

HB

164

HFIN

FILE

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

Fiscal Note Number: _____
Bill Version: CS HB 164 (FIN)
() Publish Date: _____

Revision Date/Time (Note if correction): _____
Title Ocean Rangers & Reporting Vessel Location

Dept. Affected: Dept. of Environmental Conservation
RDU Division of Water
Component Water Quality

Sponsor House Transportation Committee
Requester House Finance Committee

Component No. 2062

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services	118.4	118.4	118.4	118.4	118.4	118.4
Travel						
Contractual	1,838.7	1,838.7	1,838.7	1,838.7	1,838.7	1,838.7
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
-------------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Commercial Passenger Vessel Environmen	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1
TOTAL	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1

Estimate of any current year (FY2007) cost: 811.3

Check this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal:

POSITIONS

Full-time	1	1	1	1	1	1
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

CS HB 164 (FIN) requires Ocean Rangers on board large commercial passenger vessels at random times determined by the Commissioner of the Department of Environmental Conservation. For the purposes of this fiscal note, the assumption is that on half of the voyages, there will be an Ocean Ranger presence.

Prepared by: House Finance Committee
Division: _____
Approved by: Representative Kevin Moyer
Agency: Representative Mike Chonault

Phone: _____
Date/Time: _____
Date: _____

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

BILL NO. _____

ANALYSIS CONTINUATION

Following are the line item expenditures identified in the this fiscal note:

Personal Services:

One PFT Environmental Engineer Associate, range 22B at \$118,479.

Contractual Services:

The contractual services line includes the Ocean Rangers and other program related costs such as vessel tracking, public notices, staff training, legal support, travel, and supplies. DEC will fund Ocean Rangers under contract, rather than attempt to hire them directly as state employees. DEC identifies that 15 Ocean Rangers will be needed to implement the provisions of CS HB 164 (JUD). The Ocean Rangers will be DEC certified Level III wastewater treatment operators.

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

Fiscal Note Number: CSHB164-LAW-ENV-4-21
 Bill Version: CSHB 164 (JUD)
 () Publish Date: _____

Revision Date/Time (Note if correction): _____

Dept. Affected: Law

Title An Act relating to ocean rangers and reporting vessel location

RDU Civil

Component Environmental

Sponsor TRANSPORTATION

Requester HOUSE FINANCE

Component No. _____

Expenditures/Revenues

(Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
-------------------------------	--	--	--	--	--	--

FUND SOURCE

(Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2007) cost: 0.0

Mark this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

The bill would implement the Ocean Ranger program (per the 2006 Ballot Measure #2) by giving the DEC Commissioner the discretion to place Ocean Rangers aboard vessels in an Alaskan port or aboard vessels while the vessels are underway in Alaska marine waters between two Alaskan ports. Enactment of the bill is not expected to require a need for increased appropriation to the Department of Law.

Prepared by: Robert Meiners, Admin. Services Manager

Phone 465-5427

Division Administrative Services Division

Date/Time 4/26/07 9:05 AM

Approved by: Robert Meiners for Talis Colborn, Attorney General

Date 4/26/2007

Agency Department of Law

Revised

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

Fiscal Note Number: CSHB164-DEC-W-4-24-07
Bill Version: CSHB164
() Publish Date: _____

Revision Date/Time (Note if correction): _____
Title Commercial passenger vessels operating in
Alaska waters
Sponsor House Transportation Committee
Requester House Finance Committee

Dept. Affected: Dept of Environmental Conservation
RDU Division of Water
Component Water Quality
Component No. 2062

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services	312.1	312.1	312.1	312.1	312.1	312.1
Travel	12.0	12.0	12.0	12.0	12.0	12.0
Contractual	1,549.8	1,549.8	1,549.8	1,549.8	1,549.8	1,549.8
Supplies	83.2	83.2	83.2	83.2	83.2	83.2
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
-------------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Commercial Passenger Vessel Envir)	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1
TOTAL	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1	1,957.1

Estimate of any current year (FY2007) cost: 811.3

Mark this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal:

POSITIONS

Full-time	3	3	3	3	3	3
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

CSHB 164 requires Ocean Rangers on board large cruise vessels at random times determined by the Commissioner. For purposes of this fiscal note, the Department assumed an Ocean Ranger presence on half of the voyages.

Prepared by: Lynn J. Tomich Kent
Division: Director
Approved by: Larry Hartig - Commissioner
Agency: Department of Environmental Conservation

Phone: 907-269-7599
Date/Time: 4/24/07 4:00 PM
Date: 4/25/2007

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

BILL NO. CSHB 164

ANALYSIS CONTINUATION

Following are the line item expenditure calculations for the for the proposed legislation:

Personal Services: Under CSHB 164, DEC needs three positions to administer the program: Env. Prgm Mgr I, Env Eng Assoc, and Env Prgm Spec III.

Travel: Line item includes travel for DEC program staff for implementing the program.

Contractual: The contractual cost includes the Ocean Rangers (ORs) and other program related costs such as vessel tracking, public notices, staff training, and legal support. DEC will fund ORs under contract, rather than attempt to hire them directly as state employees.

Under the CSHB164 the total number of ORs needed is approximately 15. The OPs will be DEC certified Level III wastewater treatment operators.

Supplies: Line item includes wireless stations for Ocean Rangers and office equipment, computer and supplies for department staff.

*adopted
4-26-07*

25-LS0585W
Kane
4/25/07

CS FOR HOUSE BILL NO. 164(FIN)
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-FIFTH LEGISLATURE - FIRST SESSION

BY THE HOUSE FINANCE COMMITTEE

Offered:
Referred:

Sponsor(s): HOUSE TRANSPORTATION COMMITTEE

A BILL
FOR AN ACT ENTITLED

1 "An Act relating to reporting of vessel location by certain commercial passenger vessels
2 operating in the marine waters of the state, to access to vessels by a wastewater
3 treatment operator for purposes of monitoring compliance with state and federal marine
4 discharge and pollution requirements, to the obligations of that operator while aboard
5 the vessels, and to the qualifications of the wastewater treatment operator; and
6 providing for an effective date."

