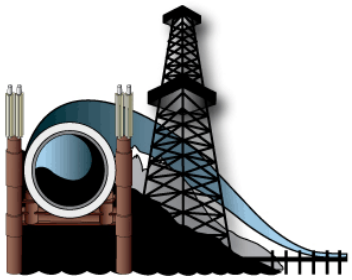
Meeting Minutes
State of Alaska Oil & Gas Infrastructure Risk Assessment



This document is intended to be a summary of the meeting discussion for use by the project team in developing the risk assessment methodology and is not intended to be an official transcript.

Topic:	**Fairbanks Public Stakeholder Consultation Meeting**
Date:	**September 25, 2008**
Time:	**6:30 PM – 8:30 PM**
Purpose:	The intent of this meeting was to solicit Fairbanks area public input as a stakeholder with interests in existing Alaska oil and gas industry infrastructure. Input provided at this meeting will help the expert firm design the risk assessment methodology.
Attendees:	Mike Thompson, State of Alaska DNR Dan Rice, State of Alaska PSIO Ed Morgan Gary Shultz, State of Alaska DNR Rena Delbridge, Fairbanks Daily News-Miner Marcia Davis, State of Alaska DOR Betty Schorr, State of Alaska ADEC Eric Breitenberger, State of Alaska ADEC Tom DeRuyter, State of Alaska ADEC John Hilgendorf, Alyeska Pipeline Service Company Matt Carle, Alyeska Pipeline Service Company Pamela Miller, Northern Alaska Environmental Center Richard Fineberg Dave Lacey Gabe Scott, Cascadia Wildlands Project David Guttenberg, State Legislature Scott Kawasaki, State Legislature Joe Thomas, State Legislature Rick Solie, ConocoPhillips Alaska Ira Rosen, State of Alaska ADEC Bettina Chastain, EMERALD Gretchen Grekowicz, EMERALD

Agenda Item	Decisions/Actions
1. Introductions The meeting began with introductions of those in attendance. A total of 22 individuals were present including members of the public, the State Agency Oversight Team (SAOT), industry, State Legislators, the Fairbanks Daily News-Miner, and local Fairbanks Alaska Department of Environmental Conservation (ADEC) employees. The meeting was facilitated by Bettina Chastain, EMERALD Project Manager, and scribed by Gretchen Grekowicz. Ira Rosen, the ADEC Project Manager, represented the State of Alaska.	
2. Project Objectives, Background, and Scope The ADEC Project Manager provided a brief introduction of the project, which was followed by a detailed overview by the EMERALD Project Manager outlining project background, scope, and timeline. Attendees posed some initial questions and comments relating to the scope and considerations of the risk assessment.	
2.1 Project Goal- The goal of the project is to conduct a system-wide risk assessment of oil and gas infrastructure in Alaska. This will involve taking a system of systems approach and evaluating the interrelations among components of the infrastructure. Although many risk assessments of individual infrastructure components have been executed in the past, this type of system-wide assessment has never been conducted in Alaska.	• None
2.2 Stakeholder Consultation Objectives- The objectives and structure of the stakeholder consultation process were explained by the EMERALD Project Manager. Six regional meeting areas along the infrastructure corridor are planned including Fairbanks, Kenai, Anchorage, Valdez, Barrow, and possibly Juneau. Fairbanks meetings are the kick-off to this consultation period. Individual meetings with key stakeholders as well as public meetings will be held in each location. The goal of the meetings is to solicit stakeholder input on significant concerns relating to existing oil and gas infrastructure in Alaska.	• None
2.3 Project Background- A background of the project was provided. Alaska's infrastructure is aging and many of its components have exceeded their original design life. In 2006, North Slope oil production was halted by failure of one component of the system (pipeline leak due to corrosion). The governor announced this risk assessment project in May 2007 in response to that incident.	• None
2.4 Project Oversight- The risk assessment is being managed by Alaska Department of Environmental Conservation. Oversight is also provided by the State Agency Oversight Team (SAOT), which is comprised of multiple State agencies. The SAOT provides guidance for the project team and makes decisions relating to the project on behalf of the State of Alaska.	• None
2.5 Expected Outcome- The outcome of the project will be a "snapshot" of the current state of the infrastructure and will highlight components with the highest relative risk. Results of the Risk Assessment will be summarized in the form of a risk profile. The SAOT will use this risk profile to develop appropriate mitigation measures. This project has been integrally linked with the Petroleum Systems Integrity Office (PSIO) since its inception. The mission of PSIO is to evaluate gaps and overlaps in regulatory oversight of the oil and gas infrastructure. PSIO will use results of the risk assessment to prioritize gaps and make recommendations to the	• None

