

Aleutian Island Risk Assessment Advisory Panel Meeting Summary
Unalaska City Council Chamber
September 2, 2009
8:00 AM- 5:00 PM

Advisory Panel Member Attendance

Tom Gemmell (Alternate-Fisheries); Shirley Marquardt (Primary-Local Government); Louise Audette via teleconference (Primary-Mariner, Oil Barge/Tanker); Mike Baker (Alternate-Mariner, Oil Barge/Tankers); Mike McGlothlin (Alternate-Mariner, Containership); Marc Smith (Primary-Mariner, Trampers); Simon Lisiecki (Primary-Mariner, Innocent Passage) Ed Page (Primary-Marine, General); Reid Brewer (Primary-Subsistence User); Bob Umbdenstock (Primary-Marine Salvor); Rick Wilson (Alternate-Marine Salvor); Whit Sheard via teleconference (Primary-NGO, Environmental); Bruce Wright (Primary-NGO, Local); Jeff Williams (Primary- Resource Manager);

Management Team Attendance

Gary Folley (ADEC); Commander James Robertson (USCG); Lt. Commander Robert Fields (USCG); Krystyna Wolniakowski (NFWF); Jay Wright (NFWF)

Risk Analysis Team Attendance

Laura Tesch (ERM); David Pertuz (DNV); Daniel Yamashiro (ERM); Tim Fowler (DNV) via teleconference

Facilitation Team Attendance

Tim Robertson; Amy Gilson; Leslie Pearson (Nuka Research & Planning Group)

Public Attendance

Amy Cox (NOAA-NMFS); Capt. Jack Kenyon (USCG); Deborah French-McCay via teleconference (ASA); Dagmar Schmidt Etkin via teleconference (ERC); Chris Hladick (City of Unalaska); John Fulton (City of Unalaska); Katharine McGlashan (Unalaska City Council); Susan Lutz (City of Akutan); Anne Hillman (KUCB)

Purpose: The purpose of this session is to allow the Risk Analysis Team to engage the Management Team and Advisory Panel to kick-off the first phase of the project.

Phase A Risk Assessment Overview (Task 1-8 overview)- Risk Analysis Team

See September 2nd: ERM/DMV PowerPoint presentation slides 1-22 for project overview. The link to this presentation is:

<http://www.aleutiansriskassessment.com/aira090901-03mtg.htm>

Data Source/Acquisition for Task 1 thru 3- Risk Analysis Team & Ed Page (AP member)

See ERM/DMV PowerPoint presentation slides 23-25 for vessel traffic data source overview. <http://www.aleutiansriskassessment.com/aira090901-03mtg.htm>

Marine Exchange of Alaska Presentation (Ed Page): See September 2nd Marine

Exchange PowerPoint presentation. The link to this presentation is:
<http://www.aleutiansriskassessment.com/aira090901-03mtg.htm>

The network of AIS stations managed by the Marine Exchange in Alaska extends geographically from Kaktovik to Ketchikan. Constantly updating equipment. By the end of this year there will be 80 active stations in AK with this years focus being the Arctic, and next year the goal is 100 stations.

Vessels send information two ways- by satellite and VHF frequency. The AIS is like an airplane transponder- going out over VHF frequency. Most vessels of concern have AIS and currently the Coast Guard has a proposed regulation- where every commercial vessel over 65 ft will have to AIS; vessels carrying over 50 passengers will have AIS; and towing vessel of 26 ft and 600 hp. AIS is a safety and security tool, which can be used to manage vessel traffic taking into consideration weather conditions and safety concerns. The AIS system in Alaska came on line in 2004. The Marine Exchange works closely with industry and members to establish AIS – receive 10 gigabyte of data each day, which is stored on a server at the Marine Exchange. Users can place information received on Google Earth for display and review. Receive information via VHS every 6 minutes, once they leave the area covered by VHS then satellite information is received. At the Scotch Cap station coverage for Unimak Pass extends approximately 336 miles. There's a variety of ways data can be sorted and displayed for review and analysis.

