

**PUBLIC WORKSHOP AND SOLICITATION
OF INFORMAL COMMENTS ON CHANGES TO
ALASKA DEPARTMENT OF
ENVIRONMENTAL CONSERVATION REGULATIONS**

MEETING MINUTES

November 9, 2004

I. Introduction and General Overview of the Project:

Craig Wilson, Project Manager for the Contingency Plan and Review Project, introduced himself. The meeting minutes will be posted on the Web site for review once completed. This meeting will deal with phase 2 of the project, which is reviewing and revising the oil pollution prevention regulations located in 18 AAC 75, Article 1. Phase 1 evaluated proposed changes to the contingency plan requirements for oil exploration and production facilities. Phase 3 will involve revising the application process and reviewing schedule for oil plans. Phase 4 will involve updating and streamlining contingency plan requirements for other types of regulated operations.

The goal is to have a draft regulation package informally available by January, at which time informal comments will be accepted. The proposed regulation package should be complete in the spring with finalized regulations by next fall. Comments in any form will be accepted during the informal regulation review, but once we go to the APA process, our interaction with the regulating community and stakeholders will be limited. There will be an opportunity to comment on the process for the next six months, which everyone is encouraged to do. The department does not have statutory change authority, so testimony should be limited to the regulations. When pointing out problems with the regulations, please provide at least one suggestion for improvement.

II. GENERAL TOPICS:

Rhonda Williams said she represented the Prince William Sound Citizens Advisory Council. Throughout the workshop you will hear our recurring theme regarding the importance of using the oil spill prevention plan cycle concept to improve Alaska's oil spill prevention regulations. The oil spill prevention plan cycle is a systems approach to oil spill prevention developed by Dr. Hann of Texas A&M University's Environmental Engineering and Technical Assistance Program. The oil spill prevention model highlights the need to establish clear standards, but an equal and corresponding need to insure that the standards are properly implemented through inspection, maintenance, repair and the lessons learned program. We have found that the state's oil spill prevention regulations often specify standards to be met, but often lack specific regulatory requirements to insure that those standards are properly implemented and maintained. We encourage the group to critically evaluate the existing oil spill prevention regulations to determine where they need improvement to create an effective

prevention system. Are construction and design standards clearly specified in regulation to prevent oil spills? Do the regulations include inspection and testing programs to verify compliance and/or identify needed maintenance and repair? Do the regulations include maintenance and repair requirements? Do the regulations include training and operator qualifications to insure plan holders have the staff to implement the oil spill prevention program and insure compliance? Do the regulations include requirements for documentation or reporting to insure the plan holder keeps the agency informed of its compliance status? Do the regulations include a feedback loop to determine the root cause of the spill and determine how to improve oil spill prevention measures at the facility or vessel? A copy of Dr. Hann's oil spill prevention play cycle diagram has been provided for review and consideration. We recommend that the prevention section of ADEC's July 1994 C-plan guidance document be codified into regulation. While the 1992 regulations were effective in establishing a number of oil spill prevention measure standards, they did not provide enough information on how the planning cycle would be achieved. We recommend ADEC adopt the international management code for the safe operation of ships and pollution prevention, ISM, as part of the state oil spill prevention regulations. The U.S. Coast Guard adopted the ISM code into federal oil spill prevention regulations at 33 CFR 196. Adopting ISM into the state regulations would provide an equivalent level of oversight for state oil spill prevention and provide ADEC the same authority to request and review records and safety audits as the U.S. Coast Guard. This regulatory change will give ADEC inspectors the tools needed to insure vessel oil spill prevention measures are in place, tested and properly maintained, completing the oil spill prevention cycle plan. There is no compelling reason to modify an oil spill prevention system that has been working efficiently, so we recommend the escort system be maintained for all laden tankers, including the new double-haul tankers. The key prevention cycle plan components are construction and design standards, inspection and testing programs, maintenance and repair, training and operator qualifications, documentation and reporting, and the feedback loop.

