	Barrow
	1982	TM (moose)	NPR-A	Barrow
Kingit, Lauri	1983	HAZMAT	Sale 87	Barrow
Kunaknana, Sarah	1998	SUB	NPR-A	Nuiqsut
Lampe, Leonard	1996	Noise	Northstar	Nuiqsut
	1996	Vis/Aes	Northstar	Nuiqsut
	1998	CRM	NPR-A	Nuiqsut
	1998	EC	NPR-A	Nuiqsut
	1998	SE/EJ	NPR-A	Nuiqsut
	1998	SUB	NPR-A	Nuiqsut
	2001	HAZMAT	Liberty	Nuiqsut
	2003	EC	ASDP	Nuiqsut
	2003	FWR	ASDP	Nuiqsut
	2003	OthEnv	ASDP	Nuiqsut
	2003	SE/EJ	ASDP	Nuiqsut
	2003	SUB	ASDP	Nuiqsut
Leavitt, Daniel	1979	FWR	Sale BF	Barrow
	1982	TM (caribou)	Sale 71	Barrow
	1983	HAZMAT	Sale 87	Barrow
	1990	HAZMAT	Sale 124	Barrow
Lincoln, Gilbert	1998	SUB	NPR-A	Anaktuvuk Pass
Long, Frank	2003	SUB	ASDP	Nuiqsut
Long, Jr., Frank	2003	EC	ASDP	Nuiqsut
	2003	Fish	ASDP	Nuiqsut
	2003	SE/EJ	ASDP	Nuiqsut
	2003	TM (caribou)	ASDP	Nuiqsut
Matumeak, Warren	1982	EC	NPR-A	Barrow
Matumeak, Warren	1982	HAZMAT	Sale 71	Barrow
	1982	SUB	NPR-A	Barrow
	1983	HAZMAT	Endicott	Barrow
	1990	HAZMAT	Sale 124	Barrow
Maupin, Dorcas	1982	Fish	Sale 71	Barrow
	1983	HAZMAT	Endicott	Barrow
Morkill, Anne; Ben Nageak (Mayor); Luke Kagak; Arnold Brower, Jr.; Dee Ritchie; and Jana Harcharek	1997	SE/EJ	NPR-A	Atqasuk
	<u>Year</u>	<u>Subject</u>	<u>Hearing</u>	<u>Community</u>
Morry, Amos	1982	EC	NPR-A	Barrow
	1982	Fish	NPR-A	Barrow
	1982	HAZMAT	NPR-A	Barrow
	1982	MM	NPR-A	Barrow
	1982	SUB	NPR-A	Barrow

Morry, Mike	1982	TM (moose)	NPR-A	Barrow
Nageak, Ben (Mayor) and Luke Kagak	1998	SUB	NPR-A	Anaktuvuk Pass
Nageak, Ben (Mayor)	1997	SUB	NPR-A	Atkasuk
Nageak, James	1998	SE/EJ	NPR-A	Atkasuk
(for Noah Itta)	1982	EC	NPR-A	Barrow
	1982	HAZMAT	NPR-A	Barrow
	1982	OthEnv	NPR-A	Barrow
	1982	TM (caribou)	NPR-A	Barrow
	1982	TM (furbearers)	NPR-A	Barrow
Nalikak, Ron	1982	EC	NPR-A	Barrow
	1982	HAZMAT	NPR-A	Barrow
	1982	SUB	NPR-A	Barrow
Napageak, Thomas	1979	HAZMAT	Sale BF	Nuiqsut
Napageak, Thomas, Leonard Lampe and Arnold Brower	1997	TM (caribou)	NPR-A	Nuiqsut
Napageak, Thomas, Arnold Brower, Jr. and Nelson Ahvakana	1998	MM	NPR-A	Nuiqsut
Neakok, Raymond	1982	EC	NPR-A	Barrow
	1982	Fish	NPR-A	Barrow
	1982	FWR	NPR-A	Barrow
	1982	HAZMAT	NPR-A	Barrow
	1982	MM	NPR-A	Barrow
	1982	OthEnv	NPR-A	Barrow
	1982	SE/EJ	NPR-A	Barrow
	1982	SUB	NPR-A	Barrow
	1982	TM (caribou)	NPR-A	Barrow
	1982	TM (furbearers)	NPR-A	Barrow
Neakok, Raymond and Tom Dean	1982	SUB	NPR-A	Barrow
Noble, Heather	1983	HAZMAT	Sale 87	Barrow
Nuiqsut Whaling Captains' Meeting	1996	Fish	Northstar	Nuiqsut
	1996	Ice	Northstar	Nuiqsut
	1996	Noise	Northstar	Nuiqsut
	1996	TM (caribou)	Northstar	Nuiqsut
	1996	MM	Northstar	Nuiqsut
	1996	TM (furbearers)	Northstar	Nuiqsut
	1996	Birds	Northstar	Nuiqsut
	1996	TM (muskox)	Northstar	Nuiqsut
Nukapigak, Isaac	1996	Noise	Northstar	Nuiqsut
	1997	Birds	NPR-A	Nuiqsut
	1997	HAZMAT	NPR-A	Nuiqsut
	1997	TM (caribou)	NPR-A	Nuiqsut
	2003	Vis/Aes	ASDP	Nuiqsut
Nukapigak, Jimmy	2003	EC	ASDP	Barrow
	2003	Fish	ASDP	Barrow
Nukapigak, Jimmy	2003	SUB	ASDP	Barrow
Nukapigak, Joe	<u>Year</u>	<u>Subject</u>	<u>Hearing</u>	<u>Community</u>
Nukapigak, Joe (Kuukpik President)	1995	HAZMAT	Sale 144	Nuiqsut
Nukapigak, Ruth	1998	SUB	NPR-A	Nuiqsut
	1979	HAZMAT	Sale BF	Nuiqsut
	1997	CRM	NPR-A	Nuiqsut
	1997	EC	NPR-A	Nuiqsut

Nukappigak, Joe	1997	SUB	NPR-A	Nuiqsut
	1998	Birds	NPR-A	Nuiqsut
	1998	Noise	NPR-A	Nuiqsut
	1998	SUB	NPR-A	Nuiqsut
Nungasuk, Benjamin	2003	SUB	ASDP	Nuiqsut
Nusunginya, Thomas	1982	SUB	NPR-A	Barrow
	1982	EC	NPR-A	Barrow
	1982	MM	NPR-A	Barrow
Okakok, Charlie	1982	HAZMAT	Sale 71	Barrow
	1982	POCWQ	Sale 71	Barrow
Okomailak, Daniel	1995	TM (caribou)	Sale 144	Barrow
Oleman (Olemaun), Nate	1998	CRM	NPR-A	Barrow
Olemaun, George	1990	HAZMAT	Sale 124	Barrow
Olemaun, Nate	2003	Fish	ASDP	Barrow
	2003	Fish	ASDP	Barrow
	2003	SE/EJ	ASDP	Barrow
Olemaun, Nate	1996	HAZMAT	1997-2002 DEIS	Barrow
Oomittuk (Oomituk), Othniel	2003	EC	ASDP	Barrow
	2003	FWR	ASDP	Barrow
	2003	OthEnv	ASDP	Barrow
	2003	SE/EJ	ASDP	Barrow
	2003	SUB	ASDP	Barrow
Peetook, Rossman	1982	EC	NPR-A	Barrow
	1982	HAZMAT	NPR-A	Barrow
	1982	OthEnv	NPR-A	Barrow
Peetook, Rossman (Mayor)	1982	EC	NPR-A	Barrow
	1982	Fish	NPR-A	Barrow
	1982	SUB	NPR-A	Barrow
	1982	TM (caribou)	NPR-A	Barrow
Phillips, Noah K.	1998	EC	NPR-A	Wainwright
	1998	HAZMAT	NPR-A	Wainwright
	1998	SUB	NPR-A	Wainwright
Rexford, Herman	1998	CRM	NPR-A	Wainwright
Rexford, Marie	1979	Noise	Sale BF	Kaktovik
Rulland, Johnny	1997	Vis/Aes	Sale 170	Kaktovik
Rulland, Lazarus	1998	SUB	NPR-A	Anaktuvuk Pass
Smith, Frank	1998	SUB	NPR-A	Anaktuvuk Pass
Solomon, Morgan	1996	HAZMAT	1997-2002 DEIS	Barrow
	<u>Year</u>	<u>Subject</u>	<u>Hearing</u>	<u>Community</u>
	1998	SE/EJ	NPR-A	Barrow
Solomon, Norman	1998	SUB	NPR-A	Barrow
Stackhouse, Martha	1983	HAZMAT	Sale 87	Barrow
Summond, David, Ben Nageak (Mayor) and Anne Morkill	1979	HAZMAT	Sale BF	Barrow
Taalak, Sam	1997	SUB	NPR-A	Atqasuk

	1982	Fish	NPR-A	Barrow
	1982	SE/EJ	NPR-A	Barrow
	1982	SUB	NPR-A	Barrow
Tagarook, Terry				
	1998	SUB	NPR-A	Wainwright
Talak, Sam (Mayor)				
	1982	TM (caribou)	NPR-A	Barrow
	1982	TM (furbearers)	NPR-A	Barrow
	1982	EC	NPR-A	Barrow
Tegoseak, Bill				
	1998	HAZMAT	NPR-A	Barrow
Toovak, Kenneth				
	1982	Birds	Sale 71	Barrow
Tukle, Joash				
	1982	EC	NPR-A	Barrow
	1982	Fish	NPR-A	Barrow
	1982	FWR	NPR-A	Barrow
	1982	OthEnv	NPR-A	Barrow
	1982	SE/EJ	NPR-A	Barrow
Tukle, Sr., Frederick				
	2001	HAZMAT	Liberty	Barrow
	2001	TM (caribou)	Liberty	Barrow
Vorderstrasse, Jim (Mayor)				
	1998	Vis/Aes	NPR-A	Barrow
Woods, Alice				
	1996	Fish	Northstar	Nuiqsut
Woods, Nanny				
	1979	Fish	Sale BF	Nuiqsut

**Alpine Satellite Development Plan
Draft Environmental Impact Statement**

Appendix B

ANILCA SECTION 810 ANALYSIS OF SUBSISTENCE IMPACTS

ANILCA Section 810 Analysis of Subsistence Impacts

ConocoPhillips Alaska Incorporated (CPAI) is seeking authorization to develop and produce oil from several of its leases currently held in the Northeast Area of the National Petroleum Reserve-Alaska. To this end, the Bureau of Land Management has prepared a Draft Environmental Impact Statement (DEIS) to assess the environmental consequences of the various actions proposed by CPAI. Sections 3 and 4 of the Alpine Satellite Development Plan (ASDP) DEIS provide a detailed description of both the affected environment of the Plan Area and the potential adverse effects of the various alternatives to subsistence use and subsistence resources. This appendix uses the detailed information presented in the ASDP DEIS to evaluate the potential impacts to subsistence pursuant to Section 810(a) of the Alaska National Interest Land Conservation Act (ANILCA).

I. SUBSISTENCE EVALUATION FACTORS

Section 810(a) of ANILCA requires that an evaluation of subsistence uses and needs be completed for any federal determination to “withdraw, reserve, lease, or otherwise permit the use, occupancy or disposition of public lands.” As such, an evaluation of potential impacts to subsistence under ANILCA § 810 must be completed for the ASDP DEIS. ANILCA requires that this evaluation include findings on three specific issues:

1. The effect of such use, occupancy, or disposition on subsistence uses and needs;
2. The availability of other lands for the purpose sought to be achieved; and
3. Other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes (16 U.S.C. § 3120).

The evaluation and findings required by ANILCA § 810 are set out for each of the five alternatives (including the No Action Alternative) considered in the ASDP DEIS.

A finding that the proposed action may significantly restrict subsistence uses imposes additional requirements, including provisions for notices to the State and appropriate regional and local subsistence committees, a hearing in the vicinity of the area involved, and the making of certain determinations as required by Section 810(a)(3). It should be determined that:

- A. Such a significant restriction of subsistence uses is necessary, and consistent with sound management principles for the utilization of the public lands;
- B. The proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition; and
- C. Reasonable steps will be taken to minimize adverse effects upon subsistence uses and resources resulting from such actions.

To determine if a significant restriction of subsistence uses and needs may result from any one of the alternatives discussed in the ASDP DEIS, including their cumulative effects, the following three factors in particular are considered: 1) the reduction in the availability of subsistence resources caused by a decline in the population or amount of harvestable resources; 2) reductions in the availability of resources used for subsistence purposes caused by alteration of their normal locations and distribution patterns; and 3) limitations on access to subsistence resources, including from increased competition for the resources.

A significant restriction to subsistence may occur in at least two instances: 1) when an action substantially may reduce populations or their availability to subsistence users, and 2) when an action may substantially limit access by subsistence users to resources. The Environmental Consequences section of the ASDP DEIS provides much of the data concerning levels of resource reduction and harvest limitations, and was used to determine whether the level of effects of each alternative is extensive enough to cause a possible significant restriction to subsistence. Section 3, Affected Environment, provides information regarding areas and resources important for subsistence use, and the degree of dependence of affected villages on

different subsistence populations. The information contained in the ASDP DEIS is the primary data used in this analysis.

A subsistence evaluation and findings under ANILCA § 810 must also include a cumulative impacts analysis. Section II, below, begins with an evaluation and finding for each of the five Alternatives, as well as the full-field development scenarios that accompany each alternative except for the No-Action Alternative. Finally, the most intensive cumulative case, as is discussed in Section 4F of the ASDP DEIS, is evaluated. This approach helps the reader to separate the subsistence restrictions that may be caused by activities proposed by the ASDP DEIS alternatives from those that may be caused by past, present, and future activities that may occur, or have already occurred, in the surrounding area.

In addition to ANILCA, Environmental Justice as defined in Executive Order 12898 also calls for the analysis of federal actions on minority populations with regard to subsistence. Specifically, Environmental Justice is:

"The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."

Section 4-4 of Executive Order 12898 regarding the Subsistence Consumption of Fish and Wildlife requires Federal agencies to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence, and to communicate to the public any risks associated with the consumption patterns. To this end, the subsistence analyses of all alternatives located in Section 4 of the ASDP DEIS have been reviewed, and are found to comply with Environmental Justice.

II. ANILCA 810(A) EVALUATIONS AND FINDINGS FOR ALL ALTERNATIVES AND THE CUMULATIVE CASE

The following evaluations are based on information relating to the environmental and subsistence consequences of the No Action Alternative, as well as proposed actions including full-field development scenarios, Alternatives A through D, and the cumulative case as presented in Section 4 of the ASDP DEIS. The stipulations discussed in Section 2 of the ASDP DEIS are also considered for the alternatives to which they apply. The evaluations and findings focus on potential impacts to the subsistence resources themselves, as well as access, economic, and cultural issues that relate to subsistence use.

A. Evaluation and Finding for the No Action Alternative

The No Action Alternative of the ASDP DEIS precludes the currently proposed development in the ASDP Area. No oil in the ASDP Area would be produced, except that which is currently extracted through the existing Alpine Facility. No new roads, airstrips, pipelines or other oil and gas facilities would be constructed, beyond what has been authorized in connection with CPAIs current development at CD-1 and CD-2.

However, activities that are currently allowed as a result of the 1998 Northeast National Petroleum Reserve-Alaska Integrated Activity Plan/Environmental Impact Statement Record of Decision (ROD) would continue. These activities include seismic exploration, exploratory drilling of test wells, and the resultant construction of ice roads and pads to support these operations.