Agenda Item	Decisions/Actions
State with regard to regulatory oversight decisions.	
2.6 Project Guiding Principles- Guiding principles of the project were reviewed. Highlights include the high importance placed on the stakeholder consultation portion of the project and the need for cooperation with infrastructure owner/operators.	• None
2.7 Risk Assessment Standards- A brief explanation of standard risk assessment methodology was provided. The risk assessment process is an organized and systematic effort to identify and analyze hazardous scenarios. Risk assessment asks three questions: 1) what can go wrong? 2) how likely is the event? and 3) how damaging would the event be if it were to occur? Rankings are assigned for both probability and consequence and are combined to form an overall risk ranking for each potential event.	• None
2.8 Project Scope- The scope of the project was described in terms of geography, infrastructure components, and other factors and considerations. The project includes the North Slope, Trans-Alaska Pipeline System (TAPS), and Cook Inlet infrastructure. Future developments such as exploration are excluded from the scope of the project. All "inside the fence" components of the infrastructure are included in the scope. Excluded components are transportation (including marine), reservoir maintenance and impacts to the reservoir, and refineries and distribution not integral to operating the infrastructure. The team will consider design/operating life, the natural aging process, operating procedures and standards, maintenance and management, regulatory oversight, changes in oil composition, and natural hazards when conducting the study. Market conditions that drive the economics of continued operations and man-made hazards such as sabotage will not be considered as part of the study.	• None
2.9 Project Timeline- The project is broken into three phases. Phase 1 started in July 2008 and will run approximately thirteen months. The first task of Phase 1, development of the Project Plan, was completed and approved by the SAOT. The next step, Stakeholder Consultation, is currently underway. The team will use input from this consultation as well as best practices to develop a draft risk assessment methodology, which will be complete in February 2009. At that time the project team will come back out to the regions to solicit stakeholder input on the methodology. The methodology will also be reviewed by an independent peer review entity. Phase 2 will take about 6-months and will begin in August 2009. Phase 2 involves implementation of the methodology by working with industry to visit facilities and collect infrastructure information and data. Phase 3 is the last phase of the project and will be complete by the end of May 2010. It involves analyzing the data collected during implementation and developing a risk profile that will be summarized in a final report that will be presented to the State.	• None
3. Questions and Comments from Attendees on the Project Overview Questions and comments were taken both throughout the presentation and following the presentation. This section includes questions, answers, and general comments and suggestions relating to the scope, timeline, and	

