Department of Environmental Conservation
Response to Comments

For

Large Commercial Passenger Vessel

General Permit No. 2013DB0004

Public Noticed April 8, 2014 – May 23, 2014

September 19, 2014

Alaska Department of Environmental Conservation
Commercial Passenger Vessel Environmental Compliance Program
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Juneau, AK 99801

SECTION I: INTRODUCTION

A Summary of Permit

The Alaska Department of Environmental Conservation (DEC), Commercial Passenger Vessel Environmental Compliance (CPVEC) Program, or Cruise Ship Program, issued a general permit pursuant to Alaska Statute (AS) 46.03 and Title 18, Chapter 69 of the Alaska Administrative Code (AAC), for marine discharge of treated sewage, treated graywater, and other treated wastewater from large commercial passenger vessels operating in Alaska on August 29, 2014.

B Opportunities for Public Participation

On April 8, 2014, the Alaska Department of Environmental Conservation (ADEC), sent notice of the draft 2014 General Permit.. Included in the notice, was a 45 day period for members of the public to submit comments addressing specific terms or conditions within the permit for consideration before final issuance. The Department has prepared the following Response to Comments document in consideration of comments received. Please note, only comments received before the closure of the public comment period are considered in this document.

C Final Permit

The final permit was issued by the Department on August 29, 2014. Significant changes are identified in the response to comments and reflected in the final fact sheet for the permit.

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SECTION III: PUBLIC COMMENTS & DEPARTMENT RESPONSE

The Department received 117 Comments in email with the subject line, "Protect Alaska's waters: Improve the cruise ship General Permit!" Of the 117, there were 5 duplicate submissions by individuals.

All comments with this subject heading were analyzed to sort through duplicate comments or information that did not address specific terms or conditions of the draft permit. The following five steps were used to identify individual comments:

i. Out of a total 2979 paragraphs/sections/lines of text, duplicate removal revealed 330 unique elements, of these there were;
ii. 71 street addresses, in 63 zip codes, with 40 additional lines of addressor information. There were 13 variations in addressee or signature line.
iii. There were 5 non-technical post-script elements not addressing any specific term or condition of the permit.
iv. Four variations on separate comments amounted to an additional 14 elements or comments not specifying unique terms or conditions in the draft permit.
v. Signature blocks comprised 115 elements.

1.) Protect Alaska's waters: Improve the cruise ship General Permit!

Protect Alaska's waters similar comments

Alaskan families and businesses rely on clean water for fishing and tourism jobs, recreation, and customary and traditional uses. I'm concerned the proposed general permit for cruise ship dumping will jeopardize our economy and way of life by allowing cruise ships to pollute our pristine waters.

> Department Response: This comment did not address a specific term or condition of the draft permit that illustrates the stated concern.

Alaska's citizens voted against cruise ship dumping in 2006, and it is disappointing to see the state roll back these common sense, voter-passed, clean water safeguards with this general permit. Governor Parnell and the Department of Environmental Conservation should listen to Alaska's citizens and demand that this industry leave our waters fishable and swimmable.

> Department Response: The draft permit reflects the statutory amendments passed by the legislature in 2013 via House Bill (HB) 80. The draft permit ensures that Alaska's marine water quality standards, including fishable and swimmable uses, are met.

Please extend the public comment period for this general permit, and keep the permit term at three years (rather than the proposed five) to allow for needed improvements to the permit over time.

> Department Response: The commenter did not offer a justification for an extension of the 45 public comment period; the Department has not extended the public comment period. A five year permitting cycle has been adopted for use as granted under 2013 HB 80 and consistent with other Department issued General Permits. The commenter does not identify practicable improvements that could be incorporated within three years rather than five years. The 2012 Preliminary Report from the Cruise Ship Wastewater Science Advisory Panel (Panel) found that "The Panel was unable to identify technologically effective and economically feasible

treatment methods, expected to consistently meet the numeric water quality criteria at the point of discharge that have been proven on cruise ships." and "Adaptation of emerging technologies from other industries to cruise ships presents significant feasibility challenges."

No dumping of effluent while stationary or in port. Ships should be not be allowed to dump within three (or one) nautical mile of shore. Under the proposed permit, ships could dump 150 million gallons of partially treated sewage in downtown Juneau alone in a single tourist season! (If toxic mixing zones are allowed under this permit, please be aware that DEC will need to post signs in our heaviest visited areas warning people that the water is neither fishable or swimmable).

Department Response: The General Permit does not allowing discharge of untreated wastewater. Wastewater must be treated by an Advanced Wastewater Treatment System or equivalent and must meet EPA secondary treatment standards for wastewater. The permitted mixing zones are sized and situated to prevent exposures that could be toxic or lead to adverse effects.

The Department will continue to monitor, report, and provide updates on impaired water bodies listed under Section 303(d) of the Clean Water Act for those which do not meet Alaska Water Quality Standards in the biennial Integrated Report; a map of these waters is also available on the Department website at http://dec.alaska.gov/water/wqsar/map.html. Section 303(d) water bodies are listed with impairment status and their effect on recreational activities.

Dilution is NOT the solution to pollution; cruise ships should not be allowed to use "moving mixing zones" to process pollution. If this model is used, you must require exclusion zones around critical habitat areas, shellfish farms, and important fisheries. Please also mandate that cruise ships be required to disclose where, when and in what volumes they discharge their wastes. Note that "one size fits all" mixing zones are inappropriate, and larger mixing zones for ships with higher effluent values should be standard.

Department Response: The Department did not require exclusion zones as the modeling showed water quality criteria would be met beyond the boundaries the mixing zone. While the commenter does not provide a basis for the disclosure request, cruise ships are already required to submit records on discharge monthly. The size of the mixing zone is based on modeling of ships, and a mixing zone will not be granted if a vessel cannot meet the requirements of the mixing zone.

We ask that you require that receiving waters be tested at the time of each effluent dump for discharges at under 6 knots. Testing waters a couple of times per year, as suggested by the draft permit, is insufficient. DEC must receive the proper funding and resources to effectively monitor for Clean Water Act violations under this permit.

Department Response: Testing at each discharge would be a burden logistically and economically on permittees with little benefit beyond that achieved with the requirement monitoring frequency. Sampling in the permit is consistent with other Department permits. The Department has adequate funding and resources to monitor for violations of this permit.

To clarify, this permit is issued only under state statutes and regulations and not under the Clean Water Act. All ships subject to this permit are also subject to the Vessel General Permit issued by the United States Environmental Protection Agency under the Clean Water Act.

I'm concerned about this permit impacting beneficial uses. Cruise ship dumping on the scale allowable by this permit could harm Alaskan businesses' ability to market seafood and shellfish as safe and sustainable, Native tribal members' ability to safely use customary and traditional resources, Alaskan tourism and recreational businesses, and Alaskan citizens' ability to fish and swim in local waters.

Department Response: Untreated wastewater discharge is not permitted under the general permit. The general permit uses the most stringent water quality standards at the end of pipe for fecal coliform bacteria to protect human health concerns regarding seafood consumption. The permitted mixing zones are sized and situated to prevent exposures that could be toxic or lead to adverse effects.

Other Comments:

As a commercial fishermen who participates in state wide salmon power trolling, bristol bay sockeye gill netting, sea cucumber dive fishery, herring roe on kelp fisheries and halibut long ling. I'm concerned about this permit impacting my livelihood. Cruise ship dumping on the scale allowable by this permit could harm Alaskan fisherman ability to market seafood and shellfish as safe and sustainable.

Department Response: This comment did not address a specific term or condition of the draft permit.

I have been a cruise ship passenger, so I know the business as both a consumer and as a resident of Douglas. We don't want pollution from cruise ships. I get crab from the sea where the ships ply and I want our waters clean. Their sewage, gray water and bilge water needs to go through a filtration plant, not directly into the sea.

Department Response: The General Permit requires treatment equivalent to an Advanced Wastewater Treatment System. These systems include either filtration or an equivalent technology to remove solids.

2.) Cruise Line Agencies of Alaska

Cruise Line Agencies of Alaska works with all the various cruise lines that call Alaska and communicates the various regulations to them. The ships bring a tremendous amount revenue to local communities they visit and we are lucky to have them.

Department Response: This comment did not address a specific term or condition of the draft permit.

Having been through the initial wastewater regulations of Ballot Measure 2, it is very refreshing to see a new approach to the general permit regulations. We are pleased to see the fair and balanced

approach to the regulations. The regulations don't target one industry and hold them to a higher standard than other industries.

> Department Response: This comment did not address a specific term or condition of the draft permit.

I know that you and the rest of the staff at ADEC worked really hard on this and it is probably a thankless job most days, but we sure do wish to thank you and ADEC for all your effort. As we work with the cruise ships on a daily basis, we see the commitment to the environment the vessels staff has, which most people do not see.

> Department Response: This comment did not address a specific term or condition of the draft permit.

As you know, the onboard treatment systems are at a point where they can't get much better. The new permit seems to be a conservative approach, yet fair. In my opinion, the cruise lines will continue to try to better treat their wastewater with new technology no matter what the regulations say, however they need to have consistent common sense and science applied to their results.

> Department Response: This comment did not address a specific term or condition of the draft permit.

Cruise Lines International Association (CLIA) – Alaska Comments on Permit 2013DB0004

3.) Summary of Permit 2013DB0004 Comments

We request ADEC to explore means to expedite coverage under the new permit, perhaps by changing the effective date and shortening the period after submittal of a Notice of Intent (NOI) to less than 30 days.

> Department Response: See Department Response to Comment 4.).

The means by which the respective stationary and underway mixing zones have been derived rely heavily on modelling, which we feel should be more explicitly described in the Fact Sheet. We are unable to evaluate the conformity of this process to established permitting procedures and 'Reasonable Potential To Exceed" (RPTE) analysis without more explicit discussion of the modelling. Further to the point, our analysis indicates that Alaska Water Quality criteria and established mixing zone processes would indicate that there is not RPTE for ammonia when discharged underway at greater than 6 knots, and that therefore no ammonia limit is required in that discharge scenario.

> Department Response: Ammonia was the driving parameter in establishing the size of the underway mixing zone; therefore, it was included as an effluent limit.

The permit includes a receiving water monitoring program for dischargers sailing under 6 knots. We understand ADEC's desire to evaluate the impact on receiving waters from the inclusion of mixing zones in the draft permit, yet the approach described in the permit is problematic. We provide greater detail in our comments.

Department Response: Responses have been provided for specific comments rather than these summary comments.

In three instances the permit provides that ADEC may terminate the permit or alter requirements beyond what is in the draft permit. While it is common for a permit to include a reopener clause in the event that circumstances or technology evolves during the life of a permit, such action would involve re-issuing a permit with all appropriate and associated administrative procedures inherent in the process. We are concerned that the permit issued may have significant changes from that on which we are providing comments. We provide comments on sections 4.3.5; 4.6.3.3 and 5.2.6 in this regard.

Department Response: The Department will follow a public process with a new comment period if the permit is changed after issuance.

The permit requires WET Testing in year three at a frequency that is beyond what is necessary to characterize the effluent and beyond that which is required of shore based facilities. We recommend language to address ADEC's monitoring needs while adding flexibility and efficiency to the process.

Department Response: WET testing is at an increased frequency in 2017, however there are no WET testing requirements in any other year of the general permit, so the frequency for all five years is equivalent to other permits issued by the Department.

4.) Timing of the Permit

CLIA Alaska member lines started arriving in Alaska waters for the 2014 cruise season during the public comment period of the draft permit. Although we had hoped the permit would be finalized prior to the season, we encourage ADEC to work as expediently as possible during the public comment review period and final decision process. Given the timing, especially in light of the generous 45 day public comment period, we don't necessarily see a need for an additional mandatory 30 day period beyond the department's final decision. We request that the 30 day period be eliminated, that the permit become effective upon final decision, and that a transition period of up to 30 days be granted for permittees to submit Notices of Intent (NOI(s)) and for DEC to review and approve discharge authorizations. Vessels intending to discharge only underway, could transition to the new permit much more quickly. Work could also be done in preparation for those vessels applying for continuous discharge authorization to help expedite the review and approval process.

Department Response: The thirty day period will be concurrent with the Notification of Intent (NOI) period, so ship operators will be able to submit the NOI at the beginning of the 30 day period after the final decision.

5.) Page 4 Table 1: Schedule of Submissions

The Schedule of Submissions summarizes and references specific sections of the permit which require submittals by the permittee. Comments will be offered on many of those sections, and any subsequent changes to those sections should be reflected in this Schedule of Submissions as well.

Department Response: The schedule of submissions will be updated with the final permit requirements.

6.) Page 5, Section 2.1.2 Eligibility; Page 24, Section 12.2

This section uses the defined term Advanced Wastewater Treatment System (AWTS). The definition of AWTS found in section 12.2 is overly complex. In fact, the defining characteristic of the AWTS is its ability to obtain certification for discharge by the U.S. Coast Guard under federal "Murkowski" rules, and its certification to discharge under the U.S. EPA Vessel General Permit (VGP), both of which have CLIA-Alaska Comments on the ADEC Large Commercial Passenger Vessel Wastewater Discharge General Permit Page 2 of 11 Permit No. 2013DB0004 specific 'pre-discharge' protocols under which vessels must demonstrate their ability to meet their respective requirements. ADEC attempts to describe the technology that has evolved to meet these requirements, but in doing so does not describe (nor could it) potential future technologies which could otherwise be disqualified under ADEC's definition.

AWTS technology is best defined by its ability to meet the Murkowski and VGP standards, and this should be the definition provided in the permit. We recommend the following language for Section 12.2:

Advanced Wastewater Treatment System (AWTS) is any system certified for discharge in Alaska under 33 [Code of Federal Regulations] CFR Part 159 Subparts C and E (Federal "Murkowski" standards) and/or the initial monitoring requirements of Section 5.1.2.2.1 of the 2013 US EPA Vessel General Permit

This definition would make section 2.1.2 unnecessary, and so it can be deleted.

Department Response: The Department did not incorporate EPA's language from the VGP into the definition as EPA's language concerns monitoring requirements, not performance limits for certification. The definition of AWTS is based on requirements. HB 80 allows for alternative systems and does not require certified systems. The definition for AWTS in the permit was designed to meet the complex requirements found in HB 80.

7.) Page 5, Section 2.1.3: Annual Registration

Annual registration has been required by statute for sailing in Alaska independent of discharge intentions. Including it as a condition in this permit is redundant and unnecessary. We suggest this be deleted, and Table 1 be amended as well.