7 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

8 * Section 1. AS 46.03.465(b) is amended to read:

9 (b) While a commercial passenger vessel is present in the marine waters of the
10 state, the owner or operator of the vessel shall provide to the United States Coast
11 Guard an hourly report of the vessel's location based on Global Positioning System
12 technology and collect routine samples of the vessel's treated sewage, graywater, and
13 other wastewaters being discharged into marine waters of the state with a sampling

1 technique approved by the department.

2 * Sec. 2. AS 46.03.476 is repealed and reenacted to read:

3 Sec. 46.03.476. **Ocean Rangers.** (a) The commissioner shall require the owner
4 or operator of a large commercial passenger vessel to allow a wastewater treatment
5 operator hired or retained by the department on board the vessel at random times
6 determined by the commissioner to perform the duties described in (b) of this section
7 while the vessel is in port in Alaska or operating in Alaska waters between two Alaska
8 ports.

9 (b) While on board a large commercial passenger vessel, the wastewater
10 treatment operator shall

11 (1) act as an independent observer for the purpose of monitoring
12 compliance with state and federal requirements pertaining to marine discharge and
13 pollution requirements;

14 (2) monitor, observe, and record data and information related to marine
15 discharge and pollution requirements in state and federal law, including registration,
16 reporting, and record-keeping requirements.

17 (c) While on board the vessel the wastewater treatment operator shall comply
18 with the vessel's approved United States Coast Guard security plan.

19 (d) Any information recorded or gathered by the wastewater treatment
20 operator shall be promptly conveyed to the department and the United States Coast
21 Guard on a form or in a manner approved by the commissioner. The commissioner
22 may share information gathered with other state and federal agencies.

23 (e) In this section, "wastewater treatment operator" means a Level III
24 wastewater treatment operator certified by the department under the authority of
25 AS 46.30.080.

26 * Sec. 3. The uncodified law of the State of Alaska is amended by adding a new section to
27 read:

28 **RETROACTIVITY.** Sections 1 and 2 of this Act are retroactive to December 17,
29 2006.

30 * Sec. 4. This Act takes effect immediately under AS 01.10.070(c).

*failed
1-9*

25-LS0585VT.2
Kane
4/25/07

AMENDMENT)

OFFERED IN THE HOUSE
TO: CSHB 164(JUD)

BY REPRESENTATIVE GARA

1 Page 1, lines 2 - 5:

2 Delete ", to access to vessels by a wastewater treatment operator for purposes of
3 monitoring compliance with state and federal requirements, to the obligations of that
4 operator while aboard the vessels, and to the qualifications of the wastewater treatment
5 operator"

6

7 Page 2, lines 2 - 25:

8 Delete all material.

9

10 Renumber the following bill sections accordingly.

11

12 Page 2, line 28:

13 Delete "Sections 1 and 2 of this Act are"

14 Insert "Section 1 of this Act is"

2007 HOUSE FINANCE COMMITTEE VOTE SHEET

DATE: 4-30-07

Amendment: Amend - 1
HB 164

MEMBER

Favor

Oppose

GARA	✓	
HAWKER		✓
JOULE		✓
KELLY		✓
NELSON		✓
STOLTZE		✓
THOMAS		✓
CRAWFORD	✓	
FOSTER		✓
CHENAULT		✓
MEYER		✓

Yea 2

Nay 9

with drawn

25-LS0585VT.3
Kanc
4/25/07

AMENDMENT 2

OFFERED IN THE HOUSE
TO: CSHB 164(JUD)

BY REPRESENTATIVE GARA

- 1 Page 2, lines 7 - 8:
- 2 Delete "port in Alaska or operating in Alaska waters between two Alaska ports"
- 3 Insert "transit in Alaska waters"

Adopted

25-LS0585W
Kane
4/25/07

CS FOR HOUSE BILL NO. 164(FIN)
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-FIFTH LEGISLATURE - FIRST SESSION

BY THE HOUSE FINANCE COMMITTEE

Offered:
Referred:

Sponsor(s): HOUSE TRANSPORTATION COMMITTEE

A BILL

FOR AN ACT ENTITLED

1 "An Act relating to reporting of vessel location by certain commercial passenger vessels
2 operating in the marine waters of the state, to access to vessels by a wastewater
3 treatment operator for purposes of monitoring compliance with state and federal marine
4 discharge and pollution requirements, to the obligations of that operator while aboard
5 the vessels, and to the qualifications of the wastewater treatment operator; and
6 providing for an effective date."

7 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

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9 (b) While a commercial passenger vessel is present in the marine waters of the
10 state, the owner or operator of the vessel shall provide to the United States Coast
11 Guard an hourly report of the vessel's location based on Global Positioning System
12 technology and collect routine samples of the vessel's treated sewage, graywater, and
13 other wastewaters being discharged into marine waters of the state with a sampling

1 technique approved by the department.

2 * Sec. 2. AS 46.03.476 is repealed and reenacted to read:

3 Sec. 46.03.476. Ocean Rangers. (a) The commissioner shall require the owner
4 or operator of a large commercial passenger vessel to allow a wastewater treatment
5 operator hired or retained by the department on board the vessel at random times
6 determined by the commissioner to perform the duties described in (b) of this section
7 while the vessel is in port in Alaska or operating in Alaska waters between two Alaska
8 ports.

9 (b) While on board a large commercial passenger vessel, the wastewater
10 treatment operator shall

11 (1) act as an independent observer for the purpose of monitoring
12 compliance with state and federal requirements pertaining to marine discharge and
13 pollution requirements;

14 (2) monitor, observe, and record data and information related to marine
15 discharge and pollution requirements in state and federal law, including registration,
16 reporting, and record-keeping requirements.