1. Evaluation of the Effect of Such Use, Occupancy, or Disposition on Subsistence Uses and Needs

Effects to subsistence resources of activities that would result under the No-Action Alternative consist primarily of those actions associated with scientific research during the summer, and oil and gas exploration during the winter. Numerous studies are conducted on a year-round basis on the North Slope, and aerial survey by fixed-wing or helicopter, or ground surveys on foot or by off-highway vehicle (OHV), all have the potential to disturb animals. The most frequent complaints voiced by local subsistence users is the large amount of aerial disturbance to animals that occurs each field season in conjunction with scientific studies (Subsistence Advisory Panel [SAP] Minutes, June 6, 2002 meeting; SAP Minutes, August 22, 2002 meeting). However, the mandatory stipulations contained in the Northeast NPR-A Record of Decision serve to minimize the potential effects of research by various entities. As a result, the effects of non-oil and gas activities on species utilized by subsistence users is expected to be local and short-term, and to have no regional population effects.

Subsistence activities that occur during the winter season, and therefore could be affected by seismic exploration or exploratory drilling include: furbearer trapping, fishing, and opportune hunting. Recent testimony by community members from Barrow and Nuiqsut has indicated that seismic exploration does interfere with overland travel by snowmobile (SAP Minutes, June 6, 2002 meeting; Harry Brower, personal communication). Specifically, the deep ruts left in the snow by seismic vehicles create difficult terrain to traverse, and result in excessive wear-and-tear on both snowmobiles and the sleds that are pulled behind them. Replacement or repair of these tools that are used for subsistence harvesting is costly. However, despite the hindrance and annoyance, seismic exploration does not create a substantial barrier between communities and subsistence resources.

2. Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The Naval Petroleum Reserves Production Act of 1976 (NPRPA), as amended, gives the Secretary of the Interior the authority to conduct oil and gas leasing in the NPR-A. However, the law prohibited petroleum production from occurring in NPR-A until authorized by Congress. In 1980, Congress granted that authorization through appropriations legislation and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The BLM is undertaking this EIS to fulfill the mandates of the President's energy policy as well as BLMs responsibilities to manage these lands under authority of NPRPA and the 1980 appropriation legislation and other authorities cited elsewhere in this EIS. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best available technology." The ASDP Area under consideration was chosen because of the known presence of recoverable oil reserves, as well as its proximity to existing oil infrastructure. The No Action Alternative does not authorize any oil and gas development activities in the NPR-A. However, other lands managed by the BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. State and Native Corporation lands cannot be considered in a BLM plan.

3. Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

No new oil and gas production or processing facilities would be developed in the ASDP Area under the No Action Alternative.

4. Finding

The effects of the No Action Alternative fall below the level of possibly significantly restricting subsistence uses and needs. The impacts to subsistence resources and access discussed above are minimal. This finding applies to the entire Planning Area.

B. Evaluation and Findings for Alternative A—CPAI Development Plan

Alternative A of the DEIS consists of the applicant's proposed action. Specifically, the alternative would allow for the construction of five new production pads, CD-3 through CD-7, as well as infrastructure such as above ground pipelines, gravel roads, and a gravel airstrip within the ASDP Area. All pipelines would be constructed on vertical support members (VSMs) and would be at least five feet in elevation above the tundra. Power lines would be supported on cable trays attached to the VSMs, except for between CD-6 and CD-7, where they would be supported from power poles. A bridge would be built across Nigliq Channel to accommodate road traffic and pipelines, and all local residents would be allowed to use the gravel roads. The proposed CD-6 pad would be located within the Fish Creek setback area, a three-mile zone along both banks of the creek in which no permanent oil and gas surface facilities are allowed under the current Northeast NPR-A ROD. Having a road across Nigliq Channel that attaches to the Alpine Central Processing Facility (CPF) violates Stipulation 48 of the Northeast NPR-A ROD, which does not allow any permanent road to be connected to a road system outside of the Northeast Planning Area.

1. Evaluation of the Effect of Such Use, Occupancy, or Disposition on Subsistence Uses and Needs

The analysis of Alternative A presented in Section 4A.4.4.1 considers the effects of construction and operation on subsistence. During the construction period, the analysis concludes that the effect of Alternative A would have negative consequences to access to subsistence resources for the community of Nuiqsut, and possibly Atkasuk and/or Barrow. This issue would result from the temporary displacement of caribou, wolf and wolverine during the construction period, as well as the presence of construction activities near key hunting and fishing areas along Fish Creek and the Nigliq Channel. Because of the displacement of key resources, hunters from Nuiqsut will need to travel farther, and expend a greater amount of time, effort, and financial resources to partake in their traditional hunting and gathering activities. Additionally, subsistence hunters will avoid construction areas, regardless of the presence of workers, for both safety and regulatory concerns. Effects to access from construction are expected to last for a minimum of two years, and to be localized to the ASDP Area including the two proposed gravel mine sites (see Figure 2.3.3.1-1).

At issue for subsistence during the operation period are three primary development infrastructures: gravel roads, pipelines, and bridges. Traffic on gravel roads has been shown to disrupt or delay caribou movement, and pipeline(s) could impede the movement of caribou, especially during the winter months when snow is on the ground. Experience has shown that while access for hunting and fishing is not restricted in development areas by law or policy, subsistence hunters are encouraged to stay away. Similarly, many hunters are wary to shoot or discharge firearms near pipelines or other development infrastructure for safety or environmental impact reasons (i.e., no one wants to create an oil spill by piercing a pipeline). Therefore, even though animals may become acclimated to the infrastructure during the operation period, hunter will still need to travel greater distances and expend greater time, effort, and money to harvest traditional resources. Although local residents would be allowed to use the gravel roads connecting CD2 to CD-7, at present there are no plans to connect this gravel road to the village of Nuiqsut, thus, providing no direct benefit to the community. Bridges across Nigliq Channel or other smaller streams may impede boat travel along these waterways, both due to an increased risk for siltation, as well as the presence of the bridge itself. During the summer, waterways comprise the main transportation corridors to and from important subsistence harvest areas. Additionally, marine mammals, fish, waterfowl, and caribou are regularly harvested from boats.

Analyses presented for individual subsistence species (i.e., fish, land mammals, waterfowl, etc.) finds negligible impacts as a result of both construction and operation under Alternative A, with most impacts being temporary and insignificant at the population level (see Section 4A.3.3, 4A.3.4, and 4A.3.5). These findings are primarily due to the fact that the majority of the construction will occur during the winter, which serves to limit the effects of potential impacts to many resources, as well as various construction designs (i.e., height of pipelines, constructing roads away from pipelines, etc.) and the eventual habituation of wildlife to the infrastructure.

2. Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The Naval Petroleum Reserves Production Act of 1976 (NPRPA), as amended, gives the Secretary of the Interior the authority to conduct oil and gas leasing in the NPR-A. However, the law prohibited petroleum production from occurring in NPR-A until authorized by Congress. In 1980, Congress granted that authorization through appropriations legislation and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The BLM is undertaking the ASDP DEIS to fulfill the mandates of the President's energy policy as well as BLMs responsibilities to manage these lands under authority of NPRPA and the 1980 appropriation legislation and other authorities cited elsewhere in this DEIS. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best available technology." The ASDP Area under consideration was chosen because of the known presence of recoverable oil reserves, as well as its proximity to existing oil infrastructure. Other lands managed by the BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. Lands outside of the NPR-A would not satisfy the congressional direction to explore and develop oil and gas resources within the NPR-A. State and Native Corporation lands cannot be considered in a BLM plan.

3. Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

Other alternatives that would reduce or eliminate the use of public lands needed for subsistence purposes are described in the main body of the ASDP DEIS, many of which became alternatives considered but eliminated from further analysis because of either economic or technological disadvantages. Section 2.6 contains a detailed discussion of these alternatives, including rationale regarding each alternative's infeasibility for the proposed project at hand.

4. Findings

The effects of Alternative A fall above the level of significantly restricting subsistence use for the community of Nuiqsut. The potential impacts to subsistence resources (displacement) and access discussed above exceed the non-significant level; therefore, a positive determination pursuant to ANILCA § 810 is required. As stated in the analysis presented in Section 4A.4.4.1 "industrial development in the Fish and Judy creeks and Colville Delta areas would reduce the availability of resources and access to the area currently supporting more than half of the harvested fish, caribou, wolves, wolverine, geese and eiders at Nuiqsut. Subsistence harvests would not be reduced to the same extent, but subsistence access would be affected as subsistence users avoid industrial areas because of perceived regulatory barriers and safety concerns with shooting around industrial development." Additionally, the effects of resource displacement and the subsequent changes to resource harvest patterns by the residents of Nuiqsut have the potential to affect multiple hunter generations.

Depending on the resulting migration patterns for the Teshekpuk Lake Herd, and the areas of relocation for other subsistence species, the communities of Barrow, Atkasuk and Anaktuvuk Pass may also be affected. However, enough data does not currently exist to warrant a positive finding under ANILCA § 810 for these three communities.

C. Evaluation and Findings for Alternative B—CPAI Development Plan

Alternative B of the DEIS would also allow for the construction of five new production pads, CD-3 through CD-7, but would require conformance with the existing Northeast NPR-A ROD. As a result, the location of CD-6 would be moved out of the 3-mile setback along Fish Creek, and gravel roads would only connect CD-1 to CD-4, and CD-6 to CD-7; CD-5 would remain roadless. Access to gravel roads would be restricted to local residents, and the bridge crossing Nigliq Channel would be for pipelines only. Gravel airstrips would be required at CD-3, CD-5 and CD-6. All pipelines would be constructed on VSMs and would be at least five feet in elevation above the tundra. Power lines would be buried in the roadways, or buried in the

tundra next to pipelines where roads do not exist. At stream crossings, power lines would be hung off bridge pipelines, or would be trenched across minor drainages.

1. Evaluation of the Effect of Such Use, Occupancy, or Disposition on Subsistence Uses and Needs

The evaluation for Alternative B is expected to be the same as that presented for Alternative A with regard both the construction and operational period. Construction of pipelines, gravel roads, and gravel airstrips would occur during the winter, and would occur in key hunting and fishing areas near Fish Creek and the Nigliq Channel. Access to subsistence harvest areas would be greatly reduced by the presence of infrastructure, as well as by the displacement of key subsistence resources. Any benefit gained by eliminating the road between CD-2 and CD-6 would be greatly offset by the resulting increase in using aircraft to access CD-5 and CD-6, which would have a greater impact on land mammals (especially caribou), and waterfowl (see Sections 4B.3.3.1, 4B3.4.1, 4B3.5.1, and 4B.4.4.1). However, constructing CD-6 outside of the 3 mile setback along Fish Creek, as well as eliminating the gravel road between CD-5 and CD-6, and constructing only a pipeline bridge across the Nigliq Channel would serve to instill confidence in the residents of Nuiqsut that CPAI is aware of their concerns, and takes seriously recommendations made to them through the years.

2. Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The Naval Petroleum Reserves Production Act of 1976 (NPRPA), as amended, gives the Secretary of the Interior the authority to conduct oil and gas leasing in the NPR-A. However, the law prohibited petroleum production from occurring in NPR-A until authorized by Congress. In 1980, Congress granted that authorization through appropriations legislation and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The BLM is undertaking this IAP/EIS to fulfill the mandates of the President's energy policy as well as BLM's responsibilities to manage these lands under authority of NPRPA and the 1980 appropriation legislation and other authorities cited elsewhere in this DEIS. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best available technology." The ASDP Area under consideration was chosen because of its proximity to existing and future potential oil fields. Other lands within the NPR-A that are managed by the BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. Lands outside of the NPR-A would not satisfy the congressional direction to explore and develop oil and gas resources within the NPR-A. State and Native Corporation lands cannot be considered in a BLM plan.

3. Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

Other alternatives that would reduce or eliminate the use of public lands needed for subsistence purposes are described in the main body of the ASDP DEIS, many of which became alternatives considered but eliminated from further analysis because of either economic or technological disadvantages. Section 2.6 contains a detailed discussion of these alternatives, including rationale regarding each alternative's infeasibility for the proposed project at hand.

4. Findings

The effects of Alternative B fall above the level of significantly restricting subsistence use for the community of Nuiqsut. The potential impacts to subsistence resources and access discussed above exceed the non-significant level; therefore, a positive determination is required pursuant to ANILCA § 810. Industrial development in the Fish and Judy creeks and Colville Delta will reduce the availability of and access to more than half of the harvested fish, waterfowl and terrestrial mammals.

Depending on the resulting migration patterns for the Teshekpuk Lake Herd, and the areas of relocation for other subsistence species, the communities of Barrow, Atqasuk and Anaktuvuk Pass may also be affected.

However, enough data does not currently exist to warrant a positive finding under ANILCA § 810 for these three communities.

D. Evaluation and Findings for Alternative C—CPAI Development Plan

Alternative C of the DEIS is similar to Alternative A, with alternate routes for the gravel road and pipeline between CD-2, CD-6 and CD-7. Specifically, Alternative C differs from Alternative A by having a gravel road between CD-3 and the Alpine CPF, connecting Nuiqsut to the gravel road system, hanging all power lines from power poles, and constructing pipelines at a minimum height of 7 feet. The proposed CD-6 pad would be located within the Fish Creek setback area, a three-mile zone along both banks of the creek in which no permanent oil and gas surface facilities are allowed under the current Northeast NPR-A ROD, and the bridge/road across Nigliq Channel would violate Stipulation 48 of the Northeast NPR-A ROD, which does not allow any permanent road to be connected to a road system outside of the Northeast Planning Area.

1. Evaluation of the Effect of Such Use, Occupancy, or Disposition on Subsistence Uses and Needs

The evaluation for Alternative C is expected to be the same that presented for Alternative A with regard to subsistence resources during road and pipeline construction. However, the route of Alternative C is 3 miles from, and connected to, the community of Nuiqsut, resulting in an increase in traffic to and from the village. In addition, construction of a road to CD-3 would have a great potential to negatively affect fish habitat and movement (see Section 4C.3.3.1). The increase of pipeline height from 5 feet to 7 feet would aid in allowing for free movement of caribou or subsistence user on snowmobiles. However, the resulting access afforded to subsistence hunters through the road connection to Nuiqsut would most likely result in a concerted focus of harvesting efforts along the road from vehicles. This could result in increased competition, and a hunter-caused displacement of resources due to the large number of vehicles utilizing the roads (see Sections 4C.3.4.1 and 4C.4.3.1).

2. Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The Naval Petroleum Reserves Production Act of 1976 (NPRPA), as amended, gives the Secretary of the Interior the authority to conduct oil and gas leasing in the NPR-A. However, the law prohibited petroleum production from occurring in NPR-A until authorized by Congress. In 1980, Congress granted that authorization through appropriations legislation and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The BLM is undertaking this DEIS to fulfill the mandates of the President's energy policy as well as BLM's responsibilities to manage these lands under authority of NPRPA and the 1980 appropriation legislation and other authorities cited elsewhere in the EIS. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best available technology." The ASDP Area under consideration was chosen because of its proximity to existing and future potential oil fields. Other lands within the NPR-A that are managed by the BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. Lands outside of the NPR-A would not satisfy the congressional direction to explore and develop oil and gas resources within the NPR-A. State and Native Corporation lands cannot be considered in a BLM plan.

3. Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

Other alternatives that would reduce or eliminate the use of public lands needed for subsistence purposes are described in the main body of the ASDP DEIS, many of which became alternatives considered but eliminated from further analysis because of either economic or technological disadvantages. Section 2.6 contains a detailed discussion of these alternatives, including rationale regarding each alternative's infeasibility for the proposed project at hand.

4. Findings

The effects of Alternative C fall above the level of significantly restricting subsistence use for the community of Nuiqsut. The potential impacts to subsistence resources by displacement during construction and operation, as well as the decrease in access to key subsistence harvest areas near Fish and Judy creeks and the Nigliq Channel discussed above exceed the non-significant level; therefore, a positive determination is required pursuant to ANILCA § 810. Industrial development in the Fish and Judy creeks and Colville Delta will reduce the availability of and access to more than half of the harvested fish, waterfowl and terrestrial mammals by the community of Nuiqsut.

Depending on the resulting migration patterns for the Teshekpuk Lake Herd, and the areas of relocation for other subsistence species, the communities of Barrow, Atkasuk and Anaktuvuk Pass may also be affected. However, enough data does not currently exist to warrant a positive finding under ANILCA § 810 for these three communities.

E. Evaluation and Findings for Alternative D—CPAI Development Plan

Alternative D varies greatly from all other alternatives in that all of the proposed production pads would be roadless under this alternative, with access only by air, ice-road, or low-pressure vehicles allowed for tundra travel. Either airstrips or helipads would be constructed at every production pad to facilitate year-round access by either fixed-wing aircraft or helicopters. Pipelines would connect all production pads, and would be constructed at a minimum height of 7 feet above the tundra, with all powerlines located in cable trays mounted on the VSMs. Because no road or bridge would cross Nigliq Channel, the pipeline connecting the production pads to the Alpine CPF would be buried beneath the channel using horizontal directional drilling. CD-6 and the pipeline connecting CD-5 to CD-6 and CD-6 to CD-7 would be located in the 3 mile setback along Fish Creek. All construction activities would be staggered under this alternative, with, construction occurring at those pads considered to have the highest production potential.

1. Evaluation of the Effect of Such Use, Occupancy, or Disposition on Subsistence Uses and Needs

Alternative D is expected to have less direct effects to subsistence during the construction period for pipelines and airstrips/helipads, due to the reduction in construction effort. Displacement of animals, especially wolf, wolverine, and caribou would occur during construction. However, the lack of extensive vehicle traffic needed for the construction of gravel roads, and the predominant use of low pressure vehicles and other winter ice-road construction equipment will reduce the intensity of the effect (see Section 4D.3.4.1).

During the operational phase, the primary effect to subsistence resources will be by aircraft, with helicopter or fixed-wing, both of which have been shown to cause displacement of caribou and other resources. The extent of this impact will be dependent on the number and frequency of aircraft trips to the various production pads, and on the type of aircraft utilized. Constructing pipelines at a minimum height of 7 feet will allow for improved access for both caribou and snowmobiles, and will serve to mitigate access issues to the Fish and Judy Creek harvest area. Additionally, not having a bridge across the Nigliq Channel will alleviate issues regarding access and hunting using boats.

2. Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The Naval Petroleum Reserves Production Act of 1976 (NPRPA), as amended, gives the Secretary of the Interior the authority to conduct oil and gas leasing in the NPR-A. However, the law prohibited petroleum production from occurring in NPR-A until authorized by Congress. In 1980, Congress granted that authorization through appropriations legislation and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The BLM is undertaking this DEIS to fulfill the mandates of the President's energy policy as well as BLM's responsibilities to manage these lands under authority of NPRPA and the 1980 appropriation legislation and other authorities cited elsewhere in the EIS. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the best

available technology.” The ASDP Area under consideration was chosen because of its proximity to existing and future potential oil fields. Other lands within the NPR-A that are managed by the BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. Lands outside of the NPR-A would not satisfy the congressional direction to explore and develop oil and gas resources within the NPR-A. State and Native Corporation lands cannot be considered in a BLM plan.

3. Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

Other alternatives that would reduce or eliminate the use of public lands needed for subsistence purposes are described in the main body of the ASDP DEIS, many of which became alternatives considered but eliminated from further analysis because of either economic or technological disadvantages. Section 2.6 contains a detailed discussion of these alternatives, including rationale regarding each alternative’s infeasibility for the proposed project at hand.

4. Findings

The effects of Alternative D fall below the level of significantly restricting subsistence use for the community of Nuiqsut, and for all other communities on the North Slope. The potential impacts to subsistence resources by displacement during construction and operation is greatly reduced under this alternative, as is the decrease in access to key subsistence harvest areas near Fish and Judy creeks and the Nigliq Channel. If adequate mitigation measures are put in place to reduce the impacts of aircraft traffic to production facilities, then impacts during the production phase will also be greatly reduced. This finding applies to the communities of Nuiqsut, Atkasuk, Barrow, and Anaktuvuk Pass.

F. Evaluation and Findings for Full-Field Development (All Alternatives)

Full-field development scenarios have been created for each alternative discussed above, except for the No-Action Alternative. These scenarios are hypothetical estimations of future oil and gas production pads and facilities in the Northeast NPR-A, and were created to allow analysts to explore a full range of potential environmental issues that could occur. All full-field development scenarios consist of at least 20 additional production pads, up to 2 additional processing facilities (such as the Alpine CPF), and associated pipelines, roads, and bridges. It should be stressed that all of the full-field development scenarios are not being considered as action that will occur as part of the ASDP, and that any additional future proposals for development in the NPR-A will be subject to NEPA Analysis.

1. Evaluation of the Effect of Such Use, Occupancy, or Disposition on Subsistence Uses and Needs

Because of the large amount of development posited for every full-field development scenario, all full-field development alternatives have the potential to greatly affect subsistence resources and subsistence uses for the community of Nuiqsut, and most likely for the communities of Barrow, Atkasuk and possibly Anaktuvuk Pass.

2. Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The Naval Petroleum Reserves Production Act of 1976 (NPRPA), as amended, gives the Secretary of the Interior the authority to conduct oil and gas leasing in the NPR-A. However, the law prohibited petroleum production from occurring in NPR-A until authorized by Congress. In 1980, Congress granted that authorization through appropriations legislation and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The President’s energy policy directs the Secretary of the Interior to “consider additional environmentally responsible oil and gas development, based on sound science and the best available technology.” The full-field development areas were chosen because of their proximity to existing and future potential oil fields. Other lands within the NPR-A that are managed by the BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. Lands outside of the NPR-A

would not satisfy the congressional direction to explore and develop oil and gas resources within the NPR-A. State and Native Corporation Lands cannot be considered in a BLM plan.

3. Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

Given the hypothetical nature of the full-field development scenarios, other alternatives that would reduce the use of these public lands for subsistence purposes were not discussed. In fact, the full-field development scenarios were intentionally created near areas of environmental or subsistence concerns, so that authors analyzing the proposed alternatives in the main body of the ASDP DEIS would be able to discuss other potential issues not covered by the proposed action.

4. Findings

The effects of all full-field development scenarios fall above the level of significantly restricting subsistence use for the community of Nuiqsut, and possibly the communities of Barrow and Atkasuk. The potential impacts to subsistence resources by displacement during construction and operation, as well as the decrease in access to key subsistence harvest areas exceed the non-significant level; therefore, a positive determination is required pursuant to ANILCA § 810.

Depending on the resulting migration patterns for the Teshekpuk Lake Herd, and the areas of relocation for other subsistence species, the communities of Barrow, Atkasuk and Anaktuvuk Pass may also be affected.

G. Evaluation and Findings for the Cumulative Case

The cumulative case as presented in Section 4F takes into consideration all past, present and reasonably foreseeable future activities on the North Slope, in addition to the proposed action alternatives discussed above. These activities include major oil spills, both on land and in the sea; development occurring elsewhere on the North Slope, including Prudhoe Bay, Kuparuk, and offshore; exploration and development in other areas of the NPR-A; and the construction of a road linking Nuiqsut to the current highway infrastructure in Alaska.

1. Evaluation of the Effect of Such Use, Occupancy, or Disposition on Subsistence Uses and Needs

The cumulative case includes potential adverse effects on subsistence harvest patterns caused by existing and planned development activities, multiple lease sales proposed for the Northwest NPR-A Planning Area, possible additional sales in the remainder of the NPR-A, and other planned and reasonably foreseeable projects on the North Slope. Future activities could include Federal and State offshore lease sales, State and private onshore activities, and transportation of oil and gas by tankers, and the construction of additional production pads and facilities. Whether any development actually would occur is not known, but the following discussion assumes that the development and production stage would occur. Section 4F of the ASDP DEIS contains a detailed description of the cumulative case, including the possible oil field and infrastructure development that this evaluation uses.

Cumulative effects on caribou-calving distribution are likely to be long term over the life of the oil fields, but probably local within 2 to 3 miles (3 to 4 kilometers) of roads located within the calving areas. This reduction in calving and summer habitat used by cows and calves of the Central Arctic Herd (CAH), the TLH, and the Western Arctic Herd (WAH) caribou from future oil and gas activities, represents a functional loss of habitat that may result in a long-term effect on caribou herd productivity. The ranges of the CAH lead to more subsistence hunting pressure on the TLH; however, this potential effect may not be measurable because of the great natural variability in caribou population productivity. Establishing the existence of a direct link to reduced harvests or access to subsistence resources under the cumulative case currently is difficult, but it is possible that these effects may exist in the future. The additional development pressure envisioned by the cumulative case scenario could exacerbate changes in abundance and productivity of caribou and these changes may, in turn, adversely affect subsistence harvests.

Possible changes in caribou distribution patterns could also negatively affect subsistence hunters. For example, changes in the location of caribou calving areas may affect hunter success if calving caribou were to move to areas that were more difficult for subsistence hunters to access.

Access by subsistence users to the Prudhoe Bay oil fields currently is restricted. Measures are proposed in this DEIS that are intended to limit such broad restrictions in the ASDP Area, but some restrictions for reasons of safety in the ASDP Area as well as elsewhere could occur. Such a reduction to access could negatively affect subsistence users.

Any future gravel roads built from the NPR-A or any other North Slope development to the existing haul road could allow access to sport hunters, particularly if no restriction on hunting from or near the roads applies. If unrestricted access would be allowed, any increase in the numbers of hunters in the area would increase competition for caribou.

The cumulative effects on muskoxen, moose, wolves, and wolverines are likely to be local within about 1 or 2 miles of oil exploration and development facilities and resource inventory-survey activities and generally short-term, with no significant adverse effects on their populations.

Although there would be more disturbance of waterfowl (including black brant) and, possibly, more small intermittent oil spills in the cumulative case, the overall effects on waterfowl are expected to be minimal under all alternatives. Even a major oil spill would not change this assessment because of the nesting and feeding patterns of the waterfowl present in the Arctic.

Fish habitat that is protected by setbacks would receive minimal impacts from most activities, although a major oil spill in the Colville River could significantly affect several fish species. While Alternatives B and C protect more fish habitat than Alternative A, the overall cumulative effects on fish would not be noticeably different under the various alternatives.

The offshore development and transport that is possible under a cumulative case could result in oil spills in the marine environment. Any oil spill that taints, or is perceived to taint, whale or other marine mammals of importance to subsistence users would have a significant negative effect on those users. If such a spill affected migration patterns or distributions of any marine mammal used for subsistence, it would also have significant negative effect on subsistence users. There is also the possibility of cumulative effects on marine mammals from disturbance and noise, caused by both development and barging or other transportation necessary to provide support to offshore facilities.

From 1990 to 1997, the North Slope's permanent population grew at an annual rate of 2.7 percent, and Nuiqsut was the fastest growing village. This rate could continue for the foreseeable future with or without the development envisioned in the cumulative case discussed in the ASDP EIS. The effects of such growth on competition for subsistence resources are difficult to predict, but it is possible that over time there will be increased competition among local subsistence users. It is unlikely that the transient workers associated with oil and gas development will add to the competition, because they are ineligible for the subsistence priority under existing Federal regulations.

2. Evaluation of the Availability of Other Lands for Oil and Gas Exploration and Development

The Naval Petroleum Reserves Production Act of 1976 (NPRPA), as amended, gives the Secretary of the Interior the authority to conduct oil and gas leasing in the NPR-A. However, the law prohibited petroleum production from occurring in NPR-A until authorized by Congress. In 1980, Congress granted that authorization through appropriations legislation and directed the Secretary of the Interior to undertake a program of competitive leasing of potential oil and gas tracts in the Reserve. The BLM is undertaking this ASDP EIS to fulfill the mandates of the President's energy policy as well as BLM's responsibilities to manage these lands under authority of NPRPA and the 1980 appropriation legislation and other authorities cited elsewhere in this DEIS. The President's energy policy directs the Secretary of the Interior to "consider additional environmentally responsible oil and gas development, based on sound science and the

best available technology, through further lease sales in the National Petroleum Reserve-Alaska.” The ASDP Area under consideration was chosen because of its proximity to existing and future potential oil fields. Other lands within the NPR-A managed by the BLM are either too remote for economically viable oil and gas production, or have a low probability of containing sufficient quantities of oil or gas. Lands outside of the NPR-A would not satisfy the congressional direction to explore and develop oil and gas resources within the NPR-A. State and Native Corporation lands cannot be considered in a BLM plan.

3. Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

Other alternatives that would reduce or eliminate the use of public lands needed for subsistence purposes are described in the main body of the ASDP DEIS, many of which became alternatives considered but eliminated from further analysis because of either economic or technological disadvantages. Section 2.6 contains a detailed discussion of these alternatives, including rationale regarding each alternative’s infeasibility for the proposed project at hand.

4. Findings

The cumulative case may significantly restrict subsistence resources or their use for caribou and requires a positive determination pursuant to ANILCA § 810. The distribution of caribou populations on the North Slope has been affected by Prudhoe Bay development, and access to subsistence resources currently is restricted there. Although procedures will be in place to ensure that future development affects access as little as possible, it is still probable that safety considerations will reduce the total area available for subsistence purposes. If a major oil spill occurs in the future, it could significantly affect both populations and distributions of fish, whales and other marine animals, causing significant restrictions to subsistence resources. Population growth over the course of the plan results in a greater number of residents relying on local resources to meet their needs. In addition, construction of any road that would allow access to the area will allow for an increase in competition for subsistence resources by sport hunters. These restrictions have the potential to affect Barrow, Atkasuk, Nuiqsut, and Anaktuvuk Pass.

III. NOTICE AND HEARINGS

ANILCA § 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the public lands which would significantly restrict subsistence uses shall be effected” until the Federal Agency gives the required notice and holds a hearing in accordance with §810(a)(1) and (2). The BLM will provide notice in the *Federal Register* that it has made positive findings pursuant to § 810 that Alternatives A, B, and C in the DEIS meet the may significantly restrict threshold. When the full-field development scenarios, as well as the cumulative case are considered, all alternatives exceed the may significantly restrict threshold. As a result, public hearings will be held in the potentially affected communities of Nuiqsut, Barrow, Atkasuk, and Anaktuvuk Pass. Notice of these hearings will be provided in the *Federal Register* and by way of the local media, including the *Arctic Sounder* newspaper and KBRW, the local Barrow radio station with coverage to all villages on the North Slope.