Department Response: It has been the Department's policy to incorporate other Department requirements into permits. Registration requirements are for all vessels, and listing it in the permit does not add a burden to permitees.

8.) Page 6, Section 3.1: Mailing Address for Required Signed Reports

This section requires the mailing of required reports to the specified address. It has been the practice to submit these reports electronically, with scanned signatures, etc. We recommend the following additional language following the address in this section:

Alternatively, required signed reports may be sent electronically by the specified deadline to DEC.WQ.Cruise@alaska.gov provided those reports are facsimile or scanned electronic files of original, signed, reports.

Department Response: The Department will require original signed copies be sent of Notices of Intent, Discharge Monitoring Reports, Noncompliance Reports, and Notices of Termination are required to be mailed to the Department. The permit will be updated to specify that attachments such as sample results to the documents may be submitted electronically.

9.) Page 7, Section 4.1: Certification

The specified certification language differs slightly from that contained in Section 1.7 of the 2013 EPA VGP. As some documents submitted under this permit may also be concurrently submitted to the US EPA, it is efficient to use the same certification language. As the EPA permit is already in effect, we recommend its adoption which we provide here, highlighting the minor editorial differences:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Department Response: The Department will make minor changes to the certification language to match the VGP.

10.) Page 7, Section 4.2.1: Notice of Intent Form

This section requires submittal of a completed Notice of Intent (NOI) at least 30 calendar days prior to discharge of any treated wastewater into the marine waters of the state. Numerous ships will already be discharging under the previous permit during the 2014 season, which would make it impossible to comply with this language if the 2014 permit takes effect this season. Consistent with our general comments, we request an exception be made to the 30 day requirement for vessels who have already submitted a registration in 2014. This will help transition ships to the new permit more quickly. New vessels will still be required to submit an NOI 30 days prior to discharging under this permit.

We recommend the following language:

Owners or operators of large commercial passenger vessels discharging under Permit Number 2009DB0026 may seek authorization to discharge under this permit after submitting a Notice of Intent (NOI) and on a schedule mutually agreed with the Department.

Ships seeking initial coverage under this Permit shall submit a completed NOI form to the Department at least 30 calendar days prior to seeking authority to discharge under this permit of any treated sewage, treated graywater, and other treated wastewater in the marine waters of the state.

The Schedule of Submissions should be appropriately edited to reflect changes in this section.

Department Response: The Department has the capability of waiving or changing date of submission requirements in the General Permit, this can be done without modifying the permit.

11.) Page 7 Section 4.2.3: Modifications

This section describes requirements to notify ADEC when modifications to the system are made. ADEC should be much more explicit in describing the types of modifications that would trigger this requirement, such as, "changes to the UV system that may affect the duration or intensity of UV dosing disinfection, changes to discharge pipe diameter or depth…."

Department Response: The Department appreciates the attention to detail, however the purpose of this section is to be inclusive to all modifications. Explicit types of modifications would constrain the purpose of this section. Modification is any change that is not included, approved, or captured in the International Oil Pollution Prevention certificate and Vendor recommendations. In other words, the AWTS system shall be kept the way it was and approved by either the vendor, U.S. Coast Guard (USCG), class, or International Maritime Organization (IMO).

12.) Page 8 Section 4.3.5: Additional Comments

This section specifies that the Department may attach additional terms and conditions to authorizations. This puts CLIA-Alaska members in the position of commenting and presumably applying for a permit that may not include its final terms and conditions. While it is common for permits to have a re-opener clause, such events presumably would trigger proper administrative procedures, public comment and other requirements for re-issuing a permit. The current language is too open ended and should be deleted.

Department Response: The Department may attach additional terms and conditions in authorizations. For example, this was done under the 2010 General Permit when specific sampling conditions were needed. The main purpose of this requirement is to enable the issuance of authorizations with additional requirements when a vessel would not otherwise be able to meet all mixing zone requirements required in 18 AAC 72. The authority for the additional terms and conditions comes from AS 46.03.462(h).

13.) Page 8, Section 4.5: Transfers

The sentence should be concluded with the language, "…per the schedule specified in Section 4.2.1." (as amended by the comment submitted above).

Department Response: The Department will change the language to read, "as specified in Section 4.2".

14.) Page 8, Section 4.6: Termination of Authorization

Section 4.6.3.3 authorizes DEC to require termination of operation under the Permit due to a change in the availability of technology or practices for the control or abatement of pollution contained in the discharge. The current Permit is a product of legislative statutory changes implementing the findings of the Science Panel. The Panel was tasked by the Legislature to look not only at the availability of technology, but also at the economics and the environmental benefit of technology. The Panel further defined "available" as technology which was proven in a marine environment. Terminating or modifying the permit solely based upon the "availability" and without

consideration of reliability, economics, or environmental benefit would not be consistent with the Panel findings or Legislative intent. Section 4.6.3.3 should be deleted.

> Department Response: The Department will consider availability, economics, and environmental benefit in any potential termination of the permit. This is a standard condition of Department wastewater permits and is included to allow for any future developments not considered in the Science Panel report. Section 4.6.3.3 also allows for changes required under 46 AS 46.03.462(j) if changes are made to 33 CFR 159.

15.) Page 9, Section 5.1.1: Discharges to Impaired Waters

This section prohibits discharges into impaired water bodies listed for constituents for which there are effluent limits. This language is overly broad, as there are many reasons why a water segment may be listed that are unrelated to wastewater discharges – particularly if the wastewater actually meets water quality limits. We recommend the following language:

Discharges to water bodies included in the latest DEC Integrated Water Quality Monitoring and Assessment Report are prohibited if the discharge cannot meet Alaska Water Quality Standards and the water segment's inclusion is due to impairment of the water column by any of the pollutants for which effluent limitations are included in the Effluent Limit Tables in the Permit.

Additionally, this permit should include language discussing instances in which TMDL's are in place for a given water segment (cruise ships would certainly be seeking a Waste Load Allocation decision in development of relevant TMDL's). The permit should be amended to include reference to impaired waters with an approved TMDL.

If an applicable TMDL exists either individually or categorically for cruise vessels (including disallowing discharges), ADEC will inform vessel owners/operators of specific requirements. ADEC will inform vessels covered under this permit that a Waste Load Allocation (WLA) has been established that applies specifically to cruise ship discharges.

Cruise ship discharges covered under this permit must be consistent with the assumptions and requirements of that WLA. If such a WLA exists, ADEC will inform the vessel operator if any additional limits or controls are necessary to be consistent with the assumptions of any available WLA in the TMDL, or whether an individual permit application is necessary.

> Department Response: The Permit will be updated to include a direct link, rather than an indirect link, to the latest Integrated Water Quality Monitoring and Assessment Report which explains the basis for and the extent of the impairments; available on the Department website at http://dec.alaska.gov/water/wqsar/waterbody/integratedreport.htm.

16.) Pages 9 to 12, Section 5.2: Mixing Zone

The mixing zone size information in Section 5.2.3, 5.2.4, 5.2.5 and Tables 3 and 4 should be clarified to indicate that the depth covered by the mixing zone is from the surface to 1 meter below the discharge port. This also should be clearly stated in the fact sheet. The current language in Tables 3 and 4, has the effect of describing the mixing zone as a rectangular plane limited to just the depth of 1 meter below the discharge. See also language in Section 5.2.5 which is similarly in need of clarification.

The mixing zone size for the underway greater than 6 knots situation in Section 5.2.3 and in Table 3 should simply extend to the stern of the vessel. There is no need to artificially narrow the mixing zone to a distance of 63 meters, which represents 21 seconds travel time at 6 knots.

ADEC has used 63 meters, and 21 seconds, to assert that there is a need for ammonia limits underway based on the 4 day chronic ammonia criteria for a 21 second exposure, which is an unnecessary basis for asserting the need for a water quality-based effluent limit. There is no possible chronic four day duration of exposure to organisms at that point as rapid and extensive dilution continues. ADEC has not demonstrated a Reasonable Potential To Exceed (RPTE) chronic or acute ammonia criteria at the stern after a modeled dilution factor of 700, and there is no need to shrink the mixing zone back to a point where a need for a limit is asserted. This is discussed at length in the Fact Sheet, and we provide further comments on the process employed by ADEC in determining the size of this mixing zone in comments on the Fact Sheet.

Section 5.2.5 establishes a 15 meter mixing zone for the Broadway Dock and the Ore Dock in Skagway, ostensibly to prevent overlapping mixing zones when both these berths are occupied by discharging ships. Consequently, these berths are restricted regardless of whether both are occupied, or for that matter when perhaps only one of the ships is an authorized discharger.

The table below provides an analysis of the cruise port calls for Skagway in 2014.[1]

Skagway Port Cruise Analysis

	May	June	July	August	September	Totals
Days w/ No Ships @ Broadway / Ore Terminal	19	9	6	9	10	53
Days w/ One ship @ Broadway / Ore Terminal	4	6	12	7	5	34
Days w/ Two ships @ Broadway/Ore Terminal	7	15	13	15	9	59
Both discharge	4	10	8	10	5	37
One discharges	3	5	5	5	4	22
None discharges	0	0	0	0	0	0
		Total Skagway Days 2014 Cruise Season				146

Thus it can be seen that the proposed 15 meter mixing zone imposes an additional restriction on the 93 days in which a ship is berthed at either the Broadway or Ore Dock, even though there are two dischargers at those terminals on only 37 of those days. On 34 days, there is only one ship at either of these terminals. On 22 additional days only one of the two ships berthed at these terminals has historically discharged in Alaska. Therefore, the issue of overlapping mixing zones is moot for 56 of the 93 days that one or more ships occupy these births.

Given ADEC's reasoning for reducing the mixing zone at these berths to 15 meters, there is no reason to impose this restriction on days in which there is only one ship berthed at these terminals. We recommend the following:

5.2.5. Mixing zone size for permittees authorized for discharge when docked in Skagway at Broadway Dock or Ore Dock is limited to a radius of 15 meters and from the water surface

equivalent to the depth the discharge port is below the water surface plus one meter on days in which more than one ship is berthed at the Broadway and Ore Docks.

In addition, it would be helpful if the permit clearly articulated that the railroad dock (or other docking locations) would fall under the 83 meter mixing zone requirements.

[1] See Skagway Port call schedule at http://skagway.com/wp-content/uploads/2012/01/2014-Skagway.pdf

Department Response: The Department has modified text in the permit and fact sheet to clarify the mixing zone extends from the surface down.

The Department has modified the permit to allow for an 83 meter mixing zone at the Broadway or Ore dock when only one ship is at either dock. A 15 meter mixing zone will be permitted at the Broadway and Ore dock whenever cruise ships are docked at both docks.

17.) Page 10 Section 5.2.6: Additional Limitations

This section provides for a more restricted mixing zone depending on NOI information. This is inconsistent with information provided during the public meeting held on April 30, 2014, in which it was communicated that the specified mixing zones identified in the permit are applicable. Again prospective permittees are placed in the position of commenting on this permit in which critical conditions may be changed unilaterally by ADEC at some point before finalizing the permit. We refer back to comments offered on Section 4.3.5 above. ADEC should be more explicit in describing what circumstances and what possible additional restrictions could be contemplated by this Section or repeal 5.2.6.

Department Response: Department has added a new Section 4.3 "Notice of Intent Review and Permit Coverage Determination Process" to the permit to clarify information in Section 5.2.6 and the Fact Sheet on the potential basis for attaching additional terms and conditions to authorizations. Section 5.2.6 references the new Section 4.3.

18.) Page 10 to 12 Section 5.3: Effluent Limitations

A column should be added to describe the monitoring frequency.

Department Response: The Department agrees. Sampling frequency for those limits listed in this section will be included in the table. The Permittee should note that additional monitoring requirements may not be included as this section is only for those limits provided in the table.

19.) Page 10, Table 2: Effluent Limitations for Vessels Permitted to Discharge Without a Mixing Zone

Table 2 is misleading, implying these are the only limits applicable for a vessel permitted to discharge without a mixing zone. Section 5.2.7 correctly notes that in this situation, discharges must meet Alaska water quality criteria at the point of discharge. Section 5.2.7 says that this condition is as outlined in Table 2, but it isn't outlined in Table 2.

Footnote b should be amended to read, "…taken during the calendar month when discharging in Alaska waters."

Department Response: For an authorization for discharge without a mixing zone, the Department will require a vessel to demonstrate it can regularly meet water quality criteria at the point of discharge for ammonia and dissolved metals. The effluent limits presented in Table 2 are either those for which there are other limits, there is no Alaska water quality criteria, or when there is more than one criteria.

20.) Pages 11 and 12, Tables 3 and 4

We recommend changing the pH limits to a minimum of 6.0 and a maximum of 9.0. There is no need to apply the chronic water quality standards of 6.5 to 8.5 directly to these discharges without any mixing, given the intermittent nature of the discharge and the fact that rapid and extreme mixing occurs. There is no scenario under which a chronic exposure as described by the standard can occur. The technology based limits for pH (shown in Table 4 of the Fact Sheet, page 15) are the same as the federal secondary treatment standards at 40 CFR 133.102(c), and are applicable for discharges from cruise ships utilizing AWTS in Section 5.1.1.1.2(1) of the EPA Vessel General Permit. The limits should be kept consistent between the ADEC and EPA permits.

Department Response: The Department has modified the permit to match federal secondary standards for pH.

21.) Page 11, Table 3: For Discharges Underway at Greater than 6 Knots

ADEC has not shown that this discharge poses a Reasonable Potential to Exceed ammonia standards, and therefore should delete the ammonia limit for ships underway at greater than 6 knots. The permit can and should allow the mixing zone to extend to the stern (which is reached very rapidly); this is very conservative and protective of both acute and chronic criteria, and will allow the dilution factor of 700 (from Fact Sheet page 47, etc.). There is no reasonable potential to cause acute or chronic toxic exposures to organisms in the receiving waters and there is no need for setting a water quality-based effluent limit for ammonia for underway vessels. We offer a more extensive discussion on this matter in comments on the Fact Sheet, which addresses ADEC's discussion of the derivation of these limits.

Department Response: See Department Response to Comment 3.).

22.) Page 13 – Section 6.3: Methods of Analysis and Page 15 – Table 5

The permit needs to specify the applicable and approved EPA methods for analysis. Citing to 18 AAC 70.020 is not sufficient for the permittee to determine applicable methods. The applicable methods for each parameter in Tables 5 and 6 should be identified in Tables 5 and 6.