Next years focus is to expand coverage of the Aleutians, currently coverage stops at Adak. A new more sophisticated system will be set up at Adak to expand the direction and distance of coverage. The Marine Exchange will be working with the U.S. Fish & Wildlife Service to identify potential locations further west.

The Marine Exchanges biggest challenge is to secure funding to expand, maintain and update the system, identify good locations for new stations, disseminate information; manage risk, and emergency response. There's three major stakeholders- federal government/ state and local government/ maritime industry. The Marine Exchange receives a third funding from each stakeholder category.

Questions and Discussion associated with Vessel Traffic, Modeling and Data

Shirley Marquardt- can the MARCS model will differentiate a vessel that had a mechanical breakdown or a mechanical breakdown due to human error?

Tim Fowler- in the data that DNV has it's difficult to distinguish between poor maintenance and mal use of the equipment. All that's reported is vessel breakdown. What DNV evaluates is the probability of vessel breakdown. It's important when it comes to risk reduction measure—a vessel that isn't operated properly versus maintained improperly, both issues are important. They can take expert judgment based upon the experience in the Aleutian Island system to attempt to determine the issue.

Shirley Marquardt- With the different types of traffic- newer, larger more technically advanced vessels transiting east and west versus the local tramper vessels, the different risk scenarios have been poor judgment of human error.

Tim Fowler- you bring up an interesting point about vessel age because so many people say that old vessels are poor vessels, age of vessel is really not a factor rather it's the maintenance level. If a vessel is old the temptation is to not maintain older vessels and reliability is reduced.

Dan Yamashiro- The MARCS output is for vessel type for frequency and if we know from the CG the type of cause – power loss then we run the MARCS to do a statistical analysis for the cause type.

Tim Fowler- we're currently working on Phase A of the risk assessment and we shouldn't try to over engineer the study. We are charged with doing a first pass, a semi-quantifiable study to get the main map and define the issue.

Ed Page- is there a common denominator for accident cause and if so, is there anything that can be done?

Tim Robertson- Wondering about variation and error rates in the data? An example earlier of a vessel that lost power, another example would be a collision. Our ability to detect collisions appears to be better versus vessels that lost power. Can you explain how you evaluate errors that may propagate through the study?

Tim Fowler- the analysis of uncertainty is an important issue and marine risk assessments are no exception. Major collisions are thoroughly reported where as but a vessel that's gone drifting is not always reported. There is a difference in the reporting rate. This data has improved with the onset of AIS coverage. These are incorporated as risk assessment parameters used in the model. All the accident models aim to estimate the frequency of which a particular hazardous event of occurring and then we apply a probability factor. All of the parameters are subject to uncertainty. What's important is making plausible variation of the parameters in the model using expert judgment. If you have plausible changes in the risk assessment parameters and you get the same conclusion, then you can assume you've got a secure conclusion. If the results vary with the analysis then you must carefully interpret the results.

Shirley Marquardt- Would it be helpful to utilize information from the at-sea fishing fleet? They do have AIS and would that information provide a good picture of vessel traffic, or is this better captured via the AIS?

Ed Page- The at-sea processor doesn't save the data but there is a way to save the data. It's not real-time data.

Marc Smith- if you use the floating resources, you can probably set up individual arrangements with companies. The fishing fleet isn't going to want to share real-time data.

Marc Smith- the inputs to MARCS, can you explain the environmental parameters and how they would interface? this is a high energy weather area; the traffic, seasons, weather input, etc.

Tim Fowler- MARCS uses a statistical representation of all the data- represents an annual average of traffic pattern of the ships and the same is true for environmental data. For wind speed we'll be collecting- wind speed/direction, and probability of calm conditions, windrows and storm condition and probability of direction/each sea state. We don't have to use an average across the entire area. We can establish sub-areas within the study zone and apply specific environmental data to those sub-areas. We have quite a bit of control of what we can put in. We need to identify the data and turn the data into probability windrows. The MARCS model does include correlation effects. Wind is a very important issue since it drives sea state and wind height. These sorts of effects are included in the MARCS model.