IV. SUBSISTENCE DETERMINATIONS UNDER § 810(a)(3)(A), (B), and (C)

ANILCA § 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy or disposition of the public lands which would significantly restrict subsistence uses shall be effected” until the Federal Agency gives the required notice and holds a hearing in accordance with §810(a)(1) and (2), and makes the three determinations required by § 810(a)(3)(A), (B), and (C). The three determination that must be made are: 1) that such a significant restriction of subsistence use is necessary, consistent with sound management principles for the utilization of the public lands; 2) that the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other such disposition; and 3) that reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions [16 U.S.C. § 3120(a)(3)(A), (B), and (C)]. The BLM has found in this subsistence evaluation that all the alternatives considered in this IAP/EIS (including

the no-action alternative), when considered together with all the past, present, and reasonably foreseeable future cumulative effects discussed in this EIS, may significantly restrict subsistence uses. Therefore, BLM will undertake the hearing procedures required by ANILCA § 810 (a)(1) and (2) in conjunction with release of the DEIS in order to solicit public comment from the potentially affected communities and subsistence users.

Once the hearings are completed, the BLM will review all comments and recommendations from Nuiqsut, Barrow, Atkasuk, and Anaktuvuk Pass and make the determinations required by § 810(a)(3)(A), (B), and (C). These determinations will appear in the ASDP Final ANILCA 810 Evaluation, to be included in the Final EIS for the proposed ASDP.

**Alpine Satellite Development Plan
Draft Environmental Impact Statement**

Appendix C

**Federal and State Laws,
Regulations and Policies
Applicable to the ASDP**

The following is a list of laws and regulations that are potentially applicable to the Alpine Satellite Development plan as proposed in this EIS. This list is not definitive or exhaustive. The intent of this appendix is to provide general background and purpose information for the reader. All information was garnered from various government information Internet sites and other government documents.

Alaska Anadromous Fish Act (AS 16.05.850)

The Alaska Anadromous Fish Act requires that an individual or governmental agency notify and obtain authorization from Alaska Department of Natural Resources (ADNR) "to construct a hydraulic project or use, divert, obstruct, pollute, or change the natural flow or bed" of a specified anadromous water body or "to use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed" of a specified anadromous water body. All activities within or across a specified anadromous water body and all instream activities affecting a specified anadromous water body require approval from ADNR.

Alaska Coastal Management Program Act of 1977 (ACMP) (AS 46.40.10, et. seq.)

The ACMP provides a balance through its guidelines and regulations for conservation of the coastal zone along with the development and use of natural resources. The ACMP states all activities that may affect coastal resources and uses, whether within or outside the coastal zone be consistent with the provisions of the ACMP. Through the ACMP, coastal districts develop coastal management programs (CMP) with enforceable policies to be included in the ACMP. These district plans must be approved by the Alaska Coastal Policy Council and by the Secretary of Commerce through the Office of the Ocean and Coastal Resource Management (OCRM).

Although federal lands are excluded from the coastal zone under the CZMA, uses and activities on federal lands that effect state coastal zones and its resources must be consistent with the state's management plan.

Alaska Fishway Act (AS 16.05.840)

The Alaska Fishway Act requires that an individual or governmental agency notify and obtain authorization from Alaska Department of Natural Resources (ADNR) for activities within or across a stream used by fish if the department determines that such uses or activities could represent an impediment to the efficient passage of fish. Culvert installation, stream realignment or diversion, dams, low-water crossings, and construction, placement, deposition, or removal of any material or structure below ordinary high water all require approval from ADNR. Construction activities also must be coordinated with critical spawning period of anadromous fish.

Alaska Historic Preservation Act (AHPA) (AS 41.35.010 – 41.35.240)

The AHPA was enacted to locate, preserve, study, exhibit, and evaluate the historic, prehistoric, and archeological resources of Alaska with the intent of preserving and protecting them from loss, desecration, and destruction so that the scientific, historic, and cultural heritage embodied in these resources may pass undiminished to future generations.

Alaska National Interest Lands Conservation Act (ANILCA) (16 U.S.C. 410hh-3233 and 43 U.S.C. 1602-1784)

ANILCA created over 100 million acres of new national parks, refuges, monuments, conservation areas, recreation areas, forests, and wild and scenic rivers in the State of Alaska, for the preservation of "nationally significant" natural resources. However, ANILCA has a number of unique rules and provisions intended to allow economic growth, and for people to move around Alaska, pursue traditional activities and lifestyles, and maintain their heritage while protecting Alaska's natural resources. Such rules concern everything from hunting and fishing on federal

lands and waters in Alaska, to special access rights, federal land uses, oil and gas leasing and study, mining, and logging activities. Two such rules are Section 810 and Section 1320.

ANILCA Section 810 requires an evaluation and proposed finding of effects of proposed development on subsistence. It requires that this evaluation include findings on three specific issues: The effect of such use, occupancy, or disposition on subsistence uses and needs; The availability of other lands for the purpose sought to be achieved; and other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.

Section 1320 of ANILCA authorizes the Secretary of the Interior to identify areas in Alaska that are suitable as Wilderness and to make recommendations to Congress for including them in the National Wilderness Preservation System.

Alaska Native Claims Settlement Act (ANCSA) (43 U.S.C. 1601-1624)

ANCSA, which became law in December of 1971, recognized Alaska Native Land Entitlements with the creation of Native corporations with Native Alaskan's as shareholders and the conveyance of approximately 44 million acres of land, which was a little more than 10 percent of the entire state.

Alaska Public Land Act (AS 38.05.010 et. seq.)

The Public Land Act manages use of Alaska's public land and water resources. There are several right-of-way, water rights and land use permits associated with this act.

American Indian Religious Freedom Act (AIRFA) (42 U.S.C. 1996)

AIRFA is primarily a policy statement reaffirming Native Americans' right to religious freedom, "including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites." The Act strives to protect this right by encouraging Federal protection of sites considered sacred to Native Americans. Section 2 of the Act requires the President to order agencies to review their policies and procedures in consultation with traditional native religious leaders.

Archeological Resources Protection Act of 1979 (ARPA) (16 U.S.C. 470)

The ARPA secures the protection of archaeological resources and sites on public and Indian lands, and encourages the exchange of information between involved individuals and entities.

Bald and Golden Eagle Protection Act (16 U.S.C. 668)

The Bald and Golden Eagle Protection Act makes it unlawful to take, pursue, molest, or disturb bald and golden eagles, their nests, or their eggs anywhere in the United States.

The Clean Air Act of 1967 (CAA) (42 U.S.C. 7401 et seq.)

The CAA as amended by the Clean Air Act Amendments of 1990 (CAAA), is intended to protect and enhance the quality of the nation's air resources by controlling emissions of EPA-designated air pollutants by stationary and mobile sources.

Pursuant to the CAA, EPA has established national air quality and pollutant emission standards designed to protect public health from any known or anticipated adverse effects of a regulated pollutant. EPA controls air pollutant emissions through such mechanisms as: issuing operating permits for facilities that emit significant amounts of hazardous air pollutants; establishing requirements and compliance deadlines for areas not in compliance with national ambient air quality standards (NAAQS) for certain pollutants; setting nationwide motor vehicle tailpipe

emission standards and incentives for the use of alternative clean fuels; establishing a timetable for the phase-out of substances determined to deplete the stratospheric ozone; and implementing programs to prevent significant deterioration of ambient air quality in areas that are currently in compliance with EPA-mandated air standards.

The CAA assigns primary responsibility to the states for protecting air quality through state-designed State Implementation Plans (SIPs). The statute requires that each state submit an SIP to EPA for approval, detailing how the state will implement, maintain, and enforce national air quality standards.

Clean Water Act (CWA) (22 U.S.C. 1251 *et seq.*)

The CWA is intended to implement policies and regulations to restore and maintain the chemical, physical, and biological integrity of the nation's waters. It prohibits the "discharge of toxic pollutants in toxic amounts" to navigable waters of the United States.

Pursuant to the CWA, EPA has established national water quality and pollutant emission standards designed to protect public health from any known or anticipated adverse effects of a regulated pollutant. EPA controls water pollutant emissions through such mechanisms as: establishing guidelines for effluent discharges from nonpoint-sources to the waters of the United States and the NPDES permitting program (Section 401); establishing guidelines for effluent discharges from point-sources to the waters of the United States and the NPDES permitting program (Section 402), regulating the discharge of dredged and/or fill material (Section 404); establishing procedures, methods and equipment, and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines (Section 311); and requiring all Federal agencies engaged in any activity that might result in a discharge or runoff of pollutants to surface waters to comply with all Federal, state, interstate, and local requirements with regard to the control and abatement of water pollution (Section 313).

Coastal Zone Management Act (CZMA) (16 U.S.C. 1452, Sec. 303 (1) and (2)).

The CZMA encourages states to preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. The federal program was designed to assist states in exercising their management responsibilities over land and water resources through the development and implementation of state management programs. A unique feature of the CZMA is that participation by states is voluntary. To encourage states to participate, the act makes federal financial assistance available to any coastal state or territory that is willing to develop and implement a comprehensive coastal management program.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601) and the Superfund Amendments and Reauthorization Act of 1986 (SARA) (42 U.S.C. 9601)

CERCLA and SARA were adopted to protect public health and the environment from risks posed by uncontrolled hazardous waste sites. CERCLA provides a statutory framework for identifying, prioritizing, and cleaning up waste sites. It also includes facility reporting requirements to state and Federal agencies for releases of hazardous substances in excess of specified amounts.

Emergency Planning and Community Right-to-Know Act (EPCRA) (42 U.S.C. 9601)

EPCRA was enacted in 1996 as a free-standing statute under Title III of the Superfund Amendments and Reauthorization Act (SARA). It is intended to prevent an accidental release of an extremely hazardous substance from any facility and, in the event of a release, to provide a

mechanism for emergency response through state and local emergency planning teams and emergency response plans. It also establishes a citizen's right-to-know about the storage and/or release of specific chemicals at facilities in their communities.

Endangered Species Act (ESA) (16 U.S.C. 1531)

The ESA is intended to protect wildlife, fish, and plant species in danger of becoming extinct, and to conserve the ecosystems on which endangered and threatened species depend. The Act defines "endangered species" as any species, except a recognized insect pest, in danger of extinction throughout all or a significant portion of its range.

A "threatened species" is defined by the Act as any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The USFWS maintains the list of endangered species. Species include birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees. The law prohibits any action, administrative or real, that results in a "taking" of a listed species, or adversely affects habitat. Likewise, import, export, interstate, and foreign commerce of listed species are all prohibited without a permit from the Secretary of Interior. Sections 2(c) and 7 of the Act direct Federal agencies to comply with the Act and consult the U.S. Fish and Wildlife Service to determine whether endangered and threatened species or their habitats are known to be in the vicinity of the proposed action.

Executive Order 11514 – Protection and Enhancement of Environmental Quality

This Executive Order details the responsibilities of Federal agencies and the CEQ in directing their policies, plans, and programs to meet national environmental goals.

Executive Order 11988 - Floodplain Management

This Executive Order directs Federal agencies to establish procedures to ensure that the potential effects of flood hazards and floodplain management are considered for actions undertaken in a floodplain. Impacts to floodplains are to be avoided to the extent practicable.

According to the "Floodplain Management Guidelines," there is a multi-step, decision-making process that must be fulfilled by federal agencies to help them avoid adverse impacts. The steps include the following: determining if a proposed action would indeed be in a floodplain, conducting public review of the action, identifying and evaluating alternative plans and sites, assessing possible impacts, development of mitigation measures, and informing the public of decisions made. Various actions are subject to this order: acquiring, managing, or disposing of federal lands or facilities; federally created, financed, or assisted construction or improvements; and federal activities that affect land use.

Executive Order 11990 - Protection of Wetlands

This Executive Order directs government agencies to avoid short- and long-term adverse impacts to wetlands, whenever a practicable alternative exists.

Wherever effects to wetlands cannot be avoided, federal agencies are to include all practicable measures to minimize adverse impacts. The EO applies to acquisition, management, and disposition of federal lands and facilities, construction and/or improvement projects in conjunction with a federal agency, and federal activities/programs that affect land use.

Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The Environmental Justice (EJ) Executive Order directs federal agencies to develop environmental justice strategies to identify and address disproportionately high and adverse human health or

environmental effects of their programs, policies, and activities on minority populations and low-income populations (including Native American Tribes), with the goal of making EJ a part of their mission and achieving environmental protection for all communities. Federal agencies are to consider the following ways to evaluate EJ under NEPA: identifying the affected area to determine if minority populations or low-income populations would be affected, analyzing the effects of the agencies' actions on minority populations and low-income populations, evaluating public health data, and assessing possible cultural, social, or historical factors that may be affected by the action. Mitigation measures identified as part of the NEPA process should address significant and adverse environmental effects of proposed actions on minority populations and low-income populations. Moreover, agencies are required to provide opportunities for effective community participation in the NEPA process.

Executive Order 13007 – Indian Sacred Sites

This executive order directs each executive branch agency with statutory or administrative responsibility for the management of Federal lands to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites.

Executive Order 13112 – Invasive Species

Federal agencies are to prevent the introduction of invasive species, control those that are introduced and provides for the restoration of native species.

Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments

This executive order directs federal agencies to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, strengthen the G2G relationships with Indian Tribes, and reduce the imposition of unfunded mandates upon Indian Tribes.

Executive Order 13186 – Responsibilities of Federal Agencies To Protect Migratory Birds

This executive order directs all federal agencies to avoid or minimize the impacts of their actions on migratory birds, and to take active steps to protect birds and their habitat. It directs that agencies ensure that environmental analyses of federal actions required by the NEPA or other established environmental review processes evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern.

Executive Order 13212 – Actions To Expedite Energy-Related Projects

This executive order directs federal agencies take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy.

Federal Land Policy and Management Act (FLPMA) (43 U.S.C. Section 1732)

The FLPMA provides for multiple use of public lands while protecting them from unnecessary or undue degradation. The BLM under the authority of the Secretary of the Interior have the authority to grant permits and regulate the use, occupancy and development of public lands to meet this objective.

Fish and Wildlife Conservation Act of 1980 (16 U.S.C. 2901)

The Fish and Wildlife Conservation Act of 1980 encourages Federal agencies to conserve and promote conservation of non-game fish and wildlife species and their habitats. Additionally, the Act requires Federal agencies undertaking projects affecting water resources to consult with the U.S. Fish and Wildlife Service and the state agency responsible for fish and wildlife resources to conserve or improve wildlife resources.

Fish and Wildlife Coordination Act (FWCA) (16 USC 661 *et seq.*)

The FWCA, as amended, proposes to assure that fish and wildlife resources receive equal consideration with other values during the planning of water resources development projects. The Act authorizes the Secretary of the Interior to provide assistance to and cooperate with federal, state, and public or private agencies and organizations in the development and protection of wildlife resources and habitat; make surveys and investigations of the wildlife in the public domain; and accept donations of land and funds that will further the purposes of the Act.

Hazardous Materials Transportation Act of 1975 (HMTA) – (40 U.S.C. 1811)

The HMTA as amended, authorizes the Secretary of Transportation to protect the Nation adequately against risks to life and property, which are inherent in the transportation of hazardous materials. The regulations pertaining to the HMTA contain specific requirements for the packaging, labeling, and transportation of hazardous materials. These regulations apply to "...any person who transports, or causes to be transported or shipped, a hazardous material; or who manufactures, fabricates, marks, maintains, reconditions, repairs, or tests a package or container which is represented, marked certified, or sold by such person for use in the transportation in commerce of certain hazardous materials."