Department Response: The Department disagrees with the need to identify specific methods of analysis. The approved methods of analysis for the Department are listed under 18 AAC 70.020(c), and the methods approved by the cruise ship program are listed in the CLIA NW and Canada Quality Assurance Project Plan (QAPP). Permitees can request alternative methods by having those incorporated into the approved QAPP. Identifying specific methods would constrain possible alternatives beyond the allowances of 18 AAC 70.020(c)(7).

23.) Page 13 – Section 6.5: Notification of Sampling

Unannounced sampling or unplanned sampling events may make it difficult to comply with the 36 hour notification requirement for 36 hour notification. We recommend the following language:

"…of each regularly scheduled sampling event at least 36 hours prior to the beginning of the sample collection." Most sampling schedules are established well in advance and will of course be shared with ADEC. Emergent sampling needs, or unannounced sampling, are another matter.

Department Response: The Department has been notified of each sample event for US Coast Guard required unannounced samples by the contracted sampler using a schedule not released to cruise ships. The text will not be changed as the 36 hour notification is a regulatory requirement. It is critical that the Department be able to monitor all sample events.

24.) Page 13 – Section 6.6: Sampling requirements for Ships Discharging at Less than 6 Knots

This section requires that twice per year, monthly sampling must be at least 21 days apart for permittees authorized for discharges at speeds of less than 6 knots. While presumably this is intended to strengthen the 'representativeness' of the monitoring, ADEC does not make the case, there is no reason for such a constraint, nor is there any explanation provided in the Fact Sheet for this requirement. Consider the following difficulties with this permit condition:

- Ship schedules and itineraries may confound such a restriction. While Section 6.8.1 allows that a ship discharging in Alaska waters for less than 10 days need only sample once, ships discharging 10 days or more would then require two. A ship discharging in Alaska waters for 12 days in a given month could not comply with both Sections 6.7.7 and 6.8.1 of this permit. This circumstance is particularly common in April, May and September, when ships may be arriving or departing mid-month. Given that certain parameters require two samples per month, it may not be possible to schedule two samples in the same calendar month given the 21 day limit.

- Some parameters, such as TSS and BOD have monthly average and daily maximum limits. In NPDES permitting, dischargers may sample more frequently than the permit requires, as long as all the data get reported on the DMR (see permit Section 7.2.3). Additional monitoring may help to meet monthly average limits in case an individual measurement was above the monthly average. The 21 day separation restriction essentially restricts the amount of sampling that could be used in computing a monthly average to just 2 samples.

- The 21 day separation requirement would essentially limit sampling to the first and last week of the month, complicating scheduling, impacting analytical resources, and potentially delaying monthly reporting as the second monthly samples would all be taken during the last 10 days of the permit.

Department Response: Section 6.7.7 will be changed to match 6.7.6. The 21 day limit will only apply to twice a year sampling such as receiving water sampling and the full sample suites in those years where they are required. Twice a month sampling is only limited by the 24 hour requirement. This matches the requirements in prior permits.

25.) Section 6.7.7, and Pages 15 to 16 – Tables 5 and 6. Sampling Requirements

For the above reasons, we request that Sections 6.7.6 and 6.7.7 delete the requirement for sampling events to be at least 21 days apart. A requirement that the samples be at least 24 hours apart should

meet ADEC's concerns, and in practice, samples will likely be taken with as many days between as it takes the ship to return to Juneau.

Department Response: See Department Response to Comment 24.).

26.) Pages 15 to 16, Tables 5 and 6: Total Residual Chlorine and Free Chlorine

It is unclear why both Total Residual and Free Chlorine are to be measured, as there is only an effluent limit for Total Residual Chlorine, which is sufficient. We recommend deleting Free Chlorine from the monitoring requirement.

Department Response: The Department disagrees as free chlorine is an integral part of the method currently use to measure chlorine and provides useful information, the requirement will remain in the permit.

27.) Page 16 – Table 6, and Page 18 – Section 6.9.4.1: WET Testing

Presumably the WET testing specified in Table 6 and Section 6.9.4.1 of the permit is to inform development of the next permit. A frequency of once per month WET testing in year 3 is more than is necessary for this purpose and far exceeds WET Testing frequencies found in other Alaska NPDES permits such as that for Juneau Mendenhall, Skagway, and Ketchikan. Interestingly, the Fact Sheet describes that WET testing would only occur twice in the third year (see Fact Sheet, page 30). Two WET tests per ship during the permit term should be sufficient. To provide more flexibility and manage costs, we recommend the frequency be changed to twice within the period of years three and four. This would allow costs to be spread over two years, and schedules to be adapted with more flexibility with respect to itineraries and ship deployment.

Department Response: See the fifth item under Department Response to Comment 3.).

28.) Pages 17 and 18: Receiving Water Monitoring for Dissolved Copper

ADEC must describe the practicality of employing EPA clean metals sample and analysis methods for dissolved copper in the receiving water. Those methods may also preclude use of a grab sample. Failure to specify this requirement could result in copper measurements above the chronic water quality criteria due to contamination introduced in the sampling and/or analysis. It would appear that EPA Methods 1669 pertain.

Department Response: Dissolved copper can be collected in the field. Methods will be addressed in the Quality Assurance Project Plan.

29.) Page 17, Section 6.8.3: Total Flow

This section specifies that if a ship has flow meters installed then total flow must be recorded based on flow meter results rather than estimates. In this case the practicality of ship operations confounds ADEC's intent. For example, a ship sailing into, or out of Alaska waters during a discharge period must necessarily estimate what flow is discharged in Alaska waters, as the flow meters will record total flow from the beginning and ending of the discharge period, not when crossing into or out of Alaska waters.

Historically ships have always provided their best estimate of discharge flow. In this case ADEC is seeking to specify a precision that is neither realistic, nor for that matter pertinent to the permit.

Ship discharge flows are small when compared to municipal or storm water discharges, and effluent limits are expressed solely in terms of concentrations, not daily mass limits.

> Department Response: The Department disagrees with the commenter that there is any additional burden. Under 18 AAC 69.050 the requirement to report on flow and volume already exists. Operators in Alaska have demonstrated an ability to comply with this condition. For any specific compliance concerns, please contact ADEC for technical assistance.

30.) Page 17, Section 6.9.3.1: Receiving Water Monitoring

We preface specific comments on receiving water sampling with the general comment that we find the approach described in the permit as problematic and rife with practical difficulties in their implementation. Sampling of the nature described without the context of baseline data would be prejudicial and inappropriate. The practical aspects of receiving water sampling in conjunction with effluent sampling for marine vessels are complex, untried, and likely to lead to unpredicted consequences in the field. No process currently exists or is detailed on how concentrations will be measured without the potential of negative influence from non-discharge sources. With multiple ships in port, it is also an open question as to whether the sampling service provider will be able to service all ships during the time available in port.

In the absence of such baseline data and resolution of other concerns expressed here, ADEC should remove receiving water monitoring from the permit. We believe ADEC must describe plans for baseline ambient water monitoring under numerous conditions, including during storm water discharge episodes and dry weather conditions. CLIA-Alaska is open to discussions about how to achieve the objectives of such monitoring outside the framework of this permit, under controlled conditions, with a further dialog on how to develop quality data and address the practical difficulties alluded to here.

> Department Response: The Department disagrees with the commenter. Receiving water monitoring is critical to testing mixing zone modeling. The Permit does not contain receiving water limits.

31.) Page 17, Section 6.9.3.1.1: Receiving Water Monitoring

The above comment notwithstanding, it is unclear how this requirement can be satisfied if/when the vessel is discharging on the pier side of the ship. ADEC should describe their thinking on this requirement in the fact sheet. Additionally, please correct the typographic error in the parenthetical sentence concluding this section.

> Department Response: The Department disagrees with the commenter. It is unclear what difficulties are being highlighted with pier side discharges. If a vessel is discharging into water, it is possible to sample the receiving water adjacent to the vessel and at the specified distance from the discharge port. See also Department Response to Comment 30.)

32.) Page 17, Section 6.9.3.6 Flow Rate

Flow rate is typically measured over time – an instantaneous flow rate recorded '...as near as practicable to the time other receiving water parameters are sampled…" is of little value and misleading for the reasons described above and others.

Presumably this requirement is to assess a correlation between flow rate and potential observations of receiving water quality. The above expressed concerns about receiving water baseline and other potential control issues associated with receiving water monitoring notwithstanding, we recommend the following language:

The average discharge flow rate must be reported for the time the ship is in port on the day in which receiving water monitoring is conducted.

> Department Response: The Department disagrees with the commenter. Flow rate is a requirement as it is one of modeling parameters for mixing zones. The information required by this condition is necessary to determine total impact. Average flow rate may not be representative as discharge rates can be highly variable. Average flow remains a requirement under 18 AAC 69.050.

33.) Page 18, Section 6.9.4: Whole Effluent Toxicity (WET) Testing Requirements

This section specifies that permittees must conduct acute and chronic toxicity tests. It is noted that Alaska Water Quality Standards do not even have an acute toxicity standard for WET Testing (see 18 AAC 70.030), and that the discharge scenarios for cruise ships (intermittent, diurnal, seasonal, rapidly diluted and of small volumes) are unlikely to result in an acute toxicity, and certainly not at the mixing zone boundary. In these considerations, we recommend elimination of the acute toxicity testing requirement from the permit.

> Department Response: The Department recognizes the commenter's point that there is currently no acute limit. However, the Department disagrees that the condition should be removed. Failure of an acute test can indicate the potential for adverse effects on aquatic life which is a narrative water quality criteria contained in 18 AAC 70.020(b)(23)(C). Acute testing can be used as a substitute for more expensive chronic sampling in the future if an acute to chronic ratio is established.

34.) Page 19, Section 7.3.1: Chronic Toxicity

This Section states that a discharge may not impart chronic toxicity, expressed as 1.0 chronic toxicity units (TUc) to aquatic organisms at the boundaries of the mixing zone. This language is drawn from Alaska Water Quality Standards at 18 AAC 70.030 but is incomplete. The 18 AAC reference concludes, "…based on the minimum effluent dilution achieved in the mixing zone." Inclusion of such language is appropriate and we recommend its inclusion in the permit. Additionally, we recommend a more complete description of how this evaluation would be computed in the Fact Sheet (i.e. 'show the math') for demonstration purposes to the general public.

Typical shore based permits include both a chronic and acute mixing zone, while this permit identifies only a single mixing zone at 83 meters. ADEC must clarify in the permit, the Fact Sheet, or both, that this requirement is measured by demonstration of a chronic toxicity unit measure of less than 1.0 at the dilution that would be achieved at the edge of the mixing zone specified in the permit.

> Department Response: The limit for chronic toxicity is set at the boundaries of the mixing zone and therefore includes the minimum effluent dilution of the mixing zone.

35.) Page 20 Section 7.4: Noncompliance Notification and Reporting

The permit requires notification to DEC within 24 hours of a noncompliant discharge due to inadequate treatment. "Inadequate treatment" is not clearly defined in this context. In addition, a more detailed report is required within 7 days. This requirement could be a challenge given that certain final reports are not received back from the lab until 10 days or longer. We recommend the following language:

7.4.1 The permittee shall notify the Department of the following occurrences, either verbally or in writing (electronic mail acceptable), within 24 hours of the permittee becoming aware of the occurrence of 7.4.1.1 Each event that results in a discharge of sewage, graywater or other wastewaters into marine waters of the state that is not in compliance with the requirements of this permit; and

> Department Response: The Department agrees that inadequate treatment is not defined in the permit and will remove the text "due to inadequate treatment". The Department agrees to add "becoming aware of" in 7.4.2 to match 7.4.1.

36.) Page 21, Section 7.5.2: Electronic Submittal of Discharge Records

Given that the Alaska season includes Memorial Day, the 4th of July and Labor Day, we recommend this section be amended to read, "…no later than five working days after the end of the month…"

Additionally, the requirement to submit the key and/or cover page, etc., should be amended to read, "With the first submittal of electronic discharge records in each season, the permittee shall provide the key…" There is no benefit to repeat this submittal each month.

> Department Response: The Department agrees to change the permit to reflect the key is not needed with each submitted monthly record unless it changes. The five day deadline is based on statue, however the Department will continue to accept records on the next working day if the deadline falls on a holiday or weekend.

37.) Notification for Discharges Necessary for the Safety of the Vessel

We recommend insertion of the following language after the word 'discharge': "…of sewage, graywater or other wastewater as defined in this permit…" Discharges not covered by this permit ought not to be conditioned in this permit. The EPA VGP has similar provisions for such other discharges and should be deferred to rather than expand the scope of this permit beyond that which is addressed by the authorizing statute.

> Department Response: The Department agrees to add wastewater to the word discharge to match the language of 18 AAC 69.060. For violations of the 2013 EPA Vessel General Permit, section 6.1.2 requires notification to the state of any noncompliance reports required in state waters under 40 CFR 122.44(i)(5).

38.) Page 21, Section 8.1.1: Proper Operation and Maintenance

Maintenance activities are typically managed with automated maintenance management systems, such as AMOS-W, or other similar systems. We recommend the following language, (with changes highlighted), "…If the required Operation and Maintenance procedures are included in the International Maritime Organization (IMO) required Safety Management System (SMS), or adopted

by reference in the SMS, or otherwise documented in the vessel's automated periodic maintenance management system then this will satisfy the maintenance aspect of the Operations and Maintenance Plan requirement."

Additionally, the permit calls for development of an operation and maintenance plan within 180 days of the effective date for an authorization granted under the permit. Even if the permit were issued today, this deadline would not occur during the 2014 Alaska cruise season. We recommend the following language instead (additions underlined):

The permittee is required to develop, or update, and implement an operation and maintenance plan specific for its facility within 180 days of the effective date for an authorization granted under the permit or, if this deadline falls outside of the Alaska cruise season, prior to discharging in a subsequent year of coverage under this permit.

> Department Response: The Department removed US Coast Guard from the text to clarify. With regard to the date, the Department can waive change deadlines in the permit when issued if the deadline will fall outside a cruise season. The Department disagrees with the other suggested changes.

39.) Pages 22 - 23

This would be an appropriate location to insert language regarding upset conditions. Previous commercial passenger vessel permits, other state permits, and federal permits typically contain language establishing upset conditions. While we acknowledge the rules or authorization to consider upset conditions may exist elsewhere, we believe it would be helpful and more complete to have the language explicitly covered in the Permit.

> Department Response: The Department has no cruise ship specific regulations or statues referring to upset conditions.