Lois Epstein said Cook Inlet Keeper is a citizen based non-profit membership organization dedicated to protecting Alaska's Cook Inlet watershed and the life it sustains. She has over 20 years of environmental work experience in the private, governmental, and non-private sectors. She has been a licensed, professional engineer for 15 years and is currently licensed in Alaska. Keeper is concerned that if ADEC separated the prevention requirements from the other requirements contained in C-Plan it could prevent ongoing public review and periodic updating of prevention activities and infrastructure, as well as potentially removing the best available technology standards from prevention. Keeper is uncertain if removal of the best available technology standards is ADEC's intention and would like clarification on that point.

Susan Harvey said she provided consulting services to the North Slope Borough and her comments were on their behalf. The North Slope Borough is a tank farm

operator who oversees exploration and production operations in the North Slope Borough area as a local government entity. The North Slope Borough has five recommendations for the general session. The first is the idea of requiring a professional engineering certification for oil spill prevention plans, particularly for exploration and production facilities. Federal oil spill prevention requirements have a third-party professional engineer review of complex prevention plans every five years. The second recommendation is operator qualification training programs for all major oil spill prevention requirements or proof that the services are provided by qualified third-party contractors. The North Slope Borough contracts with professional engineers or licensed inspectors and they feel that has been an important part of their risk management program and would like to see that continued throughout other major oil facilities in Alaska. For example, for a leak detection system there should be evidence that the operator's personnel are trained and qualified to install, test, calibrate and operate the system. The North Slope Borough would recommend that a team of local, state, federal government and industry members be put together to look at industry and federal standards for inclusion into Alaska's prevention regulations for drilling and production facilities. The state regulations, particularly 18.AAC.75.045, were drafted in 1992. They had Cook Inlet platforms in mind for drilling operations, but did not address the fact that most of the North Slope wells were drilled from either land based drilling rigs or offshore rigs. Most of the drilling prevention regulations work well for the 5% of the oil produced in Cook Inlet, but not for the 95% of the oil that is produced on the North Slope. The North Slope Borough has evaluated a number of appropriate industry and federal standards and would strongly recommend a team of local, state and government people to get together to collaborate on that. The North Slope Borough is concerned about the number of inspections done at exploration and production facilities evaluating oil spill prevention. The state conducted three oil spill inspections for North Slope facilities in 2002 and four in 2003 across the entire North Slope exploration production operations. We would like to strategize with the state on improving the number of inspections. We recognize that the inspection capability may be limited by budgets, but there may be other creative ideas for improving oil spill prevention such as requiring third-party audits by certified professional engineers. The last recommendation is seasonal drilling to prevent offshore oil spills during the broken ice and fall freeze up seasons and onshore exploration seasonal drilling to protect subsistence use areas. The North Slope Borough is committed to whaling and subsistence use and would like to protect the offshore areas. We would like to see the oil spill prevention program continued to protect our cultural and subsistence resources. We recommend that drilling be scheduled from November 1 through April 15 and during the winter season. These comments do not apply to onshore drilling for production development. We are concerned about onshore exploration drilling in subsistence areas and offshore drilling in the winter seasons to work around the broken ice and fall freeze up seasons.

Terry Bryant, Cook Inlet Regional Systems Advisory Council, said they submitted their written comments, which should be included in the record.

(Off the record from 9:03 to 9:22 a.m.)

Craig Wilson called the meeting back to order.

III. CRUDE OIL TRANSMISSION PIPELINES:

Becky Lewis, ADEC, said they wanted to know if there were sections of the crude oil transmission pipeline prevention regulations that did or did not reflect current industry trends and how they might need to be changed to increase the efficacy of the regulations.

Alise Decola said this was an area of concern, especially in Cook Inlet. The biggest gap we see has to do with the classification, or lack thereof, for gathering lines. This is a type of pipeline that is effectively unregulated by the state and federal government partly due to lack of a clear definition. We would like to see a definition that would provide a clear category for these lines that recognizes the fact that they are moving a large volume of oil. They are not being subjected to the instruction standards, leak detection programs, and operation and maintenance procedures that other types of piping are subjected to. We would recommend that the federal regulations at 49 CFR 195, which is part of the crude oil transmission pipelines, be applied from construction, operation and maintenance, leak protection and the other categories that apply, be applied to gathering lines. We are willing to discuss approaches to safer regulations so we are not putting refineries into areas unrealistic for existing pipelines. The state regulations should recognize that there is a large quantity of underground piping that runs through Cook Inlet that are gathering lines and not, by definition, true crude oil transmission pipelines. They pose a significant risk in terms of size and the amount of through put. We hope to see a better prevention scheme designed and implemented to address that risk.