Marc Smith- Does environmental parameters affect the traffic pattern and mariners choice?

Tim Fowler- we haven't thought about how environmental factors may affect the vessel traffic volume.

Shirley Marquardt- there's a larger volume of traffic going west that take the Great Circle route, there's an atmospheric affect that slingshots the vessel westward.

Bruce Wright- Have you ever had to take into consideration sea ice and vessel traffic patterns?

Tim Fowler- Sea ice isn't directly included in MARCS. We have researched the effects of sea ice when we did a study in the Baltic Sea. What is the hazard with seasonal effects of sea ice?

Ed Page- They may change their routes; slush may get into their sea chest.

Shirley Marquardt- Vessel icing is more of an issue as it relates to vessel stability, than actual sea ice.

Tim Fowler- I have a couple of questions. One for Ed Page- In all the fields where you were indicating cargo data they weren't filled. Do you have any cargo data in your AIS?

Ed Page- AIS isn't mature enough for people to enter good information. People aren't that diligent for putting the cargo into the database. Lloyds of London has a considerable amount of information on cargo, as well as the Coast Guard. You can assume that some vessels are carrying certain types of cargo—cargo ship= general assortment of cargo and not the bulk commodity.

Tim Fowler- determining the type of cargo and hazards associated with the various cargos is one of the major challenges for this study.

Simon Lisiecki- will you need to sift through the data to determine the different fuel types being used by vessels too, such as persistent fuel versus non-persistent.

Ed Page- it's fairly easy to determine the type of fuel being used based on vessel type. They don't tell you the quantity of oil they're carrying though.

Tim Fowler- I'd like to remind everyone that this is the Phase A-risk assessment and what we're aiming to do is map out the general risk, it is a semi-quantitative study. DNV has correlation data of bunker fuel capacity to ship size and can make a reasonable guess for the types of vessels. We can establish and apply the variations. We can make the assumption that they've all got the more hazardous type of fuel. In Phase B, we can refine the data so that we get a more accurate result than what we got in Phase A.

Bruce Wright- will there be a look into the future? As the Arctic opens up, 90% of the increase in traffic will be associated with resource extraction.

Tim Fowler- it is part of the study, we've been commissioned to look into our crystal ball and examine the future vessel traffic over the next 25-year period. We are going to have a go at trying to produce alternate future traffic routes.

David Pertuz- we will need to get in touch with reputable agencies to get an understanding for future development such as Minerals Management Service and

agencies in Canada. Coast Guard R/D has also conducted studies associated with future search and rescue issues in the Arctic.

Lunch Break

Continued discussion with the review of data sources for the other tasks- spill modeling, receptor and consequence analysis.

Dan Yamashiro (ERM), lead presenter: See ERM/DMV PowerPoint presentation slides 26-27. <http://www.aleutiansriskassessment.com/aira090901-03mtg.htm>

The GEMS model will be used and the modular is the COSIM (Chemical, Oil Spill Impact Model). I'll talk about data types, the data that we'll be trying to glean from the Advisory Panel and other sources. Need to think in terms of receptors, we'll going to get the vessel routes from the MARCS model. The model will need bathymetry, current, wind and weather data in order to understand the fate and transport of contaminants. Part of the scope is to model oil spills. What were proposed in the request for proposal is 48 different scenarios. As the project progresses, we'll be identifying the conditions for each scenario. The model will also illustrate shoreline oiling for persistent and non-persistent oils. Oil concentration in parts per billion, as well as how long it will persist in the water column can be modeled in order to understand the effects. Receptor data sets such as fisheries information can be overlaid as a GIS data set into the model.

Another topic we'll be covering relates to the invasive species such as rats. We'll be looking to the Advisory Panel for understanding what constitutes an invasive species in the Aleutian Islands. Invasive species can be terrestrial or marine, human assisted transport of an organism. To quantify the invasive species in the Aleutians is very difficult. This issue will be looked at on a qualitative basis or a general overview.