40.) Page 23, Section 12.1: Acronyms

Please add:

> IMO-International Maritime Organization
>
> ND-Non-detect
>
> Department Response: The Department agrees to make these changes.

41.) Page 24, Section 12.2 Definitions

As previously commented, AWTS technology is in fact best defined by its ability to meet the Murkowski and VGP standards, and this should be the definition provided in the permit. We recommend the following language for Section 12.2

Advanced Wastewater Treatment System (AWTS) is any system certified for discharge in Alaska under 33 CFR Part 159 Subparts C and E (Federal "Murkowski" standards) and/or the initial monitoring requirements of Section 5.1.2.2.1 of the 2013 US EPA Vessel General Permit

> Department Response: See Department Response to Comment 6.).

42.) page 28, Section 12.2. Definitions.
Toxic Unit, Chronic (TUc) definition should be expanded to also include 100/IC25 as per the Water Quality Standard for WET and as per Section 7.3.3 of the permit. For purposes of this permit, the definition could even avoid mentioning the 100/NOEC option, since the permit does not require its use.

Department Response: The Department will update the definition.

43.) Page 28, Section 12.2. Definitions.
The definition for Underway is problematic. A vessel may be underway and traveling less than 6 knots.

This brings up a problem with the description of limits for underway at less than 6 knots and its associated requirements. What is really relevant is that the requirements pertain to stationary vessels in port, and that may be the best way to word the requirements. The permit should then just note that discharging vessels are held to the limits and requirements for the in port discharge until they are underway and are at 6 knots or greater.

Given the permit's reference to impaired water bodies, it would be relevant for ADEC to include a definition of the term, "impaired water-body" and "water segment."

Department Response: See Department Response to Comment 24.).

Cruise Lines International Association (CLIA) – Alaska Comments on Fact Sheet

44.) Summary of Fact Sheet Comments

a) The explanation for determination of the mixing zone for the underway discharge scenario is not clear to us. The fact sheet identifies that the dilution factor at the stern for a moving cruise ship is 700:1. It is then unclear by what reasoning a mixing zone of less distance (63 meters) is needed, and that at this distance and time (21 seconds at six knots), all water quality criteria would be met. Based on that analysis, the permit then requires an ammonia effluent limit, asserting it is a water quality-based effluent limit, established to meet the 4 day average duration chronic ammonia water quality criteria, in 21 seconds. We see no need to bring the mixing zone in closer than the stern, and at stern-level mixing there is no need for ammonia limits when underway at greater than 6 knots. There is no basis in the normal permitting process that we can discern that would require a mixing zone to be brought down in size to the point where it requires a limit. Note that many Alaskan municipal discharges to marine water do not have limits for ammonia or copper, which would certainly be the case if ADEC treated them the same as they are treating cruise ships in this permit.

   Department Response: Preliminary work using sample data showed a reasonable potential to exceed for fecal coliform while underway, although this was not finished as technology based limits were stricter. Using Department guidelines reasonable potential analysis can be done for those parameters that have a technology based limit such as TSS and BOD.

b) The fact sheet has about 10 pages describing dilution modeling for the in port situation, but does not present any of the modeling. It offers one figure in two different places (figures 2 and

12) describing the model results for different vessels, but the reader is provided with no insight into what causes the different results. It is important for both the permittees and the general public to be provided with greater insight into ADEC's modeling process and results.

Department Response: Additional information has been provided in the Fact Sheet. The size of the mixing zone is based on modeling of ships, and a mixing zone will not be granted if a vessel cannot meet the requirements of the mixing zone.

c) The fact sheet uses ambient copper data for Skagway that is all based on non-detect values with methods that had high detection limits. The data should not be used in this manner or in the reasonable potential analysis. It would be better to use the same ambient metals data as for Juneau.

Department Response: Past sampling in Skagway indicated there could be elevated levels of copper in the waters in and around Skagway, therefore the Department used the Method Detection Limit of the sample as a conservative approach to Skagway mixing zones.

d) The fact sheet incorrectly states that dilution is not applicable for use with conventional or non-toxic criteria such as bacteria, pH, temperature or others. As such, the fact sheet concludes water quality criteria for these must be met at the point of discharge without the mixing benefit. We don't find this to be the case in Alaska, or with the EPA. There are technology based effluent limits (TBELs) for pH which are less stringent than the pH criteria. Many Alaskan communities have very substantial mixing zones for bacteria, and effluent discharges are allowed that have temperatures higher than the applicable criteria.

Department Response: The Advanced Wastewater Treatment Systems have shown that they can regularly meet the limits for conventional parameters (except ammonia).

e) The fact sheet states that there is reasonable potential for TSS and BOD, but reasonable potential analysis is a tool specifically used for determining if a discharge will meet water quality criteria in the receiving waters as a means of telling if a water quality-based effluent limit is needed. There are no water quality criteria for TSS or BOD.

Department Response: The Reasonable Potential Analysis used by the Department includes the use of technology based limits as well as water quality based limits. For this permit the federal secondary standards were input as technology limits for BOD and TSS.

f) There is discussion in numerous places of the dilution for discharges at speeds less than 6 knots. The discussion would be more accurate if it describes the dilution for stationary discharges from cruise ships while in port. Then it can say that this dilution is conservatively used also for discharges when underway at less than 6 knots, even though an underway discharge at less than 6 knots would actually receive much higher dilution.

Department Response: The Department agrees, however we believe that the language included in the Fact Sheet for Speeds of under 6 knots (Page 47), "… when docked or at speeds of under 6 knots…" adequately describe these discharges. As the commenter did not specify where there is a direct need to include the suggested language, the Department finds no need for change or further clarification.

45.) Fact Sheet (FS), Page 7, Section 1.2: Authority
Please edit to read, "…discharge of domestic wastewater from a ship is unlawful…"

Department Response: The Department agrees to update the Fact Sheet.

46.) FS, Page 8, Section 2.2.1: Vessel Information
Please edit to read, "The remaining ships discharge outside state waters." Use of the term federal waters is not accurate, as many ships withhold discharges until outside 12NM – which are outside the territorial seas.

Department Response: The Department agrees to update the Fact Sheet.

47.) FS, Page 9, Section 2.4: Authorized Discharges
Please edit to read, "…or other treated wastewaters as defined by AS 46.03.490 (10)" as that is a defined term under this statute which may be narrower than the common usage understood by many readers.

Department Response: The Department disagrees with the comment, other wastewater is defined in the permit.

48.) FS, Page 13, Section 6.1, second paragraph.
Please change the last two sentences as follows

WLA are often determined for impaired waters and define a portion of a receiving water body's total allowable maximum daily loadings that may be assigned to a current or future discharger. There are no TMDLs for waters that the cruise ships are in, and hence no TMDL derived WLAs apply at the time of issuance of this permit. The allocation of a WLA is a tool to ensure applicable WQS are not exceeded in the receiving water body.

Department Response: The Department disagrees with the suggested change. There are TMDLs in place in waters cruise ships visit or could visit, although they do not have WLA for the parameters of concern in this permit.

49.) FS, Page 13, Section 6.2: Technology Based Effluent Limitations
Please clarify the second sentence of this section, which currently reads, "Defining the class of AWTS impacts the level of treatment and has proscribes the TBELs." The meaning of this sentence is unclear.

Department Response: The Department has corrected a typographical error, the above sentenced has been changed to read, *"Defining the class of AWTS impacts the level of treatment and proscribes the TBELs."*

50.) FS, Page 14, Section 6.2.2: Federal Requirements
The third paragraph discusses the EPA Vessel General Permit (VGP) but is not quite accurate when it says that permit prohibits toxic materials from graywater, blackwater (sewage), or bilgewater. While certainly the VGP has conditions intended to minimize toxicity from gray water or graywater mixed with black water, it does not prohibit (i.e. 'zero tolerance') materials which may contribute to

toxicity. Rather the EPA, in evaluating cruise ship effluent discharges (in large part relying on the same data the ADEC used in developing this permit), determined that no effluent limits were necessary for constituents beyond the conventional pollutants identified in the VGP. We recommend the following language:

It also contains conditions to minimize the introduction of materials that may contribute to the toxicity of graywater and graywater mixed with Blackwater, or bilge water.

The Last paragraph of this section should read, "…to submit a copy of non-compliance reports for discharges…" The EPA permit does not require specific forms, but does require reports.

> Department Response: The Department disagrees with the change of text regarding toxic materials, VGP sections 5.1.1.1.4 and 5.2.1.1.4 do not allow the addition of toxic materials to any systems which will discharge into waters of the permit.
>
> The Department agrees to add reports to the last sentence of this section of the fact sheet.

51.) FS, Page 15, Section 6.2.4: Summary of TBELs

The listed limits for pH do not match those of the permit. We have commented that the permit limits are appropriately 6.0-9.0, as indicated in this table (see comments referring to Permit Page 11 and 12, tables 3 and 4).

> Department Response: The Department will correct the Fact Sheet to match the permit.

52.) FS, Page 16, Section 6.3.2, Reasonable Potential Analysis

The first paragraph, first sentence, should be changed to read:

WQS apply to water bodies and include a prohibition on conduct that causes or contributes to a violation of WQS in the receiving waters (18 AAC 70.010).

The second paragraph of this section is where ADEC provides the link between WQS and the Reasonable Potential Analysis (RPA). For clarity in explaining the normal permitting process for determination of WQBEL's, we recommend the following language (additions underlined):

The most restrictive WQC are used to protect all applicable uses (18 AAC 70.040.(1)) and are listed in Table 5. Historical effluent monitoring (2008-2012) was compared to the WQC in Table 5 to screen for potential pollutants of concern which exceed WQC at the point of discharge. If effluent concentrations exceed the most restrictive WQC, then a further analysis is needed to determine whether a reasonable potential to cause or contribute to a violation of WQS exists after accounting for dilution in the receiving water that can be authorized through a mixing zone, commonly referred to as an RPTE analysis. If there is a reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria after any allowed dilution (i.e. a permitted 'mixing zone'), then a Water Quality Based Effluent Limit (WQBEL) is established.

If, however, it is determined that there is not a reasonable potential for the discharge to cause or contribute to an exceedance of the water quality criteria after any allowed dilution, and there is no technology based standard established for the constituent, then the permit will not include an effluent limit for that parameter.

We do not believe that ADEC's analysis demonstrates that there is a water quality basis for imposing an ammonia limit in the greater than 6 knot discharge scenario when using normal permitting procedures, and recommend that it be removed from the permit. We provide our explanation here:

The fourth paragraph states that,

No reasonable potential to exceed WQS for any pollutants other than fecal coliform, pH, BOD, and TSS was found for cruise ships that historically have discharged in Alaska marine waters while moving at speeds of 6 knots or greater [i.e. not including ammonia]. This is due to the large available dilution when moving at speed (see next section). However, since ammonia is the driving parameter in determining the 6 knots or greater mixing zone size, there is reasonable potential to exceed ammonia at the boundaries of the mixing zone.

This language is important in presenting the fact that ADEC's analysis determined that there was no RPTE for ammonia from discharges when sailing at greater than 6 knots, yet the permit uses ammonia as the "driving parameter" to establish a mixing zone size restricted to the point where it could say there was a RPTE for ammonia at 63 meters, and hence a need for a water quality-based effluent limit. Further, we find it inconsistent when one considers that despite no RPTE determination, the permit contains a limit based on a 4 day exposure chronic criterion in a discharge scenario where the exposure would be 21 seconds at most.

The term 'driving parameter' is not found in 18 AAC 70 Alaska Water Quality Standards, or ADEC's Implementation Guidance: 2006 Mixing Zone Regulation Revisions; nor is it found in the EPA NPDES Permit Writer's Manual, the EPA Technical Support Document for Water Quality Based Toxics Control, or the EPA Water Quality Standards Handbook. These documents represent the most frequently referenced rules and guidance in developing APDES/NPDES permits.

The discussion in the fact sheet does not adequately describe the concept behind 'driving parameter' and so we are unable to assess whether it is correctly implemented in this permit or furthermore why this would result in a truncation of the mixing zone before reaching the stern of a moving vessel. Any conservative evaluation of the dynamics of the underway discharge scenario would acknowledge that active mixing occurs at least to the stern (and certainly beyond) with a conservative dilution factor of 700:1. ADEC acknowledges this in numerous instances in the fact sheet.

Given this analysis, ADEC does not establish that there is an RPTE (in fact it concedes there is not) and thus guidance and regulation would indicate there is no need for an ammonia limit for discharges underway at greater than 6 knots. Restricting the mixing zone to the point that creates a need for an ammonia limit inverts the process, appears to be arbitrary and is not supported by environmental need or benefit and needlessly presents permittees with a compliance risk.

Additionally, the third and fourth paragraphs each assert that reasonable potential to exceed WQS is determined to exist for fecal coliform, pH, BOD, and TSS. RPA pertains to evaluating effluents to see if they will cause exceedances of water quality criteria in the receiving water, after considering dilution. As there are no water quality criteria for BOD or TSS, the RPA is not relevant. There are TBELs for BOD and TSS, which in any event are more stringent than would be a WQBEL. There was no RPA for fecal coliform, but if there was one, it would also have determined that the TBEL

would be more stringent than a WQBEL. Similarly, if an RPA was done for pH that considered dilution in the receiving waters, it would recognize that the TBEL of 6.0 to 9.0 would be more stringent and that in meeting the TBEL there would be no RPTE, and no need to apply the pH WQC of 6.5 to 8.5 directly to the effluent.

Department Response: The Department disagrees with the change to the first sentence. The first sentence paraphrases parts of 18 AAC 70.010 and, by its nature, is incomplete. Hence the citation to the regulation. Note that 18 AAC 70.010 references waterbodies and does not mention receiving water.

The Department disagrees with the suggested changes to the second paragraph. The reader is already referred to Appendix E where detail is provided on how the reasonable potential analysis was performed for this permit.

The Department has reviewed its reasonable potential findings for pH, BOD, and TSS and made adjustments when appropriate. The effect of the review is that effluent limits for pH, BOD, and TSS are based solely on technology limits. Additionally, please see Department Response to Comment 72.).

The Department disagrees with the commenter's statements regarding ammonia and the discussion of the driving parameter. The cited regulations were followed and the cited guidance documents considered. They do not prescribe a single, unique outcome. Regulatory discretion exists for decisions such as whether one mixing zone size will be established for all pollutants that exceed applicable criteria at the point of discharge or whether each such pollutant will have its own unique mixing zone. As the Department has chosen the approach of one mixing zone for all pollutant, it has also determined that establishing effluent limits for the pollutant or parameter that effects the size of that mixing zone is reasonable and prudent. The Department has made clarifying edits to Section 6.3.2, Section 6.3.4.3, and relevant sections of Appendix E.