17 (c) While on board the vessel the wastewater treatment operator shall comply
18 with the vessel's approved United States Coast Guard security plan.

19 (d) Any information recorded or gathered by the wastewater treatment
20 operator shall be promptly conveyed to the department and the United States Coast
21 Guard on a form or in a manner approved by the commissioner. The commissioner
22 may share information gathered with other state and federal agencies.

23 (e) In this section, "wastewater treatment operator" means a Level III
24 wastewater treatment operator certified by the department under the authority of
25 AS 46.30.080.

26 * Sec. 3. The uncodified law of the State of Alaska is amended by adding a new section to
27 read:

28 RETROACTIVITY. Sections 1 and 2 of this Act are retroactive to December 17,
29 2006.

30 * Sec. 4. This Act takes effect immediately under AS 01.10.070(c).

DRUCE D. WEYHKAUCH, LLC

whyrock@pci.net

114 S. FRANKLIN ST.

SUITE 200

JUNEAU, ALASKA 99801

TELEPHONE: (907) 463-5566

FAX: (907) 463-8858

RECEIVED

APR 04 2007

DIVISION OF
OCCUPATIONAL LICENSING
JUNEAU

April 3, 2007

Mr. Al Clough, Deputy Commissioner
Chairman, Alaska Board of Marine Pilots
Alaska Department of Commerce, Community and Economic Development
P.O. Box 110800
Juneau, Alaska 99811-0800

Re: DEC's Ocean Ranger Program and Marine Pilots

Dear Deputy Commissioner Clough:

We write on behalf of the Southeast Alaska Pilots' Association (SEAPA) about questions related to the state's new ocean ranger program, how it will be managed, and concerns that it not interfere with Alaska's marine pilot activities. We look forward to a constructive dialogue and meaningful input to the ocean ranger program, and to assist you and other state agencies on these questions and concerns. As we explain below, this interaction should start very soon.

SEAPA is an association of marine pilots who are licensed by the State of Alaska and United States Coast Guard. SEAPA is an organization recognized by the State's Board of Marine Pilots that dispatches marine pilots to cruise ships and cargo vessels transiting Southeast Alaska's marine waters from Dixon Entrance to Yakutat. Alaska law requires these vessels to have a marine pilot onboard while the vessel is in Alaska waters.

Marine pilots embark and disembark vessels at pilot stations or in various Alaska ports. That is an extremely dangerous process. Once onboard, marine pilots, among their other duties, are agents of the state to insure the safe transit of vessels, to insure the public has an independent observer with local knowledge of navigation and marine conditions, to protect the public and

Deputy Commissioner Al Clough
April 3, 2007
Page 2

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OCCUPATIONAL LICENSING
JUNEAU

commerce, and to assist and advise the captain and crew on ship handling and docking.

Last year, the state adopted an "ocean ranger" program. We understand that the ocean ranger program will be administered by the Department of Environmental Conservation, and we understand that DEC will begin to operate the ocean ranger program this year. SEAPA has not been advised how DEC will administer the ocean ranger program, how ocean rangers will be placed aboard vessels, where ocean rangers will stay once onboard a vessel, what the specific duties of an ocean ranger will be once they are onboard vessels, what each ocean ranger's term of stay will be onboard vessels, or any other policy or logistical aspect of DEC's ocean ranger program.

The first cruise ship will enter Alaska's waters for its first port of call (Juneau, Alaska) on May 6, 2007. Thus, time is growing short to deal with the many logistical and program issues related to ocean rangers, and address concerns by marine pilots about DEC's plans for implementing the ocean ranger program. SEAPA does not take a position on the ocean ranger program. It is state law and the state will have to deal with it. However, we write to advise you of SEAPA's concerns regarding the ocean ranger program and to make you aware that the tasks, functions, and operations of marine pilots should be taken into account by DEC as it implements the ocean ranger program.

How will ocean rangers get to and from vessels? The process of disembarking or embarking a vessel at a pilot station is hazardous, and cannot be interfered with in any way that could cause injury or the risk of an accident. SEAPA must contract with pilot boats and tugs to get marine pilots to and from a pilot station, and cannot assume liability for transporting others. We anticipate that ocean rangers will use their own method of transportation to each vessel they board, or arrange to get on or off vessels while the vessel is in port. Is that correct?

Where will ocean rangers stay while onboard a vessel? Adequate rest in quiet quarters is essential to the integrity of a marine pilot's duties while onboard a vessel. Marine pilots must be assured a quiet cabin onboard a vessel

Deputy Commissioner Al Clough
April 3, 2007
Page 3

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APR 3 2007
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OCCUPATIONAL LICENSING
DENVER

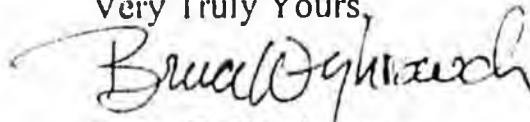
for their rest and sleep. No accommodation onboard a vessel reserved to a marine pilot should be compromised by the ocean ranger program. In addition, training future marine pilots is a critical aspect of SEAPA's activities, and is required by law. SEAPA must have assurances that its marine pilot trainees will have adequate accommodations onboard vessels too, and that such accommodations will not be interfered with by the ocean ranger program. We assume that the ocean rangers will be purchasing a berth on a vessel if they plan to travel on a vessel, and that that expense will be borne by the ocean ranger program. Is that correct?

Where will ocean rangers work while onboard a vessel? SEAPA has not been advised where an ocean ranger will operate while onboard a vessel. The marine pilot's critically important functions take place on the bridge, and must not be interfered with in any way by the ocean ranger program. There would be problems associated with interference of bridge personnel by the presence or activities of an ocean ranger on the bridge. The safety of the ship, crew, cargo, and public must come first, and that must be the first consideration of any program administered by DEC. Is DEC taking this approach?