Agenda Item	Decisions/Actions
management of the project.	
Q: Is abandoned infrastructure included in the scope of the assessment? **A:** The possibility of considering abandoned infrastructure will be discussed by the team. The category will have to be evaluated and discussed internally, but it is likely that abandoned equipment tied to existing operating infrastructure will be included.	• EMERALD to evaluate abandoned infrastructure as a component of the project scope
Q: Who will conduct the risk assessment? Will ADEC be executing it in-house or will it be contracted out? Does the State have the expertise to conduct a risk assessment such as this? **A:** EMERALD has been hired to conduct the risk assessment. ABS Consulting is also part of the EMERALD team. These companies are risk management experts. **Q:** Doyon (EMERALD is a Doyon subsidiary) does not seem qualified to do this work. Are personnel resumes available for review? **A:** EMERALD is an independently operated Doyon subsidiary that has been in business since 1996 providing process safety and risk management consulting services. The EMERALD Project Manager, Bettina Chastain, has about 20-yrs of experience, and has been involved in this field since the Occupational Safety and Health Administration (OSHA) PSM regulation was initially published. Industry is required to comply with this OSHA PSM regulation. Process safety and risk management is EMERALD's core business. EMERALD does risk assessment work for the oil and gas industry and also exports its services internationally. EMERALD brings knowledge of Alaska and the Alaska oil and gas infrastructure to the project and will provide project management and technical oversight of the project. For this project, EMERALD has teamed with ABS Consulting, a large international firm with experience conducting large scale assessments. ABS Consulting has world-wide experience and brings a global perspective to the project. ABS works for industry and also exports these types of services. The team developed a competitive proposal in response to the State RFP. The team can make resumes available upon request.	• EMERALD to provide personnel resumes upon request
C: The State is working to retain the National Academy of Sciences (NAS) to conduct the peer review, which will be executed during the same period of time the methodology is available for public review. The State hopes that it can get agreement on the methodology through that process. **Q:** When will the public have the opportunity to see the draft methodology? What type of public involvement will there be after the deadline of Nov 4? **A:** The risk assessment methodology will be developed by February 2009. The methodology will be made available for public review and public workshops will be held during the March-April 2009 timeframe. This effort will run concurrently with the independent Peer Review.	• None

Agenda Item	Decisions/Actions
Q: The team says it will work with industry. What if industry does not comply with this request? It seems some of the information required will be proprietary. Will industry be willing to share proprietary information? **A:** The team hopes to cooperate with industry and has already met with industry through AOGA. We believe it is in everyone's best interest to cooperate. If there are significant risks to industry, it will be important both to the State and to industry to have that knowledge. Risk assessments have been conducted on portions of the infrastructure and the team would like to have the opportunity to review these assessments from a system-wide perspective. Some of this information needed is certainly confidential, but the team is working with industry to put tools in place to address this concern and to provide industry a comfort level that will allow them to provide information to the project. We also hope that industry will work with us to develop the methodology. Industry already utilizes risk management processes. We hope to consider these as part of methodology development. We also hope that industry works with the team during the implementation phase so the results can be used to make risk management decisions that will benefit both the State and industry. **C:** The dialogue between industry and the project team is open. The State is working with Department of Law to identify the best path forward, possibly through confidentiality agreements. The project's success depends on an open dialogue with industry because industry holds the majority of existing data on the infrastructure.	• None
Q: Access to industry information is very important for this project. It is naïve to assume that industry will give the State access to this information, especially because they have not shared this type of information in the past. It is disconcerting to hear that the team is "hoping" for industry cooperation. Hopefully, the State has the legal authority to force industry cooperation if necessary. Industry may have fears about how the State will re-tool its regulatory oversight as a result of the project. Oil and gas is a public resource so industry should have to share its information on the infrastructure with the public. **A:** The ACES project allowed State agencies to share information. Department of Revenue (DOR) now has the authority to require information from industry on changes in production and unplanned disruptions. This has allowed DOR to create a base of information that can be used. This project is in the beginning phases of gathering information. If industry does not cooperate, the State may have to go back to the legislature and request additional authority to gain that information. The State hopes that industry will go about this the easy way through cooperation rather than the hard way.	• None
Q: How will the team gain access to the oilfield workers that have operational information? Whistleblowers have been an enormous asset to non-governmental organizations (NGOs). Also, if the contract for the risk assessment is with ADEC, how will the team acquire information from other State agencies? **A:** The State is working with Department of Law to work out information-sharing	• Discuss options for outreach to industry employees