53.) FS, Page 17, Table 5

Add to the title, "applicable in the receiving water."

Move the headings "Chronic WQC" and "Acute WQC" to after the pH criteria line, as those headings are not applicable to bacteria, dissolved oxygen or pH.

Department Response: The Department will update the Table to clarify the criteria used for each parameter.

54.) FS, Page 18, Section 6.3.4: Mixing Zones

Paragraph 2, third sentence, change to read

"…….. where the speed of the discharge and buoyant ascent pushes the effluent faster than the receiving water moves."

Paragraph 3, first sentence, change to read

"……. in the reasonable potential analysis, and in determining WQBELs if needed."

Department Response: The Department disagrees with the need for adding the suggested language. In the first case, buoyant ascent is only one mechanism for the speed of the discharge to move faster that the receiving water. The existing language would incorporate buoyant ascent when relevant. The need for the second suggested change is addressed prior to the referenced language as, "… the Department determines **whether** and how much…"

55.) FS, Page 18, Section 6.3.4.1 Mixing zone modeling

Paragraph 3 second sentence, change to read

"When no mixing zone is authorized, then effluent limitations are set equal to the WQC."

Department Response: A mixing zone will only be authorized by the Department if a vessel can regularly meet water quality criteria without the need of a mixing zone.

56.) FS, Page 20, Section 6.3.4.3 Chronic mixing zone driving parameter

The first paragraph describes how after having determined that a reasonable potential to exceed WQS exists. The size of the chronic mixing zone needs to be determined. This seems backwards. The size of the mixing zone is linked to the allowed dilution factor, and that dilution factor is an integral part of the reasonable potential analysis.

The paragraph goes on to say, "Once a mixing zone size is determined, an effluent limitation must be calculated for the driving parameter." That part is incorrect. There is no such requirement in regulation or in EPA's Technical Support Document for Water Quality-based Toxics Control. The mixing zone size needed for the driving parameter could be, and in this case clearly should be set at a point where there would be no reasonable potential to exceed and hence no need for a water quality-based effluent limit. The chronic ammonia criteria is based on a 4-day duration of exposure, and DEC is proclaiming a need for a water quality-based effluent limit after a 21 second exposure, and this is after describing how for acute criteria mixing, you want to assure that a drifting organism would not have more than a 15 minute exposure. Why be worried about a 21 second exposure for a chronic criteria mixing zone? Use a mixing zone that extends to the stern of the underway cruise ship, and use a dilution factor of 700. Then there is no chronic exposure to aquatic life and no reasonable potential to exceed, and no need for a limit.

A similar concern pertains to the wording on page 56, section F.7.1.

Department Response: See Department response to Comment 44.)a).

57.) FS, Pages 21-22, authorized mixing zone for discharge while moving at 6 knots or greater

Change third sentence to read

The width of the discharge plume will be 5 meters or less, and the depth extends from the surface to 1 meter below the discharge port.

We recommend a mixing zone to the stern and a dilution factor of 700. The method to hone in on 63 meters is confusing, un-necessary, and results in an un-necessary establishment of an ammonia limit.

Department Response: The Department has changed the text to add "from the surface." The Department disagrees with the suggested removal of a 63 meter mixing zone. The use of a mixing zone is consistent with the under 6 knots analysis in this permit.

58.) FS, Page 23, Section 6.3.6.2. WQBELs for speeds of 6 knots or greater

This shows that the maximum ammonia concentration across all ships was divided by the chronic WQC to give a WQBEL of 160 mg/L, in order to create a mixing zone as small as possible. This isn't needed. Instead, this section should acknowledge that with a mixing zone to the stern, no WQBELs were needed as there was no reasonable potential to exceed WQC.

Department Response: See Department response to Comment 44.)a).

59.) FS, Page 24, Section 6.3.7

Change third sentence to read

There was one exceedance of the chronic mercury WQC in 2008 and three of the chronic selenium WQC in 2009.

Department Response: The Department agrees to change the text as suggested.

60.) FS, Page 25, Table 7: Effluent limitations for vessels permitted to discharge without a mixing zone

Table should be changed to show that other WQC must all be met.

Department Response: The Department has made the suggested change to the Fact Sheet.

61.) FS, Page 26, Table 8

Change title to show the mixing zone goes from the surface to 1 meter below the discharge port.

Change the Basis for Limit for Fecal coliform to Technology based and provide citations. One citation is Section 5.1.1.1.4 of the VGP.

Change the pH limits to minimum of 6.0 and maximum of 9.0. Call these limits Technology based, and cite to 40 CFR 133.102 and section 5.1.1.1.4 of the VGP.

Department Response: The Department has fixed the title as suggested. The basis for fecal coliform is water quality criteria based, but has also been demonstrated by technology. The Department will leave fecal coliform in the table as a water quality basis for a limit. pH was updated in the permit to match federal technology limits.

62.) FS, Page 27, Table 9

Change title to show the mixing zone goes from the surface to 1 meter below the discharge port.

Change the pH limits to minimum of 6.0 and maximum of 9.0. Call these limits Technology based, and cite to 40 CFR 133.102 and section 5.1.1.1.4 of the VGP.

In same table, identify Fecal coliform, TRC, BOD and TSS basis for limits as technology based.

Department Response: The Department agrees to update the table title and show the basis for limits. See response to Comment 61.) for pH and fecal response.

63.) FS, Page 28, section 7.1.1: Routine monitoring

Change second paragraph, and reword a little to show that the permit contains three sampling scenarios, not two.

Department Response: The sampling scenario for no mixing zone is the same as for vessels authorized for only 6 knots or greater; the text is not updated as there are only two sampling tables in the GP.

64.) FS, Page 29, Section 7.1.1, 5th line from the top

Change to read "…lack of a compelling human health or environmental concern given the large and rapid dilution that occurs."

Department Response: The Department agrees to change the text as suggested.

65.) FS, Page 33, Appendix A: List of Changes in the Permit

Delete the entry that says effluent limits for ammonia and dissolved metals are removed for vessels permitted to discharge without a mixing zone. The permit for such vessels clearly requires that they meet Alaska's water quality standards, and that is effectively a limit.

Department Response: The Department has made the suggested change to the Fact Sheet.

66.) FS, Page 34, Appendix A: List of Changes in the Permit

It is identified here that the "Upset Conditions" section of the previous permit has not been included in the 2014 permit. This is a standard permit condition and is specifically articulated in 40 CFR Part 122.41(n) – a standard permit condition applicable to all NPDES permits, and by 40 CFR Part 123.25, applicable in state issued NPDES permits. We recommend inclusion of the language from the "Upset Conditions" provisions of 40 CFR Part 122.41(n).

Department Response: See Department Response to Comment 39.).

67.) FS, Page 44, Appendix E, Table 13

Move Chronic WQC and Acute WQC headings to below the pH line.

Also put "median" after 14 on the Fecal coliform line.

Footnotes need to be re-lettered.

Department Response: The Department agrees to the suggested changes.

68.) FS, Page 45, second paragraph

We don't believe this paragraph reflects actual practice; see discussion in general comments for the fact sheet.

Department Response: See Department Response to Comment 44.)c).

69.) FS, Page 46, Copper, last paragraph about Skagway data

It would be best to delete this discussion, as the data set is limited by the detection limit. See also comment re same topic on page 55. Note that this paragraph says that one of the reference sites had a dissolved copper concentration of 5.3 ug/L, but then said the value was still below the reporting limit. However, on page 55 it says that it was a non-detect at 5.3 ug/L. Use of values set equal to the detection limits is simply not valid for determining copper limits while discharging in Skagway. Use the Juneau data instead as it obviously used methods with low enough detection limits to be relevant.

Department Response: See Department response to Comment 74.).

70.) FS, Page 47, Speeds of 6 knots or greater

Change 4th sentence to read,

"…dilution of 700:1 that occurs within half a minute after ….."

Department Response: The reference used by the Department for this statement has "under a minute." Without a source provided the Department is unable to evaluate this suggested update.

71.) FS, Page 47, Summary of Results

Same comment as for page 45, second paragraph.

Department Response: See Department Response to Comment 69.).

72.) FS, Page 48, Speeds of 6 knots or greater

With the technology based limits there is no reasonable potential to exceed WQS for fecal coliform, pH. Reasonable potential to exceed does not apply to BOD or TSS for which there are no WQC, so only the technology based limits apply for these.

By using ammonia, to reduce the mixing zone size down to 63 meters, DEC has arbitrarily determined a WQBEL is needed for ammonia based on a 21 second possible exposure to a chronic 4-day WQC. We disagree with this approach and recommend the mixing zone extend to the stern (a few seconds longer). There is no need for an ammonia limit. The discharges do not, and cannot impart a chronic toxic effect because the duration of exposure is so short.

Department Response: The Department disagrees with this comment. Preliminary work using sample data showed a reasonable potential to exceed for fecal coliform while underway, although this was not finished as technology based limits were stricter. Using Department guidelines reasonable potential analysis can be done for those parameters that have a technology based limit such as TSS and BOD. For the ammonia limit, see the Department response to Comment 44.)a).

73.) FS, Appendix F, pages 50 to 60: Available Dilution and Mixing Zone Modeling

For all the discussion of modeling, there are no presentations of actual model runs. Figure 12 does illustrate that different runs got different results, but it is impossible to understand what situations

(depth, discharge rate, pipe diameter) produced which results, nor was there any discussion explaining the range of results.

Department Response: The mixing zone modeling runs produced a large amount of data that would be difficult to present in a fact sheet.

74.) FS, Page 55, Section F.4.6 and Table 17: Ambient concentrations for pollutants of concern

2.6 µg/L is used for dissolved copper for Skagway. The number should not be used. It is a detection limit value used when the parameter was actually not detected. The narrative also notes that a reference site sample was an exception, which was below a detection limit of 5.3 µg/L. That is also a non-detect value, just with a higher detection limit. Note that on page 46 it actually says this was a concentration, and not a non-detect.

Department Response: The Department has explained the use of the dissolved copper in the text following Table 17. The text on page 46 has been updated to match the final Skagway 2011 TMDL, which lists the 5.3 µg/L result as a value.

75.) FS, Page 56, Section F.5.1

Change the first paragraph and the first sentence in the second paragraph to read:

The amount of dilution required to meet WQC depends not only on the effluent concentration and the applicable WQC, but also on the amount of that parameter that naturally exists in the receiving water. If ambient levels are high, the dilution needed to meet WQC is higher than if the parameter was not present in the receiving water.

Although the dilution required depends on the effluent concentration, the WQC for the parameter, and the concentration of the parameter in the receiving water, ….

The reason for the change is that ammonia, copper, nickel and zinc will also be naturally occurring in the receiving water, and are not necessarily a pollutant in that case.

Department Response: The Department has made the suggested change to the Fact Sheet.

76.) FS, Page 56, Section F.6

Add "met" at the end of the second sentence.

The last sentence says that mixing zones will not be authorized for ships that cannot meet the acute aquatic life criteria. We believe the sentence should be changed. If an acute criteria cannot be met within 15 minutes, then that would be the basis for establishing a WQBEL to assure that the parameter met the acute criteria after acute mixing.

Department Response: The Department disagrees with the suggested change. Under the Department Implementation Guidance for the 2006 Mixing Zone Regulation Revisions the Department may not issue a mixing zone if the discharge will not meet the acute aquatic life criteria.

77.) FS, Page 56, Section F.7.1: Driving Parameter
Same comment as for page 20.

Department Response: See Department Response to Comment 56.).

78.) FS, Page 57, Section F.7.2: Findings
Change the third sentence to read

The width of the discharge plume will be 5 meters or less, and the depth extends from the surface to 1 meter below the discharge port.

Change the mixing zone size to extend to the stern, and use a dilution factor of 700. There is no need to reduce the mixing zone down to 63 meters to justify setting a WQBEL for ammonia. Comment for page 20 pertains.

Department Response: The Department agrees to add "from the surface" to the text. See Department response to Comment 44.)a) for the comment on mixing zone size and ammonia.

79.) FS, Page 58, Section F.8.2, first paragraph, second sentence
Change the depth to extend from the surface to 1 meter below the discharge port…

Department Response: The Department agrees to add "from the surface" to the text.

80.) FS, Page 68, last paragraph
Note that the panel members went on board several cruise ships…..

Department Response: The Department does not agree that this language needs to be changed.

81.) FS, Page 73
Following the last paragraph, add

The discharges also meet the federal secondary treatment standards of 40 CFR 133.102 and the Federal Vessel General Permit requirements for cruise ships at Section 5.1.1.1.2.

Department Response: The Department disagrees with the change, 33 CFR 159, which requires 40 CFR 133.102 is already listed as a requirement. The Vessel General Permit does not cover blackwater.

82.) Concur with CLIA – Alaska
We appreciate the opportunity to comment on the Draft Permit, issued under the authority granted by 2013 legislative action in House Bill 80. In reviewing the permit and its associated Fact Sheet, we are pleased to see the efforts taken to implement the legislative intent granted in House Bill 80. We also note the extent to which this draft permit more closely aligns with permits issued to shore based dischargers.

We would like the public record to reflect that we concur with the issues raised by CLIA-Alaska in their public comments; especially those highlighted in their cover letter.

Given the Alaska cruise season is currently underway, we also request ADEC work as expeditiously as possible to finalize the permit.

> Department Response: See Department response to specified comments. The Department strives to issue permits in as timely and responsible a manner as possible.

83.) Concur with CLIA – Alaska II

We have reviewed the Draft Permit and thank you for the opportunity comment on it before being finalized. While there are some significant changes this year, we feel that the regulations outlined in the permit holds our industry to a standard that not only protects the environment, but is also more in line with the standards of shore based facilities. We would like to formally announce our approval of the permit and support of the comments made by CLIA Alaska in their cover letter.

Considering that the Alaska cruise season is currently underway, we would like to see the permit finalized as soon as possible.

> Department Response: See Department Response to Comment 82.).

84.) Writing in Support

I believe the permit will provide all the necessary provisions to protect our marine environment while providing the industry with an achievable and predictable regulatory framework under which to operate.

> Department Response: This comment did not address a specific term or condition of the draft permit.

