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STATE PIPELINE  
COORDINATORS OFFICE

May 2, 2011

Frederick M. Thompson  
State of Alaska Pipeline Coordinator's Office  
411 West 4<sup>th</sup> Avenue, Suite 2  
Anchorage, AK 99501-2343

**Notice of objection: ADL 418997 Alaska Stand Alone Gasline Right-of-Way Lease Application**

Dear Mr. Thompson,

It has come to the attention of the representatives of Interior and Eastern Alaska, that the State of Alaska is currently pursuing the route selection process for the instate natural gas pipeline. We have recently been informed that the Pipeline Coordinator's Office has received a right-of-way application from the Alaska Gasline Development Corporation (AGDC), for the purpose of transporting natural gas from the North Slope to the Cook Inlet via the Parks Highway Corridor. While we are grateful for the work that is being done to facilitate the construction of an in-state natural gas pipeline we are concerned about the transparency of the process, the potential for the State to limit public review of the route choices in the future, the validity of the figures used to justify the selection of the Parks Highway route, and the failure to include potential economic benefits in the route selection process.

The route selection process has not been transparent up to this point, and we do not believe any independent analysis has been completed to verify that the Parks Highway route would be the optimal route. The information that is currently available to the public does not contain all of the reference materials used in the decision making process, specifically the sources of the data used by Enstar during their previous evaluation of the Parks Highway route. If the data used in Enstar's report is the basis for the AGDC decision making process, the State should reconsider the route on the basis that Enstar's decisions are derived from a profit maximization motive and not the maximization of benefits to society, which should be the basis for the State's decision.

Below, we outline some of the reasons we believe that the Richardson Highway corridor should be given a fair evaluation as a potential instate pipeline right-of-way.

According to the *Stand Alone Gas Pipeline Route Alternatives Analysis* (Sep. 2009) issued by the State of Alaska Office of the Governor, the Parks Highway route is the least expensive choice. The authors of the analysis estimate that the cost of building the pipeline along the Parks Highway corridor would be \$3,929,222,046, and would supply 1,593 customers with 18.1 million standard cubic feet of gas/day (MMSCFD) (this number excludes the population centers that would be served by either route). They estimated that the Richardson route would cost \$4,411,270,780, and would supply 2,582 customers with 2.4 MMSCFD. While this does reveal that the Parks Highway route would be cheaper to construct, the analysis fails to address any of the social benefits along either route. It does not provide estimates for the costs associated with routing a pipeline near Denali National Park or additional costs of bypassing the park, and we believe the report may contain errors in the population and gas demand estimates for the Richardson Highway route.

Of primary concern is the over-estimated demand along the Parks Highway route due to the inclusion of Clear Air Force Base. It is our understanding that Clear Air Force base is unable to utilize gas provided by a natural gas pipeline for strategic security purposes. Second, we are concerned that the demand along the Richardson Highway route is understated, primarily as a result of the exclusion of military bases and other potential gas consumers located southeast of Fairbanks. According to the report, customers and gas demand for the population centers that would be served by either option (Anchorage/Cook inlet area and Fairbanks) were excluded from the estimates, however, there are some discrepancies between the communities that would be included on both routes. These differences seem to arise from the inclusion of locations under the lateral pipeline component of the Parks Highway route that would not actually be serviced by the lateral pipeline. These areas include Fort Wainwright, Eielson Air Force base, Flint Hills Refinery and the City of North Pole, and Golden Valley Electric Association generation Facilities. While it is unlikely that Eielson Air Force Base and Fort Wainwright would convert their coal fired power plants to gas, again for security reasons, they could potentially utilize the natural gas for energy needs at facilities not connected to their steam heat distribution system. Fort Greely, which is located further down the Richardson Highway does not have coal fired power and is currently using diesel fuel, so it is likely that they would be interested in utilizing natural gas to operate their electric generation and heating systems while maintaining diesel generation back-up. If this is true, then the residential, industrial, and military consumers on the Richardson route would be significantly greater than currently estimated.