Agenda Item	Decisions/Actions
between State agencies. **Q:** How will the project team gain access to the infrastructure operators in the field? **A:** We will need cooperation from industry to go to the facilities and talk with operators. **Q:** Are protections being offered to whistleblowers so they have the opportunity to provide input freely and not put their jobs at risk? **A:** Anyone can submit a survey on the website anonymously. An important focus of the project is outreach. The team wants to give people as many routes as possible to provide input. The survey is a tool that gives people that opportunity if they are not comfortable speaking publicly about their concerns. **Q:** How will oilfield workers be notified? **A:** The team will have to notify these workers through public outreach. They will have to be reached as citizens. **C:** It seems that the team thinks it will be easy to solicit input from whistle-blowers. Input from these individuals will be essential to the project, but will be difficult to obtain. **C:** The State should send the survey to industry workers.	
Q: With regard to natural hazards, will the team consider climate change as part of the project? **A:** The team will evaluate natural hazards as part of the project. In terms of climate change specifically, the team has not determined how it will be incorporated into the methodology. The team will look to the State academic institutions for assistance with this. The team recognizes that this issue needs to be addressed.	• Determine how to address climate change as part of the project
C: I tried to submit the survey online, but it did not work. **A:** The submit button on the survey did not work for about half a day, but is up and running now. Also, the survey can be mailed or faxed back to the project team. The team wants to ensure that we have work-arounds so anyone who wants to provide input can do so.	• None
C: In terms of State agency groups, Alaska Fish and Game should be on the SAOT.	• Consider inclusion of Alaska Department of Fish and Game
C: The process being utilized for the project is good, but success hinges upon how ADEC defines unacceptable consequences. This is extremely important.	• None

Agenda Item	Decisions/Actions
C: An inherent conflict of interest is present in terms of this project because it requires the State to oversee its own monitoring program. Additionally, Doyon works for industry. The project needs a formal public component, similar to a Regional Citizen Advisory Council, for people to have confidence in the results. This would mean a lot from a stakeholder perspective.	• Consider a more formal and ongoing channel for public input into the project
C: The project team should consult with smaller communities in the vicinity of oil and gas infrastructure. Specific recommendations include Nuiqsut, Glennallen, AHTNA, and the Native Village of Eyak. The team should go to them rather than expecting them to travel to attend a meeting.	• Consider options for consultation with smaller communities with an interest in infrastructure
C: It is important to point out that all the comments made by various representatives of the public today have been consistent in their message.	• None
Q: How often does the SAOT meet? **A:** At this point in the project, the SAOT meets monthly. During the RFP development the team met more frequently.	• None
Q: Is the State working on defining unacceptable consequences? **A:** Yes, DOR is working on how to define unacceptable consequences from a revenue perspective. Each State agency will likely have its own perspective on this topic. It will be up to the technical team to make a recommendation and the SAOT to make a final decision on this definition. **C:** The end product will be a risk profile that will likely be on a continuum. "Unacceptable" is probably not an ideal term because we are really looking at different levels of consequences, e.g. high, medium, low. Additionally, each consequence category, i.e., safety, environment, and reliability, will have its own metric.	• None
C: Mapping is an important tool for reviewing spill information. When information is displayed geographically, certain issues become clearer.	• None
C: Fluctuation in market conditions has been excluded from the scope of the project, but the system does not operate statically. Some of the greatest risks to operations are linked to change in flow, e.g., cold start-up. The team should find a way to consider these conditions. **A:** The team will evaluate changes in composition and will consider throughput. Market conditions refer to economics that drive business decisions that could halt production. Economics will not be considered.	• None
Q: What is Alyeska's perspective on the project (directed to industry representatives at the meeting)? **A:** Alyeska is interested to see how the work lays out and how the methodology is	• None