Magnuson-Stevens Fishery Management and Conservation Act (M-SFCMA) (16 U.S.C. 1801-1883)

The M-SFCMA establishes national standards for fishery conservation and management within the exclusive economic zone and oversees the preparation of fishery management plans. Fishery management plans describe the fisheries and contain necessary and appropriate conservation and management measures, applicable to foreign fishing and fishing by vessels of the U.S. The Sustainable Fisheries Act: Amendments to M-SFCMA. SFA amendments to the MSFCMA include changes to existing National Standards for fishery management. The changes provide guidelines, based on the National Standards, provide more detailed requirements for fisheries management under the M-SFCMA. The Guidelines also serve as an aid in the development of Fisheries Management Plans, and as a guide to the Secretary in the review and approval of those Fisheries Management Plans. One of the key Guidelines calls for delineation of Essential Fish Habitat (EFH).

Marine Mammal Protection Act (MMPA) (16 U.S.C. 1361-1407)

The MMPA was enacted in 1972 for the purpose of ensuring that marine mammal are maintained at, or in some cases restored to healthy population levels. The original Act established a moratorium of the "taking" or importing of marine mammals except for certain activities that are regulated and permitted. Regulated and permitted activities include scientific research, public display, and the incidental take of marine mammals in the course of commercial fishing operations.

Jurisdiction over marine mammals under the MMPA is split between two agencies, the USFWS and NOAA Fisheries. The USFWS has jurisdiction over sea otters, polar bears, manatees, dugongs, and walrus while NOAA Fisheries has jurisdiction over all other marine mammals.

Migratory Bird Treaty Act (Title 16 U.S.C. 703)

The Migratory Bird Treaty Act is intended to protect birds that have common migration patterns between the United States and Canada, Mexico, Japan, and Russia. The Act regulates the harvest of migratory birds by specifying the mode of harvest, hunting seasons, and bag limits.

National Environmental Policy Act of 1970 (NEPA) (42 U.S.C. 4321)

Congress established a national policy for the protection and maintenance of environmental resources by providing a mandatory process for all federal agencies to follow. NEPA ensures that environmental effects will be considered by requiring that federal agencies consider the environmental effects of their proposed action and alternatives on the human environment before deciding to fund and implement the action.

Essentially, NEPA documents the effects of federal funding on certain environmental resources, and provides for public involvement in the decision-making process. NEPA is called a process law. However, it only requires a certain decision-making process be followed; it does NOT mandate specific outcomes.

Under NEPA, all federal agencies must prepare a detailed statement of the environmental effects of proposed federal actions that may significantly affect the quality of the human environment. The Act also established the Council on Environmental Quality (CEQ) to oversee NEPA implementation. CEQ has promulgated regulations for NEPA implementation at 40 CFR 1500. NEPA also directed federal agencies to develop their own regulations to ensure compliance with NEPA requirements.

National Historic Preservation Act of 1966 (NHPA) (16 USC 470 et seq.)

The purpose of the NHPA is to ensure consideration of the values of historic properties in carrying out federal activities, and to make efforts to identify and mitigate impacts to significant historic properties. Federal agencies must consider the effects of their undertakings on properties in or eligible for the Register of Historic Places, and consequently work to minimize harmful effects on the property.

Section 106 also requires that federal agencies provide the Advisory Council on Historic Preservation (ACHP) with the opportunity to comment on the undertaking. The Section 106 review process is usually carried out as part of a formal consultation with the State Historic Preservation Officer (SHPO), the ACHP and other parties, such as Native Tribes that have knowledge of, or a particular interest in, historic resource in the project area. Formal consultation is concluded upon preparation of a Memorandum of Agreement among the consulting parties that addresses the treatment of adverse effects.

Native American Graves Protection and Repatriation Act (NAGPRA)

NAGPRA established a means for American Indians, including members of Indian Tribes, Native Hawaiian organizations, and Native Alaskan villages and corporations, to request the return or "repatriations" of human remains and other cultural items presently held by Federal agencies or Federally assisted museums or institutions. The Act also contains provisions regarding the intentional excavation and removal of, inadvertent discovery of, and illegal trafficking in Native American human remains and cultural items.

Naval Petroleum Reserves Production Act (NPRPA)

The NPRPA gives the Secretary of the Interior the authority to conduct oil and gas leasing and development in the NPR-A. Its stated purpose is to provide for the development of the reserve "in a manner consistent with the total energy needs of the Nation, and for other purposes." The law exempts the NPR-A from other laws that require wilderness reviews and BLM's normal land use

planning. Through the law, BLM is to manage the lands to prospect "environmental, fish and wildlife, and historical and scenic values," and is specifically required to assure that oil and gas activities in Special Areas be conducted "in a manner which will assure the maximum protection of... surface resources to the extent consistent with the requirements of [the] Act for the exploration of the reserve." Portions of the Teshekpuk Lake and the Colville River Special Areas are in the ASDP Area.

Oil Pollution Act of 1990 (OPA)

OPA streamlined and strengthened EPA's ability to prevent and respond to catastrophic oil spills. A trust fund financed by a tax on oil is available to clean up spills when the responsible party is incapable or unwilling to do so. The OPA requires oil storage facilities and vessels to submit to the Federal government plans detailing how they will respond to large discharges. EPA has published regulations for aboveground storage facilities; the U.S. Coast Guard has done so for oil tankers. The OPA also requires the development of Area Contingency Plans to prepare and plan for oil spill response on a regional scale.

Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. 6901) and The Federal Hazardous and Solid Waste Amendments (HSWA)

RCRA establishes EPA's authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. RCRA focuses only on active and future facilities and does not address abandoned or historical sites.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act of 1899 requires that a permit be obtained from the U.S. Army Corps of Engineers for construction of a dam, dike, or other structure in or affecting navigable waters. The term "navigable waters" include waters subject to the ebb and flow of the tide and/or waters usable for commerce transportation.

Safe Drinking Water Act (SDWA) of 1974 - 42 (U.S.C. s/s 300f et seq.)

The SDWA as amended, is intended to protect the quality of public water supplies and all sources or potential sources of drinking water whether from above ground underground source. The Act authorized EPA to establish safe standards of purity and required all owners or operators of public water systems to comply with primary (health-related) standards. State governments, which assume this power from EPA, also encourage attainment of secondary standards (nuisance-related). The underground injection control (UIC) program (authorized by Part C of the SDWA) was established to provide safeguards so that injection wells do not endanger current and future underground sources of drinking water (USDW).

Toxic Substances Control Act of 1976 (TSCA) (15 U.S.C. 2601)

TSCA is intended to protect human health and the environment from hazardous chemicals by authorizing EPA to track the 75,000 industrial chemicals currently produced or imported into the United States and to require testing of new and existing chemical substances that may pose an environmental or human-health hazard. EPA can ban the manufacture and import of those chemicals that pose an unreasonable risk. TSCA also regulates the treatment, storage, and disposal of certain toxic substances, specifically polychlorinated biphenyls (PCBs), chlorofluorocarbons (CFCs), asbestos, dioxins, certain metal-working fluids, and hexavalent chromium.

TSCA supplements other Federal statutes, including the CAA and the Toxic Release Inventory under EPCRA.

**Alpine Satellite Development Plan
Draft Environmental Impact Statement**

Appendix D

**Northeast National Petroleum Reserve-Alaska
Integrated Activity Plan/ Environmental Impact Statement**

Record of Decision

**Bruce Babbitt, Secretary of the Interior
October 1998**

Prepared by
U.S. Department of the Interior Bureau of Land Management

in cooperation with
U.S. Department of the Interior Minerals Management Service

Decision

The plan described below is hereby adopted for future management in the northeast planning area of National Petroleum Reserve-Alaska. The plan adopted here is the Preferred Alternative presented in the Northeast National Petroleum Reserve-Alaska Final Integrated Activity Plan/Environmental Impact Statement with minor clarifications and changes noted, explained, and evaluated in Appendix A. Comments offered by the public and other government agencies have resulted in these clarifications and minor modifications of the Preferred Alternative. We thank those who have helped us in this planning process through their comments.

The plan emphasizes restrictions on surface activities, consultation with local residents, and coordinated scientific studies to protect wildlife habitat, subsistence use areas, and other resources. At the same time it makes approximately 87 percent of the planning area's 4.6 million acres available for oil and gas leasing.

This decision culminates the Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) process. It fulfills the National Environmental Policy Act (NEPA) requirements associated with management planning on these public lands, including making decisions on what lands to make available for oil and gas leasing. It serves as the NEPA documentation for the first oil and gas lease sale. Subsequent lease sales are contemplated within the portion of the planning area made available for leasing. Prior to authorizing future site-specific activity on these lands or conducting any additional lease sales, the Bureau of Land Management (BLM) will conduct the appropriate additional NEPA analysis, tiering from the IAP/EIS, if appropriate.

The decision is described below and includes the stipulations in Appendix B.

Teshekpuk Lake Special Area

Teshekpuk Lake Surface Protection Area: This area is depicted in green (including the green hatched area) on Figure II.C.1 of the Final IAP/EIS reproduced here on page 3. It encompasses important goose molting areas, caribou calving and insect-relief habitat, and all of Teshekpuk Lake. It is of special importance to subsistence users because of the caribou and fish resources in the area and long-standing subsistence use of the area. Within this area:

- No permanent oil and gas surface occupancy will be allowed. (Note: Unless otherwise noted, reference to no permanent oil and gas occupancy would prohibit pads, rigs, platforms, gravel roads, airstrips, gravel or other material extraction pits, and pipelines.)



- No seasonal exploratory or delineation wells will be allowed.
- Ice roads, seismic activities, winter overland moves, and other nonpermanent activities other than exploratory or delineation well drilling may be authorized.
- Oil and gas leasing will be allowed in the 5- to 6-mile band (hatched area on Fig. II.C.1) at the southern and western edge of this area. Rights to the subsurface resources under leases in this area will not include the uppermost 500 feet.
- Restrictions will be imposed on aircraft activity associated with permitted activities. (See stipulations 52-55.)

Miguakiak River:

- No permanent oil and gas surface facilities, except essential transportation crossings (roads and pipelines), will be allowed within 1/2 mile of the river.
- An area within 3 miles of the river is of particular sensitivity for subsistence activities and will receive special consideration within the consultation framework described in stipulation 61.

Colville River Special Area

Colville River:

- The BLM will develop a Colville River Management Plan for the Special Area in cooperation with adjacent landowners and other affected parties to address subsistence, wildlife, recreation, paleontological, and other issues. Prior to launching such a plan, the agency will conduct a raptor workshop to review scientific literature on disturbance to raptors and identify potential additional mitigation measures. Creation of a Bird Conservation Area as described in Section II.B.6 of the Final IAP/EIS will be explored with other landowners as part of the Colville River Management Plan.
- No permanent oil and gas surface facilities, except essential pipeline crossings, will generally be allowed within 1 mile of the west bluffs (or bank if there is no bluff) extending the length of the river in the Colville River Raptor, Passerine and Moose Land Use Emphasis Area (LUEA). (Maps depicting this and other LUEAs mentioned in this document can be found in the Final IAP/EIS, pp. II-4 to II-17.)
- An area within 2 miles of the west bluff (or bank if there is no bluff) extending the length of the river in the Colville River Raptor, Passerine and Moose LUEA is of particular sensitivity for subsistence activities and wildlife and will receive special consideration within the consultation frameworks described respectively in stipulations 61 and 62.
- The Scenic Areas LUEA will be managed for Visual Resource Management (VRM) I upstream of Umiat and VRM II below Umiat, although exceptions to

this management guidance will be allowed for subsistence structures and essential pipeline crossings.

- Even though the physical characteristics and associated resource values make the Colville River "eligible" for designation, the river has been determined not "suitable" for Wild & Scenic River (WSR) designation, because other landowners within the potential WSR corridor do not support this action and, without their cooperation, management as a WSR would be ineffective.

Kikiakrorak and Kogosukruk Rivers:

(Note: The following discussion refers only to portions of the Kikiakrorak River downstream from T. 2 N., R. 4 W., U.M. and the Kogosukruk River downstream from T. 2 N., R. 3 W., U.M.)

- No permanent oil and gas surface facilities, except essential transportation crossings, will be allowed within 1 mile of the bluff (or bank if there is no bluff) on either side of the rivers and several of the Kogosukruk tributaries.
- An area within 2 miles of the top of the bluff on either side of the rivers and several of the Kogosukruk's tributaries is of particular sensitivity for raptor nesting and will receive special consideration within the consultation framework described in stipulations 61 and 62.
- The BLM is being directed to prepare the necessary documents to add an area encompassing approximately 2 miles on either side of the rivers and the Kogosukruk's tributaries to the Colville River Special Area. The BLM will include management considerations for these areas in the Colville River Management Plan.

Umiat Recreation Site LUEA:

- Incorporate plans for future management of this area in the Colville River Management Plan. Emphasis is to be on supporting public health and safety.

Other Specific Areas in the Planning Area

Fish Creek:

- No permanent oil and gas surface facilities, except essential transportation crossings, will be allowed within 3 miles of the creek downstream from the eastern edge of Sec. 31, T. 11 N., R. 1 E., U.M. or within 1/2 mile of the creek farther upstream.
- An area within 2 miles of the creek in and above Sec. 31, T. 11 N., R. 1 E., U.M. is of particular sensitivity for subsistence activities and will receive special consideration within the consultation framework described in stipulation 61.

Judy Creek and Ikpikpuk River (in the planning area):

- No permanent oil and gas surface facilities, except essential transportation crossings, will be allowed within 1/2 mile of these waterbodies.
- An area within 2 miles of these waterbodies is of particular sensitivity for subsistence activities and will receive special consideration within the consultation framework described in stipulation 61.

Pik Dunes LUEA:

- No surface structures, except essential transportation crossings, will be allowed.
- The BLM is being directed to prepare the necessary documents to add the LUEA to the Teshekpuk Lake Special Area.

Deep-Water Lakes:

- No permanent oil and gas surface facilities will be allowed in the lake bed of fish-bearing lakes in this portion of the Fish Habitat LUEA. Nor will such occupancy be allowed within 1/4 mile of these fish-bearing lakes.

Kuukpik Corporation Entitlement:

- The BLM has asked Kuukpik to identify twice its underselection acreage. In its first oil and gas lease sale, BLM will defer from leasing those lands Kuukpik identifies.

The plan also includes decisions which apply to the entire planning area. These are incorporated in the stipulations for the plan which are listed in Appendix B. They address such topics as waste prevention, handling, and disposal; preventive measures and preparation and response to spills; ice roads and water use; overland moves and seismic work (which are allowed throughout the planning area subject to stipulations); oil and gas exploratory drilling; facility design and construction; ground transportation; air traffic; oil field abandonment; and subsistence.

The plan establishes procedures and advisory bodies to address subsistence and research (inventory and monitoring) concerns. Stipulation 61 describes a conflict avoidance procedure to address subsistence concerns with oil and gas exploration and development activities. Through it, lessees will consult with the North Slope Borough (NSB), affected communities, and the Subsistence Advisory Panel, a special body created to represent subsistence issues (See Sec. II.F.6 of the Final IAP/EIS). Under the plan, representatives from Federal, State, and NSB agencies, the oil industry, environmental groups, academia, and other interested parties will be invited to participate on a Research and Monitoring Team. This team will coordinate research and monitoring projects related to the effectiveness of

stipulations and surface resource impacts. It also will seek advice from the Subsistence Advisory Panel (See Sec. II.F.7 of the Final IAP/EIS). The team will be chartered in accordance with the Federal Advisory Committee Act.