In fact, using 2010 census data data from the State of Alaska Department of Workforce Development Resource & Analysis our study suggests that the Richardson route contains approximately 7,878 more consumers than the Parks route. In addition to this data, the Alaska Department of Natural Resources released an *Alaska Natural Gas In-State Demand Study* (ASP 2001-1000-2650) in 2002, which states that the estimated gas demand for the Fairbanks North Star Borough could be up to 5.2 Bcf/yr or about 14.2 MMSCFD/day, not including power plant conversion. If one looks closely at the Stand Alone Gas Pipeline Alternative Analysis, it states that if the power plants along the Parks Highway were not converted then the demand for natural gas would be 0.0 MMSCFD, and .03 MMSCFD for the Richardson Highway. Such uncertainty and variances in the estimates for gas demand and populations along each route suggest a more rigorous examination should be conducted to address the underlying assumptions regarding power plant conversions and military base utilization.

We also believe that the geotechnical issues and potential impacts to human life along the Parks Highway are not being given the full weight they should receive. Dr. Paul Metz, Professor of Geological Engineering at the University of Alaska Fairbanks has provided a brief synopsis of some of those issues below:

The Parks Highway route crosses the Denali Fault system at two locations. The main strand of the Denali Fault crosses the Parks Highway near Cantwell. At this crossing there is adequate area to locate a high pressure pipeline away from the buildings and structures in the area. The Hines Creek strand of the Denali Fault crosses the Parks Highway near the entrance of Denali National Park and Preserve. At this location there is limited area to build a fault crossing structure for a pipeline away from the populated areas along the highway that would be resistant to a major

earthquake. In addition to an actual rupture along the Hines Creek strand fault structure, a major earthquake would reactive large scale and deep seated landslides that occur in the area from the Garner Station on the Alaska Railroad through to the visitor facilities near the entrance to Denali Park, a distance of approximately 12 miles. These existing landslides have deformed the Alaska Railroad tunnels at Garner and Moody stations, the Parks Highway and the highway bridges across the Nenana River as well as the tributary creeks to the Nenana River from the Garner station to the park entrance. These landslides have also deformed the foundations to the recently constructed buildings in the Nenana Canyon. A failure of natural gas pipeline buried in these large landslides in the canyon would be a major hazard to life and property.

The Richardson Highway route crosses *only* the main strand of the Denali Fault near the Black Rapids Glacier. The valley of the Delta River is wide at this location and there are no build facilities in the region other than the Trans-Alaska Pipeline. The Trans-Alaska Pipeline crossing of the Denali Fault withstood a magnitude 7.9 earthquake in the region in 2002. The natural gas pipeline crossing of the fault could be designed in a similar fashion and located far enough from the oil pipeline such that a catastrophic failure of either one would not impact the other structure. The Richardson Highway route also crosses two smaller active fault structures the Donnelly Dome and McGinnis Glacier Faults. As at the Denali Fault crossing the valley of the Delta River is large and the fault crossings are distant from any occupied structure. These crossing do not pose any major hazard to life and property.

It appears as if these geotechnical and safety considerations have not been discussed in the analysis of route options. We have also not seen discussion regarding the additional costs associated with routing through Denali National Park or the additional costs associated with bypassing the park as has been proposed in the most recent analysis from the AGDC. Given the potential scale of these costs it may be both safer and more economically beneficial to route the gasline along the Richardson Highway. While the current estimated difference in the cost of the routes is \$482 million dollars, without a public estimate for the additional costs of bypassing Denali National Park or routing through the Park it is difficult to assess the true difference in the cost of the routes.

In addition, a comparative evaluation of the potential mineral resources along each route is necessary. Dr. Metz was kind enough to weigh in on this subject, and has indicated that the potential to utilize natural gas to extract resources that are currently stranded along both routes could create major economic benefits for communities located along the routes. According to Dr. Metz's analysis the estimated value of mineral deposits along the Parks Highway corridor is \$14.6 billion dollars while the estimated value along the Richardson Highway corridor is \$20.2 billion dollars, which is a difference of \$6.4 billion dollars. While the potential value of resources along each route is substantial, it seems that the final decision regarding the route of the instate gasline has been solely based on the estimated costs of the project. In terms of a correct economic assessment of the project, this is a very limited approach that does not give appropriate weight to the direct and indirect economic and social benefits associated with potential development along each route.

The Richardson route could also allow for the construction of a gas-to-liquids (GTL) facility in the Interior that could supply Interior military bases with synthetic fuels. This could potentially reduce the chances of one of Alaska's military bases being shut down in the next Base Relocation and Consolidation (BRAC) round. Under the current Parks Highway plan it would be impossible to locate a GTL facility in the Interior due to the limited supply of gas available from the lateral pipeline. And yet another potential benefit could be increased exploration for oil and gas in Eastern Alaska.