Susan Harvey, speaking on behalf of the North Slope Borough, had three recommendations relative to crude oil transmission pipelines. Another term used for crude oil transmission pipelines is common carrier lines. Common carrier lines in Alaska are generally well covered under DOT federal regulation 49 CFR 195. In 1992 when the state put the oil spill prevention standards in place for crude oil transmission pipelines there was an eye towards leak detection as an incremental state standard that would provide additional benefits above and beyond the federal regulations. The North Slope Borough agrees this is a good idea and should be maintained. The technology for common carrier lines has a way of improving over time and the 1% standard may no longer be state-of-the-art. Our recommendation is that the state reviews the technology to determine whether the 1% standard is still appropriate or whether a lower standard threshold should be established in regulation. The data we reviewed showed a consistent standard of .35% to .5% being consistently met and some operators have actually tested below that. Operators have responded to the North Slope Borough's desire

for offshore protection by putting in redundant leak detection systems, which we feel should be a state standard for future developments. The last recommendation is a testing and implementation standard for leak detection. There are standards in the state prevention regulations, but no implementation, inspection, maintenance and repair components. The state has made great efforts to describe those details in the guidance documents, but they are not codified in the regulations. For example, related to leak protection, there should be standards on installation, initial testing to verify it meets the standards and then some way to test the standards on a monthly or annual basis. The North Slope Borough sees three categories of facility pipelines: the piping that connects tanks, manifolds, and the valving systems. A lot of that piping is within secondary containment and is not high-risk. Much of the piping is buried and subject to existing protection requirements. Another category is gathering or flow lines. Flow lines are unique, because they typically connect a wellhead all the way back to a facility. In Alaska, particularly in the North Slope and Cook Inlet, they are large in size and carry oil, gas and water, which are particularly corrosive and erosive in nature and tend to be more prone to spills. We looked at the state's database from 1995 to 2002 regarding oil spills in the North Slope. Sixty-five percent of the oil spills were attributed to structural and mechanical problems, which might have been prevented or minimized through improved pipeline prevention measures. Forty-four percent of the 65% total was from unregulated pipelines. A majority of the spills on the North Slope are from gathering and flow lines, because those lines carry corrosive and erosive fluids. The flow lines on the North Slope are above ground. The state's prevention regulations have two standards for above ground. You have to construct the VSM properly and do visual leak detection observations at least monthly. When you are looking at 16% of the nation's crude oil, 900,000 barrels a day, flowing through a series of pipelines, a visual leak detection standard of once a month seems like a pretty low standard. The National Research Council worked with the North Slope Borough and their operators to produce a study in 2003 called the Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope. They estimated that there are approximately 450 miles of pipeline corridors on the North Slope, which are the gathering and flow lines bringing oil to the facilities. Each corridor contains anywhere between 1 and 26 pipes in a bundle. They estimate that the cumulative length of existing North Slope pipelines is about 1,100 miles. The North Slope Borough would like the state to consider adoption of 49 CFR 195, as appropriate, for Alaska flow lines. North Star processes its oil at the island and runs it through a crude oil transmission line back to the Transalaska pipeline. That line is regulated as a common carrier line and gets all the oversight requirements of the federal regulations, as well as the state's additional leak detection requirements. If an operator chooses not to process oil in an offshore environment and runs a gathering or flow line back to an onshore location then that line, as currently covered under the standards, only has minimal oil spill prevention requirements.