Time is running short. We look forward to working with you and DEC in a constructive manner to address these and other questions and concerns, and to insure the safe, logistically sound implementation of the DEC ocean ranger program, while taking into account existing activities and legally-mandated duties of marine pilots and marine pilot trainees.

Thank you and please call if you have any questions about this matter.

Very Truly Yours,



Bruce B. Weyhrauch

C: Captain Larry Vose, President, Southeast Alaska Pilots' Association
DEC Commissioner Larry Hartig
Renda Heimburger, Marine Pilot Coordinator
Mr. Paul Kirchner, General Counsel, American Pilots Association
Rear Adm. Arthur E. (Gene) Brooks, Commander, 17th Coast Guard District, Alaska

TO: House Finance Committee Members
FR: Chip Thoma, Box 21884, Juneau
RE: CS HB 164, Ocean Rangers
Date: April 24, 2007

Thank you for the opportunity to comment on this bill that would significantly repeal the Ocean Ranger section of the 2006 Cruise Initiative.

CS HB 164 would **repeal** the initiative language that became law last December. The present cruise law requires that a Ranger be on board all large cruise ships that enter state waters. **This CS repeals that presence** to a random system of observations and monitoring, beginning and ending in Alaska cruise ports. The CS language does solve some logistical and jurisdictional issues, and it places Rangers on board ships between Alaska ports, as the law fully intended. However, the logistics and random boarding language, to be authorized by the DEC Commissioner, can be **accomplished by regulation**, not by repeal of the 2006 cruise law. This statutory change in the CS is unnecessary.

The CS also **repeals** the job description of an Ocean Ranger from a "licensed marine engineer" to a "Level III wastewater treatment operator." The **major** reason given for this change is that licensed marine engineers presently employed by the Alaska Marine Highway System (AMHS) **may quit their full-time jobs** for seasonal, 5-month work as Rangers aboard cruise ships. There is absolutely no basis for that assertion. In fact,

- There has been **not one inquiry by any Marine Hwy engineer** about the Ocean Ranger program to their local union or business agent.
- The AMHS marine engineers I spoke to assured me they would never quit their full-time jobs to become Rangers. Such a situation defies logic.

I called Juneau public works, who informed me that the CBJ has seven Level III operators, all employed full-time, and they know of no retired personnel. Also, the human resources section of the Anchorage Water & Wastewater Utility (AWWU) told me they employ 21 Level III operators, full-time. Golden Heart Utilities of Fairbanks reports they have 6 Level III operators employed. Additionally, the DEC master list shows a state total of 83 active Level III operators, whose certificates are current, and 23 expired certificates, most due to retirement. I contend that Level III operators **do not exist as a labor pool in Alaska** for Ocean Rangers. This present CS language is a **poison pill** that makes the Ranger program **inoperative** for 2007. This repeal is without merit.

Finally, the cruise ships **intend to charge Rangers for room and board**, at a cost of \$2100 week, \$300/day. With 25 Rangers working 25 weeks, that cost would be \$1.3M for May-September. The state or the contractor could rent apartments adjacent to cruise ports for the summer, saving at least \$1.25M.

LETTERS ABOUT OCEAN RANGERS: Both of these letters appeared in the Anchorage Daily News and Juneau Empire.

Ocean rangers should be onboard cruise ships 100 percent of time

I have been following the ocean ranger argument with interest. When I voted for the initiative I thought it called for 100 percent at-sea coverage of cruise ships, and that the head tax on cruise ship passengers would cover the costs of the program. Now the Legislature wants to tweak the initiative so coverage at best would be intermittent at sea. Meanwhile, the state would have to pay for the ocean rangers' staterooms.

The fishing industry in Alaska has been required to carry at-sea observers for years at the individual vessel's expense. The fishing vessels pay (through third-party contractors) all expenses for the observers including salaries, insurance and travel. In addition, the fishing vessels provide meals and lodging while the observers are onboard. Why should the cruise industry get a free ride? Why should the state of Alaska have to pay the cruise line to berth an ocean ranger?

The cruise industry utilizes the resources of Alaska just as the fishing industry does and should be bound by the same principles and standards. Ocean rangers should be onboard 100 percent of the time and their costs should be borne by the cruise ship industry.

---- Jim H. Branson, executive director (retired)

North Pacific Fishery Management Council

Need for cruise ship observers imperative to ensure compliance

While negotiating with the cruise industry over delinquent head tax, the people of Yakutat discovered that cruise ships were discharging sewage from the 480,000 passengers and crew that visit each year into our bay. Our beaches are where our residents gather clams, kelp, muscles and a multitude of other subsistence foods, so you can imagine our concern. In addition to subsistence, Yakutat Bay is the home of our gillnet and troll fishery. After extensive negotiations, the industry reluctantly agreed to stop dumping, but there is no way to determine if they're living up to our agreement.

During the negotiations, we were assured we would be notified immediately of any environmental mishaps. A week after our 2003 meeting, a cruise ship struck a reef at the head of our bay, putting a 120-foot crease and a 10-foot hole in its hull, dumping whatever was in its ballast tanks. Yakutat was not notified, like promised a week earlier. The ship went aground at the head of our bay and continued on to Seward, a distance of over 300 miles, with a 10-foot hole in its hull.

An observer would ensure that ships are not dumping illegally, and environmental mishaps are reported.

---- Dave Stone, mayor

City and Borough of Yakutat

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM

April 25, 2007

SUBJECT: Ocean rangers program (CSHB 164(JUD);
Work Order No. 25-LS0585T)

TO: Representative Les Gara
Attn: Darcy Dugan

FROM: Brian J. Kane *BJK*
Legislative Counsel

You have requested a side-by-side comparison of what ocean rangers would do under the original AS 46.03.476 and what the wastewater treatment operators are supposed to do under CSHB 164(JUD).