Other Key Topics for Task 5 through 8- Risk Analysis Team

Laura Tesch (ERM) lead presenter. See ERM/DMV PowerPoint presentation slides 28-29. <http://www.aleutiansriskassessment.com/aira090901-03mtg.htm>

The Risk Analysis Team opened up the discussion on the other tasks including identifying the risk reduction options. A two-day workshop format will be used for developing the initial list (Task 6). Task 7 will include a more detailed review of the risk reduction options. The NAS Special Report has an initial list of risk reduction options.

Project Schedule- Risk Analysis Team, All

See ERM/DMV PowerPoint presentation slides 30-31.

<http://www.aleutiansriskassessment.com/aira090901-03mtg.htm>

A copy of the schedule was provided as a handout and is also posted on the project website. The project schedule is very aggressive and was established in the National Academy of Science (NAS) report. The project schedule developed by ERM/DNV was conceptually agreed upon by the Management Team and adheres to the NAS report. Input from the Advisory Panel is needed to develop a realistic schedule. Certain tasks of Phase-A are being done concurrently. The assumption is that data will be coming from the Advisory Panel. Preliminary reports will be provided and communication will be occurring with the Panel members for input and comments. The Advisory Panel will be

part of the developmental process of the study. The time periods that are considered off-days in the proposed schedule are the recognized holidays and changes can be taken into consideration. The key to having a quality project and products, recognizing this the schedule may need to be adjusted so that quality isn't sacrificed. Another factor that hasn't been taken into consideration is the Peer Review. The Peer Review panel has not been established and they will need an appropriate amount of time to review products. The assumption is that ERM/DNV would receive one set of comments but if the Peer Review panel has not seen the report, they may have significant changes or questions about each product.

Question and Discussion

Simon Lisiecki- The Peer Review is that going to be a one-author review after the study or is it something else.

Leslie Pearson- The way that the NAS described it is that there would be a panel established. We have had discussions with NAS on options for establishing a panel. One option is that NAS would provide the Management Team with a list of subject matter experts to select panel members. The NAS would facilitate the Peer Review Panel but it wouldn't be a formal NAS peer review.

Simon Lisiecki- Once the Panel is established will they do a review of each product.

Leslie Pearson- the goal is to get a Peer Review Panel established. The panel will review each product as they're developed, not waiting until the end to review a draft final product.

Laura Tesch- There's six deliverables that would go through the Peer Review process.

Laura Tesch- the times we'd all be coming together would be Task 3, Task 6 and Task 7. There is a 21-day set aside for the review time for each report. The draft reports go out to the Advisory Panel and comments are consolidated and forwarded to ERM/DNV for report finalization.

Bruce Wright- for the timeline, the red is reviews of draft products.

Tim Robertson- what I've got up now is on page 105 of the NAS report and there's four columns; one is the Management Team, another the Advisory Panel, Risk Analysis Team and the Peer Review Panel. I'm hoping that Laura can relate the proposed schedule to this table. At task 3 there's a review by all entities. Once we get past that then we would develop a report on the Phase A consequence analysis. That report would come out for review and consolidated into a final report. The peer review panel will be looking at the technical portion of the study. After that we would start talking about risk reduction measures and prioritizing them.

Dan Yamashiro- There is inherent to this schedule a project risk- budget, schedule, and management risk. The bit that isn't incorporated into this study is the peer review panel and possible effects on the schedule and budget due to scope change. The peer review wasn't incorporated into the schedule at all.

Bruce Wright- Independent peer review is always a wild card.

Dan Yamashiro- changing the project schedule to affect the review is the least risk on the entire project and budget.

Jay Wright- would it be possible to provide the Advisory Panel with a preliminary schedule?

Laura Tesch- I can't imagine that all the Advisory Panel and Management Team members will be available for the entire review process.

Jim Robertson- should we come to agreement right now that if someone doesn't have time to review that we move forward?

