FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas 3
Alaska LNG LLC
Alaska LNG Project
Docket No. PF14-21-000
§ 375.308(z)

December 11, 2014

Mr. Charlie Kominas
Alaska LNG Project
c/o ExxonMobil Alaska LNG LLC
16945 Northchase Dr., DEV-GP4-480
Houston TX, 77060

Re: Staff's Comments on Initial Draft Resource Reports 1 and 10

Dear Mr. Kominas:

The enclosure contains our comments on Alaska LNG LLC's (Alaska LNG) initial draft Resource Reports 1 and 10 for the planned Alaska LNG Project. These comments should be addressed in the next submittal of resource reports. We are also including the comments compiled by the state agencies as they were presented to us. With your filing of the Resource Reports, please provide a matrix that identifies the specific locations where the requested information may be found in the resource reports.

When filing documents and maps, be sure to prepare separate volumes, as outlined on the Commission's website at http://www.ferc.gov/help/filing-guide/file-material.asp. Any Critical Energy Infrastructure Information should be filed as non-public and labeled "Contains Critical Energy Infrastructure Information-Do Not Release" (18 CFR 388.112).

Thank you for your cooperation. If you have any questions, please contact me at (202) 502-8045.

Sincerely,

James Martin
Branch Chief
Gas Branch 3

Enclosure

cc: Public File, Docket No. PF14-21-000

Enclosure

ALASKA LNG PROJECT
DOCKET NO. PF14-21-000
ENVIRONMENTAL COMMENTS

Comments on the Initial Draft of Resource Report 1

1. Clarify the following discrepancies identified in Resource Report 1:

    a. Section 1.5.3.2 states the gas treatment plant (GTP) and related infrastructure would require about 7 years to complete. This is not consistent with the 2019 to 2024 timeframe for project construction provided in section 1.5.1.3. Provide the schedule of activities for the GTP and related infrastructure on at least an annual basis, attributing activities to the season in which they are planned to occur (i.e., summer, winter, or both).

    b. Section 1.3.2.7 indicates that the construction method for the Point Thomson Gas Transmission Line (PTTL) could include underground installation or placement on elevated supports, and would be determined during pre-front-end engineering design studies. Section 1.5.3.2 indicates the PTTL would be constructed over 2 years, with the first year required to install vertical support members and the second year to install the pipeline. This suggests the pipeline would be installed aboveground. Clarify the construction details for this facility.

    c. If the PTTL pipeline is installed below ground, indicate whether the gas conditioning facilities described as part of the non-jurisdictional facilities planned for the Point Thomson Unit would provide the gas cooling described in section 1.3.2.7 or if additional gas cooling facilities would be needed.

2. Provide a more detailed description of the owner/operator of each facility. It is unclear who would own and operate the various components of the project.

3. Provide additional details on the opportunity for providing "in-state" gas supply. Include locations of potential take-off points as well as information on discussions with local entities to take the gas from the take-off points.

4. Provide a cumulative impacts assessment for the project, including a thorough analysis of the cumulative impacts associated with the additional work related to the project (as identified in section 1.1, page 3). Provide a description of the methodology used for the assessment. The description should include

identification of the study area or region of influence used for the assessment as well as justification for the use of the identified study area.

5. Provide an appropriate scale map (e.g., 1:6,000) showing the location of the liquefaction facility on the Cook Inlet.

6. Provide the location, footprint, and plot plans for the proposed compressor stations.

7. Provide the location of the proposed centerline of the pipeline facilities as well as the proposed permanent and construction rights-of-way and additional temporary workspaces. Identify the proposed right-of-way width for both construction (including temporary extra workspaces) and operation of each of the proposed pipelines. For any construction right-of-way width greater than 75 feet, provide a detailed explanation, including typical rights-of-way figures, of the conditions that justify the increased width.

8. Provide maps and a detailed description of the proposed CO_2 return pipeline at Prudhoe Bay.

9. Gravel and sand source areas should be identified as well as disposal areas for blast rock and other construction debris. Provide estimates of the amount of material to be obtained and disposed of during construction.

10. Provide an analysis of whether the existing infrastructure in the project area (e.g., roads, bridges, etc.) is adequate and could support the heavy loads that would be transported during construction. If modifications to the existing infrastructure would be needed to accommodate construction of the project, those modifications should be defined with respect to the footprint of the activity, who would execute the action, the timeline, and whether it would only be completed in support of the Alaska LNG Project.

11. Describe whether dredging would be necessary for construction and operation of the liquefaction facility on the Cook Inlet. Include information about the amount of dredging required, the dredging method(s) that would be used, and where and how the dredge material would be disposed for both the construction and operation phases of the project. Also clarify if dredging would be required to accommodate the offshore activities and facilities along the North Slope, including the volume of material to be dredged, the dredging methods, and where and how the dredge material would be disposed.

12. Where temporary ice haul roads are proposed to be constructed, indicate whether these roads would be re-constructed each winter and whether Alaska LNG would be able to re-construct the road in the same location with no additional impact.

Also indicate whether some temporary access (haul road, west dock improvements) would be repeated each year of construction. For example, would ice roads be reformed each winter construction season? Would dredging operations need to occur after each winter season due to ice, or multiple times during year due to ice or currents?

13. Section 1.3.2.1 states that north of the Brooks Range the pipeline gas would be cooled to below freezing to maintain the stability of thaw sensitive soils. South of the Brooks Range the report indicates there would be seasonal variation in the temperature of the gas exiting compressor stations. Provide additional information on the plan to maintain the gas temperature to specifically minimize its impact on thaw sensitive soils. Indicate if other solutions are being considered. Clarify whether the cooling north of the Brooks Range would be year round or seasonal. Additionally, describe whether temperature control of the gas would be needed south of the Brooks Range in areas of thaw unstable permafrost and where it would apply. Describe the facilities and process used to cool the gas.