Agenda Item	Decisions/Actions
developed from a technical perspective. Confidentiality is a legitimate business concern. Alyeska is also interested to hear what the public thinks about the project.	
4. Stakeholder Input on Focus of the Risk Assessment The EMERALD Project Manager outlined specific input to be solicited from stakeholders. Attendees provided input on the portions of the infrastructure they feel warrants project team attention. Components of the infrastructure in the scope of the project include production wells, gathering lines, facility piping, crude oil pipelines, gas and water injection systems, gas transport pipelines integral to the operating infrastructure, oil and gas processing and treatment, waste management and disposal (re-injection), storage tanks, terminals, marine loading facilities, and support systems.	
4.1 Small Feeder Lines- Feeder lines that are a part of the infrastructure were identified as a component warranting project team focus. These smaller lines make up the bulk of the lines and until recently they were not regulated. This means that integrity of these lines was solely up to the operators. There is no pigging of these lines. It is important to analyze this risk and to ensure that effective maintenance of these lines is occurring. It is not enough to look at the past track record of the companies because the companies have changed over time. For example, Arco and BP are now combined. We hear from workers who express concern that operations are not occurring in a safe manner. This issue extends beyond OSHA.	• None
4.2 Tie-ins Between New and Existing Facilities- Although new developments are out of scope, it was recommended that locations where existing facilities will tie-in to new developments should be considered. The team should take a dynamic view of the infrastructure rather than a static view.	• None
5. Stakeholder Input on Initiating Events Attendees identified initiating events that have the potential to cause catastrophes relating to the infrastructure.	
5.1 Reduced Workforce- Over time, the number of industry operators at the facilities has been reduced. This means that less people are present in the field to recognize spills quickly when they occur. This human recognition is industry's biggest asset when it comes to effective spill response. It was pointed out that there is obviously something wrong that needs to be fixed, otherwise there would be no need for this project.	• None
5.2 Low Throughput- Decline in production was noted as a significant concern because when the owner/operators start cutting costs, integrity of operations may suffer.	• None
5.3 Management of Change- Changes to operations is a risk in itself.	• None
6. Stakeholder Input on Priorities for Preventing Unplanned Events Related to Oil & Gas Infrastructure in Terms of Reliability, Safety, & Environment The three consequence categories that will be used to evaluate risks for the project were described. Safety refers to both public safety and safety of industry workers. Environment refers to any consequences to the natural resources of the State including waterways, wildlife, and other resources. Reliability refers to events that disrupt the flow of oil and subsequently have the potential to impact State revenue. Significant concerns from attendees	

Agenda Item	Decisions/Actions
in these specific areas were identified and are summarized below.	
6.1 Chronic Impacts- Chronic environmental impacts were identified as a concern. Many small spills over time have the potential to significantly impact the environment. 500 spills occur per year on the North Slope. This could have health implications to the public that will eventually have to be addressed.	• None
6.2 Subsistence- Some of the smaller villages including Coldfoot, Anaktuvuk Pass, Nuiqsut, and Bettles were identified as highly affected by the oil and gas infrastructure in their area. Nuiqsut is located only 4-miles from an oil field. Resident's livelihoods are dependent on subsistence from the Colville River, Arctic Ocean, and land animals in the area. It was recommended that the project team consult with these villages.	• None
6.3 Impacts to Waterways- Catastrophic impacts to waterways such as rivers and the Beaufort Sea were identified as a significant concern. Pipelines cross these rivers and some are in close proximity to the sea. It was noted that these risks are often underplayed, but should be analyzed.	• None
6.4 Any Spill to a Waterway Unacceptable- In terms of the Copper River Watershed, an unacceptable consequence is any spill into a river system. Spills in these waterways are difficult to clean up and should be prevented by engineered means. It was pointed out that this opinion is a consensus of the NGO groups.	• None
6.5 Toxicity of Oil- The toxicity of oil was identified as a concern. It was noted that even small amounts of oil are toxic and last longer than previously thought. The team should look at the best available scientific research on this topic to fully address the impacts of spills.	• None
6.6 Health Impacts- Health impacts to response workers was identified as a consequence of concern. When incidents occur, if response workers are not properly trained and protected, health impacts can result. This occurred in relation to the Exxon Valdez spill. This is a very high impact because this type of damage can never be repaired.	• None
6.7 Revenue Impacts to Copper River Basin Fisheries- A spill causing environmental damage to the Copper River watershed could have significant impacts to the revenue stream of the State as well as local communities. More oversight efforts should be placed in this area.	• None
7. Stakeholder Input on Other Specific Concerns or Priorities Attendees provided a summary of their interest in oil and gas infrastructure and the project and identified other concerns and priorities to the project team for consideration.	
7.1 Process Safety Management- An attendee raised the issue of process safety management (PSM) and recommended that the team consider it in terms of the risk assessment methodology. The attendee stated that PSM was not specifically addressed in the Project Management Plan (PMP) and that the Plan does not define safety. The Baker Report blamed process safety for the Texas City explosion that killed and injured multiple people. It is important to have a work environment that allows employees to provide input and that management listens to that input and	• None