Lois Epstein questioned if the crude oil transmission pipeline regulations covered everything they needed to cover such as other lines that look, feel, operate and

have a significant potential impact to the environment as what are now being called crude oil transmission lines. As a member of the Federal Advisory Committee for Hazardous Liquid Pipelines advising the Office of Pipeline Safety for seven years, she is familiar with the gaps in the federal regulations. This is an opportunity to address gaps at both the state and federal level. What is done in Alaska could have implications nationwide. There are some very large unregulated pipelines known as gathering or flow lines. A rural gathering or flow line is unregulated federally. There is an ongoing process to define a federal gathering line. Spill reporting has a lack of clarity, because not everyone is using the same definitions. Keeper urges ADEC to improve the C-Plan requirements to prevent releases from liquid gathering lines, liquid flow lines, and oil field wastewater pipelines. Something that has not been brought up today is natural gas lines that have liquid condensates or a natural gas line that produces water. Gas field operations are not regulated under the C-Plan, but we get spills from condensates on a periodic basis. Cook Inlet Keeper published a report in September of 2002 entitled "Lurking Below: Oil and Gas Pipeline Problems in the Cook Inlet Watershed" that contains a detailed analysis of the releases from pipelines throughout the Cook Inlet region from 1997 to 2001. We particularly focused on oil pipelines and not gas lines. There is about 311 miles of oil pipelines in the region. About 60 of those are gathering or flow lines in the Swanson River field in the Kenai Refuge. During this period, 7 of the 8 largest pipeline spills with known volumes occurred at the Swanson River field. The spills ranged up to 228,648 gallons and came from gathering and produce water disposal pipelines, the non-transmission pipelines. During that period, 41% of the 66 reported oil pipeline releases in the region came from approximately 60 miles. Keeper found that there is a higher percentage of releases from production piping than any other type of pipeline. Onshore oil represented 41% of releases, onshore oil processing facility piping was 36%, offshore pipelines was 14%, tank farm piping was 8% and onshore oil transmission pipelines was 2%. In the year following issuance of the report, roughly the same pipeline release pattern applies with 50% of the releases coming from oil field production at the Swanson River field. While transmission pipelines are not identical to gathering lines, flow lines and oil field wastewater pipelines, they are similar enough in function, citing and environmental risk that ADEC should examine whether leak detection, more frequent aerial surveillance, leak shut-off and internal inspection requirements should be applied to these lines. That includes looking at the requirements of 49 CFR 195 and other possibilities as well including the crude oil transmission line requirements that exist at the state level. Each of these measures can help reduce the likelihood or size of releases, regardless of release cause. While current production pipeline requirements focus almost entirely on corrosion related releases, in the five-year period we looked at, only 27% of the releases from the pipelines in the Cook Inlet region came from corrosion. In the following year, 0% were reported from corrosion. We are addressing corrosion better than we are other potential release causes from these currently unregulated gathering and flow lines, but we need to do more. Keeper will be submitting written comments and wants to stay engaged in the process.

In response to Mike Bronson, Craig Wilson said they would come out with an informal proposed regulation in January. At that time, they would accept additional comments for a fairly long period of time. Once they went into the APA process where they had a formal proposed regulatory package, they would allow a certain period of time for written public comments. The APA procedure will start in the late spring. The goal is to have the regulatory package out by the beginning of June.

Rhonda Williams, Prince William Sound Regional Citizens Advisory Council, said the federal DOT regulates Alaska crude oil transmission pipelines under the comprehensive federal DOT pipeline regulations in 49 CFR 195. In addition to the federal regulations, the state has adopted a leak detection standard for Alaska's crude oil transmission pipelines of 1%. Prince William Sound CAC supports Alaska's additional leak detection standard, however we feel the leak detection regulations need to be updated to reflect best available technology and clarified to insure that all of the elements of the oil spill prevention plan cycle are addressed. We recommend adopting at least a .5% leak detection standard for crude oil transmission pipelines. We recommend the regulations be expanded to include specific inspection and testing programs to initially test the leak detection system to verify accuracy upon initial installation and at routine intervals during the life of the pipeline maintenance and repair standards to insure the system continues to function correctly and specific training and operator qualifications to install, test, operate and repair the leak detection system, a documentation and reporting system and a feedback loop process to examine the leak detection system if leaks are not properly and timely detected.