14. Clarify whether the heater stations described in section 1.3.2.2 would heat the gas, cool the gas, or both.

15. The pipeline construction infrastructure described in section 1.3.2.3 includes a pipe coating yard and concrete coating facility. Clarify if only one pipe coating yard and one concrete coating facility are planned for the pipelines.

16. The pipeline construction infrastructure described in section 1.3.2.3 includes equipment fueling facilities. Provide a detailed description of these facilities, including seasons the facilities would be operated, the criteria that would be used to site them, and mitigation measures that would be implemented at each site to protect the environment.

17. Expand the discussion in section in 1.5.2.3 to provide a detailed description of the marine pipe lay process.

18. Describe the location, dimensions, purpose, and construction method for permanent roads for access during operations.

19. Several agencies provided detailed comments on the FERC's Erosion Control, Revegetation, and Maintenance Plan (Plan) and Wetland and Waterbody Construction and Mitigation Procedures (Procedures) during the review period for the Alaska Pipeline Project. Review these agencies' comments and ensure appropriate measures are incorporated as necessary into the Alaska LNG Plan and Procedures. For any proposed modifications to the FERC Plan or Procedures, include a table that provides a "cross walk" of each part of the Plan and Procedures with the corresponding section of Alaska LNG's proposed mitigation

measures and a detailed analysis of the alternative methods proposed to demonstrate that they would provide the same or greater levels of protection.

20. Include Alaska LNG's proposed plans (e.g., project-specific Erosion Control, Revegetation, and Maintenance Plan, Wetland and Waterbody Construction and Mitigation Procedures, etc.) as appendices to this resource report.

21. The "Landfalls" portion of section 1.5.2.3 indicates that microtunneling methods are also under consideration. Provide a description of the microtunneling construction method as well as an analysis of the considerations in selecting microtunneling.

22. Provide a detailed description of the construction and operation procedures to be used in the areas of discontinuous permafrost for the appropriate facilities in section 1.5.2.3.

23. It appears that the 60-mile-long PTTL would carry untreated gas with a high sulfur content. Describe the design measures that would be incorporated to account for the high sulfur content and integrity of the pipe. Indicate whether the gas conditioning facilities described as part of the non-jurisdictional facilities planned for the Point Thomson Unit would address the potential sulfur content issue.

24. Indicate whether the vertical support members needed to implement the above ground installation of the Prudhoe Bay Gas Transmission Line would be equipped with closed-loop refrigeration systems to prevent thermal impacts on permafrost similar to those used on the TAPS line. Further, if the PTTL line is installed aboveground, indicate if the vertical support members for that pipeline would use a similar refrigeration system. For any portions of the mainline that would be installed above ground in areas of thaw unstable permafrost indicate if the same type of refrigerated vertical supports would be used and provide a table listing the locations of these mitigation measures.

25. Identify the source and purpose, and estimate of the quantity of water that would be required for construction and operation of the project.

26. Clarify the power source for the proposed compressor stations. The description lists the fuel sources as "may be included." Additional information is needed to understand what Alaska LNG would propose for its power sources, how the decision would be made, and when the decision would be made.

27. Describe the proposed power source(s) for the cathodic protection (CP) system. Describe whether the CP system for the mainline would interfere with integrity management of the TAPS line or other underground utilities. Include a description of any environmental factors that could influence the effectiveness of

the CP system and what steps would be necessary to adjust the system to address these effects. In addition, describe any mitigation measures proposed in areas where the mainline pipeline would be located in proximity to high voltage electric transmission lines.

28. Similar to jurisdictional facilities, describe the environmental impacts of the non-jurisdictional facilities. Indicate ownership and design plans for each facility. The following information should also be provided for non-jurisdictional facilities:

    a. maps depicting the locations of the facilities and alternative routes considered;
    b. a listing of any federal, state, and local permits required and the anticipated schedule for obtaining those permits;
    c. an estimate of the acreage required for both construction and operation of the facilities;
    d. a list of waterbodies and wetlands affected by the facilities; and
    e. copies of all correspondence with the State Historic Preservation Office and the U.S. Fish and Wildlife Service regarding cultural resources and federally listed endangered and threatened species.

29. Provide a correspondence appendix that includes documentation of correspondence Alaska LNG has had with land management, regulatory, and other applicable agencies and entities with expertise in the project area during preparation of the resource reports. A correspondence appendix, organized and tabbed by stakeholder, should be provided for each individual resource report or one overall correspondence appendix (typically provided as part of Resource Report 1) should be provided that covers all resource reports.

30. Discuss generally the production source of natural gas to be transported by the Alaska LNG Project. Indicate if the gas would come from existing or future production facilities. If the source would be from future facilities, describe the review and permitting process for these facilities.

31. Address the comments provided to FERC by the State of Alaska in attachment 1.

Comments on the Initial Draft of Resource Report 10

1. Provide a discussion of why the existing Kenai LNG facility or its expansion cannot be used to serve the needs of this project.

2. Identify all areas of the route considered "greenfield" (i.e., not collocated with an existing facility or right-of-way). For those areas considered greenfield, provide a summary of what alternatives were considered in these areas. The summary should include a comparison of the routes considered. Factors to include in the

analysis are: number of total miles crossed, acres of construction right-of-way, acres of permanent right-of-way, number of waterbody crossings, acres of wetlands affected, land ownership type, land use types affected in acres, reason the alternative was dismissed as the proposed route, and any other factor needed to provide a meaningful analysis of the alternatives considered.