Agenda Item	Decisions/Actions
takes action on it rather than ignoring or punishing employees that speak up about problems. The attendee noted that the PMP says that maintenance procedures will be checked. It is important that implementation of procedures is also considered because procedures are useless without proper implementation. The infrastructure could be designed perfectly, but if the operators are not effective, problems will occur. The attendee stated that the assessment needs to go to this level of detail to provide useful results. The ADEC Project Manager asked how process safety management is defined. The attendee stated that it is about how managers work with the employees. It is about having engineers look at all aspects of the operation to see if any flaws in the system exist. PSM addresses safety of the process as a whole.	
7.2 Public Involvement in Oversight- The need for citizen involvement in oversight of the oil and gas industry was identified as a priority. It was noted that the public has asked for this type of public oversight for a long period of time.	• None
7.3 Insufficient Contingency Plans- Contingency Plans were identified as a concern. The commenter noted that holes are present in existing plans.	•
7.4 Lack of Regulatory Oversight- Low presence of governmental regulatory personnel on the North Slope was identified as a concern. It was recommended that the project team take this into consideration by evaluating the number of State regulators present on the North Slope over the past several years compared to other oilfields in the country. The team should look at the organizational structure that is in place, how robust that structure is, as well as evaluate the operating and maintenance schedule of industry. A rigorous audit program is key for the oilfields. This has been done on TAPS, but should be implemented elsewhere (along the infrastructure) as well.	• None
7.5 New RCAC for the Corridor- It was noted that the PWSRCAC has been a good oversight mechanism. Industry has resisted establishing new RCAC's in other regions of the State, but they could be needed. A citizen's group such as this has the ability to oversee State regulatory oversight of the infrastructure. This should be considered as a potential mitigation measure in response to risks. The citizens along the oil and gas corridor have been asking for their own RCAC for a long time.	• None
7.6 Mitigation Measures- It was pointed out that if the goal is to fix problems, the project needs to address potential mitigation measures to minimize risks. Low level chronic risks need to be captured in this effort.	• None
8. Best Risk Management Practices, Guidelines, and Standards; existing Risk Assessments, Studies, Reports, or Other Data/Information Relevant to Alaska Oil & Gas Infrastructure Recommended data sources and best risk management practices suggested by attendees are summarized below.	
8.1 The Baker Report was recommended as a source of information on process safety management and its application in industry.	• Project team to consider review of the

Agenda Item	Decisions/Actions
	Baker Report
8.2 A recommendation was made to review major maintenance projects conducted by industry including why the maintenance work was initiated, what was found, and what the recommendations were at the time. This could be compared to the record of work actually completed.	• Project team to consider reviewing major maintenance projects by industry
8.3 A recommendation was made that the team should consider gaps in regulatory jurisdiction. The team indicated that the Petroleum Systems Integrity Office (PSIO) has been tasked with completing a gap analysis to meet this need. PSIO has been meeting with State and federal agencies to identify these gaps. This project and the PSIO gap analysis are linked The Risk Assessment Project will use results of the PSIO work as considerations for the assessment. The PSIO will use the results of the risk assessment to ensure that critical gaps in high risk areas are addressed. PSIO will use risk assessment ranking to set priorities for gaps.	• Project team to consider regulatory gaps in oversight
8.4 A recommendation was made that the team should evaluate effectiveness of spill response as part of the project.	• Project team to consider use of spill response information as part of review
8.5 It was recommended that the team evaluate Contingency Plans as part of the assessment.	• Project team to consider review of Contingency Plans

Attachments:	Presentation Stakeholder Information Packet

NOTE:
Submit comments and corrections to Gretchen Grekowicz at ggrekowicz@emeraldalaska.com