



ALASKA
Department of
Environmental
Conservation

Cruise Ship Waste Water Science Advisory Panel

Teleconference
May 19, 2011
Draft Summary

Welcome and Identification of Participants

Panel Members:

Mark Buggins
Reinaldo Gonzalez
Juha Kiukas
Lincoln Loehr
Steve Reifenstuhl
Michelle Ridgway
Thomas Weigend
Simon Veronneau

Krista Webb (Facilitator)

DEC:

Melissa Goldstein
Rob Edwardson
Ed White
Albert Faure

Public:

LTG Scott Guesno (USCG)ⁱ
Hermann-Josef Mannes (Meyer Werft)ⁱⁱ
Ira Donovan (Burns and McDonnell)ⁱⁱⁱ
Mike Tibbles (ACA)

1. Introduce Melissa Goldstein

Melissa Goldstein introduced herself and the Panel welcomed her to the team.

2. Vendor Technical Specifications

Krista Webb explained why the specifications had not been sent out to vendors yet (leery of sending something that looks like a request for proposal (RFP) with no potential contract pending).

The Panel discussed what types of vendors they wanted to request cost estimates from in order to prioritize the list of vendors to be contacted. For ship board systems, the Panel agreed that they wanted to request information from companies with solid experience with installation of AWTS on ships. Vendors with no marine ship installation experience could still be solicited for shore side polishing systems.

It was noted that current vendors of marine shipping AWTS do not make polishing systems. Juha Kiukas suggested giving all vendors the opportunity to quote whatever systems they felt qualified to provide and it would be the Panel's job to evaluate feasibility.

The Panel agreed to request the five options in the specification document and ask for quotations as both new builds and retrofits.

- A. Complete wastewater treatment process (AWP) including Ammonia and metals removal
- B. Complete wastewater treatment process (AWP) including Ammonia removal
- C. Complete wastewater treatment process (AWP)
- D. AWP Effluent polishing unit for Ammonia
- E. AWP Effluent polishing unit for Metals

The Vendors to be contacted are:

- Evac Zodiak Kubota
- Gertsen and Olufsen AS
- Hamworthy
- Headworks USA
- Lennotech BV
- Oy WatMan AB
- RWO/Viola
- Scanship

All of these vendors have successfully done ship installations.

Other comments on the vendor specification document are that it should be called a “request for information and budgetary price”, not an RFP.

Hydraulic loading units for hydraulic loading per day were corrected on page two and three of the specifications.

Panel discussed the influent values and agreed to use the data presented, noting that this data is representative of ships that treat all their waste streams, not a ship that segregates wastewater. It was agreed to use this in order to compare apples to apples.

3. Discussion of work to be completed to meet objectives

Panel reviewed the Statute and mandate of the Panel. Krista Webb asked each Panelist specifically to state how they were feeling regarding the task of preparing a final report.

Panel observations are listed below:

- Panel work is progressing. Panel is on the right path.
- There is still a great deal of data they would like to see, but if data were inadequate or not comparable, the Panel would need to make their conclusions based on assumptions and available information and state data gaps and how these gaps affect their conclusions.
- There is much work to be done and adequate face to face time will be necessary to pull it all together.

- Costs for implementation that cruise lines already gave us seemed underestimated.
- Panel will need to look at the cost of treating ton of water to the current permit standards, and compare it to what the cost would be to treat effluent to meet WQS. That will need to be compared to environmental benefits of reducing effluent levels to WQS from what they are now.
- In addition, need to translate costs to passengers and account for different sized ships. Wastewater treatment per passenger is more expensive on smaller ships.
- Once Panel gets some idea of costs, they can look at implementation and feasibility and other issues, for example, who would own a shore-side treatment system.
- Panel has a lot of information to draw from to address mandate.
- Item 1 is readily summarized, for Item 2 Panel will need to wait and see additional information. Item 3 should be prioritized by the Panel. Look at environmental benefit in the context of existing WQS, existing land-based facilities, and mass loadings. These issues should already be under discussion by the Panel.
- Panel must think about and find out costs to cruise ship companies of holding and discharging untreated wastewater outside the 12 mile limit.
- The Panel needs to be looking at options that have a spatial component such as whether ship is tied at dock and discharging to community WWTP (which, unlike for cruise ships, are subject to permit limits that are derived considering both water quality standards and dilution in mixing zones), or to travel offshore 12 miles and discharge without treatment. Costs must be different depending on type of ship and itinerary. Panel needs GIS data to map where vessels actually need to go.
- Suggestion was made that Panel look at environmental benefit and cost in a general way - what are environmental benefits and costs of implementing additional methods of treatment –costs and benefits don't need to be looked at individually. The question is what is the environmental benefit from improving effluent from what it is now. One Panelist stated that there is no benefit to reducing effluent concentrations further in terms of water quality and mass loading.
- Panel discussed the word “marginal” which is an economic term, but may be pejorative to other audiences. Panel agreed that document must be worded for all audiences.

Michelle Ridgway proposed asking industry to tell the Panel what the complications are for going offshore – what is cost and benefit of it – so the Panel could understand this practice. Michelle offered to prepare a simple strawman questionnaire to give to the cruise companies. She also offered to share some papers on this subject.

Rob Edwardson asked to revise the vendor specifications document to just ask for equipment costs because without knowing specifics of the project, installation costs would be very difficult to quote. Panel discussed this issue and noted that experienced suppliers would have installation costs from reference projects available and be able to provide estimated potential installation costs and the Panel would like to ask for these examples.

Michelle Ridgway asked the Panel if there was any point in asking for complete systems. She said it seemed the common presumption is that the existing systems treat wastewater pretty well with the exception of ammonia and metals and the most feasible alternative would be to add polishing systems (either on ship or shore) to existing AWWTS. Isn't the question what is the additional cost to treat ammonia and metals?

Juka Kiukas said that Scanship is modifying their whole system by changing the carrier bed to get more biological activity and changing the aerator. They are redesigning to create AWWTS that will not need a polishing unit. Hamworthy is doing the same. Panel agreed they would want estimates for complete systems as well.

4. Review and status of pending data requests

Pending information requests and status are listed below:

- 1) Cost estimates of new systems/retrofitting – specifications to go out to Vendors after meeting
- 2) GIS data (ship routes, discharge locations) – in process of obtaining discharge logs
- 3) % treated vs. untreated streams – completed - to be sent to Panel after meeting
- 4) Map showing regulatory limits/what discharged where – close to completion
- 5) Ambient metal concentrations within 12 miles of shore – still no response from AKMAP
- 6) Information on WWTPs that discharge into vulnerable water systems

Other Information Pending

EPA cruise ship survey economic data (data was not available to public, DEC trying to obtain). Krista sent request to EPA for results of survey on 5/25/11.

5. Next Meeting

The next meeting will be a conference call scheduled in late June 2011. The next face to face meeting will be scheduled in September 2011. Krista Webb will send out Meeting Wizard requests.

6. Public Comment

None.

ⁱ Alternate for Lamberto Sazon

ⁱⁱ Alternate for Thomas Weigend

ⁱⁱⁱ Alternate for Reinaldo Gonzalez