3. With the September 18, 2013 signing of the Denali Park Improvement Act (Public Law 113-33), provide an alternatives analysis for a route that would utilize the utility corridor of the Parks Highway for the 7 miles the road passes through Denali National Park and Preserve. Provide a detailed comparison of potential impacts with the current proposed route that avoids the park.

4. If microtunneling would be used to install the landfall at Cook Inlet, provide an alternatives analysis that compares the use of microtunneling with the horizontal directional drill technique and open cut trenching.

5. Provide an alternatives analysis related to the proposed marine pipe lay method that compares the anchor-based lay barge with the use of a lay barge that makes use of a dynamic positioning system. Include a detailed comparison of potential benthic impacts, marine vessel traffic issues, and an analysis of metocean data that could affect barge handling and marine safety.

6. Provide an alternatives analysis comparing the proposed direct lay of the marine segment of the pipeline, with an alternative that would include plowing or jetting the pipeline to install it at or below the bottom of the sea bed. For the direct lay of the marine segment, provide evidence of consultation with the U.S. Department of Transportation (DOT) that use of the direct lay would meet the requirements of the DOT's Minimum Federal Safety Standards in 49 CFR 192.

Attachment 1

State of Alaska Comments on Preliminary Draft Resource Report (RR) 1 and RR 10 Table of Contents
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Department/ Division/ Section	Document name	Section # (i.e. 2.1.4)	Page #	Figure # / Table #	Comment
ADF&G	Preliminary Draft RR 1	1.0	1		As information in this draft report is not well developed or detailed, it is difficult to comment on most aspects of the general project description. As more detail is provided in subsequent drafts, more comments will likely be developed.
ADOT&PF	Preliminary Draft RR 1	1.1 PROJECT DESCRIPTION Ancillary Facilities	3		This section makes a general reference to using State of Alaska – DOT transportation infrastructure – Airports, roads, etc. While this report is very preliminary in nature, it is recommended that the project sponsors coordinate closely and frequently with ADOT, their plans with regards to this infrastructure. The impacts to ADOT infrastructure needs to be defined and planned for as early on as possible.
ADOT&PF	Preliminary Draft RR 1	1.3 LOCATION AND DESCRIPTION OF FACILITIES	4-5		The study corridor is approximately 2000 ft. wide. Understanding the very preliminary stages of this project, ADOT will want to know as soon as possible the locations where the pipeline will cross the road and or be longitudinal within the highway right of way. We will want to know what existing bridges, if any, the pipeline proposes to use / attach to. What existing or new material sources are to be used/proposed? Locations of laydown yards, camps, etc. and proposed access points to the existing highway system.
ADNR/DGGS/ Engineering Geology	Preliminary Draft RR 1	1.3.1.4 Other Facilities	7		Special considerations are required in establishing new sand and gravel material sites in the coastal environment, particularly in the Nikiski region. Resource extraction in coastal regions must be conducted in a manner that will minimize adverse impacts to natural shoreline processes; this includes limiting the removal of vegetation such as trees and brush in areas that could become destabilized and ensuring that material extraction will not trigger or accelerate shoreline erosion locally or in an adjacent area.
ADOT&PF	Preliminary Draft RR 1	1.3.3.3 Non-Jurisdictional Facilities, Kenai Spur Highway Relocation	13 – 15		The report states the planned Liquefaction Facility location "would require that the existing Kenai Spur Highway be relocated to allow for site safety and security buffer zones." It further indicates ADOT would be responsible for this and that it must be completed prior to start-up of the Liquefaction Facility. The report indicates this is a Non-Jurisdictional Facility and beyond FERC's jurisdiction, but it appears to imply it is being considered a connected action. ADOT wants to be involved In the NEPA scoping for this project. If in fact ADOT is to relocate the road, both adequate time and funding is needed to do so. The parameters by which the location of the road must be relocated need to be made known as soon as possible.
		1.4.2.2	18 -19		The report mistakenly refers to the Denali highway when it should say "Dalton" highway. It also says the

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ADOT&PF	Preliminary Draft RR 1	Pipeline Associated Infrastructure, Access Roads			current design requires an access road approximately every 10 miles of pipeline from the nearest existing public or private road to the construction ROW. The 10-mile road access appears improbable between Livengood and where the pipeline alignment becomes adjacent to the Parks Hwy near Nenana. There are no roads in this area. Access roads will more than likely impact DOT&PF ROW, requiring driveway access permits and other review. This review will take time and coordination with DOT&PF's ROW and Traffic Engineering sections, regarding specific locations of access roads, and should commence as soon as is possible.
ADF&G	Preliminary Draft RR 1	1.4.2.2	19		Temporary work camps as well as permanent facilities need to be surrounded by electric fences to minimize human interactions with foxes, and brown and black bears that were common during construction of the Trans-Alaska Pipeline. The temporary storage and proper disposal of putrescible wastes will be an important part of minimizing human/carnivore interactions, as well as the prohibition of direct feeding of animals. Regarding construction impacts to bears, mortality to bears also could occur from defense of life and property incidents. The authors should refer to literature that described human-carnivore interactions and the problems that ensued during the construction of the Trans-Alaska Pipeline System. In addition, a bear-human interaction plan will need to be developed and implemented before pre-construction and construction activities occur. The plan will need to address topics including prohibition of direct feeding of bears and other wildlife by humans; minimizing the attraction of bears to facility and work sites; the layout of facilities and work areas to minimize interactions between humans and bears; measures to warn and protect site personnel; deterrence of bears, if authorized, from the work area or facility; proper storage and disposal of materials that may be toxic to bears; and proper handling, temporary storage, and disposal of putrescible wastes. The bear-human interaction plan could be a component of a larger more comprehensive carnivore-human interaction plan that addresses not only bears, but foxes, wolves, coyotes, and wolverines that occur in the project area. The plan should account for the differences in the carnivore presence within various construction segments so that additional emphasis can be placed within segments with known issues regarding human-carnivore interaction.