Lois Epstein, Cook Inlet Keeper, discussed product transmission pipelines. There is a large pipeline from the Tesoro Refinery to Anchorage that carries gasoline, diesel, and etcetera. The pipeline has been upgraded, but a few years ago they had a release and did not have to meet the requirements of the crude oil transmission pipelines. They did not have leak detection. There is no certainty that they will continue meeting all the crude oil transmission pipeline regulations, which is another gap in the state requirements that should be part of this discussion. The state should recognize that there are certain product transmission lines that need attention.

(Break from 9:55 a.m. to 1:35 p.m.)

IV. ABOVEGROUND STORAGE TANKS & FACILITY PIPING:

Bob Dreyer opened the discussion on aboveground storage tanks and facility piping. Written comments would be accepted for the next several months. He reiterated that they were talking about the regulations, not the statutes.

Ronda Williams, Prince William Sound Regional Citizens Advisory Council, said

they recommended eight improvements in oil spill prevention regulations for crude oil tanks. They recommend the API 653 inspection standard and the API 650 construction standard be updated. ADEC's regulations require outdated versions of the API 653 tank inspection standard and the API 650 construction standard. ADEC should review the most recent versions of the standards, insure that they are appropriate for Alaska, and adopt the sections that are appropriate. We recommend the regulations require the use of API 653 certified tank inspectors. Although this is policy as documented in ADEC guidance 94-02, it is not codified in regulation. Requiring an API certified inspector would insure that the inspection is completed to the API 653 standards, a complete technical analysis is completed and repairs are made prior to returning the tank to service. We recommend minimum inspection intervals to be established for tanks 30 years and older. Alaska's tank inspection program has been very successful in identifying necessary tank maintenance repairs, which has prevented catastrophic tank failures throughout the state. History shows that tank failure risk increases with tank age. Routine inspection of older tanks at least once every 10 years, with no extensions, will assist in reducing the risk of a catastrophic tank failure from the high-risk, older tanks. We recommend ADEC adopt a requirement to complete an internal inspection on tanks with internal floating roofs at least once every five years. Internal floating roofs are much more complicated to operate than fixed-roof tanks and damage can occur to the tank bottom and shell from incorrect operation of the floating roof. Roof seals and floating roof systems require more maintenance and repair than a fixed roof and more in a short or internal inspection interval especially in cold weather, applications where seals can fail. The risk of catastrophic oil spill and/or fire from an internal floating roof tank will be reduced by more frequent internal inspections. We recommend ADEC upgrade the tank leak detection requirements. Specifically, we recommend that all newly constructed tanks be required to install leak detection systems below the tank floor during construction. Tank leak detection systems installed below the tank floors are effective in identifying small, continuous tank floor leaks, which may go unobserved by above grade leak detection systems. For new tanks, there is little incremental cost of installing the tank leak detection system below the tank floor when the tank is built. Risk reduction is worth building it right in the first place. We recommend that improved leak detection systems be considered for existing tanks, especially large aging tanks that do not have liners under the tank bottom. Large, old tanks that lack secondary containment liners under the tank floor bottom pose an important oil spill risk for Alaska. Identifying a class of existing tanks that should be upgraded will reduce the oil spill risk and impact to the environment. We recommend ADEC clarify requirements for tanks removed from service. ADEC's regulations require tanks, which have been removed from service to meet "new tank standards" when they are returned to service. Regulations currently lack specific timelines or procedures for these requirements. We recommend ADEC clarify contingency tank requirements. ADEC's regulations do not specify inspection, maintenance, repair and placarding requirements nor do they specify usage limitations for contingency tanks. We recommend ADEC upgrade secondary containment