Many of the geographically-specific restrictions listed above are also included in the stipulations. Nearly all stipulations are subject to an exception clause. Exceptions to a stipulation may be granted under strict conditions. In the event that an exception to a lease or permit stipulation is requested and before an exception may be granted, the AO shall find that implementation of the stipulation is:

1. a) technically not feasible or
b) economically prohibitive or
c) an environmentally preferable alternative is available, and
2. the alternative means proposed by the lessee fully satisfies the objective(s) of the stipulation.

In addition, prior to the consideration or granting of an exception to a lease or permit, all conditions and/or consultation requirements specific to a stipulation must be met. The Authorized Officer (AO) shall consult with appropriate Federal, State, and NSB regulatory and resource agencies before an exception may be granted, except in the case of an emergency. The AO's power to grant stipulation exceptions is limited to those subjects, uses, and permits over which the BLM has authority. Exceptions also may be granted in emergencies involving human health and safety.

Some decisions listed above and in the stipulations are not subject to the exception clause. These include:

1. decisions on the areas to be available or unavailable for oil and gas leasing,
2. prohibition of permanent roads connecting to a road system outside the planning area,
3. prohibitions on pipeline and road crossings in the setback area around Teshekpuk Lake and road crossings in the setback area adjacent to the Colville River, and
4. prohibitions on permanent oil and gas surface occupancy in the Teshekpuk Lake Surface Protection Area

The plan will not affect other non-discretionary BLM responsibilities mandated by Congress. Chief among these is conveyance of land to individual Alaskan Natives and to Native corporations under the Native Allotment Act and the Alaska Native Claims Settlement Act (ANCSA), respectively.

Appendix B Stipulations

The following definitions apply to the following stipulations:

Active Floodplain: The lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum that area subject to a 1 percent or greater chance of flooding in any given year (also referred to as the 100-year or base floodplain).

Body of Water or Waterbody: A lake, river, stream, creek, or pond that holds water throughout the summer and supports a minimum of aquatic life.

Permanent oil and gas facilities: Production facilities, pipelines, roads, airstrips, production pads, docks and other bottom-founded structures, seawater-treatment plants, and any other structure associated with an oil and gas operation that occupies land for more than one winter season. It does not include material sites or seasonal facilities such as ice roads and ice pads.

The following stipulations are based on existing policies and laws, and on knowledge of the resources present in the planning area and current industry practices. All stipulations will attach to all activities, including oil and gas leases issued in the planning area. All oil and gas activity permits issued subsequent to leasing shall comply with the appropriate lease stipulations specific to the activity under review. All permits issued in conjunction with other authorized activities (e.g., seismic operation, commercial guiding) within the planning area shall comply with the appropriate stipulations specific to the activity under review.

Additional site-specific stipulations may be added by the Authorized Officer (AO) as determined necessary by further NEPA analysis and as developed through consultation with other Federal, State, and NSB regulatory and resource agencies. Other Federal, State, and NSB permits (e.g., NPDES, Clean Water Act [CWA] Section 404) also may be required by law or regulation for an oil and gas project to proceed. A list of permits/approvals commonly required in conjunction with an oil and gas exploration and development project is provided in Table II.F.1 of the Final IAP/EIS. (All references to tables and figures in these stipulations are to the tables and figures in the Final IAP/EIS. Also see the Final IAP/EIS for maps of Land Use Emphasis Areas (LUEAs) referred to in these stipulations.) Additional permits not listed in Table II.F.1 may be required. Specific State permits are required when the State has primary authority, under Federal or State law or regulation, for enforcement of the provision in question. Specific permits issued by Federal agencies other than BLM could include permit conditions that are more stringent than those presented below.

Exception Clause: In the event that an exception to a lease or permit stipulation is requested and before an exception may be granted, the AO shall find that implementation of the stipulation is:

1.
 - a. technically not feasible or
 - b. economically prohibitive or
 - c. an environmentally preferable alternative is available, and
2. the alternative means proposed by the lessee fully satisfies the objective(s) of the stipulation.

In addition, prior to the consideration or granting of an exception to a lease or permit stipulation, all conditions and/or consultation requirements specific to a stipulation must be met. The AO shall consult with appropriate Federal, State, and NSB regulatory and resource agencies before an exception may be granted, except in the case of an emergency. The AO's power to grant stipulation exceptions is limited to those subjects, uses, and permits over which the BLM has authority. Exceptions may be granted in emergencies involving human health and safety.

Waste Prevention, Handling, and Disposal and Spills:

1. To prevent and minimize present and future pollution, management decisions affecting waste generation shall be addressed in the following order of priority:
 - Prevention and Reduction
 - Recycling
 - Treatment
 - Disposal
 - a. Lessees shall prepare a waste-management plan approved by the AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, to achieve specific waste-reduction and prevention goals for all phases of exploration and development (including activities conducted by contractors). The plan shall identify all waste streams that will be produced during each operation by type, volume, and toxicity and the method of disposal. For each waste stream, the lessee/operator shall describe what actions will be taken to minimize the volume. The plan should include activities that will integrate pollution prevention concepts into purchasing, inventory, shipping/receiving, operations maintenance, training, accounting, and design. The goal of the plan shall be continuous environmental improvement and achievement of reduction goals developed through the planning process. Lessees shall develop schedules for implementation and review to meet reduction and prevention goals, designate accountable personnel to carry out action items, and specify

budget line items for plan elements. Lessees shall provide the AO with an annual waste-management report.

- b. Lessees shall implement a hazardous-materials tracking system to ensure proper use, storage, and management of materials being used within industrial processes. The use of chlorinated solvents is prohibited.
 - c. Lessees shall conduct annual environmental compliance audits.
- 2. Attracting wildlife to food and garbage is prohibited. All feasible precautions shall be taken to avoid attracting wildlife to food and garbage. A current list of approved precautions, specific to type of permitted use, can be obtained from the AO. Lessees and permitted users shall have a written procedure to ensure that the handling and disposal of putrescible waste will be accomplished in a manner to prevent the attraction of wildlife.
- 3. Burial of garbage is prohibited. All putrescible waste shall be incinerated or composted through an AO- approved system, unless otherwise authorized by the AO. All solid waste, including incinerator ash, shall be removed from BLM lands and disposed of in an approved waste-disposal facility in accordance with U.S. Environmental Protection Agency (USEPA) and State of Alaska, Dept. of Environmental Conservation (ADEC) regulations and procedures. Burial of human waste is prohibited except as authorized by the AO.
- 4. Except as specifically provided, all pumpable solid, liquid, and sludge waste shall be disposed of by injection in accordance with USEPA, ADEC, and the Alaska Oil and Gas Conservation Commission regulations and procedures. On-pad temporary muds and cuttings storage will be allowed as necessary to facilitate annular injection and/or backhaul operations.
- 5. Wastewater disposal:
 - a. Unless authorized by the National Pollution Discharge Elimination System (NPDES) or State permit, disposal of domestic wastewater into bodies of freshwater, including wetlands, is prohibited.
 - b. Surface discharge of reserve-pit fluids is prohibited unless authorized by applicable NPDES, ADEC, and NSB permits and approved by the AO.
 - c. Disposal of produced waters in upland areas, including wetlands, will be by subsurface-disposal techniques. The AO, in consultation with the ADEC and USEPA, may permit alternate disposal methods, if the lessee demonstrates that subsurface disposal is not feasible or prudent.

- d. Discharge of produced waters into open or ice-covered marine waters less than 33 feet (10 meters) in depth is prohibited. The AO in consultation with ADEC and USEPA may approve discharges into waters greater than 33 feet (10 meters) in depth based on a case-by-case review of environmental factors and consistency with the conditions of a NPDES permit.
 - e. Alternate disposal methods will require an NPDES permit certified by the State.
- 6. Areas of operation shall be left clean of all debris.
- 7. All spills shall be cleaned up immediately and to the satisfaction of the AO and all agencies with regulatory authority over spills, including the USEPA, ADEC, and the U.S. Coast Guard.
- 8. Notice of any spill shall be given to the AO as soon as possible. Other Federal, State, and NSB entities shall be notified as required by law.
- 9. For oil- and gas-related activities, a Hazardous-Materials Emergency-Contingency Plan shall be prepared and implemented prior to transportation, storage, or use of fuel. The plan shall include a set of procedures to ensure prompt response, notification, and cleanup in the event of a hazardous substance spill or threat of a release. Procedures applicable to fuel handling (associated with transportation vehicles) may consist of Best Management Practices approved by the AO. The plan shall include a list of resources available for response (e.g., heavy-equipment operators, spill-cleanup materials or companies), and names and phone numbers of Federal, State, and NSB contacts. Other Federal and State regulations may apply and require additional planning requirements. All staff shall be instructed regarding these procedures.
- 10. Oil-spill-cleanup materials (absorbents, containment devices, etc.) shall be stored at all fueling points and vehicle-maintenance areas and be carried by field crews on all overland moves, seismic work trains, and similar overland moves by heavy equipment.
- 11. Lessees shall provide refresher spill-response training to NSB and local community spill-response teams on a yearly basis.
- 12. Lessees shall plan and conduct a major spill-response field-deployment drill annually.
- 13. Prior to production and as required by law, lessees shall develop spill prevention and response contingency plans and participate in development and maintenance of

the North Slope Subarea Contingency Plan for Oil and Hazardous Substances Discharges/Releases for the NPR-A operating area. Planning shall include development and funding of detailed (e.g., 1:26,000 scale) environmental sensitivity index maps for the lessee's operating area and areas outside the lessee's operating area that could be affected by their activities. (The specific area to be mapped shall be defined in the lease agreement and approved by the AO in consultation with appropriate resource agencies). Maps shall be completed in paper copy and geographic information system format in conformance with the latest version of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration's Environmental Sensitivity Index Guidelines. Draft and final products shall be peer reviewed and approved by the AO in consultation with appropriate Federal, State, and NSB resource and regulatory agencies.

14. Except during overland moves and seismic operations (see stipulation 24m), fuel, other petroleum products, and other liquid chemicals designated by the AO, whether in excess of 660 gallons in a single tank or in excess of 1,320 gallons in multiple containers, shall be stored within an impermeable lined and diked area capable of containing 110 percent of the stored volume. The liner material shall be compatible with the stored product and capable of remaining impermeable during typical weather extremes expected throughout the storage period. Permanent fueling stations shall be lined or have impermeable protection to prevent fuel migration to the environment due to overfills and spills. The storage area shall be located at least 500 feet from any waterbody with the exception of small caches (up to 210 gallons) for motor boats, float planes, and ski planes.
15. Fuels shall not be stored on the active floodplain of any waterbody. Although fuels may be off-loaded from aircraft on ice, fuels shall not be stored on lake or river ice.
16. Refueling of equipment within 500 feet of the highest high water mark of any waterbody is prohibited with the exception of refueling motor boats, float planes, and ski planes. (See stipulation 24n for restrictions related to overland moves and seismic operations.)
17. All fuel containers, including barrels and propane tanks, shall be marked with the responsible party's name, product type, and year filled or purchased.

Ice Roads and Water Use:

18. The location of winter ice roads shall be offset from year to year to minimize vegetative impacts. The offset shall be greater than or equal to the width of the road.

19. Compaction of snow cover or snow removal from fish-bearing waterbodies shall be prohibited except at approved ice-road crossings.
20. Water withdrawal from rivers and streams during winter is prohibited. Water withdrawal is prohibited during winter from lakes less than 7 feet (2.1 m) deep if they are interconnected with or subject to seasonal flooding by a fish-bearing stream. Water may be withdrawn from isolated lakes that are less than 7 feet (2.1 m) deep that lack connection to or are not subject to seasonal flooding by a fish-bearing stream. After consultation with the appropriate Federal, State, and NSB regulatory and resource agencies, the AO may authorize withdrawals from any lake less than 7 feet (2.1 m) deep, if the proponent demonstrates that no fish exist in the lake.

Generally, water withdrawal drawdown during winter from lakes 7 feet (2.1 m) deep or deeper shall be limited to 15 percent of the estimated free-water volume (i.e., excluding the ice). After consultation with the appropriate Federal, State, and NSB regulatory and resource agencies, the AO may authorize drawdown exceeding 15 percent from a lake greater than 7 feet (2.1 m) deep, if the proponent of the additional drawdown demonstrates that no fish exist in the lake. Operators are encouraged to use new ice-road and ice-pad construction methods, such as using aggregate "chips" shaved from frozen lakes, to decrease water demands, construction time, and impact on fisheries.

21. The AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, may allow water extraction from any lake used by molting geese, if it is determined that the withdrawal is consistent with stipulation 20 and will not adversely affect identified goose-feeding habitat along lakeshore margins. An analysis/demonstration of the hydrologic functions of the lake(s) under review may be required of the lessee by the AO prior to approval of the withdrawal.
22. Except for approved crossings, alteration of the banks of a waterway is prohibited. Waterways include natural features with sufficient water to create riparian (willow) habitat such as rivers, streams, deep and shallow lakes, tundra ponds, and shallow water tracks. Clearing of willows along the riparian zone is prohibited. Movement of equipment through willow stands shall be avoided whenever possible.

Overland Moves and Seismic Work:

23. Seismic work is prohibited within 1,200 feet of any known, long-term cabin or campsite, identified by the AO, without the written permission of the AO. The AO's decision will be informed by the consultation process described in stipulation 61.

24. The following restrictions apply to overland moves, seismic work, and any similar use of heavy equipment (other than actual excavations as part of construction) on unroaded surfaces during the winter season:
- a. Because polar bears are known to den predominantly within 25 miles of the coast, operators shall consult with the Fish and Wildlife Service (FWS) prior to initiating activities in such habitat between October 30 and April 15. Activities are prohibited within 1 mile of known or observed polar bear dens; obtain locations from the FWS, (907) 786-3800. Operators are encouraged to apply for a letter of authorization from the FWS to conduct activities in polar bear denning areas.
 - b. Motorized ground-vehicle use will be minimized within the Colville River Raptor, Passerine, and Moose Area LUEA from April 15 through August 5, with the exception that use will be minimized in the vicinity of gyrfalcon nests beginning March 15. Such use will remain 1/2 mile away from known raptor-nesting sites, unless authorized by the AO. The BLM shall consult with FWS to plan travel routes to minimize disturbance to raptors.
 - c. Crossing of waterway courses shall be made using a low-angle approach to avoid disruption of the natural stream or lake bank. Except at approved crossings, operators are encouraged to travel a minimum of 100 feet from overwintering fish streams and lakes.
 - d. If snow ramps or snow bridges are used at water crossings for bank protection, the ramps and bridges shall be substantially free of soil and/or debris. Snow bridges shall be removed or breached immediately after use or before spring breakup.
 - e. To avoid additional freeze down of deep-water pools harboring overwintering fish, waterways shall be crossed at shallow riffles from point bar to point bar whenever possible.
 - f. On-the-ground activities shall use low-ground-pressure vehicles such as Rolligons, ARDCO, Trackmaster, Nodwell, or similar types of vehicles. A current list of approved vehicles can be obtained from the AO. Limited use of tractors equipped with wide tracks or "shoes" will be allowed to pull trailers.
 - g. Bulldozing of tundra, trails, or seismic lines is prohibited. This stipulation, however, does not prohibit the clearing of drifted snow along a trail, seismic line, or in a camp, to the extent that the tundra mat is not disturbed. Snow may be cleared from a waterbody ice

surface to prepare an aircraft runway, if approved by the AO in consultation with appropriate Federal, State, and NSB regulatory and resource agencies.