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Department/ Division/ Section	Document name	Section # (i.e. 2.1.4)	Page #	Figure # / Table #	Comment
ADOT&PF	Preliminary Draft RR 1	1.4.2.2 Pipeline Associated Infrastructure, Construction, Camps, Pipe Storage Areas, and Contractor Yards	19-20		The ADOT will need to know the location and size of all camps. It is likely the Department will require a Traffic Impact Analysis for each camp that accesses a major State Highway. Good quality material sites along the Dalton Highway are hard to find, develop and permit. Most of our existing sites are needed for future maintenance and road projects. ADOT would be interested in acquiring rights and joint use of any new sites that are developed along the Dalton and Parks highways. Locating, developing and producing quality material for both the gas line construction and for future roadwork and maintenance should be viewed as a positive benefit for commerce and the traveling public.
ADNR/DGGS/ Engineering Geology	Preliminary Draft RR 1	1.5.2.3 Pipeline Construction Procedures	26 - 35		Given the other categories of consideration, this section should also address the possible impacts of any dredge modifications or new infrastructure in coastal areas. This would include assessments of how, or if, intertidal and near shore permanent facilities such as docks, terminals, etc. will affect existing alongshore sediment transport patterns.
ADNR/DGGS/ Engineering Geology	Preliminary Draft RR 1	1.5.2.3 Trenching	29		It has been proposed that State of Alaska geologists work in conjunction with the Project's trenching activities to document and log the geology exposed in the trench walls. This Project will provide an unparalleled opportunity to construct a North-South geologic transect across Alaska. Section describing trenching procedures should include statement that geologists may be present while the trench is open, collecting samples and documenting the geology of the trench walls.
ADNR/DGGS/ Engineering Geology	Preliminary Draft RR 1	1.5.2.3 Longitudinal and Cross Slopes	34		Unstable slopes are not explicitly addressed; elements are included in Longitudinal and Cross Slopes section. Anticipate further details to be outlined in Applicants' Plan and Applicants' Procedures.
ADNR/DGGS/ Engineering	Preliminary Draft RR 1	1.5.2.3 Geologic	34		Report states that "Neither the PBTL nor PTTL crosses known, potentially active fault areas". Gravitational collapse faults and low activity faults exist in the general vicinity of the PTTL. A geologic study should

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Geology		Faults			address whether or not these features cross any of the PTTL facilities or pipelines.
ADNR/DGGS/ Engineering Geology	Preliminary Draft RR 1	1.5.2.5 Infrastructure Construction	37		Special considerations are required in establishing new sand and gravel material sites in the coastal environment, particularly in the Nikiski region. Resource extraction in coastal regions must be conducted in a manner that will minimize adverse impacts to natural shoreline processes; this includes limiting the removal of vegetation such as trees and brush in areas that could become destabilized and ensuring that material extraction will not trigger or accelerate shoreline erosion locally or in an adjacent area.
ADF&G	Preliminary Draft RR 1	1.5.3.2	38		The text states the Point Thomson Transmission Line will be constructed in two seasons; 1 season for VSM installation and the second for pipe installation. In Section 1.3.2.7, the text indicates pre-FEED studies will determine if the pipeline will be buried or elevated. Both sections should be describing the same procedure for installing this project component.
ADF&G	Preliminary Draft RR 1	Appendix A			Appendix A, Point Thomson Corridor, Sheet 9, MP 42 The proposed alignment corridor crosses the East Channel Sagavanirktok River slightly upstream or downstream of the buried crossing of the Badami Pipeline. The proposed route may cross the wetland complex slightly upstream of the Badami Weir, a structure put in place by BP Exploration (Alaska) Inc. to stop headcutting of the outlet channel that occurred when outflow was intercepted and eroded the unconsolidated fill over the Badami Pipeline ditch. Substantial resources have been focused on keeping this wetland from being drained. The alignment should be altered to eliminate the possibility of a repeat of this incident. In addition, overwintering of anadromous broad whitefish has occurred upstream and downstream of the proposed crossing location. If this crossing is proposed as a winter open cut crossing, appropriate means need to be used to ensure viable fish overwintering can be maintained downstream of the proposed crossing location. Alternatively, HDD or an elevated or aerial crossing could be used at the East Channel Sagavanirktok River.
ADF&G	Preliminary Draft RR 1	Appendix A			Appendix A, Point Thomson Corridor, Sheet 10, MP 49-50. The proposed alignment corridor goes through a known anadromous fish overwintering area along the bluffs of the West Channel Sagavanirktok River. If this crossing is proposed to be constructed in winter by open cut, the alignment will need to be shifted either upstream or downstream to cross shallow areas that will freeze to the bottom, and thus avoid causing adverse effects to this important fish overwintering area. Alternatively, HDD or an elevated or