One of the main goals of recent legislative changes in House Bill 80 was to adopt the finding of the science panel and authorize DEC to develop cruise ship permits consistent with other dischargers. The proposed permit largely achieves that goal.

> Department Response: This comment did not address a specific term or condition of the draft permit.

The visitor industry represents one of Alaska's largest sources of employment. State studies have identified nearly 40,000 jobs in Alaska and over $3 billion in economic activity attributable to the visitor industry. Given the importance to the State, it critical we find the right balance between environmental protection and allowing businesses to operate. I believe the proposed permit appropriately achieves that balance.

> Department Response: This comment did not address a specific term or condition of the draft permit.

I feel that this is a reasonable solution to a very hot button issue. When the Cruise Ship Initiative was passed, we all knew that it was a target on the cruise industry and the discharge was an avenue by the author's of the initiative to run the cruise industry out of Alaska. I believe the permit will

provide all the necessary provisions to protect the environment. I am glad to see that there was a science panel made up of common sense and reasonable people who could take all aspects of the cruise industry and the environment into account when coming to a decision. I believe this decision was the right one. The environment is very important to all Alaskans but so is business.

> Department Response: This comment did not address a specific term or condition of the draft permit.

The Millennium Alaskan Hotel employs over 85 ALASKANS on a year round basis. We rely on a healthy tourism industry to keep Alaskans employed. I believe the proposed permit appropriately achieves the balance needed to keep Alaskans jobs in place.

> Department Response: This comment did not address a specific term or condition of the draft permit.

I work in the tourist visitor industry here in Skagway, Alaska and I believe the permit will provide the necessary items to protect our marine environment while providing the tourist industry with an achievable and predictable regulatory framework under which to operate.

> Department Response: This comment did not address a specific term or condition of the draft permit.

I join my colleagues at Icy Strait Point and Huna Totem Corporation in the village of Hoonah Alaska expressing support of the proposed Large Commercial Passenger Vessel Wastewater Discharge General Permit, Number 2013DB0004. One of the main goals of recent legislative changes in House Bill 80 was to adopt the finding of the science panel and authorize DEC to develop cruise ship permits consistent with other dischargers.

We are confident that the above mentioned permit will insure both the vitality of an industry on which our Village and Corporation depends while providing stringent mechanisms to protect the lands and waters our ancestors have placed in our stewardship.

Please help our community sustain our economic viability by moving forward and approving Permit Number 2013DB004 promptly and without redundant public expense.

> Department Response: See Department response to Comment 82.)

85.) Alaska Chamber

The mission of the Alaska Chamber of Commerce is to promote a positive business environment in Alaska. The Alaska Chamber represents hundreds of businesses, manufacturers and local chambers from across Alaska, including many who benefit from the economic opportunities provided by the visitor industry.

The Department of Environmental Conservation (DEC) is to be commended for the work put into developing this permit. The Alaska Chamber, as well as many other Alaska organizations and businesses, have been advocating for a reasonable and predictable regulatory environment in Alaska.

Last year it was a pleasure to support House Bill 80, which established the statutory framework for this permit and authorized DEC to utilize the best science, including mixing zones to ensure protection of our marine environment. This change was a critical component of meeting the Legislative intent to treat the cruise industry similar to other dischargers in Alaska.

Although we believe the permit takes a very conservative approach, we are very pleased to see permit conditions such as the underway limits, which recognize the high quality of treatment and significant mixing which occurs following the discharge of wastewater. As you consider the public comments and final decision on the permit, please evaluate and consider eliminating any provisions that place additional requirements or restrictions on cruise vessels without providing measureable environmental benefit. Consideration of environmental benefit, as well as applying criteria in a reasonable, consistent, and predictable manner for all permittees, are critical components to keeping Alaska competitive, our businesses strong and Alaskans working.

Department Response: This comment did not address a specific term or condition of the draft permit.

86.) Alaska Maritime Agencies

Alaska Maritime Agencies is a vessel agency company that has operated in Alaska since the 1950's and as such, we've witnessed the growth and expansion of the shipping and cruise industry in Alaska over the past decades. From the expansion of cruise facilities in southeast and southcentral Alaska to the startup of the Trans-Alaska Pipeline, we have witnessed the growth of the maritime industry in Alaska and we believe a robust industry is essential to a healthy Alaskan economy.

Your efforts to balance the ADEC's mission statement with the practical realities of managing wastewater discharges by large passenger vessels can be a daunting task, but we believe that as long as sound scientific methods and principals are adhered to, you will find the correct balance. Applying fairness to the process is key- large passenger vessels and other dischargers should be treated equally and as you continue to evaluate provisions moving forward we recommend that this be done consistently and equitably to all dischargers in the state. We believe it is possible, if not essential, to have reasonable regulations which protect the water quality in the State of Alaska while providing a competitive working environment for these businesses to grow and prosper.

We are one of the many businesses in the state's maritime industry that hires full time and seasonal employees throughout various ports. Our company provides agency services to domestic and foreign shipping interests doing business in the state of Alaska. We order services on behalf of the vessel and observe how the cruise industry positively impacts the state economy. Some of these services are: crew member transfers, provisioning, expediting parts/equipment, line handlers/stevedores, marine pilots, air transfers of passengers/crew members, medical services and many more. We see firsthand the economic benefits of a vibrant and growing maritime industry and hope you will always strive to strike a balance between protection of our valuable resources and encouraging a fair business climate.

Department Response: This comment did not address a specific term or condition of the draft permit.

87.) Resource Development Council for Alaska

The Resource Development Council for Alaska, Inc. (RDC) is writing in support for timely approval of the Proposed Large Commercial Passenger Vessel Wastewater Discharge General Permit, Number 2013DB0004.

RDC is a statewide, non---profit, membership---funded organization founded in 1975. The RDC membership is comprised of individuals and companies from Alaska's oil and gas, mining, timber, tourism, and fisheries industries, as well as Alaska Native corporations, local communities, organized labor, and industry support firms. RDC's purpose is to link these diverse interests together to encourage a strong, diversified private sector in Alaska and expand the state's economic base through the responsible development of our natural resources.

RDC applauds the Alaska Department of Environmental Conservation (DEC) for its efforts to improve the large commercial passenger vessel wastewater discharge permit. The draft permit, based on science and technology, is a positive example for regulatory bodies to follow for resource and community development.

It is a policy of RDC to advocate for equitable environmental laws for cruise ships and to support reasonable mixing zones for all resource and community development, including the tourism industry. DEC's new regulations require cruise ships that travel through Alaska's inside passage to have better wastewater treatment systems than that of some coastal communities. The draft permit recognizes that cruise ships visiting Alaska have some of the highest levels of treatment of wastewater.

The draft permit, which is largely based upon the work of the science panel and the legislative statutory changes in 2013, authorizes mixing zones for cruise ships. The draft permit utilizes a process based upon science, best technology, and more closely aligns cruise ship permits with the process used for other dischargers.

Further, it is a policy of RDC to advocate for predictable, timely, and efficient state and federal permitting processes based on sound science and economic feasibility. RDC believes part of economic feasibility includes equitable and competitive regulations. Having reasonable regulations that are protective of the environment yet still allow businesses to operate is critical.

The tourism industry in Alaska has a direct visitor spending of more than $1.8 billion annually, excluding travel costs. Additionally, tourism is the second---largest private sector employer, and accounts for one in eight Alaskan jobs. The most recent available data indicates that the tourism industry generates over 39,000 direct and indirect jobs, 9% of Alaska employment, and $1.32 billion in combined labor income.

Of the 1.96 million visitors in 2013, about half arrived on a cruise ship. One in three Alaska visitors are repeat travelers to the state. Many of the independent travels returning to the state first visited Alaska via cruise ship. Dozens of Alaska communities and boroughs combined collected $78 million in sales and bed taxes, and docking fees in 2013 to the State of Alaska collected $101 million in visitor related revenues.

In addition to comments in this letter, RDC encourages DEC to address concerns made by Cruise Lines International Association, Alaska (CLIA Alaska) in a letter submitted May 23, 2014 regarding the draft permit. The scientific and technical concerns in CLIA Alaska's letter offer recommendations for using reasonable methods and standards consistent with other permits, all while continuing to adequately protect the environment.

RDC also encourages DEC to review and consider removing provisions of the permit that place additional restrictions on cruise vessels with no added benefit to the environment.

Alaska's environmental standards, across all resource sectors, are second to none. Ultimately, RDC is pleased this general permit offers a more---balanced approach and requirements that will keep Alaska's waters clean and provide for a healthy business environment in which cruise ships can continue to bring visitors to Alaska.

Department Response: This comment did not address a specific term or condition of the draft permit.

88.) Large Commercial Passenger Vessel Wastewater Discharge Draft Permit No. 2013DB0004

a) As a threshold matter, we're deeply concerned the State of Alaska is not taking seriously its responsibilities to protect Alaska's magnificent waters and fisheries. During the primacy debate over Alaska's assumption of the Clean Water Act's NPDES program, we argued the state was ill-prepared to adequately protect Alaska's water and fisheries resources, and the current proposed permit – through the state's domestic wastewater discharge authority - simply reinforces those concerns.[1]

[1.] Commenters note that had this draft permit fallen within the jurisdiction of the Clean Water Act's NPDES program, it would clearly violate the law because it is so much weaker than the previous permit, and thus would run afoul of the CWA's prohibition against back-sliding. However, as noted herein, the state's water quality standards, including its anti-degradation policy, prohibit many of the discharges envisioned here anyway.

Department Response: This comment did not address a specific term or condition of the draft permit.

b) Furthermore, the draft permit belies the will of a strong majority of Alaskans, who voted in 2006 to put reasonable controls on cruise ship pollution. Unfortunately, the Parnell Administration worked closely with various cruise ship corporations to rollback these commonsense safeguards. Now, the proposed general permit allows ships to dump partially treated waste water far above Alaska's water quality standards into designated sacrifice zones alongside each ship – even those at dockside.

Department Response: The draft permit reflects the statutory amendments passed by the legislature in 2013 via House Bill (HB) 80. The draft permit ensures that Alaska's marine water quality standards, including fishable and swimmable uses, are met.

c) A significance difference between the draft permit and the 2010 General Permit is the geographic coverage of the Draft Permit. See Draft General Permit at 2.2. The proposed permit encompasses all marine waters of the state. The 2010 General Permit (Part 1.1) specifically excluded the waters of Glacier Bay National Park and Preserve from the scope of the permit, in addition to any waters listed on "impaired" or "water quality-limited" designation. Under existing agency precedent, it is impermissible to use a state general permit "to authorize activities that cannot be carried out, subject to the terms and conditions of the permit, throughout the geographic area covered by the permit." See Hearing Officer's Final Decision in Adjudication of EPA General Permits AK-G70-1000 and AK-G70-0000 at 16 (May 10, 2002)(activities "threaten" water quality under 18 AAC 72.900(a)(5) "when they could result in the in the discharge of pollutants into a waterbody that is listed as impaired under CWA §303(d) ....").

We recommend also excluding from coverage those waterbodies classified as Category 3 in Alaska's Final 2012 Integrated Report. According to that report, ADEC classifies waters as Category 3 when it lacks sufficient information to make an attainment or impairment determination. The list includes Gastineau Channel in Juneau. Amazingly, despite years of monitoring cruise ship effluent, ADEC still can't determine whether authorized discharges in Gastineau Channel fully protect existing uses of this water body. Consequently, ADEC lacks a reasonable basis or substantial evidence to support a conclusion that mixing zones proposed in the draft general permit will in fact fully protect existing uses of Gastineau Channel.

Department Response: Because of the size of its water resources, Alaska has insufficient, inadequate or little to no data or information to support attainment or impairment determinations of all designated uses for many waterbodies. Based on historical findings, the Department expects that the majority of these waters would be assigned to Category 1 – waters attaining standards for all uses – if the Department had sufficient information available to assess them for all uses. Through the Alaska Monitoring and Assessment Program, the Department collects sufficient and representative data across different regions to make regional decisions on the attainment vs impairment status of the waterbodies within that region. The most recent survey in Southeast Alaska was conducted in 2004 and rated the overall condition of Southeastern Alaska's coastal waters as good (the water quality, sediment quality, and fish tissue contaminants are rated good; the benthic index for this region could not be evaluated). As discussed in Appendix E of the Fact Sheet, the Department relied on existing studies and collected additional data for the four pollutants of concern (ammonia, dissolved copper, dissolved nickel, and dissolved zinc) as well as receiving water parameters that affect mixing characteristics (e.g., pH, temperature, tidal currents, and salinity). As described in Appendix F of the Fact Sheet, the focus was on Juneau and Skagway Harbors as they are two of the top three cruise ship ports in Alaska and have been identified by the Department as having the potential for limited mixing. Based on these multiple lines of evidence, the Department is able to support a conclusion that mixing zones proposed in the draft general permit will in fact fully protect existing uses of Gastineau Channel.

d) The draft permit also ignores legislatively-created "Special Areas" – which includes Alaska's most prized critical habitat area, wildlife sanctuaries and fish and game refuges.[2] The legislature created critical habitat areas "to protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary

purpose." 5 AS 16.20.500. Special area permits are required for, among other things, waste disposal. 5 AAC 95.420(a)(8). Yet ADF&G fails to provide public notice for special areas permit applications, and cruise ships discharging under the proposed general permit would be under no obligation to inform local governments, Tribes, fishermen or other Alaskans about the timing, location, volume or content of sewage and other wastes discharged into large, transient mixing zones. Furthermore, because mixing zones – by definition – fail to meet water quality standards designed to protect fish habitat and other uses, they cannot be deemed a compatible use to protect and preserve fish and wildlife habitat.[3] Accordingly, ADEC should adopt a common-sense rule that creates zero waste discharge in all special areas around the state. This basic safeguard would lend predictability to the regulated community and provides Alaskans with certainly our special areas will receive the protections envisioned by the Legislature. If nothing else, mariners, fisherman and other users have a right to know about pollution discharges in their local waters, and VHF radio or similar real-time announcements about cruise ship discharges – with timing, location, volume, etc. - would provide a practical and low cost way to ensure Alaskans know about cruise ship discharges.