Tim Robertson- What I want to try and do is to get the schedule and get it right rather than posting an unrealistic schedule. If we set a schedule and everyone agrees to it then we all will need to work with it.

Simon Lisiecki- if someone isn't going to be there then individuals can at least submit their comments in writing.

Bob Umbdenstock- if there's an incident that affects peoples schedule is there a mechanism to pause the project.

Shirley Marquardt- is that a decision for the management team?

Jim Robertson- During the Arctic Rose investigation, 9/11 occurred and we paused the investigation. I'd like to think that common sense would prevail.

Break

Tom Gemmell- will reduction options factor in response planning?

Laura Tesch- the risk reduction options will focus on preventing the impact. The focus under phase A won't look at response equipment, lightering, salvage. The initial list of RRO is in the Appendix A in the NAS report 293 and it's categorized by subject matter, which aren't ranked.

Gary Folley- According to the list "enhanced" oil spill response is part of the risk reduction option. We're going to need to figure this out and how far we'll take this.

Tom Gemmell- we need to go through this list and clean it up.

Laura Tesch- the Phase A job is to review, prioritize and add to the list. After we've got through the risk analysis the options and location may change as more detailed information becomes available. When we do tackle this list it will generate a lot of questions: who will implement them, what will it cost, can it be implemented.

Gary Folley- defining what a risk reduction measure is needs to be done. The issue of spill response capability in the Aleutians and compare it to Prince William Sound is a big issue.

Bob Umbdenstock- the focus of this exercise is to discuss intervention strategies, post casualty/pre-emergency event, how to prevent the environmental insult. The question is how do you prevent the incident from occurring.

Project Communication- Risk Analysis Team, All

Laura Tesch (ERM) lead presenter. See ERM/DMV PowerPoint presentation slide 32. <http://www.aleutiansriskassessment.com/aira090901-03mtg.htm>

The Aleutian Island website is up and running and there is a Management Team and Advisory Panel website. Part of ERM/DNV role is to have bi-monthly calls with the

Management Team and communicate progress. Our question is, when we have information that we want to gather do we go directly to individuals? What's the best way for us to communicate?

During this discussion it was decided that a communication protocol should be developed to formalize the communication process between the various teams and panels. Nuka Research & Planning is the facilitator for the Advisory Panel but if the Risk Analysis team needs specific information from a panel member they should contact that panel member directly. The goal is not to hinder communication. General consensus was that there should be a gatekeeper between the Management Team and Advisory Panel to the contractor. It was also suggested that a webpage be developed or a link where you can start a chain of communication- record of when the question was asked, deadline—a project blog.

Action Items:

- Develop a communication protocol for information flow between Advisory Panel, Risk Analysis Team and Management team.
- Review and evaluate the possibility of establishing a project blog or communication website for all entities.

De-brief on Severe Weather Guideline Meeting-Marc Smith (AP member/Tramper)

The winter storm guideline is specific to Dutch Harbor. The issue is primarily associated with Tramper traffic. The winter storm guidelines were designed in 2001 or 2003 about offloading vessels at anchor. Currently the guidelines require a tramper to have 10 shots of chain and begin discussions/communicating when the winds are sustained at 45 knots. It was a great example of how the local entities are attempting to mitigate risk. CG representative provided a flow chart of the decision process. There was discussion from the Alaska Marine Pilots to reduce the sustained wind to 35 knots rather than 45 knots.

The guidelines were written when the fisheries weren't rationalized-where time was of the essence to fish and reach their quota. They agreed to meet again to discuss further. The goal is to reduce risk. It would be beneficial to have an AP member report back on what the final decision of this discussion. These guidelines are specific to the Port of Dutch Harbor. The Pilots have another set of guidelines for Akutan. Some very skilled pilots built the guidelines

- Follow-up with the City and/or AMP Advisory Panel representative on getting a summary of the final decision on the winter storm guidelines.

Adjourned at 4:30PM ADT