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					aerial crossing could be used at the West Channel Sagavanirktok River. The resource reports should carefully assess the effects of soil disturbance caused by burial of the pipeline to permafrost integrity, particularly through streambanks and wetlands. Ditching through stream banks, especially in unstable, ice-rich soils, may cause physical and thermal degradation , causing loss of riparian habitat, drainage of wetland complexes, potential changes in stream morphology, and increased sedimentation, with a resultant loss of aquatic habitat. The pipeline ditch can intercept overland flow that may erode backfill material from the pipeline ditch and potentially serve as a canal carrying water with a high sediment load into nearby streams or wetlands. The interception of stream flow and wetland cross drainage can pose significant problems, particularly in areas of continuous and discontinuous permafrost in rolling or mountainous terrain. Rehabilitation, especially in ice-rich soils, may require extensive, repeated ditch maintenance and long-term thermal stabilization activities before the habitat can return to its former stability and productivity. This may be particularly problematic if chilled gas is not added to the pipeline for several years following installation, thereby slowing the rate of re-freezing of the disturbed permafrost soils. Detailed evaluation of the buried Point Thomson gas transmission pipeline should be presented with respect to water movement across the pipeline ditch, particularly as the proposed route is generally perpendicular to water movement in the area. An evaluation of the measures that will be used to ensure water movement (e.g., sheet flow) across the buried pipeline is accommodated; measures to stabilize the ditch as backfill thaws and loses volume; measures and techniques that will be used to bring additional backfill material to areas needing remediation along the generally roadless 58 mile alignment; and measures to ensure vegetation regrowth all need to be presented within the resource reports.
ADNR/DGGS/ Engineering Geology	Preliminary Draft RR 1	Appendix A Corridor Sheets (Topo and Aerial)		Appendix A	On the map sheets, many NHD Named Flow lines do not correspond to streams in either aerial photos or topographic map base imagery.

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ADNR/OPMP	Preliminary Draft RR 1	Appendix C	2 - 48		Project proponent should include a key or other description to clarify/explain what the designations for columns 6-9 (U/S. M/S & D/S) mean. (Do they stand for: "Upstream", "Midstream", and "Downstream.") What do the notations "X", "(X)", and "A" in columns 6-8 mean.
ADNR/ML&W /SCRO	Preliminary Draft RR 1	Appendix C	2		Authorization for easement or lease for any long-term facilities that are required for pipeline operation, yet not issued AKLNG, such as electric distribution lines that feed pipeline facilities (though note that these authorizations would be issued to third parties, such as utility companies).
ADNR/Div. of Parks & Outdoor Rec.	Preliminary Draft RR 1	Appendix C	18		Within the Alaska Dept. of Natural Resources, LWCF oversight responsibility lies with the State Liaison Officer, Ben Ellis, Director, Division of Parks and Outdoor Recreation and Alternate State Liaison Officer, Jean Ayers, Grants Administrator. 550 W. 7th Ave, Suite 1380, Anchorage, AK 99501. ben.ellis@alaska.gov 907-269-8701 jean.ayers@alaska.gov 907-269-8694. It also lies with USDOI, National Park Service, NW regional office. Contact: Martha Droge, LWCF Project Officer, 909 First Avenue, 5th Floor, Seattle, WA 98104-1060. Martha_J_Droge@nps.gov 206-220-4122
ADOT&PF	Preliminary Draft RR 1	Appendix C	30		Highway Event Permit is listed as needed for "transportation of material or construction work within ROW". This is incorrect. This permit is used for special events such as parades or running races. I don't anticipate the project will need this permit.
ADNR/ML&W /Water Resources	Preliminary Draft RR 1	Appendix C			Permit or Plan; Agency column should be rewritten to state: Permit to Appropriate Water initially, and then followed by Water Right Certificate of Appropriation for permanent water uses; Temporary Water Use Authorization for non-permanent water use. Alaska Department of Natural Resources (ADNR), Division of Mining, Land and Water (DMLW).
ADNR/ML&W /Water Resources	Preliminary Draft RR 1	Appendix C			Estimated Time for Permit Approval column should read: 2 – 4 months minimum for Temporary Water Use Authorization. Issuance time for a Permit to Appropriate Water can be longer depending on outcome of the public notice process. (SEE Appendix C – State Approvals – Surface Water Rights Permits…at pg. 18)
ADNR/ML&W /Water Resources	Preliminary Draft RR 1	Appendix C			Statute/Regulation column should read: Alaska Water Use Act, Alaska Statute (AS) 46.15 / 11 AAC 93.035 - .130 and 11 AAC 93.210 - .220

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ADNR/ML&W /Water Resources	Preliminary Draft RR 1	Appendix C			Definition column should read: Water is a common property resource in Alaska; application for water right over 5,000 gallons per day is subject to public notice process.
ADNR/ML&W /Water Resources	Preliminary Draft RR 1	Appendix C			Why Permit is Required column should read: For constructing works for an appropriation, or diverting, impounding, withdrawing, or using a significant amount of water from any source (the term significant amount of water is defined in 11 AAC 93.035).
ADNR/ML&W /Water Resources	Preliminary Draft RR 1	Appendix C			Data Needs column should start out with a sentence that states: As stated in the instructions on each application form. The existing first bullet point should begin with "Temporary Water Use Authorization requires:". The current first sentence ("Requires a Temporary Water Use Permit and Surface and Groundwater Rights for groundwater and surface water withdrawal.") of the first bullet point should be deleted. The first line of the second bullet point should read: Permit to Appropriate Water requires:
ADNR/ML&W /Water Resources	Preliminary Draft RR 1	Appendix C			Commentary column should read: A Temporary Water Use Authorization can be issued for up to five years per authorization.
ADNR/ML&W /SCRO	Preliminary Draft RR 1	Appendix C			As per AS 27.19.030, the State of Alaska, Dept. of Natural Resources is responsible for approving material site reclamation plans for all gravel mining operations located within the state. Regardless of the location/land ownership of the mining operation.
ADOT&PF	Preliminary Draft RR 1	Appendix C	30		A Lane Closure Permit should be anticipated for work done under a Utility Permit.
ADNR/ML&W /SCRO	Preliminary Draft RR 1	Appendix C	27		**Materials Sale Permit:** Authorization may be required jointly from the SPCO and DMLW if new material sites will be open to public sales following approval. Under AS 38.05.550 designated material sites are multi-user sites.
ADNR/ML&W /SCRO	Preliminary Draft RR 1	Appendix C	41		Authorization for temporary restriction or closure of public easements (including RS-2477 and section line easements) may be required in support of pipeline construction activities Authorization for vacation(/ temporary relocation) of public easements (including RS-2477 and