[2.] See ADF&G special areas locator at:
http://www.adfg.alaska.gov/index.cfm?adfg=conservationareas.locator
[3.] For example, the draft permit allows mixing zones for Kachemak Bay, contrary to federal law. 33 U.S.C. § 1901

Department Response: The permitted mixing zones are sized and situated to prevent exposures that could be toxic or lead to adverse effects. Water quality criteria may be exceeded within the mixing zone but toxicity would not occur. All designated and existing uses of the waterbody will be protected. Discharge of treated effluent into Kachemak Bay is not prohibited by 33 USC 1901, the requirements are the same as for the Alexander Archipelago.

e) ADEC is applying the mixing zone requirements contained in 18 AAC 70.240, Register 202, July 2012. These regulations have not been approved by EPA. Consequently, ADEC cannot determine that the discharges meet all the requirements under P.L. 106-554, codified at 33 U.S.C. § 1901 note (2012), including compliance with the Federal Water Pollution Control Act, as amended. See AS 46.03.462(j)(2).

Appendix H of the Fact Sheet for the Draft Permit purports to provide the analysis and a rationale to support ADEC's antidegradation determinations. Significantly, ADEC presumes that all marine waters affected by the proposed general permit are high quality or Tier 2 waters and concludes there is a potential for additional lowering of water quality because the general permit allows cruise ships to make use of authorized mixing zones. See Fact Sheet for Draft Permit No. 2013DB0004 at 67-68. The draft Permit also "includes effluent limits that are less stringent than some 2010 general permit limits because of the allowance of mixing zones for ammonia, dissolved copper, dissolved nickel, and dissolved zinc." Id. at 7.

Alaska's antidegradation policy, however, only allows ADEC to authorize lowering the quality of Tier 2 waters if it finds it "is necessary to accommodate important economic or social development in the area where the water is located." See 18 AAC 70.015(a)(2)(A) (emphasis added). This standard, by its terms, is location-specific. Under this proposed general permit,

ADEC simply does not know the specific locations a cruise ship will discharge before a ship seeks authorization under the general permit to discharge. ADEC may not use a general permit to authorize activities that require site-specific review. See Hearing Officer's Final Decision in Adjudication of EPA General Permits AK-G70-1000 and AK-G70-0000 38- 43 (May 10, 2002); see also Ohio Valley Environmental Coalition, et al., v. Horinko, 279 F.Supp.2d 732, 761-62 (S.D.W.Va. 2003).

Consequently, before DEC authorizes the lowering of water quality via a mixing zone pursuant to this general permit, it must provide for public notice and conduct an antidegradation review at the site-specific level. Nothing in AS 46.03.462 allows ADEC to do otherwise. In fact, the Alaska Legislature specifically recognized ADEC's authority to "(1) restrict the areas in which discharges permitted under this section may occur; or (2) impose additional terms and conditions on the manner in which discharges permitted under this section may be made in a specific area." See AS 46.03.462(h). The referenced authority encompasses ADEC's responsibilities under Alaska's Antidegradation Policy.

Department Response: The Department used the mixing zone regulations contained in 18 AAC 70 as amended in 2012. This general permit does not require EPA oversight or approval, and the current Department approved regulations were used. The Department disagrees with the idea that a presumption was made that all state waters are Tier 2 waters; this is addressed in the General Permit Section 5.1 which prohibits discharges into impaired waters. The Department disagrees with the need for site-specific review as explained in the following paragraphs. The allowed discharges will occur with an existing treatment system or equivalent of what cruise ships have been using to discharge treated wastewater. The Department has restricted discharges to impaired waters, and will evaluate the need for additional terms and conditions based on each application for authorization to discharge. Section 4.3 of the General Permit was added to clarify the process of approval to discharge.

The Department disagrees that the Horinko case concluded that a prospective antidegradation analysis was inappropriate at the time of general permit issuance. Instead in the Horinko case the judge found that EPA was inconsistent in its position on what was required for a Tier 2 analysis for a general permit and consequently acted arbitrarily and capriciously in approving West Virginia's regulations. Moreover, the Horinko opinion reiterated numerous times that the court is mindful of the deference owed to an agency's reasonable interpretation of regulations. As such, the following provides the Department's rational as to why Tier 2 analyses can be completed at the time of general permit issuance, and how that process ensures the protection of water quality. Note that since the Horinko decision EPA has approved the State of Washington antidegradation regulations that conduct the antidegradation analysis at the time of general permit issuance.

DEC's methodology for completing a Tier 2 analysis for general permits is to issue general permits for discharges to waterbodies, or a waterbody, with the same tier. For example, most DEC APDES permits are for discharges to Tier 2 waterbodies. As a result, the Department imposes permit conditions (e.g., effluent limits, best management practices, etc.) under the principle that the level of water quality (and the waterbody uses) for Tier 2 waterbodies will be maintained and protected when permit conditions are adhered too, thus, providing assurance that all Tier 2 waterbodies receiving discharges under the general permit will

remain high quality Tier 2 waterbodies. Accordingly, site-specific antidegradation analyses are not warranted under the principle that general permits are crafted to be protective of the selected waterbody tier. However, as a commenter noted, DEC does reserve the authority to conduct an individual antidegradation analysis for a discharge that seeks coverage under a general permit. In these cases, when DEC determines that an applicant seeking coverage under a general permit was not fully contemplated in the general permit's antidegradation analysis, then an additional analysis will be completed either as part of the general permit authorization or through the issuance of an individual permit. Whether DEC completes an antidegradation analysis during general permit development or during subsequent general permit authorization, public participation is satisfied by the draft general permit and/or authorization subject to public notice specifying the area of coverage and the waterbody tier the antidegradation analysis pertains to.

The hearing officer's decision related to log transfer general permits is binding only to the specified permits (AK-G70-1000 and AK-G70-0000).

The concerns raised about the scope of the activities and potential impacts under an antidegradation analysis for a general permit are routinely addressed by the Department when determine the scope of the general permit itself. If an activity does not fit under the general permit, then an individual permit will be considered.

f) Section 312 of the Clean Water Act (33 U.S.C. § 1322) requires vessels – such as cruise ships - with installed toilet facilities to be equipped with an operable marine sanitation device (MSD), certified by the Coast Guard to meet EPA performance standards, in order to operate on the navigable waters of the United States. This federal authorization creates a federal nexus requiring consultation with USFWS and NOAA on species listed under the federal Marine Mammal Protection Act and the federal Endangered Species Act. Unfortunately, the draft permit and fact sheet make no effort to understand potential impacts to listed or otherwise protected species; for example, the fact sheet makes the baseless blanket assertion that "[t]hreatened or endangered species are not expected to be adversely affected. MZ size and location ensures no toxicity to these species," with zero explanation or analysis. Fact Sheet, p. 64. Yet mixing zones – and the violation of water quality criteria within them – likely constitutes a "take" or other adverse impact on protected species which ADEC has chosen to ignore. As a result, ADEC should require zero discharge zones in and around any critical habitat or similarly protected areas for listed species.

Department Response: The Department reviewed a list of threatened and endangered species for coastal Alaska provided by ADF&G. Underway mixing zones are not likely to affect threatened or endangered species as the mixing occurs rapidly and directly under or adjacent to the vessel. Stationary discharge typically occurs at docks or anchorages within the harbors of coastal communities. Steller's eider, *Polysticta stelleri*, overwinter in several cruise ship ports such as Unalaska, Kodiak, and Homer, but cruise ships are typically limited to summer operations in Alaska.

g) With the demise of the Alaska Coastal Management Program – and in the wake of efforts to push through numerous ill-advised provisions in HB 77 – our groups have had front-row seats as Alaska's once proud permitting regime unravels. The proposed permit is a big step

backward from the previous permit, and essentially allows cruise ships to discharge large volumes of partially treated wastes whenever and wherever they chose in Alaskan waters and fisheries.

Accordingly, we urge you to take the current draft permit back to the drawing back, and to convene a truly balanced panel to come up with some reasonable compromises. Otherwise, if this permit proceedss as drafted, it will lock Alaska into a failed permitting regime that will ensure ever-increasing pollution to our magnificent fisheries as time unfolds.

Department Response: The Department disagrees with this comment. The permit will not allow partially treated wastewater, the discharge of treated wastewater must meet Alaska Water Quality Standards at the end of pipe for fecal coliform and must meet federal secondary standards for conventional pollutants.

89.) Sitka Tribe of Alaska (STA)

a) STA and its tribal citizens utilize the outer coastal waters of Baranof Island for the extensive harvest of subsistence flora and fauna. STA strongly believes large cruise ship discharges within the State's 3 nm jurisdictional limit and more specifically less than 6 knots or stationary discharges have a strong potential to significantly affect subsistence resources and the health of the people who utilize them.

b) The proposed permit allows cruise ships that utilize Advanced Wastewater Treatment Systems (AWTS) to discharge wastewater within the 3nm limit. While these systems may be the most advance available for treating wastewater their inadvertent failure during a discharge event could easily contaminate subsistence resources and jeopardize the health of subsistence users.

c) The proposed "less than 6 knots and stationary" discharges are particularly concerning to STA. The area that cruise ships travel in Sitka Sound at "less than 6 knots" is near the city of Sitka and its outlying islands. As many as 3 cruise ships a day will anchor in the water just off the Sitka National Historic Park. The waters described above already receive sewage discharges from the municipality's wastewater treatment plant and the hundred or so sewage outfalls from private home owners on surrounding islands. Adding to the contaminants in these waters are three municipal boat harbors and a large transient fishing fleet along with wastewater discharge of three large commercial fish processing plants. While these waters are not considered impaired water bodies under the Clean Water Act, they do whoever, contain higher levels fecal coliform bacteria, increased biological oxygen demand (BOD), and increased total suspended solids (TSS). Adding large cruise ship discharges to the "mix" would result in a high probability of these waters exceeding EPA acceptable levels for fecal coliform, BOD, and TSS.

To alleviate the concerns addressed in this letter, STA request that large cruise ships not be allowed to discharge wastewater within the 3nm limit along Baranof Island from Khaz Point (57.503181N, 136.018100 W) to Point Lauder (56.540365 N, 135.064048 W) (see attached map). Although it is outside of the State's jurisdiction, STA also requests that the cruise ship industry voluntarily not discharge in the portion of Sitka Sound that falls outside the 3nm limit.

Department Response: This permit sets TSS, BOD, and fecal coliform limits at the most stringent levels based on federal secondary standards or Alaska Water Quality Criteria. At these limits the Department does not consider AWTS discharges as adding to water quality concerns for these parameters. The Department is also limited by federal laws and regulations which require the state to apply to the EPA for no discharge zones under section 312(f) of the Federal Water Pollution Control Act. Under the federal requirements the state must demonstrate that adequate pump out facilities are provided, which are not currently available in the Sitka area for large cruise ships.

90.) Juneau Chamber of Commerce

The Juneau Chamber of Commerce would like to commend the ADEC for proposing a new 5-year cruise ship discharge permit. We were pleased that many of the findings were adopted from the Science Panel and the legislative statutory changes in 2013, authorizing mixing zones for cruise ships. This permit utilizes a process based upon science, best technology, and more closely aligns cruise ship permits with the process used for other dischargers.

We were additionally pleased that the permit acknowledges the current high level of treatment utilized by the cruise ship industry in Alaska. One of the main goals of amending cruise ship permit statutes (HB 80) was to bring fairness into the permitting process by treating cruise ships like other dischargers in Alaska.

The Juneau Chamber of Commerce respectfully recommends the DEC to continue to evaluate provisions to ensure this goal is consistently applied throughout the permit and that the DEC give serious consideration to industry suggestions to bring the permit in even closer alignment with requirements of other permits. Keeping Alaska's regulations protective of the environment yet still allowing businesses to operate is a critical component of Alaska remaining competitive.

The cruise ship industry employs thousands of Alaskans and has proven to be a large part of the economy in many areas of Alaska, especially Southeast.

Department Response: This comment did not address a specific term or condition of the draft permit.

91.) Effect of the permit with respect to protection of overall water quality

The draft General Permit and associated fact sheet provide a great deal of rationale and detail to support changes from the current ADEC General Permit. Based on my experience and familiarity with results from all of the vessels in the program, I generally believe that the permit both meets the intent of HB80 and is protective of Alaska's water quality, as long as federal testing requirements (USCG and EPA) remain constant.

Department Response: This comment did not address a specific term or condition of the draft permit.

92.) Overlap with USCG and EPA regulations and permits

There is a general overlap in sampling frequency and parameters between USCG, EPA, and the ADEC General Permit requirements, and it appears that this draft permit was written to accomplish this goal. Effluent limits are similar in most cases. This allows us as sampling contractors to perform efficient sampling that can provide compliance data for the vessels for all three programs. It is

important to note that under some circumstances and discharge patterns, the EPA and USCG testing requirements now require more testing for some vessels than is dictated by this draft General Permit. Of particular note is that dissolved metals and ammonia will not be routinely monitored twice per month as is required under the current ADEC general permit.

Department Response: The differences between federal sampling and permit required sampling are due to the differences in operating conditions between this permit and federal regulations and permits.

93.) Consequences of the reduction of sampling frequency

The regular sampling and testing that is performed to confirm the compliance of advanced wastewater treatment systems on ships has promoted the careful maintenance and consistent performance of these systems over the past few years. Reducing the sampling frequency and the number of parameters tested will remove an important safeguard that ensures that ships are routinely monitored to confirm compliance, even when mixing zones are allowed.

Department Response: The Department agrees that regular sampling is critical to ensure performance of the systems. The reduction in some parameters such as priority sample data is due to a large amount of data already received that justifies such a change.

94.) Evaluation of new vessels to Alaska

The Department needs to address how it will review and process applications for vessels requesting a mixing zone if they are new to Alaska and have no prior analytical data to review. These ships need to be presented with guidelines on how to gather sufficient data to demonstrate to the Department that the vessel qualifies for a mixing zone.

Department Response: New vessels will need to submit vessel specific data on the NOI form. These vessels will be modeled using composite wastewater sample data from 2008 to 2012.

95.) Receiving water sampling details and guidance

The Department needs to specify exact guidelines for how receiving water samples are collected in order to provide accurate data for the CORMIX model. These guidelines should include the specified depth of sample collection in the water column with respect to location and depth of the vessel discharge point and acceptable equipment to be used for sample collection. The Department must also decide if these guidelines will be included in the project Quality Assurance Project Plan, or in the independent Vessel Specific Sampling Plans.

Department Response: The guidelines will be provided in an approved Quality Assurance Project Plan. The Project Plan can be separate of the CLIA NW & Canada 2014 Quality Assurance Project Plan.