requirements for aboveground storage tanks. ADEC's regulations do not include a requirement to verify that initial tank installation and design meets the state's impermeability standard nor do they include a requirement for the operator to verify that the secondary containment installation continues to meet the state's impermeability standard over time. Going back to Dr. Hand's (ph) Oil Spill Prevention Plan Maintenance Model, the current regulations establish a standard, but provide no mechanism to follow through with inspection, maintenance, repair and training components needed for an effective prevention system for secondary containment. More specifically, we recommended ADEC adopt regulations that require a licensed engineer to certify that initial design and installation of new secondary containment systems meets the state's impermeability standard, adopt regulations that require a licensed engineer to inspect the secondary containment system at least once every 10 years, and certify that both new and existing secondary containment systems continue to meet the state's standards. We recommend they adopt regulations that require quarterly inspections, maintenance and repair programs to be completed by the operator for their secondary containment system to insure it continues to comply with the state's impermeability standards. For aboveground storage tanks and facility piping, we recommend that facility piping construction, inspection, repair and maintenance standards be upgraded for buried and aboveground pipeline. More specifically, we recommend that ADEC consider adopting portions of 49 CFR 195 that are appropriate for facility piping to prevent oil spills before they happen. Typically, federal oil spill prevention standards do not apply to the majority of facility piping in Alaska. Alaska's facility piping regulations provide more instruction for buried piping, but aboveground piping is more predominate in Alaska. The aboveground piping standards are limited to visual leak detection prompting repair or replacement. The standards, therefore, do not constitute proactive oil spill prevention standards. Some of the key provisions of 49 CFR 195 that would improve oil spill prevention for facility piping include construction standards and corrosion control programs, O&M procedures, inspection procedures, leak detection system standards, safety and emergency response procedure requirements, training requirements, valve maintenance requirements, maps and technical record keeping, pipeline repair requirements, terminal date records and third-party audits.

Susan Harvey, a consultant for the North Slope Borough, said the North Slope Borough recommends eight improvements in oil spill prevention regulations for oil storage tanks. They would like to see a minimum 10-year inspection interval for onshore tanks. The current regulations are written with a nominal 10-year and API 653. Either allows you to shorten that interval if you have corrosion problems or extend the interval beyond 10 years if your floor bottom corrosion rate allows it. The floor bottoms often get replaced, but the shells, roof structure and the rest of the support for the tank do not. The API standard allows you to go to a 20-year inspection interval by replacing your floor bottom, but that does not mean there are not issues related to corrosion of the shell or other parts of the tank structure. The North Slope Borough, as part of their risk management plan,

adopted a minimum threshold of every 10 years. We are recommending a five-year interval for internal inspections and a one-year external for offshore tanks. Offshore tanks experience higher external corrosion rates. In many offshore applications, particularly when on a platform or gravel island, there have been a number of waivers issued for secondary containment and diking, so many of those tanks do not have full secondary containment. If one of those tanks do rupture, the catastrophic results would be significant. They recommend a more frequent schedule for offshore tanks. Secondary containment design requirements for offshore tanks are also a consideration that the North Slope Borough would like the department to review. 18 AAC 75.075 addresses offshore tank secondary containment systems for platforms, but not gravel islands or other types of structures. They recommend codifying the requirement for API certified inspectors. The North Slope Borough hires API 653 certified inspectors and professional Alaskan engineers to implement API 650 construction standards. The North Slope Borough would like the department to evaluate the tank construction inspection standards to see if they could be updated. The North Slope Borough hires most of their consulting, engineering and inspections services from outside vendors, because you cannot find an API 653 inspector that was trained in the 1991 version. It would be useful if the tank standards were updated specifically to Alaska standards. We recommend establishing a formal approval process for deviancies for tank standards. If there is a deviation from regulatory standards, those recommendations should be signed by a licensed professional engineer and approved by the agency in writing before the installation, repair or modification to the tank. There is concern that there have been some waivers that did not go through that level of technical rigor. The North Slope Borough feels the process should be codified. The North Slope Borough would like to clarify requirements for tanks removed from service and contingency tank use. We recommend clarification of which tanks should be included in determining the storage capacity of the facility and clarifying the construction, inspection and documentation requirements for the various sized tanks. Some of this information is in the guidance documents, but it is not clear exactly where the threshold cutoffs are. The guidance documents identify the classes of tanks and the documentation and record keeping that has to be done. The 1994 guidance identifies the type of information that has to be supplied on various sizes of tanks, but that is not in the regulation. It would be useful for that information to be codified so everyone knows the rules of how to properly document, inspect, construct and keep records on their tanks. The North Slope Borough's comments related to facility piping were made earlier in the meeting.

Terry Bryant said they prepared extensive comments for the workshop, which they would submit as written comments.

Bob Dryer encouraged everyone to submit written comments and questions. He adjourned the meeting at 1:58 p.m.