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					section line easements) may be required in support of long term pipeline operation activities Authorization or non-objection for use and development of RS-2477 or section line easements may be required for any pipeline development or operation activities that exceed those uses described in DMLW's 'generally allowed uses of state land' Approval for the creation of easements or platted right-of-way depicted on a DNR plat that is separate from the plat document
ADEC/DOW	Preliminary Draft RR 1	Appendix C	All		GENERAL DISCUSSION DEC Division of Water, Wastewater Discharge Authorization Program is currently working on issuing General Permit AKG332000 – Statewide Pipeline Construction, Operation, and Maintenance (Statewide Pipeline GP) , which will authorize discharges associated with hydrocarbon pipeline Construction, Operations and Maintenance. The following discharges are proposed to be included in the General Permit: Domestic Wastewater, Filter Backwash, Gravel Pit Dewatering, Excavation Dewatering, Hydrostatic Test Water, Fire Test Water, Secondary Containment, Mobile Spill Response, Horizontal Directional Drilling, Non-contact Cooling Water (limited coverage), and Storm Water.
ADEC/DOW	Preliminary Draft RR 1	Appendix C	All		GENERAL DISCUSSION Appendix C does not discuss facility storm water requirements that are not covered under construction storm water. These storm water permit requirements are covered under the multisector general permit or Statewide Pipeline GP.
ADEC/DOW	Preliminary Draft RR 1	Appendix C	All		GENERAL DISCUSSION Discharges associated with horizontal directional drilling (HDD) appear to be included in discussion under 401 Certification of 404/103/10 permits. However, drilling fluids potentially discharged during HDD activities would be covered under a CWA 402 Program (i.e. APDES Statewide Pipeline GP or individual permit).
ADEC/DOW	Preliminary Draft RR 1	Appendix C ROW 3 (pg.	6 – 7		GENERAL DISCUSSION Class I UIC Wells shows up twice; once on page 7 and again on page 22. DEC recommends that the applicant

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		6) – continues to ROW 1 (pg. 7)			describe EPA Requirements on page 7 and DEC on page 22. Or, put next to each other to describe the requirements and authority. EPA has primacy over approving Class I UIC injection. DEC requires coverage under 2010DB0001 (or upcoming 2015DB0001) after receiving EPA approval. Comments for page 22/23 are shown below.
ADEC/DOW	Preliminary Draft RR 1	Appendix C ROW 4 / ROW 1	22 - 23	Column 3	STATUTE/REGULATION Correction: AS 46.03.100
ADEC/DOW	Preliminary Draft RR 1	ROW 1	15		GENERAL DISCUSSION General Permit AKG250000 Non-contact Cooling Water Discharges to Waters of the U.S. in Alaska or the Statewide Pipeline GP will be available for facilities with design intake flows of less than 2.0 million gallons per day.
ADEC/DOW	Preliminary Draft RR 1	ROW 1	15	Column 3	STATUTE/REGULATION ADD: 18 AAC 70.
ADEC/DOW	Preliminary Draft RR 1	ROW 1	15	Column 5	WHY PERMIT IS REQUIRED REPLACE: "discharges on tribal lands for which USEPA retains granting authority" with " Denali National Park and Preserve, Metlakatla, and for 301(h) facilities."
ADEC/DOW	Preliminary Draft RR 1	ROW 1	15	Column 9	DATA NEEDS REPLACE: "ADEC extends area of influence to 1/5 mile" with "DEC may consider a mixing zone on a case-by-case."
ADEC/DOW	Preliminary Draft RR 1	ROW 2	19	Column 5	WHY PERMIT IS REQUIRED Delete: "and Alaska Pollutant Discharge Elimination System (APDES) storm water permits. Also applicable to EPA Class I UIC Wells."
ADEC/DOW	Preliminary Draft RR 1	ROW 2	19	Column 10	COMMENTARY Revise 2nd bullet to read, "Short-term variance required for open cut crossings of streams and water bodies.

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					See 18 AAC 70.200"
ADEC/DOW	Preliminary Draft RR 1	ROW 2	19	Column 10	COMMENTARY Delete 3rd bullet
ADEC/DOW	Preliminary Draft RR 1	ROW 2	19	Column 10	COMMENTARY Revise 4th bullet to read, "Requires an Antidegradation Analysis. See 18 AAC 70.015"
ADEC/DOW	Preliminary Draft RR 1	ROW 3 / 1	19 / 20	Column 1	PERMIT OR PLAN; AGENCY The last row page 19 "CGP" and the next row page 20 "SWPPP" both cover the Construction General Permit; they are not two different permit requirements. The SWPPP is developed prior to filing the Notice of Intent under the CGP. Note that coverage may also be available under the Statewide Linewide GP.
ADEC/DOW	Preliminary Draft RR 1	ROW 3 / 1	19 - 20	Column 10	COMMENTARY Revise the commentary to read as follows, " ADEC has stated the process will remain similar as the one formerly used by EPA."
ADEC/DOW	Preliminary Draft RR 1	ROW 2	20	Column 10	COMMENTARY Revise Definition to read as follows, "… the SWPPP is intended to prevent and minimize releases of storm water into waters of the US."
ADEC/DOW	Preliminary Draft RR 1	ROW 2	22	Column 1	PERMIT OR PLAN; AGENCY CORRECTIONS: Domestic and Non-Domestic Wastewater Disposal System Plan Review; ADEC, Division of Water
ADEC/DOW	Preliminary Draft RR 1	ROW 2	22	Column 3	STATUTE/REGULATION ADD: 18 AAC 72.600 (Non-Domestic)
ADEC/DOW	Preliminary Draft RR 1	ROW 2	22	Column 4	DEFINITION CORRECTIONS: Department Plan Review and Approval is required for Domestic and Non-Domestic Wastewater Systems by State Wastewater Disposal Regulations.