96.) Ambient water quality in harbors

If receiving water is to be monitored as part of permit compliance for ships, it will be necessary to determine the baseline levels of the contaminants of concern in the harbor when ships are not present. Simply monitoring these parameters within the mixing zone of the vessel and upstream of the current opposite of the discharge plume will not take ambient contaminant conditions completely into account. In Juneau in particular, there is a seafood processor within the area where

ships regularly dock that produces waste that will include suspended solids, biochemical oxygen demand, and ammonia. It will be imperative to perform baseline measurements of these contaminants in the harbor if receiving water quality is to be regulated in the future.

Department Response: The monitoring will not be used for compliance purposes, but is intended to gather data on both receiving water quality as well as information that will support mixing zone modeling.

97.) Whole Effluent Toxicity (WET) Testing frequency

There is a discrepancy between the fact sheet of the permit and the permit itself concerning the frequency of WET testing required of the in-port discharging vessels in year three of the permit. The fact sheet indicates that WET samples are to be collected twice per year per ship in year three of the permit, while the draft permit itself indicates that WET samples are to be collected monthly per ship in year three of the permit. Sampling each in-port discharging vessel twice per season in year three will provide adequate WET testing results. Requiring monthly testing of these vessels in year three would result in the collection of more data than necessary to evaluate the toxicity effects of effluent and is an excessive burden on permit holders.

Department Response: The Department has corrected the discrepancy between the permit and fact sheet. Monthly testing in 2017 is less than quarterly testing found in some municipal permits.

98.) Requirement for chlorine testing if not used for disinfection

Residual chlorine is sometimes present in measurable quantities within the effluent of many ships as a result of chlorinated potable water or cleaning products eventually becoming a component of the final advanced wastewater system permeate, even though chlorination is not used as a method for disinfecting the wastewater. This chlorine will not be measured if ships are using disinfection methods other than chlorine (i.e. UV sterilization) and are not be required to test for residual chlorine under this permit. Routine residual chlorine testing should be considered as part of the regular testing requirements of all vessels.

Department Response: The Department will require chlorine testing for all samples as it is part of the federal limits identified in HB 80.

99.) Effective date for the permit

The requirements in this draft permit will cause significant changes to how samples are collected and analyzed for vessel compliance if the permit is finalized as presented. These changes will require careful consideration and planning in order to ensure that sampling and testing is performed accurately. Making these changes in the middle of a cruise ship season is ill advised, especially when questions about baseline receiving water quality remain unanswered.

Department Response: The Department will notify vessel operators regarding the sampling requirements for a partial season. The Department intends to pro-rate the sampling requirements for a partial season under both the 2010 and 2014 General Permits.

100.) Concluding Remarks

By making these changes to the final permit, the goal of protecting the waters of the State where cruise ships operate while still following the Alaska Water Quality Standards and the intent of HB 80

will be achieved. These changes will allow large ships to operate advanced wastewater treatment systems in a clean and efficient manner and continue to be monitored by frequent sampling of their effluent. The goal of requiring a wastewater permit for large ships is to protect the quality of Alaska waters, and the best way to do this is to produce a final permit that is consistent with other permits, is attainable by the permittees, interprets the water quality standards appropriately, and encourages compliance rather than avoidance.

Suggested changes to draft permit:

a) Increase testing frequency of temperature, pH, total residual chlorine, specific conductance, BOD, ammonia, and hardness for ships discharging at speeds of 6 knots or greater to twice per month instead of twice per year

Department Response: See Department Response to Comment 93.).

b) Provide specific guidance on testing requirements for vessels that are new to Alaska

Department Response: See Department Response to Comment 94.).

c) Provide specific guidance on methods and quality control for receiving water sampling

Department Response: See Department Response to Comment 95.).

d) Establish a plan for baseline monitoring of harbors in which mixing zones will be allowed

Department Response: See Department Response to Comment 96.).

e) Establish the frequency of WET testing in year three to twice per season per vessel

Department Response: See Department Response to Comment 97.).

f) Evaluate the requirement for testing for residual chlorine in situations where chlorine is not used for disinfection of the wastewater effluent

Department Response: See Department Response to Comment 98.).

g) Delay the effective date of the permit until after the conclusion of the 2014 sampling season

Department Response: See Department Response to Comment 99.).

101.) Omission of Standards

The permit allows large cruise ships to apply for a mixing zone and presents standards for those mixing zones depending upon whether ships are underway. Ships that do not request a mixing zone authorization must meet Alaska's "end of pipe" water quality standards (Table 2). These standards do not include ammonia or dissolved copper, and other dissolved metals. Likewise, effluent limitations set forth in the permit for ships requesting a mixing zone and operating at speeds less than 6 knots has no standard for dissolved copper. Dropping the less stringent standards provides a

disincentive for the industry to invest in and develop better treatment methods that would have potentially met the previous standards at the discharge point.

Department Response: See Department Response to Comment 19.).

102.) Issues with Monitoring

Foremost, we have concerns with respect to the monitoring plans outlined in the permit. For example, the permit does not seem to couple the volume of discharge with the sampling effort. While both volume and sampling protocol are addressed separately, it appears that the volume of discharge need not be recorded at the same time that samples are collected. Discharge volume by definition affects the dilution potential in the mixing zone. We thus advocate that the volume of discharge be recorded simultaneously with the sampling within the mixing zone to achieve accurate estimates of concentration. It was unclear in the permit how or if these two measurements would occur.

Likewise, given the low sampling frequency for monitoring (twice per month or twice per year) it is unclear how, within the monitoring plan, the DEC will monitor whether those sampling events are representative (6.7 .2) of the effluent discharged throughout the summer. Recognizing that there are some operational conditions when wastewater may have higher or lower levels of certain pollutants (e.g., grease, oil, or fecal coliform), the permit may allow ships to high grade the sampling events to reflect those low pollutant periods. Without monitoring efforts to insure the sampling events are representative it is difficult to see how ships may sample accordingly.

Section 6.7.8 stipulates that ships can only discharge wastewater stored in tanks if they sample from that etlluent in the tanks and they meet the effluent limits. However, water quality left in tanks over time can significantly change owing to promotion of bacterial growth and other parameters. We thus encourage language in the permit that requires ships to sample the effluent in tanks just prior to discharge.

Monitoring compliance is a critical component to the permit's effectiveness. Monitoring should be conducted (per permit item 6.9.3.1.1) at the locations closer to the anchored or moored ships (l 5m vs. 83m). This provides the best opportunity to recognize when ships exceed permitted discharges and to initiate corrective actions. We also encourage the DEC to consider the timing of the monitoring as the introduction of certain pollutants may have large impacts to marine system depending upon time of year. For example, some pollutants (e.g. fecal coliform, ammonia, and phosphates) have the potential to initiate or promote harmful algal blooms or other effects that could cause health effects in humans or animals when water temperatures are at their warmest.

We are likewise concerned that receiving water monitoring is not required for ships permitted to discharge at speeds greater than 6 knots. We recognize the inherent difficulties in sampling the water around a ship underway, but eliminating any monitoring efforts to insure water quality standards are met for ships underway reduces any incentives to insure these standards are met.

In some instances, the permit should clarify language regarding sampling. For example, 7.4.3 includes language about notification of noncompliance. The language states that the DEC may waive the requirement for a written report (of noncompliance to the permit) if the permittee submits the notification verbally within 24 hours and the information is sufficient for Department needs.

The permit should clarify what criteria will be used to satisfy DEC needs and insure that transparency and public access to these reports of noncompliance are available.

Department Response: Discharge volume information is collected under the regulatory requirements for discharge record books under 18 AAC 69.050. With regard to representativeness, the Department uses Ocean Rangers deployed on large cruise ship to monitor for sampling compliance to ensure it is representative and follows plans outlined in Vessel Specific Sampling Plans and Quality Assurance Project Plans. Sampling from holding tanks is required during discharge to obtain a representative sample.

Monitoring at the boundaries of the mixing zone is typical in municipal permits to determine if mixing zone requirements are met beyond the boundaries of the mixing zone. Underway sampling of receiving water would be difficult with the proximity of the mixing zone to the stern of the ship and would create potential safety issues. A written report may be waived if the verbal report contains all required information, for example if a cause was determined and corrected.

103.) Cumulative Impacts

The new permits and provided background information do not address cumulative impacts to these waters and assume an unlimited ability of the aquatic environment to handle these constituents, especially in port areas such as Skagway or while berthing in areas such as Sitka Sound.

Department Response: The Department used the chronic water quality standard to partially address the cumulative effects of cruise ship discharges. The chronic criteria is based on a three or four day exposure, while most ships are in port from 8 to 16 hours. The Department also considers the nature of the pollutant, how it is transported in the environment, the available dilution, whether it is likely to persist in the environment, and whether it bioaccumulates. The findings in the Permit are based on a consideration of the above.

104.) Park-Specific Concerns

As part of regular cruise routes and destinations, a number of cruise ships anchor within 400 meters of SITK's intertidal zone (see attached photo). Pollutant discharges released in large enough volumes from cruise ships anchored near the park, have the potential to adversely impact the characteristics of seawater flowing over the intertidal zone and the abundance of native species that reside in the intertidal zone or use the intertidal zone for foraging, shelter, or reproduction. Additionally, certain types of discharges (e.g. ammonia, phosphates, and nitrogen) have the potential to destabilize the intertidal ecosystem or promote the growth of aquatic invasive species.

Given these potential impacts to SITK resources, we recommend that cruise ships discharge wastewater in an area outside of where effluent could adversely influence waters entering the park tidelands or in an area of sufficient ocean circulation to disperse effluent effectively away from the park. If this is not possible, we would prefer that no wastewater discharges occur while cruise ships are moored or anchored in the vicinity of SITK, which is a smaller area. Both of these strategies have the highest likelihood of preventing effluent discharges from adversely effecting park resources. This approach is similar to that taken within Glacier Bay National Park and Preserve, where cruise ships do not discharge wastewater effluent within the bay in accordance with their concession permit.

If neither of these strategies can be practically incorporated into the DEC general permit, we recommend a limited mixing zone, similar to that adopted for Skagway Harbor (15m vs. 83m), adopted for vessels moored or anchored adjacent to the park. While we recognize that Skagway Harbor is already listed as an impaired water body by the EPA and the Crescent Harbor/ Jamestown Bay water body is not, adopting a smaller mixing zone for the waters around SITK would help prevent the waters adjacent to, and flowing over, the park from becoming impaired.

Additionally, 18 AAC 70.240 requires that for estuarine and marine waters, measured at mean lower low water, the cumulative linear length of all mixing zones intersected on any given cross section of an estuary, inlet, cove, channel, or other marine water may not exceed IO percent of the total length of that cross section. The cross section of marine water adjacent to SITK may be less than 900 m at low tide. As described the mixing zone for a vessel moving under 6 knots is a radius of 83 m. This means at a minimum the diameter of the mixing zone is 166 m (or 521 m by circumference), much greater than the IO percent of total cross-sectional length. This situation may exist in other areas, including Skagway, where the cross section length of the harbor at low tide is approximately 950 m, meaning the 15 m radius (30 m diameter or 94 m circumference) mixing zone may be exceeded with multiple ships in harbor. We recommend these issues be addressed.

Regarding the national park units north of the Aleutian Islands - Bering Land Bridge National Preserve, and Cape Krusenstern National Monument - we note that most of the research and supporting documentation for this permit comes from the Gulf of Alaska (GOA), both in Southcentral and Southeast Alaska. A major question is: Is it appropriate to permit the same levels of discharge in the Chukchi Sea and Bering Sea as in the GOA, given differences in temperature, pelagic communities, marine mammal community structure, and the rate of chemical and biochemical reactions (metabolism, chemical breakdown, adsorption, etc.)? Chemical cycling and biological activity is lower in the Arctic Ocean than in the GOA. It would therefore be appropriate to cite evidence that the discharge is appropriate under these different conditions, or to find appropriate research from Arctic point sources that may help to develop a tailored set of permitted levels for Arctic. We are concerned that the Arctic Ocean may require lower permitted levels of discharge. In addition, there are a great deal more subsistence activities in the Chukchi than in the GOA, which should influence decision making on fecal coliform, ammonium, and heavy metals.

Some of the maximum levels of heavy metals that have been summarized in past years (e.g. 330 mg/I Zn and 160 mg/I Cu) exceed levels which cause mortality to terrestrial receptors (i.e., in mining-related fugitive dusts) such as lichens, bryophytes and algae. The main difference between these discharges, of course, is that marine discharges presumably become more dilute once mixed with surrounding water, unlike terrestrial discharge deposited on a receptor. Still, primary productivity is lower than in southeast Alaskan waters than in the Arctic and is sensitive to perturbation. Thus the primary question remains: On what basis has the appropriate decision on discharge levels and mixing zones in the Arctic been made, given the differences between biological effects and processes in the GOA and the Chukchi?

> Department Response: The Department recognizes the importance of the nearshore environment. Modeling of cruise ship discharges showed most ships were able to meet WQC at 83 meters, well within 400 meters from shore. The Department will not authorize discharge from vessels not able to meet the mixing zone requirements and disagrees with the suggestion of no discharge in Sitka. The 15-meter mixing zone proposed for part of Skagway

harbor was based on the potential for overlap, which does not occur with anchored vessels as in Sitka.

With regard to the cross section, the 83 meters is a semicircle from the side of the hull with the discharge port, which would not exceed 10% of the 900 meter width listed in the comment.

For northern national park units the Department determined that the Bering Sea has limited annual cruise traffic, and the Chukchi Sea had no large cruise ships discharge during the study period. The Department recognizes the importance of these areas and will continue to monitor ship traffic and discharges in these areas during the term of the permit.

105.) Clarification in the Accompanying Documents

We had a number of concerns about the clarity and accuracy of the referenced material in the documents. For example, the Fact Sheet states that HB80 does not allow cruise ships to start discharging lower quality effluent. Yet immediately following this answer states that the ballot measure passed in 2006 required water quality criteria that was more stringent than for any other discharger in the state. By definition, then, HB does result in lessening of ship effluent quality if less stringent.

Likewise, there is a confusing discussion of inner and outer mixing zones. Is this in a cruise ship wake? Terms like "acute aquatic life criteria" are unclear. Using several examples and illustrations would clarify the permit.

Department Response: The Department was not able to find the reference to HB 80 that states the discharge of lower quality effluent is allowed. The requirement of the ballot measure in 2006 to meet all water quality criteria at the point of discharge has not been achieved for all pollutants. HB 80 sets requirements equivalent to what has been achieved. The Department could not find a reference to inner or outer mixing zones in the fact sheet. There is a revised explanation of initial mixing in Section 6.3.4 that may be helpful. The Department added a definition for acute to Section 6.3.1.