- h. To reduce the possibility of ruts, vehicles shall avoid using the same trails for multiple trips unless necessitated by serious safety or superseding environmental concern. This provision does not apply to ice roads (see stipulation 18 above).
- i. Ground operations are to begin only after the seasonal frost in the tundra and underlying mineral soils has reached a depth of 12 inches, and the average snow cover is 6 inches deep. The exact date shall be determined by the AO.
- j. Ground operations shall cease when the spring melt of snow begins; approximately May 5 in the foothills area where elevations exceed 300 feet, and approximately May 15 in the northern coastal areas. The exact date will be determined by the AO.
- k. Seismic activities and overland moves within the Goose Molting LUEA and the Teshekpuk Lake Caribou Habitat LUEA from May 1 through September 30 are prohibited. (Note that this overrides language in stipulation 24j.)
- l. To prevent surface disturbance to tundra and other vegetation, tracked vehicles will not execute tight turns by locking one track.
- m. Operators shall use best available technology (e.g., self-contained containment systems) or other appropriate spill containment measures, approved by the AO, to prevent fuel migration from fuel or chemical storage areas to the environment due to overfills and spills.
- n. Refueling of equipment is prohibited within the active floodplain of any waterbody.

Oil and Gas Exploratory Drilling:

25. From May 1 through September 30, exploratory drilling other than from production pads is prohibited in the Special Caribou Stipulations Area (Fig. II.C.1-1).
26. Exploratory drilling is prohibited within 1,200 feet of any known, long-term cabin or campsite, identified by the AO, without written permission of the AO. The AO's decision will be informed by the consultation process described in stipulation 61.
27. Permanent or gravel oil and gas facilities including roads shall not be constructed during the exploration phase of oil and gas development.
28. Exploratory drilling in river, stream, and lake beds, as determined by the highest high water mark, is prohibited. Exceptions to this stipulation may be authorized by the AO in cases of shallow lakes which freeze to the bottom, do not support significant fish or bird populations, and are hydrologically isolated. Further, such an exception may be granted only if it is environmentally preferable to maintaining the restriction.

Facility Design and Construction:

29. At least 3 years prior to approval of any development plan for leases within the Special Caribou Stipulations Area (see Fig. II.C.1-1), the lessee shall design and implement a study of caribou movement, including historical information regarding the distribution and range use of the Teshekpuk Lake Caribou Herd, as well as maps of caribou trails within the area. Study data may be gathered concurrent with approved seismic and exploration activity. The study design shall be approved by the AO in consultation with the Research and Monitoring Team. The study will include a minimum of 3 years of data to assist in providing the information necessary to determine facility design and location, including pipelines, that will be part of the development plan. Lessees may submit individual plans or they may combine with other lessees in the area to do a joint study. Total study funding by all lessees will not exceed \$500,000.
30. Causeways and docks are prohibited in river mouths or deltas. Artificial gravel islands and bottom-founded structures are prohibited in river mouths or active stream channels on river deltas, except as provided in the paragraphs below.

The BLM discourages the use of continuous-fill causeways. Environmentally preferred alternatives for field development include the use of onshore directional drilling, elevated structures, or buried pipelines. Approved causeways shall be designed, sited, and constructed to prevent significant changes to near shore oceanographic circulation patterns and water-quality characteristics (e.g., salinity, temperature, suspended sediments) that result in exceedences of water-quality criteria, and must maintain free passage of marine and anadromous fish.

Causeways, docks, artificial gravel islands, and bottom-founded structures may be permitted if the AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, determines that a causeway or other structure is necessary for field development, and that no feasible and prudent alternative exists. A monitoring program may be required to address the objectives of water quality and free passage of fish. Additional mitigation shall be required where significant deviation from these objectives occurs.

31. Permanent oil and gas surface occupancy, including but not limited to permanent oil and gas facilities, pads, rigs, platforms, gravel roads, airstrips, pipelines, gravel or other material extraction sites, and exploration and delineation drilling facilities are prohibited in the Teshekpuk Lake Surface Protection Area (specifically, T. 13 N., Rs. 3-7 W., U.M.; Secs. 1-6, 8-16, 21-25, 36, T. 13 N., R. 8 W., U.M.; T. 14 N., Rs. 1-2 E. and Rs. 1-8 W., U.M.; Secs. 1-2, 11-14, T. 14 N., R. 9 W., U.M.; T. 15 N., Rs. 2-8 W., U.M.; Secs. 1-3, 7-30, 35-36, T. 15 N., R. 9 W., U.M.; T. 16 N., Rs. 2-8 W., U.M.; Secs. 1-6, 8-17, 21-27, 34-36, T. 16 N., R. 9 W., U.M.; T. 17 N., Rs. 1-9 W., U.M.; and T. 18 N., Rs. 2-8 W., U.M.). No exceptions will be granted to this stipulation.
32. Lessees shall use maximum economically feasible extended-reach drilling for production drilling to minimize the number of pads and the network of roads between pads. New developments shall share facilities with existing development when prudent and technically feasible. All oil and gas facilities, except airstrips, docks, and seawater-treatment plants, will be collocated with drill pads. If possible, airstrips will be integrated with roads. Given the paucity of gravel sites in the planning area and the cost of transporting gravel from outside the planning area, lessees are encouraged to implement gravel-reduction technologies e.g., insulated or pile-supported pads.
33. Within the Special Caribou Stipulations Area (see Fig. II.C.1-1), lessees shall orient linear corridors when laying out oil field developments to address migration and corralling effects and to avoid loops of road and/or pipeline that connect facilities.
34. Lessees shall separate elevated pipelines from roads by a minimum of 500 feet, if feasible. Separating roads from pipelines may not be feasible within narrow land corridors between lakes and where pipe and road converge on a drill pad.
35. To minimize delay or deflection of caribou movements, lessees shall place pipeline on the appropriate side of the road as determined by the AO (depending on general caribou movements in the area).
36. In the Special Caribou Stipulations Area (see Fig. II.C.1-1) and where facilities or terrain may funnel caribou movement, ramps over pipelines, buried pipe, or pipe buried under the road may be required by the AO after consultation with appropriate

Federal, State, and NSB regulatory and resource agencies.

37. Aboveground pipelines shall be elevated at least 5 feet, as measured from the ground to the bottom of the pipe, except where the pipeline intersects a road, pad, or a ramp installed to facilitate wildlife passage and subsistence passage and access. The AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, may make an exception if no feasible and prudent means exists to meet the requirement.
38. All crude oil, produced water, seawater, and natural gas pipelines shall be constructed to accommodate the best available technology for detecting corrosion or mechanical defects during routine structural integrity inspections.
39. Permanent oil and gas facilities, including roads, airstrips, and pipelines, are prohibited within and adjacent to the waterbodies listed below at the distances identified to protect fish and raptor habitat, cultural and paleontological resources, and subsistence and other resource values. Setbacks include the bed of the waterbody and are measured from the bank's highest high water mark.
 - a. **Ikpikpuk River:** a 1/2-mile setback from the bank of the Ikpiukpuk River within the planning area (fish, raptors, subsistence, cultural, and paleontological resources).
 - b. **Miguakiak River:** a 1/2-mile setback from each bank of the Miguakiak River (fish and subsistence resources).
 - c. **Teshkepuk Lake:** a 1/2-mile setback from the bank and around the perimeter of Teshkepuk Lake (fish and subsistence resources).
 - d. **Fish Creek:** (1) a 3-mile setback from each bank of Fish Creek downstream from Section 31, T11N, R1E; (2) a 1/2-mile setback from each bank of Fish Creek in and upstream from Section 31, T11N, R1E (fish and subsistence resources).
 - e. **Judy Creek:** a 1/2-mile setback from each bank of Judy Creek extending from the mouth to the confluence of an unnamed tributary in Sec. 8, T8N., R.2W., Umiat Meridian (fish and subsistence resources).
 - f. **Colville River:** a 1-mile setback from the western bluff (or bank if there is no bluff) of the Colville River extending the length of the river as described in the Colville River Raptor, Passerine, and Moose LUEA. This restriction does not apply within 1 1/2 mile of the Umiat airstrip (fish, raptor, passerine, moose, paleontological, subsistence, scenic, and recreational resources).
 - g. **Deep Water Lakes:** a 1/4-mile setback around the perimeter of any fish-bearing lake within or partially within the deep lake zone (see Fig. II.B.5) (fish resources). (If the fish-bearing status of the waterbody is unknown, the burden is on the lessee to demonstrate whether fish are present.)

- h. **Kikiakrorak River:** a 1-mile setback from each bluff (or bank if there is no bluff) of the Kikiakrorak River downstream from T.2 N, R. 4 W., Umiat Meridian (raptor, passerine, and moose resources).
- i. **Kogosukruk River:** a 1-mile setback from each bluff (or bank if there is no bluff) of the Kogosukruk River (including the four tributaries off the southern bank) downstream from T.2 N., R.3W., Umiat Meridian (raptor, passerine, and moose resources).

On a case-by-case basis, essential pipeline and road crossings will be permitted, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, through setback areas in those instances where no other suitable sites are available. Stream crossings will be sited perpendicular to the main channel flow; lake crossings will be at the narrowest point. Pipeline and road crossings are prohibited in the setback around Teshekpuk Lake, with no exceptions. Road crossings are prohibited in the setback adjacent to the Colville River with no exceptions.

- 40. Gravel mining sites required for development activities will be restricted to the minimum necessary to develop the field efficiently and with minimal environmental damage. Where feasible and prudent, gravel sites shall be designed and constructed to function as water reservoirs for future use. Gravel mine sites are prohibited within the active floodplain of a river, stream, or lake unless the AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, determines that there is no feasible and prudent alternative or that a floodplain site would enhance fish and wildlife habitat after mining operations are completed and the site is closed.

Mine site development and rehabilitation within a floodplain shall follow the procedures outlined in McLean (1993), North Slope Gravel Pit Performance Guidelines; State of Alaska, Dept. of Fish and Game (ADF&G) Habitat and Restoration Division Technical Report 93-9.

- 41. For those waterbodies not listed in stipulation 39, permanent oil and gas facilities, including roads, airstrips, and pipelines, are prohibited upon or within 500 feet as measured from the highest high water mark of the active floodplain. Essential pipeline and road crossings will be permitted on a case-by-case basis.
- 42. Bridges, rather than culverts, shall be used for any allowed road crossings on all major rivers, including those waterbodies listed in stipulation 39 or identified by the AO in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, to reduce the potential of ice-jam flooding and erosion. When necessary on smaller streams, culverts shall be large enough to avoid restriction of fish passage or adversely affecting natural stream flow.

43. The natural drainage pattern will be identified prior to and maintained during and after construction. All permanent structures constructed adjacent to a body of water, such as approved road and pipeline crossings, shall be sited and designed to limit erosion from flooding and wave action (e.g., through use of slope-protection measures). Cross-drainage structures will be sited, maintained, and properly abandoned to prevent impoundments or alteration of local or areawide hydrology. Gravel structures shall be designed and sited to minimize the length that is perpendicular to sheet flow.
44. Dewatering during construction shall be conducted using Best Management Practices (BMP's). A current list of BMP's will be available from the AO. Examples include the use of splash plates, dewatering points, natural filtration through vegetation, and dewatering during low-water period.
45. No surface structures, except essential transportation crossings, are allowed within the Pik Dunes LUEA.
46. Lessees shall minimize the impact of industrial development on key wetlands. Key wetlands are those wetlands that are important to fish, waterfowl, and shorebirds because of their high value or scarcity in the region. Lessees shall identify on a map or aerial photograph the largest surface area, including future expansion areas, within which a facility is to be sited or an activity is to occur. The AO will consult with Federal, State, and NSB regulatory and resource agencies to identify key wetlands and work with lessees during the development of operating plans. To minimize impact, the lessee shall avoid siting facilities in the identified wetlands, unless no feasible and prudent alternative exists. Key wetland types include but are not limited to fish-bearing lakes and streams, riparian shrub, and the following classes described by Bergman et al. (1977): shallow and deep-Arctophila ponds, deep-open lakes, basin-complex wetlands, and coastal wetlands.
47. Permanent oil and gas facilities are prohibited within 1 mile of known long-term cabins or long-term campsites, identified by the AO, except that pipelines and roads are allowed up to mile from such cabins or campsites. The AO's decision will be informed by the consultation process described in stipulation 61.
48. Permanent roads (i.e. gravel, sand) connecting to a road system or docks outside the planning area are prohibited, and no exceptions may be granted. Permanent roads necessary to connect pads within independent, remote oil fields are allowed but they must be designed and constructed to create minimal environmental impacts. Roads connecting production sites between separate oil fields may be considered if road-connected operations are environmentally preferable to independent, consolidated operations that each include airstrip, housing, production, and support facilities. This exception will only be granted following consultations with appropriate Federal, State, and NSB regulatory and resources agencies, and the appropriate level of NEPA

review.

Ground Transportation:

49. The following ground-traffic restrictions apply to permanent roads (as authorized in stipulation 48 above) in the Special Caribou Stipulations Area (Fig. II.C.1-1):
- a. From May 20 through June 20:
 - 1. Traffic speed will not exceed 15 miles per hour.
 - 2. Traffic will be minimized (a reasonable target would be four convoy round-trips per day between facilities). Nonessential operations requiring vehicles shall be suspended during this time period.
 - b. From May 20 through August 1:
 - 1. Caribou movement will be monitored.
 - 2. Based on this monitoring, traffic will cease when a crossing by 10 or more caribou appears to be imminent.
 - c. From May 20 through August 20:
 - 1. Convoying will be used to minimize the number of disturbances due to road traffic.
 - 2. Personnel will be bussed between work sites and other facilities to minimize the number of vehicles on the road.
50. Major stockpiling of equipment, materials, and supplies for oil and gas activities in the Special Caribou Stipulations Area (see Fig. II.C.1-1) shall occur prior to or after the period May 20 through June 20 to minimize road traffic during that period.
51. Chasing wildlife with ground vehicles is prohibited.

Air Traffic:

(Note: The BLM's authority to restrict air traffic is limited to those activities associated with use authorization on BLM-administered lands.)

52. Use of aircraft larger than a Twin Otter for authorized activities in the planning area, including oil and gas activities, from May 20 through August 20 within the Teshekpuk Lake Caribou LUEA (see Fig. II.B.4) is prohibited, except in cases of emergency.
53. Helicopter overflights for BLM-permitted activities shall be suspended in the Goose Molting LUEA (see Fig. II.B.2) from June 15 through August 20.
54. Fixed-wing aircraft traffic takeoffs and landing for BLM-permitted activities in the planning area shall be limited to an average of one round-trip flight a day from May 20 through June 20 at aircraft facilities in the Teshekpuk Lake Caribou Habitat LUEA

(see Fig. II.B.4). Within the Goose Molting LUEA (see Fig. II.B.2), fixed-wing aircraft use for such activities shall be restricted from June 15 to August 20 to flight corridors and frequencies established by BLM in consultation with the appropriate Federal, State, and NSB regulatory and resource agencies.

55. Aircraft shall maintain an altitude of at least 1,000 feet above ground level (AGL) (except for takeoffs and landings) over caribou winter ranges from October 1 through May 15 and 2,000 feet AGL over the Teshekpuk Lake Caribou Habitat LUEA (see Fig. II.B.4) from May 16 through July 31, unless doing so would endanger human life or violate safe flying practices.
56. Aircraft shall maintain an altitude of at least 1,500 feet AGL when within 1/2 mile of cliffs identified as raptor nesting sites from April 15 through August 5, unless doing so would endanger human life or violate safe flying practices. Aircraft shall maintain an altitude of 1,500 feet AGL when within 1/2 mile of known gyrfalcon nest sites from March 15 to April 15. Permittees shall obtain information from BLM necessary to plan flight routes near gyrfalcon nests.
57. Hazing of wildlife by aircraft is prohibited.