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ADEC/DOW	Preliminary Draft RR 1	ROW 2	22	Column 10	COMMENTARY CORRECTIONS: 1. Detailed engineering reports, plans and specifications must be signed and sealed by an Alaskan registered professional engineer.
ADEC/DOW	Preliminary Draft RR 1	ROW 3	22	Column 1	PERMIT OR PLAN; AGENCY CORRECTIONS: Domestic and Non-Domestic Wastewater Disposal State Permits (18 AAC 72) and Alaska Pollutant Elimination Discharge (APDES) Permits (18 AAC 83) ; ADEC, Division of Water
ADEC/DOW	Preliminary Draft RR 1	ROW 3	22	Column 3	STATUTE/REGULATION CORRECTIONS: 1. 18 AAC 70 – Alaska Water Quality Standards 18 AAC 83 – APDES Program
ADEC/DOW	Preliminary Draft RR 1	ROW 3	22	Column 9	DATA NEEDS GENERAL DISCUSSION 1. Coverage for Domestic and Non-Domestic Wastewater may be obtained through various General Permits or through the Statewide Pipeline GP. 2. The Temporary Camp Practice Permit will NOT apply to camps described in RR1. To qualify for coverage under this permit, camps must be: Remote; Small (≤24 average persons/ 7day period); Temporary (<14 Days); Only use pit privies, incinerating toilets, or composting toilets; and generate <1,000GPD of Graywater. 3. Because the Temporary Camp Practice Permit would not apply; camps may also need to seek separate coverage's for Solid Waste, Drinking Water, and Food Service through the Department's Environmental Health Division. 4. Data needs address the application process prior to obtaining authorization. Whereas, BMPs are requirements under the permit after the authorization.

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					REMOVE: 1. Temporary Camp Practice Application Worksheet. 2. Application of Best Management Practices. ADD: 1. Mixing Zone Analysis (If Applicable) 2. Wastewater Characterization Environmental Mapping of Discharge Locations
ADEC/DOW	Preliminary Draft RR 1	ROW 3	22	Column 10	<u>COMMENTARY</u> REMOVE: 1. "Consolidated Application for Drinking Water……." EXPLANATION: The permit is not applicable (See Comment Page 22, Row 3, Column 9). ADD: The Statewide Pipeline GP proposes to include coverage for certain Non-Domestic and Domestic Wastewater Discharges. Coverage for Non-Domestic and Domestic Wastewater Discharges may also be possible under various other State Permits or APDES General Permits.
ADEC/DOW	Preliminary Draft RR 1	ROW 4 / 1	22 - 23		GENERAL DISCUSSION Class I UIC Wells shows up twice; once on page 7 and again on page 22. DEC recommends that the applicant describe EPA Requirements on page 7 and DEC on page 22. Or, put next to each other to describe the requirements and authority. EPA has primacy over approving Class I UIC injection. DEC requires coverage under 2010DB0001 (or upcoming 2015DB0001) after receiving EPA approval. Comments for this item are included next to those for items on page 6 and 7.
ADEC/DOW	Preliminary Draft RR 1	Appendix C ROW 4 / ROW 1	22 - 23	Column 4	<u>DEFINITION:</u> Remove second paragraph on page 7 and add to this section "DEC permits Class I wells under a waste water disposal permit *after* EPA issues the Class I permit requirements.
ADEC/DOW	Preliminary	Appendix C ROW 4 /	22 - 23	Column 5	<u>WHY PERMIT IS REQUIRED</u> Replace "Injection of wastewater…" with "Compliance with Waste Disposal under AS 46.03.100 and 18 AAC

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	Draft RR 1	ROW 1			72."
ADEC/DOW	Preliminary Draft RR 1	Appendix C ROW 4 / ROW 1	22 - 23	Column 10	COMMENTARY Remove bullets 2 and 3 from page 6 and 7 and insert here.
ADOT&PF	Preliminary Draft RR 1	Appendix C	34		Utility Permits ROW is listed as "required if pipeline or other facilities are located in existing electric or other utility ROW's." This is incorrect. A Utility Permit will be required for any location where the pipeline occupies the highway right of way (crossings or longitudinal). This would also apply to permanent pipeline infrastructure – such has block valves or compressor stations, etc. In addition, the Statute/Regulation would include most of 17 AAC15.
ADOT&PF	Preliminary Draft RR 1	Appendix C	35		Encroachment Permit is listed as "required if pipeline is located near highways or within highway right of way." As stated above, this more accurately describes a Utility Permit. An Encroachment Permit is for temporary use of the ROW, such as for construction staging areas. It is issued for up to a 5 year term. This permit requires property appraisal and is more time consuming to obtain.
ADOT&PF	Preliminary Draft RR 1	Appendix C			The project sponsors are currently applying for and receiving Special Use Permit for field work (G&G) occurring within the ROW.
ADOT&PF		General Comments			It would be ADOT's intention to avoid roadway construction in areas on the Dalton or Parks Highways when the gas line construction is underway in the same locations along those routes. The STIP identifies proposed projects, locations and timing along both routes. Having said that, the STIP is a fluid document and plan, as is the proposed plan for the gas line.
ADOT&PF		General Comments			The project needs to address the impacts of the use of the Dalton and Parks Highways for transport of equipment, materials, personnel and the overall construction operation of the gas line. What impact will construction have on safety, congestion, roadway maintenance and wear on the highway surface?
ADOT&PF		General Comments			The report states airports may need upgrades and improvements. This needs to be further clarified and quantified. What needs to be done, at what airports and at what cost? ADOT doesn't maintain the Galbraith and Prospect Creek Airports. We have an agreement with Alyeska - who maintains those particular strips. Also, lease space may be limited for staging materials and other operations at several of