As an initial note, while the title of the section refers to "Ocean Rangers," the text of AS 46.03.476 refers to the person required to board the vessel as a "marine engineer." There are three differences between the duties assigned to a marine engineer in the current AS 46.03.476 and the wastewater treatment operator's duties under CSHB 164(JUD).

(1) AS 46.03.476(a) states that part of the marine engineer's duties is to "insure that passengers, crew, and residents at ports are protected from improper sanitation, health, and safety practices." This duty has not been included in CSHB 164(JUD), but the other duties listed in AS 46.03.476(a) have been retained as duties of the wastewater treatment operator.

(2) AS 46.03.476(b) states that the marine engineer is to "monitor, observe, and record data and information related to the engineering, sanitation, and health related operations of the vessel. . . ." These observation duties of the marine engineer are not included in CSHB 164(JUD). The rest of the observation duties listed in AS 46.03.476(b) have been retained in the bill draft as duties of the wastewater treatment operator.

(3) Sec. 2(c) of CSHB 164(JUD) adds a duty for the wastewater treatment operator that is not found in the current AS 46.03.476. Sec. 2(c) of the bill states that the wastewater treatment operator "shall comply with the vessel's approved United States Coast Guard security plan" while aboard the vessel. This duty is not listed in the current AS 46.03.476.

If I may be of further assistance, please advise.

BJK:ljw
07:232 ljw

4/16/07

RE: Ocean Rangers & Cruise Ship Initiative Law

To All Alaska Legislators:

The following information substantiates the need for the Ocean Ranger program. This table is a partial list of discharges, violations and convictions by the cruise industry in recent years. The list is not exhaustive, because the cruise industry is not under independent observation. One can assume that there are many more incidents that are never reported. I trust this helps explain why 81,000 Alaskans voted to establish the Ocean Ranger program, based on the successful fisheries observer program that has served Alaska well for over thirty years. Thank you for consideration of these facts in your deliberations.

Gershon Cohen Ph.D., Co-sponsor of the Alaska Cruise Ship Ballot Initiative

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Significant Pollution and Environmental Violations and Fines, 1998 - 2007
(The information in this table was copied from the website www.cruisejunkie.com, and includes incidents reported by the media and in public documents)

Year	Ship, Cruise Line Explanation of Offense(s)	Fine	Nature of Offense
January 2007	<i>Dawn Princess</i> , Princess Cruises The cruise line agreed to a plea bargain under which it pays a fine of \$200,000 and restitution of \$550,000 after criminal charges were filed. The company was charged with failing to cooperate at a slow, safe speed while near humpback whales and in 2001 hit and killed a humpback.	\$750,000	Whale strike
November 2006	<i>Mercury</i> , Celebrity Cruises The Seattle Times reports today that Celebrity Cruises faces a fine for the Mercury dumping 500,000 gallons of untreated wastewater into Puget Sound. Though it initially claimed it hadn't dumped, shipboard documents contradicted the company's claim. The dumping happened 10 times over nine days in September and October 2005.	\$100,000	Untreated Wastewater
March 2006	<i>Texas Treasure</i> , Corpus Christi Day Cruise The ship's operator pled guilty to obstructing a US Coast Guard investigation into whether the ship had illegally discharged waste oil and deliberately bypassed its pollution prevention equipment. The incidents occurred in October 2004. Sentencing is scheduled for April 25, 2006; the proposed plea agreement includes a \$300,000 fine and the institution of an Environmental Compliance Plan.	\$300,000	Oil discharges

March 2005	Disclosures of violation of MOU between the State of Hawai'i and the cruise industry: On March 12th the Honolulu Advertiser reported that Norwegian Cruise Line America's <i>Pride of Aloha</i> discharged about 70 tons of treated effluent into Honolulu Harbor last month, violating a voluntary agreement with the state. The state's agreement with the cruise ships allows such discharges at least a mile out from shore while traveling at least 6 knots. On March 16th, West Hawaii Today reported it had received numerous calls that Holland America's <i>Statendam</i> discharged what appeared to be "brown water" into Kailua Bay for about 15 minutes to 20 minutes before it moved further out to sea. Several of the callers reported the discharge left a "brown mark" on the vessel's side.	None	Violation of MOU
January 2005	The Washington State Department of Ecology issued a press release indicating 3 violations of its MOU with the cruise industry. One violation occurred on May 13 in Port Angeles, when Holland America Line's <i>Zaandam</i> discharged treated effluent through an advanced wastewater treatment system that Ecology had not approved. The <i>Zaandam</i> made only one port call in Washington in 2004. Princess Cruises' <i>Sapphire Princess</i> discharged treated effluent throughout the 2004 season through an advanced treatment system that had not received Ecology approval. The ship also released untreated waste water from its galleys and laundry during one voyage between Seattle and Victoria in June. Ecology is investigating the June discharge.	None	Violation of MOU
December 2004	<i>SunCruz</i> , JAB America JAB America, Inc., pled guilty to charges that one (1) of its vessels, the <i>SunCruz VI</i> , dumped garbage off its deck into waters of the United States while departing from Port Everglades on April 24, 2004. US Coast Guard surveillance equipment observed and recorded several filled plastic garbage bags being dumped overboard from the vessel into Government Cut near Fort Lauderdale.	Unknown	Plastic and garbage
November 2004	Holland America Line (Carnival Corporation) In August 2004, Holland America Line was notified by the National Park Service that the <i>Volendam</i> and <i>Statendam</i> may have violated opacity standards while operating in Glacier Bay. On November 10, 2004, NPS notified Holland America Line in separate letters that a Violation of Record would be entered in the permanent park files for each ship.	None	Air opacity
October 13, 2004	<i>Pride of Aloha</i> , NCL America Discharged approximately 300 gallons of effluent into Hilo Harbor	None	Violation of MOU
June 2004	Holland America Line (Carnival Corporation) Former Vice President, Richard K. Softye, was fined \$10,000 after pleading guilty to falsely certifying that Holland America Line was performing environmental audits when it wasn't. He was also ordered to perform 450 hours of community service while on probation for	\$10,000	Falsifying record