Oil Field Abandonment:

58. Upon field abandonment or expiration of a lease or oil- and gas-related permit, all facilities shall be removed and sites rehabilitated to the satisfaction of the AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies. The AO may determine that it is in the best interest of the public to retain some or all of the facilities. Lessees shall comply with all exploration and development bonding required by law and regulation (43 CFR 3154.1 and 3134.1). No exceptions shall be granted to this provision.

Subsistence:

59. During exploration, development, and production, the lessee shall develop and implement a plan, approved by the AO in consultation with the Research and Monitoring Team and the Subsistence Advisory Panel, to monitor the effects of activities on subsistence. The lessee shall provide biannual reports to BLM, the Research and Monitoring Team, and the Subsistence Advisory Panel.
60. Lessees shall not unreasonably restrict access by subsistence users in oil field development areas.
 - j. Lessees shall establish procedures for entrance to facilities, the use of roads, and firearms discharge. These procedures shall be developed in consultation with affected local communities, NSB, and the Subsistence Advisory Panel and be

approved by the AO. In cases where the lessee and the Panel disagree, the AO will determine the appropriate procedure.

- k. Lessees shall develop and distribute information about how to conduct subsistence activities in development areas safely (so equipment is not damaged and people are not endangered) to the communities through public meetings, newsletters, radio, and signs in both English and Inupiaq.

- 61. Exploration and development and production operations shall be conducted in a manner that prevents unreasonable conflicts between the oil and gas industry and subsistence activities.

Prior to submitting an exploration plan or development and production plan (including associated oil-spill contingency plans) to the BLM, the lessee shall consult with potentially affected subsistence communities (e.g., Barrow, Nuiqsut, Atkasuk, or Anaktuvuk Pass), NSB, and the Subsistence Advisory Panel to discuss potential conflicts with the siting, timing, and methods of proposed operations and safeguards or mitigating measures that could be implemented by the operator to prevent unreasonable conflicts. Through this consultation, the lessee shall make every reasonable effort, including such mechanisms as a conflict avoidance agreement, to ensure that exploration, development, and production activities are compatible with subsistence hunting, fishing, and other subsistence activities and will not result in unreasonable interference with subsistence harvests.

A discussion of resolutions reached during this consultation process, specific conflict avoidance agreement(s), and plans for continued consultation shall be included in the permit application, exploration plan, or the development and production plan. In particular, the lessee shall show in the plan how its activities, in combination with other activities in the area, will be scheduled and located to prevent unreasonable conflicts with subsistence activities. Lessees also shall include a discussion of multiple or simultaneous operations, such as exploration and delineation well drilling and seismic activities, that can be expected to occur during operations to more accurately assess the potential for any cumulative effects. Communities, individuals, and other entities who were involved in the consultation shall be identified in the application or plan. The AO shall send a copy of the exploration plan or development and production plan (including associated oil-spill-contingency plans) to the potentially affected communities, the NSB, and the Subsistence Advisory Panel at the time they are submitted to the BLM to allow concurrent review and comment as part of the plan approval process.

In the event no agreement is reached between the parties, the AO shall consult with representatives from the subsistence communities, Subsistence Advisory Panel, NSB, and the lessee(s) to specifically address the conflict and attempt to resolve the issues before making a final determination on the adequacy of the measures taken to prevent unreasonable conflicts with subsistence harvests.

The lessee shall notify the AO of all concerns expressed by subsistence users during operations and of steps taken to address such concerns. Lease-related use will be restricted, when the AO determines it is necessary to prevent unreasonable conflicts with local subsistence hunting, fishing, and other subsistence activities.

In enforcing this stipulation, the AO will work with other agencies and the public to assure that potential conflicts are identified and efforts are taken to avoid these conflicts, e.g., planning seismic operations to avoid traditional land use sites and allotments. These efforts may include seasonal drilling restrictions, seismic restrictions, and directional drilling requirements or use of other technologies deemed appropriate by the AO.

The consultation process described in this stipulation will also be required of applicants for geophysical (i.e. seismic) permits to address potential conflicts with the setback requirements for cabins and campsites described in stipulation 23. This consultation will help provide information to the AO on the advisability of modifying or waiving the restriction on seismic activity identified in stipulation 23.

62. The following subsistence, wildlife habitat, and traditional/cultural land use areas are of significant concern to local communities and will be given special consideration during the consultation process outlined in stipulation 61:
- a. **Long-term cabins and campsites:** a 2-mile zone around the cabins and campsites.
 - b. **Ikpikpuk River:** a 2-mile zone from the east bank of the river.
 - c. **Miguakiak River:** a 3-mile zone from each bank of the river.
 - d. **Fish Creek:** (1) a 3-mile zone from each bank downstream from Sec. 31, T11N, R1E; (2) a 2-mile zone from each bank in and upstream from Section 31, T11N, R1E.
 - e. **Judy Creek:** a 2-mile zone from each bank of the creek.
 - f. **Kogosukruk River:** a 2-mile zone from each bluff (or bank if there is no bluff) of the river (including the four tributaries off the southern bank) downstream from T. 2 N., R. 3 W., Umiat Meridian.
 - g. **Kikiakrorak River:** a 2-mile zone from each bluff (or bank if there is no bluff) of the river downstream from T.2 N, R. 4 W., Umiat Meridian.
 - h. **Colville River:** a 2-mile zone from the west bluff (or bank if there is no bluff) extending the length of river in the Colville River Raptor, Passerine, and Moose LUEA.

In addition, a permittee or lessee engaged in oil and gas-related activity shall consult with the BLM, FWS, ADF&G, and the NSB regarding wildlife concerns prior to submitting a geophysical (i.e. seismic) permit, exploration plan, or development and

production plan involving activity within the 2-mile zones around the Kogosukruk (and its tributaries), Kikiakrorak, and Colville Rivers described above. In the event that the permittee or lessee and the agencies are unable to reach agreement on steps necessary to address wildlife concerns, the AO will consult with the other agencies and the permittee or lessee before making a determination on the adequacy of the measures taken to prevent conflicts with wildlife.

Orientation Program:

63. The lessee shall include in any application for permit to drill a proposed orientation program for all personnel involved in exploration or development and production activities (including personnel of lessee's agents, contractors, and subcontractors) for review and approval by the AO. The program shall be designed in sufficient detail to inform individuals working on the project of specific types of environmental, social, and cultural concerns that relate to the planning area. The program shall address the importance of not disturbing archaeological and biological resources and habitats, including endangered species, fisheries, bird colonies, and marine mammals and provide guidance on how to avoid disturbance. Guidance shall include the production and distribution of information cards on endangered and/or threatened species in the planning area. The program shall be designed to increase sensitivity and understanding of personnel to community values, customs, and lifestyles in areas in which personnel will be operating. The orientation program shall also include information concerning avoidance of conflicts with subsistence, commercial fishing activities, and pertinent mitigation.

The program shall be attended at least once a year by all personnel involved in on-site exploration or development and production activities (including personnel of lessee's agents, contractors, and subcontractors) and all supervisory and managerial personnel involved in lease activities of the lessee and its agents, contractors, and subcontractors. Individual training is transferable from one facility to another except for elements of the training specific to a particular site.

Lessees shall maintain a record onsite of all personnel who attend the program for so long as the site is active, though not to exceed the 5 most recent years of operations. This record shall include the name and dates(s) of attendance of each attendee.

Traditional Land Use Sites:

64. Lessees shall conduct an inventory of known traditional land use sites prior to any field activity. This inventory will be compiled from sites listed in the most current Traditional Land Use Inventory available from the NSB's Inupiat History, Language, and Cultural Commission, and shall be approved by the AO. Based on this inventory, the lessee shall develop a plan to avoid these sites and mitigate any potential damage that could result from field activities. The plan shall indicate how access to the site by

local subsistence users will be provided. Lessees shall submit copies of the plan to BLM and the Subsistence Advisory Panel with any application for permit to drill.

Other Activities:

65. It is the responsibility of the authorized user to ensure that all individuals brought to the planning area under its auspices adhere to these stipulations. Authorized users of the planning area shall provide all employees, contractors, subcontractors, and clients with a briefing regarding stipulations applicable to the lease and/or permit. A copy of applicable stipulations will be posted in a conspicuous place in each work site and campsite.
66. The authorized user shall protect all survey monuments and be responsible for survey costs if remonumentation is required as a result of the user's actions.
67. All activities shall be conducted to avoid or minimize disturbance to vegetation.
68. The BLM, through the AO, reserves the right to impose closure of any area to operators in periods when fire danger or other dangers to natural resources are severe.
69. The authorized user shall be financially responsible for any damage done by a wildfire caused by its operations.
70. Construction camps are prohibited on frozen lakes and river ice. Siting of construction camps on river sand and gravel bars is allowed and, where feasible, encouraged. Where leveling of trailers or modules is required and the surface has a vegetative mat, leveling shall be accomplished through blocking rather than use of a bulldozer.
71. Use of pesticides without the specific authority of the AO is prohibited.
72. The feeding of wildlife by authorized users is prohibited.
73. Hunting and trapping by lessee's employees, agents, and contractors are prohibited when persons are on "work status." Work status is defined as the period during which an individual is under the control and supervision of an employer. Work status is terminated when the individual's shift ends and he/she returns to a public airport (e.g., Fairbanks, Barrow, Nuiqsut, or Deadhorse). Use of lessee facilities, equipment, or transport for personnel access or aid in hunting and trapping is prohibited.
74. Lessees shall conduct a cultural and paleontological resources survey prior to any ground-disturbing activity. Upon finding any potential cultural or paleontological resource, the lessee or their designated representative shall notify the AO and suspend all operations in the immediate area of such discovery until written authorization to

proceed is issued by the AO.

75. Petroleum exploration and production activities are prohibited within 1/2 mile of occupied grizzly bear dens, identified by the ADF&G, unless alternative mitigation measures are approved by the AO in consultation with appropriate Federal, State, and NSB regulatory and resource agencies.
76. Oil and gas lessees and their contractors and subcontractors will prepare and implement bear-interaction plans to minimize conflicts between bears and humans. These plans shall include measures to: (a) minimize attraction of bears to the drill sites; (b) organize layout of buildings and work areas to minimize human/bear interactions; (c) warn personnel of bears near or on drill sites and identify proper procedures to be followed; (d) if authorized, deter bears from the drill site; (e) provide contingencies in the event bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The lessee's shall develop educational programs and camp layout and management plans as they prepare their lease operations plans. These plans shall be developed in consultation with appropriate Federal, State, and NSB regulatory and resource agencies and submitted to the AO.
77. Operators are encouraged to apply for a letter of authorization from the FWS to conduct activities in polar bear denning areas.
78. Permanent structures, other than oil and gas facilities, are prohibited within 100 feet of the highest high water mark of the nearest body of water.
79. Lessees shall use smokeless flares for handling routine conditions and use auxiliary smokeless flares for planned events that exceed the capacity of routine flares. Lessees shall use flares that meet the Federal New Source Performance design standards listed in 40 CFR 60.18.

**Alpine Satellite Development Plan
Draft Environmental Impact Statement**

Appendix E

BLM Sensitive Species List for Alaska

The following have been designated by BLM as Sensitive Species in Alaska. Many are not known to occur in the ASDP Plan area.

Birds	
Common Name	Scientific Name
Northern goshawk (Queen Charlotte)	<i>Accipiter gentilis laingi</i>
Tule white-fronted goose	<i>Anser albifrons elgasi</i>
Marbled murrelet	<i>Brachyramphus marmoratus</i>
Dusky Canada goose	<i>Branta canadensis occidentalis</i>
Gray-cheeked thrush	<i>Catharus minimus</i>
Olive-sided flycatcher	<i>Contopus cooperi/borealis</i>
Trumpeter swan	<i>Cygnus buccinator</i>
Blackpoll warbler	<i>Dendroica striata</i>
Townsend's warbler	<i>Dendroica townsendi</i>
American peregrine falcon	<i>Falco peregrinus anatum</i>
Arctic peregrine falcon	<i>Falco peregrinus tundrius</i>
Harlequin duck	<i>Histrionicus histrionicus</i>
Bristle-thighed curlew	<i>Numenius tahitiensis</i>
Buff-breasted sandpiper	<i>Tryngites subruficollis</i>
Kittlitz's murrelet	<i>Brachyramphus brevirostris</i>
King eider	<i>Somateria spectabilis</i>
Long-tailed duck	<i>Clangula hyemalis</i>
Black scoter	<i>Melanitta nigra</i>
Black guillemot	<i>Cepphus grylle</i>
Dovkie	<i>Alle alle</i>
Red-throated loon	<i>Gavia stellata</i>
Brant	<i>Branta bernicla</i>
Red knot	<i>Calidris canutus</i>
Black-tailed godwit	<i>Limosa limosa</i>
Surf scoter	<i>Melanitta perspicillata</i>
Mckay's bunting	<i>Plectrophenax hyperboreus</i>
Marbled godwit	<i>Limosa fedoa</i>
Common eider	<i>Somateria mollissima</i>
Yellow-billed loon	<i>Gavia adamsii</i>

Mammals	
Common Name	Scientific Name
Canada lynx	<i>Lynx canadensis</i>
Harbor seal	<i>Phoca vitulina</i>

Fish	
Common Name	Scientific Name
Angayukaksurak char	<i>Salvelinus anaktuvukensis</i>
Western brook lamprey	<i>Lampetra richardsoni</i>
Gulkana steelhead	<i>Oncorhynchus mykiss</i>
Kigliak char	<i>Salvelinus alpinus</i>
Clear Creek chum salmon	<i>Onconhynchus keta</i>
Beaver Creek chinook salmon	<i>Onconhynchus tshawytscha</i>

Plants	
Common Name	Scientific Name
—	<i>Artemisia globularia</i> var <i>lutea</i>
—	<i>Artemisia senjavinensis</i>
—	<i>Beckwithia glacialis</i> ssp <i>alaskana</i>
—	<i>Botrychium ascendens</i>
—	<i>Claytonia ogilviensis</i>
—	<i>Cochlearia sessilifolia</i>
—	<i>Cryptantha shackletteana</i>
—	<i>Douglasia beringensis</i>
—	<i>Draba aleutica</i>
—	<i>Draba kananaskis</i>
—	<i>Draba murrayi</i>
—	<i>Draba ogilviensis</i>
—	<i>Erigeron muirii</i>
—	<i>Eriogonum flavum</i> var <i>aquilinum</i>
—	<i>Erysimum asperum</i> var <i>angustatum</i>
—	<i>Lesquerella calderi</i>
—	<i>Ligusticum calderi</i>
—	<i>Mertensia drummondii</i>
—	<i>Oxytropis arctica</i> var <i>barnebyana</i>
—	<i>Oxytropis kobukensis</i>
—	<i>Poa hartzii</i> ssp <i>alaskana</i>
—	<i>Podistera yukonensis</i>
—	<i>Polystichum aleuticum</i>
—	<i>Salix reticulata</i> ssp <i>glabellcarpa</i>
—	<i>Saxifraga aleutica</i>
—	<i>Senecio moresbiensis</i>
—	<i>Smelowskia pyriformis</i>