**Conclusion:**

Given the level of public financing that will be necessary for the project to be completed and the State's current expenditures on the study of route options, it is vital that the chosen route follow the guidelines laid out in HB 369, which necessitate that the selected route be the most economical and provide gas to the most Alaskan residents at a reasonable cost. If this were a private project it would be understood that the most economical choice would be the lowest cost option that maximizes returns to shareholders. However, this is a public project and as such it must address the total impacts to society, which include both the direct and indirect costs and benefits.

We would like to see several of our questions and concerns addressed.

1. What is the certainty of military installations consuming the Natural Gas along each route?
2. Do the population estimates used in the AGDC analysis and Alternative Route Analysis use the most current data available?
3. Will there be a consideration of the total benefits of each route in the decision making process?
4. Will estimates for the updated cost of constructing a pipeline in or around Denali National Park, including costs addressing the geotechnical issues discussed above, be made public?

Thank you for your attention to this matter.

**Jim Dodson, President and CEO**  
Fairbanks Economic Development Corporation  
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## Alternative Instate Bullet Line Routes:

### Population and Mineral Value Estimates

The population differences along the proposed instate bullet line routes were estimated using United States Census' 2010 population data available from the State of Alaska Department of Workforce Development Resource & Analysis Statistics. Communities were selected from the Alaska Gasline Development Corporation's "Alaska Stand Alone Gas Pipeline Plan of Development" (March 2011), and a the State of Alaska Office of the Governors "Stand Alone Gas Pipeline Route Alternatives Analysis" (Sep. 2009).

2010 estimates

Route	Location	Population	Housing Units
Parks	Nenana	376	215
Parks	Tanana	246	136
Parks	Anderson	246	145
Parks	Healy	1034	711
Parks	Cantwell	219	200
Parks	Talkeetna	876	744
Parks	Trapper Creek	481	499
Parks	Willow	2101	1912
Parks	Houston	1912	973
Parks	Big Lake	3350	2780
<b>TOTAL</b>		<b>10,841</b>	<b>8,315</b>

Route	Location	Population	Housing Units
Richardson	Moose Creek	747	332
Richardson	North Pole	2117	916
Richardson	Eielson	2647	848
Richardson	Pleasant Valley	725	396
Richardson	Two Rivers	719	348
Richardson	Harding-brich lakes	299	656
Richardson	Salcha	1095	585
Richardson	Big Delta	591	305
Richardson	Delta Junction	958	517

Richardson	Fort Greely	539	364
Richardson	Paxson	40	179
Richardson	Gakona	218	131
Richardson	Glennallen	483	336
Richardson	Copperville	155	N/A
Richardson	Copper Center	328	199
Richardson	Lake Louise	46	315
Richardson	Nelchina	59	47
Richardson	Chickaloon	272	251
Richardson	Palmer	5937	2281
Richardson	Knik-River	744	336
<b>Total</b>		<b>18,719</b>	<b>9,342</b>

Route	Total Population of differing locations along routes
Parks (2010)	10,841
Richardson (2010)	18,719

<b>Difference</b>	<b>7,878</b>
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Estimate Range	
(+10%)	8,666
(-10%)	7,090

Mineral development value estimates were provided by Dr. Paul Metz of the University of Alaska. Values were estimated using the "Mineral Occurrence Revenue Estimation and Visualization Tool" (MOREV) which was developed in cooperation with UAF and the Michigan Technical Research Institute (MTRI). MOREV uses geospatial data on metallic and non-metallic mineral resources, and other commodities for Alaska, Yukon, and British Columbia to estimate potential future revenues under pre-define and user-generated scenarios within the existing and future railroad corridors in the regions.

Route	Mineral Development Probability	Total estimated value of mineral development
Parks	10th Percentile	\$843,763,387
Richardson	10th Percentile	\$897,109,410
	difference	\$53,346,023
Parks	50th Percentile	\$14,643,109,869
Richardson	50th Percentile	\$20,167,434,999
	difference	\$5,524,325,130
Parks	90th Percentile	\$68,330,984,020

Richardson	90th Percentile	<b>\$100,018,774,830</b>
	difference	<b>\$31,687,790,810</b>