	three years.		
March 2004	<p>Carnival Corporation Carnival Corporation reported in its 10Q filing with the Securities and Exchange Commission that on March 5, 2004, Holland America Line notified the United States and Netherlands governmental authorities that one of its chief engineers had admitted to improperly processing bilge water on the Noordam. A subsequent internal investigation determined that the improper operation may have begun in January 2004 and may have continued sporadically through March 4, 2004. The matter had also been raised by Coast Guard officials in San Juan, Puerto Rico to their counterparts in Tampa following a report to them of the incidents. It isn't clear whether Holland America's self-report predates the report made by the Coast Guard. Holland America Line and three shipboard engineers have received grand jury subpoenas from the Office of the U.S. Attorney in Tampa, FL (where the ship was homeported). (See CCL 10Q filed with the SEC on April 8, 2004)</p>		Bilge water
December 2003	The Honolulu Advertiser reported there had been at least 14 violations of Hawaii's MOU with the cruise industry in the first year. See Hawaii MOU.html	None	Violation of MOU
October 2003	<p>Carnival Cruise Line Carnival Cruise Line paid \$200,000 administrative fee to settle with the California State Lands Commission over the cruise line's noncompliance with state ballast water discharge law.</p>	\$200,000	Ballast water
August 2003	<p>Carnival Corporation In a petition filed with the U.S. District Court in Miami late last month, Carnival's probation officer in Fort Lauderdale, Fla., accused the company of violating terms of its probation by filing 12 false audit reports and asked that Carnival be required to pay another community-service fine. Carnival officials said they fired three environmental-compliance employees responsible for the reports. But the company did not admit to violating its probation.</p>		Falsifying records
August 2003	At the new cruise ship terminal at the Port of Seattle, cruise ships fail to abide by requirement to use low-sulfur diesel while docked – a violation of the state environmental mandates for the project.		Air pollution
May 2003	<p>Norwegian Sun, Norwegian Cruise Line The ship is cited by the State of Washington for an illegal discharge of 16,000 gallons (40 tons) of raw sewage into the Strait of Juan de Fuca (just off Whidbey Island, a popular vacation resort). The strait is known to be habitat for Orca whales.</p>		Sewage discharge
February 2003	<p>Norwegian Wind, Norwegian Cruise Line A couple aboard the ship reported observing whole beer bottles, whole wine bottles, beer and pop cans, corks, plastic plates, plastic utensils, plastic cups and organic material all being tossed into the ocean from the back of the ship. The ship was between Hawaii</p>	None	Disposal of plastics and other garbage

	and Fanning Island. The company insists it did nothing illegal. The incident is being investigated by the US Coast Guard and EPA.		
January 2003	<i>Ecstasy</i> , Carnival Cruise Line The company reported an accidental discharge of 60 gallons of grey water while anchored at Avalon Bay (Catalina Island, California), approximately one-half mile from land.	None	Graywater discharge
October 2002	<i>Crystal Harmony</i> , <i>Crystal Cruises</i> Reported in March 2003 that contrary to a written promise to not discharge in the Monterey Bay Marine Sanctuary, the ship discharged 36,000 gallons of treated bilge, treated sewage, and grey water. The company stated that it didn't report the discharge because it wasn't illegal -- it only represented that they didn't keep their promise.	None -- but ship banned for life from Monterey, CA; Crystal banned for 15 years	Sewage discharge
Summer 2002	Holland America Line 1 ship cited for violations of air opacity regulations	\$27,500	Air pollution
August 2002	<i>Ryndam</i> , Holland America Line Approximately 40,000 gallons (250 according to HAL) of sewage sludge discharged into Juneau harbor. The incident was reported by harbormaster staff. The brown, thick substance is being tested by Alaska's DEC for fecal coliform, pH, and biochemical demand levels.	\$2 million in December 2004	Sewage discharge
July 2002 Plea Agreement	<i>Norway</i> and "at least one other ship", Norwegian Cruise Line Norwegian Cruise Line pled guilty to on numerous occasions from 1997 through April 2000 that it routinely circumvented the oily water separator, allowing oily bilge to be discharged directly into the sea. The company was given a lenient sentence because it reported its practices to the Department of Justice.	\$1.5 million (\$1 million fine and \$500,000 in court-ordered community service to fund environmental projects in South Florida)	Oil discharges
April 2002 Plea Agreement	<i>Ecstasy</i> , <i>Fantasy</i> , <i>Imagination</i> , <i>Paradise</i> , <i>Sensation</i> , <i>Tropicale</i> , Carnival Corporation Carnival Corporation pled guilty to numerous occasions from 1996 through 2001 that it discharged oily waste into the sea from their bilges by improperly using pollution prevention equipment. In addition, the company falsified Oil Record Books in order to conceal its practices. The plea agreement only focuses on Carnival Cruise Line (and dismisses any future charges against other Carnival Corp. subsidiaries), however it only applies to the Southern District of Florida. Other federal jurisdictions may pursue independent investigation and prosecution.	\$18 million (\$9 million fine and \$9 million in court-ordered community service to fund environmental projects in South Florida)	Oil discharges
December 2001	<i>Zenith</i> , Celebrity Cruises A compliance audit under the plea agreement between Royal Caribbean and the US Department of Justice found that a 55-gallon drum of hazardous waste generated by the print shop was landed at Tampa as non-hazardous waste.	None	Improper disposal of hazardous waste
October 2001	<i>Spirit of Oceanus</i> , Cruise West Discharged 24,000 gallons of graywater in the port of San Diego		Graywater discharge

