



ALASKA
Department of
Environmental
Conservation

Cruise Ship Waste Water Science Advisory Panel

Teleconference
June 28, 2011, 8 a.m. ADT
Agenda

Absolute Time

Topic

00:00 - 00:10

Welcome and Identification of Participants

- Mark Buggins
- Ken Fisher
- Reinaldo Gonzalez
- Juha Kiukas
- Lincoln Loehr
- Steve Reifentstahl
- Michelle Ridgway
- Bert Sazon
- Silke Schiewer
- Simon Veronneau
- Thomas Weigend
- Melissa Goldstein, ADEC
- Rob Edwardson, ADEC
- Ed White, ADEC
- Albert Faure, ADEC
- Lynn Kent, ADEC
- Mike Tibbles, ACA
- Krista Webb, Facilitator

Status Reports – Melissa Goldstein, DEC

- ADEC contacted vendors to acquire cost estimates for AWTS and polishing units. Two vendors said no (Scanship and Lenntech), Hamworthy said they would only supply technical information. Others said they were undergoing lab testing (Evac Zodiac Kubota). One vendor (RWO) supplied a report the morning of the teleconference; ADEC had not a chance to review it yet. Melissa suggested the Panel was likely to need to find other ways to get cost information.
- 2004 EPA Cruise Ship Wastewater Survey Responses – ADEC is working with EPA to see this draft report when it is released.
- Ambient metals within 12 miles of shore – ADEC contacted AKMAP. No data from water column exist from this source. Melissa is trying to get the sediment data. Michelle Ridgway offered to provide sources that she is aware of for metals in water column data. Lincoln Loehr cautioned the Panel that dissolved parameter data is preferable and that older data and or total recoverable metals data is not ideal.
- Rob Edwardson told the Panel that ADEC is planning to contract with Northern Economics in order to help define available data and appropriately collect data the Panel will need. He agreed to send the qualifications of this company to the Panel.

- Technology Workshop – Panel discussed the usefulness/desirableness of having a Technology Workshop in October 2011 as outlined by the Process document. Panelists were divided over whether hosting a technology conference would be a useful thing to do; however, most Panelists thought October was too soon to host a conference. Highlight points from this discussion are listed below:
 - The field of existing cruise ship wastewater treatment system vendors and potential new technologies were identified for the 2009 Feasibility Study and Workshop. Additional vendors such as (RWO/Veolia) should be added to this list.
 - The majority of vendors with WWT systems currently installed on cruise ships in Alaska are not interested in supplying additional information at this time either because they are too busy, the market is too limited, or the challenge too great.
 - Reverse osmosis followed by ion exchange has been proven to remove metals from treated effluent, both on shore and on ships. There are numerous vendors of these types of systems used in land based applications. Ship equipment installation contractors could be asked to determine feasibility and cost of installing different configurations of these systems on ships and on shore. It was suggested that Juha, Thomas, and Albert prepare a short list of installation contractors to contact. Simon disagreed with this approach, cautioning that only proven ship WWT contractors should be utilized. Reinaldo responded that the technologies are proven, they just need to be adapted to the space and that the choice ultimately is whether it is more cost effective and efficient to install systems for metal treatment on ships or have shore-side polishing systems. Silke suggested having the installation contractors describe the logistics at a meeting and have ACA present to ask questions.
 - Michelle made the suggestion to send Ed and Albert to a large existing world-wide conference for WWT and bring back highlights. She also noted that other nations and regions are looking at these same issues and challenging industry about these issues and that the Panel should be looking at all that information. She suggested the Panel should evaluate all potential solutions to the issue. She also noted that the Panel is serving the public, thus any conference should be during the legislative session, and there may be better ways to communicate this information to the public than a technology conference, such as a web-based video.
 - The potential conferences identified by the Panel are WEFTEC, SeaTrade, and the West Coast Cruise Ship Conference. The programs and abstracts for these conferences should be looked at the by Panel to identify any potential vendors or treatments of interest. If so, these companies can be contacted by DEC to provide information or invited to talk with the Panel.
 - Albert noted that there was a ship currently sailing in Alaska (Regatta) that is experimenting with a double train treatment system (the Triton) which can treat metals. Based on their VSSP and the results of their sampling this system and configuration looks promising but there is not enough data yet

to confirm. Albert offered to write up a summary of this system, have it reviewed by the ship operator and the vendor, and provide it to the Panel.

New Materials Provided - DEC

- DEC report on treated vs. untreated wastewater streams
 - Lincoln noted that in this report, there is no calculation of % blackwater to total water treated. Blackwater % ranged from 7-18 percent. Lincoln has sent this information to the Panel previously. It's important to ask what the mass loading of ammonia is per capita, and compare that to treatment plants. In 2010, Carnival Spirit had very low ammonia and then had a spike where Lincoln believes it probably treated blackwater. Albert and Ed noted that the Carnival Spirit has two distinct systems, one for blackwater and one for graywater; therefore the spike was not likely a result of blackwater treatment.
- Discharge Map and Table showing regulatory limits – not distributed prior to teleconference; not discussed.
- 2010 Large Ship Wastewater Sampling Draft Report – distributed to Panel members prior to teleconference; not discussed.

Draft Report – Krista Webb

- Report Content
 - Sections and content creation – see report draft
 - Questionnaire for Cruise Operators - Silke suggested adding the question: “Do you foresee changes in the fleet based on new standards in the future?”
 - GIS Mapping – Michelle added potential figures to include in the report
- Krista asked the Panel to review the draft report/outline carefully and provide comments, revisions, content, or thoughts to her by July 13 in any way possible (revised text, memo, email). She agreed to compile input, reconcile any conflicts, and redistribute the next draft of the report.

Discussion of Next Face to Face Meeting – Krista Webb

- Date – The optimum week looked like September 27th, but all Panelists had not responded to the meeting wizard. There appeared to be some technical difficulties, as some invitees' initial responses did not register in the Meeting Wizard. Krista asked Panelists to complete the meeting wizard who had not already done so. Once all Panelist's replied to the meeting wizard, the optimum dates for the meeting are 9/21/11-9/23/11. The next face to face meeting is scheduled for September 21, 2011 – September 23, 2011, in Juneau.
- Length – Panelists agreed that a 2.5-3 day meeting was better than shorter and preferred the meeting conclude on Friday.
- Agenda
 - Review the types of water treatment systems in an internal work session. What do we think we know and what do we think is out there.

- Lincoln suggested looking at the work of the first Science Advisory Panel and inviting Dr. Alan Mearns from NOAA to attend the next meeting and give the Panel a presentation. Dr. Mearns pulled together the structure of that report. Each chapter had different authors, but the entire panel reviewed, edited and agreed with that report.
- Discussion and presentations of environmental benefits and costs (looking at ambient data and GIS mapping as part of that discussion).
- Time for face to face discussion.
- Review any cost/feasibility study information from vendors.

01:50-02:00 **Public Comment and Adjourn**

To Do

1. Rob to send qualifications and work scope of Northern Economics to Panel.
2. Ed to send regulatory limit table to Panel.
3. Albert to draft a report on the Triton system on the Regatta to be reviewed by ADEC, the Vendor, and the Operator. The report will then be sent to Panel.
4. Panelists to review and send comments and revisions for report to Krista.