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					the airports listed. Once the project has better understanding of the specific operations at each individual airport, they should consult with ADOT Airport Leasing to see if leasing space is available.
ADOT&PF		General Comments			The ADOT foresees a need to construct a permanent maintenance facility at Franklin Bluffs. A maintenance station at this location provides the optimum distance between existing stations, facilitates grading, snow plowing and other maintenance operations and has been needed for over 20 years. A maintenance station at this location will also benefit gas line construction. ADOT is pursuing this effort through the legislature.
ADOT&PF		General Comments			The project needs to identify which state highways will be used to facilitate construction of the Liquefaction Facility – will Seward, Sterling and Kenai Spur Highways between Anchorage and Nikiski be used for hauling material and equipment? What maintenance expectations do the project sponsors have with regards to the Dalton Highway? Do the project sponsors have any expectation of roadway improvements or minimum standards for the Dalton, Elliott or Parks Highways?
ADOT&PF		General Comments			Does the project foresee a need for additional maintenance effort on the Dalton and Elliot Highways during construction of the project? Do they foresee a need to provide maintenance 24/7 along the Dalton?
ADOT&PF		General Comments			Does the project propose to comply with weight restrictions or will they need to haul overloads? The project needs to address the impact on pavements especially during Spring Break-up when Seasonal Weight Restrictions are in place. What major routes will be used in and around Fairbanks and what impact will that have on traffic congestion, Level of Service and road wear? The Department requests more detailed information from the Project Sponsor as to how the pipe will be transported, the weight of the trucks (low, high and average) and how the project intends to minimize negative impacts to Departmental assets. What are the projected number of truck loads on the Dalton, Elliott, and Parks Hwys?
		General			Failure to meet air quality standards can cost the state and local government significant penalties and

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ADOT&PF		Comments			potential lawsuits, including loss of federal grants for transportation and other programs. Careful analysis of any projected impacts will have to occur. The impacts resulting from increased traffic resulting from the construction efforts will need to be incorporated into the Fairbanks traffic model and not exceed Fairbanks' PM 2.5 emissions budgets. These trips could potentially trigger transportation conformity, which will take some time to work through and will involve the Metropolitan Planning Organization (MPO). Regardless, the project will be required to undergo a general conformity determination. In either case an interagency consultation process on any gasline-related transportation impacts to air quality will be required. Winter construction, at least in the Fairbanks and northern Alaska area, would potentially present air quality challenges. We recommend listing specific construction timeframes so any impacts can be considered and addressed.
ADOT&PF		General Comments			Does the project foresee a labor shortage in ADOT labor positions – maintenance operators and mechanics and engineers?
ADNR / Division of Parks and Outdoor Recreation		General Comments			Since the proposed pipeline will impact DPOR managed lands totaling 40+ miles – we would like to see an explanation that outlines how the project will mitigate any impacts to seasonal and year round recreation for Denali State Park; and the Captain Cook State Recreation Area.
ADNR / Division of Parks and Outdoor Recreation		General Comments			Work with the State Historic Preservation Office and the Office of History and Archaeology to identify cultural and archaeological resources within the project area, within Denali State Park and Captain Cook State Recreation Area.
ADNR / Division of Parks and Outdoor Recreation		General Comments			1. Mission Statement: The Division of Parks and Outdoor Recreation provides outdoor recreation opportunities and conserves and interprets natural, cultural, historic resources for the use, enjoyment, and welfare of the people. 2. Denali State Park (AS 41.21.151), and Captain Cook State Recreation Area (41.21.410) are legislatively designated areas; and are subject to regulations found in 11 AAC Chapters 5, 7, 12, 16, 18, and 20. 3. Denali State Park is managed according to statute, regulations, and the Denali State Park Master Plan (2006).

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					4. The character of the proposed pipeline, and associated pipeline activities within Denali State Park and/or Captain Cook State Recreation Area should consider the following: • Minimization of project foot print. • Minimization of visual and noise impacts, and reoccurring impacts associated with construction and maintenance. • Develop and provide enhancements of recreation opportunities (i.e. trails, campgrounds, boat launches, land acquisitions, visitor services, etc.).
ADNR / Division of Parks and Outdoor Recreation		General Comments			DPOR is working on developing a visitor center complex in Denali State Park at MP 134.5
ADNR / Division of Parks and Outdoor Recreation		General Comments			Denali State Park and Captain Cook State Recreation Area are subject to Land Water Conservation Fund (LWCF).
					ADF&G = Alaska Department of Fish & Game
					ADNR = Alaska Department of Natural Resources
					DGGS = Division of Geological & Geophysical Surveys
					DMLW = Division of Mining, Land, and Water
					OPMP = Office of Project Management & Permitting
					DMLW/SCRO = Division of Mining, Land, and Water / South Central Region Office
					DPOR = Division of Parks & Outdoor Recreation
					ADEC/DOW = Alaska Department of Environmental Conservation / Division of Water