Summer 2001	Carnival Cruise Line, Celebrity Cruises, Crystal Cruises, Holland America Line, Norwegian Cruise Line, Princess Cruises 11 ships (six companies) cited for violations of air opacity regulations	Carnival Cruise Line (\$27,500 – suspended) Celebrity Cruises (\$55,000, 1/2 suspended) Crystal Cruises (\$55,000 – 1/2 suspended) Holland America (\$27,500 – suspended) Norwegian Cruise Line (\$27,500) Princess Cruises (\$55,000 – suspended) Royal Caribbean Int'l (\$27,5000 – suspended)	Air pollution
June 2001	<i>Rhapsody of the Seas</i> , Royal Caribbean International Discharged 200 gallons of graywater into Juneau harbor.	Unknown (up to \$25,000 is allowed)	Graywater discharge
June 2001	<i>Mercury</i> , Celebrity Cruises Discharged treated wastewater at Juneau without required permits. Tests of the wastewater indicated that it was more acidic than permitted for discharging within a mile of shore.	Unknown (up to \$25,000 is allowed)	Wastewater discharge
May 2001	<i>Westerdam</i> , Holland America Line Discharged gray wastewater while docked in Juneau -- estimated by Holland America Line at 30 to 100 gallons (the pump's output is 200 gallons per minute, so the estimate appears low).	Unknown (up to \$25,000 is allowed)	Graywater discharge
May 2001	<i>Norwegian Sky</i> , Norwegian Cruise Line Discharged black water (sewage) for 20 to 30 minutes (meaning a waste stream of up to three-quarters of a mile) while the vessel was en route from Juneau to Ketchikan and within 3 miles of the Alexander Archipelago. Fecal coliform counts were 3500 times the allowable federal standard and total suspended solids 180 times the standard.	Unknown (up to \$25,000 is allowed)	Sewage discharge
Jan - May 2001	<i>Holiday</i> , Carnival Cruise Line Discharges 768,000 gallons of greywater (nearly 40,000 gallons per week for 20 weeks) into the port of San Pedro, California	None	Graywater discharge
Summer 2000	Carnival Cruise Line, Celebrity Cruises, Crystal Cruises, Holland America Line, Norwegian Cruise Line, Princess Cruises, World Explorer Cruises 15 ships (7 companies) cited for violating Alaska's state smoke-opacity standards when they were docked in Juneau between mid-July and mid-August	Carnival Cruise Line (\$27,500) Celebrity Cruises (\$55,000) Crystal Cruises (\$55,000) Holland America (\$165,000 – \$55,000 suspended) Norwegian Cruise Line (\$27,500) Princess Cruises (\$55,000) World Explorer Cruises (\$27,500 -- \$10,000 suspended)	Air pollution
January 2000 Plea Agreement	Royal Caribbean Cruises Ltd. State of Alaska charged RCCL in August 1999 for seven counts of violating state laws governing oil and hazardous waste disposal. In January 2000, RCCL pled guilty to dumping toxic chemicals (including dry-cleaning fluid) and oil-contaminated water into the state's waters.	\$3.5 million	Discharge of toxic chemicals, oil discharge
Summer 1999	Carnival Cruise Line, Celebrity Cruises, Holland America Line, Norwegian Cruise Line, Princess Cruises, World Explorer Cruises 13 ships (six companies) charged by the Environmental Protection Agency for air pollution violations in the waters of Juneau, Seward and Glacier Bay	Carnival Cruise Line (\$55,000) Celebrity Cruises Holland America (\$55,000) Norwegian Cruise Line (\$55,000) Princess Cruises (\$110,000) World Explorer Cruises (unknown)	Air pollution

July 1999 Plea Agreement	<p><i>Grandeur of the Seas, Majesty of the Seas, Monarch of the Seas, Nordic Empress, Nordic Prince, Song of America, Song of Norway, Sovereign of the Seas, Sun Viking, Royal Caribbean Cruises Ltd.</i></p> <p>The company pled guilty in six jurisdictions to charges of fleet wide practices of discharging oil-contaminated waste, regularly and routinely discharging without a permit wastewater contaminated by pollutants through its ships' gray water systems, and making false material statements to the Coast Guard. These practices occurred fleet-wide into 1995 and occurred on one ship as late as 1998. Among the violations supporting this guilty plea were repeated oil discharges from the Nordic Prince into the waters of Alaska's Inside Passage during 1994. Jurisdictions: Miami (\$3 million), New York City (\$3 million), Los Angeles (\$3 million), Anchorage (\$6.5 million), Puerto Rico (\$1 million), US Virgin Islands (\$1.5 million)</p>	\$18 million ((\$3.5 million designated for the National Fish and Wildlife Foundation and \$2.5 million to the National Park Foundation)	Oil discharge, discharge of hazardous waste, falsifying records
September 1998	<p><i>Island Adventure, Meridian Ship Managers</i></p> <p>200 gallons of fuel oil spilled into the Intracoastal Waterway, Port Everglades, FL</p>	\$5000	Oil spill
June 1998 Plea Agreement	<p><i>Sovereign of the Seas, Monarch of the Seas, Song of America, Nordic Prince, Nordic Empress, Royal Caribbean Cruises Ltd</i></p> <p>After <i>Sovereign of the Seas</i> was found discharging oily bilge waste approximately 8-12 miles from San Juan Harbor, PR on October 25, 1994, an investigation found the ship's engineers routinely discharged oily waste overboard instead of processing it through the ship's oily water separator. In addition, employees on all five ships falsified oil record books and made false statements to the Coast Guard to conceal illegal discharge practices.</p>	\$8 million ((\$1 million designated to the National Fish and Wildlife Foundation)	Oil discharge, falsifying records
June 1998 Plea Agreement	<p><i>Nordic Empress, Royal Caribbean Cruise Ltd</i></p> <p>Ship observed and filmed by Coast Guard aircraft as it discharged oil while en route to Miami, FL. The company pled guilty to the willful presentation of a false oil record book for the ship during a US Coast Guard Investigation. In addition, investigations revealed that the ship had been fitted with a bypass pipe allowing employees to discharge bilge waste from the ship without first processing it through an oily water separator</p>	\$1 million	Oil discharge, falsifying records
June 1998 Plea Agreement	<p><i>Rotterdam, Holland America Line</i></p> <p>In 1994, discharged waste 13 times in 10 days into Alaskan waters. The ship had fixed, permanent piping that allowed oily waste to be discharged directly overboard.</p>	\$2 million ((\$1 million fine, \$1 million restitution)	Oil discharge
March 1998	<p><i>Statendam, Holland America Line</i></p> <p>210 gallons of oil spilled into Los Angeles Main Channel, CA</p>	\$800 fine \$50,000 restitution	Oil discharge

Alaska State Legislature



HOUSE TRANSPORTATION COMMITTEE

HB 164 – Cruise Ship Location Reports and Ocean Ranger Access to Vessels

This legislation narrows the broad language of Ballot Measure 2: "The Cruise Ship Initiative". This bill will allow the Department of Environmental Conservation (DEC) to implement the initiative in a reasonable way. A way that reflects the low level of risk large cruise ships present to Alaskans and the waters and marine resources of the state. In no way does HB 164 ease or lessen the federal and state environmental laws that have regulated cruise ship discharges since 2001.

This bill:

- Clarifies that hourly reports of vessel locations are to be submitted to the United States Coast Guard
- Clarifies that the requirement to be an "Ocean Ranger" is equivalent to a level III wastewater treatment operator certified by the department under the authority of AS 46.30.080
- Clarifies the times that an "Ocean Ranger" is allowed on a vessel to "random times determined by the commissioner [of DEC] while the vessel is in an Alaska port or operating in Alaska waters between two Alaska ports"
- Clarifies that an "Ocean Ranger" must comply with the vessel's approved United States Coast Guard security plan while aboard the vessel
- Clarifies that while onboard a vessel, the Ocean Ranger's job duties include monitoring, observing, and recording data and information related to the registration, record-keeping, and discharge functions already required by federal and state law

Below are a number of facts that support making these clarifications or changes to the initiative provisions:

- In 2001, only 2 of 24 large cruise ships (8%) entering Alaska waters had installed advanced wastewater treatment systems. In 2006, 24 of 29 large cruise ships (82%) entering Alaska waters had installed wastewater treatment systems
- Of all the large cruise ships operating in Alaska waters, only those with properly maintained and operated advanced wastewater treatment systems were approved under federal and state laws to discharge wastewater in Alaska
- In 2004, DEC issued a report titled: "Assessment of Cruise Ship and Ferry Wastewater Impacts in Alaska" that found wastewater effluent from large cruise ships with advanced wastewater treatment systems does not pose a risk to aquatic organisms.
- The same DEC study also determined that "No human risk is posed by the low concentration of tested pollutants found in wastewater samples"
- The same DEC study found that wastewater samples "indicate that hazardous materials are not being discharged through these (large cruise ship) wastewater systems
- Since 2001, federal and state laws have been implemented regulating cruise ship discharges and already impose requirements such as a Quality Assurance / Quality Control Plan and a Vessel Specific Sampling Plan to ensure accurate monitoring, sampling, recording, and analysis of cruise ship discharges.

This bill should also significantly reduce or eliminate the need for the state to pay an estimated \$2.0 million dollars in state general funds to implement the Ocean Ranger program.

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
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Juneau, Alaska 99801-1182
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MEMORANDUM

April 2, 2007

SUBJECT: Ocean Ranger Jurisdiction (Work Order No. 25-LS0672)

TO: Representative Kyle Johansen
Attn: Randall Ruaro

FROM: Alpheus Bullard *TLAB*
Legislative Counsel

In response to your request: The state of Alaska does not have jurisdiction over Canadian waters. In the absence of an agreement between the United States and Canadian governments Alaska lacks the authority to mandate that the owner or operator of a large cruise ship have an "Ocean Ranger" aboard while the vessel is in Canadian waters.

TLAB:med
07-215.med

The Legislature's Power To Control Appropriations Is An Important "Check And Balance" On The Initiative Process

Authority

Article IX, sec. 13:

"Expenditures. No money shall be withdrawn from the treasury except in accordance with appropriations made by law."

February 28, 1977, AG Opinion

"This provision [Article IX, sec. 13] gives the legislature total and absolute power over the expenditure of state funds."

Municipality of Anchorage v. Frohne 568 P.2d 3, 5 fn. 5 (Alaska 1977)

"Statutory language implementing [Article IX, sec. 13] establishes a budgetary system in which all appropriations are made by legislative act. AS 37.30.030, .080, .100"

Article XI, sec. 7:

"Restrictions. The initiative shall not be used to ... make ... appropriations

Section 8, (Cruise Ship Initiative) Ballot Measure #2

"[t]he Ocean Ranger program ... shall be subject to legislative appropriation"

**Statement of Facts from Testimony and Documents
Presented to the House Transportation Committee, EPA Records,
and U.S. Public Health Service Records
Showing the Risk to Alaska From Wastewater Pollution or
Health and Sanitation Issues by Today's Fleet of
Large Cruise Ships is Very Low**

FACT #1: In 2006, 83% Of The Cruise Ship Fleet Operated In Alaska Waters With "State Of The Science" Advanced Wastewater Treatment Systems.

Lynn Kent, Director of the Division of Water for the State DEC, Captain Roussel, and Captain Phillips testified and provided a spreadsheet showing that prior to 2002, (the old fleet) there were only 2 cruise ships in Alaska out of 24 total vessels that operated with advanced wastewater treatment system. (AWTS) In 2006, today's fleet, 24 out of 29 (82%) of large cruise ships have advanced wastewater treatment systems (AWTS) and those numbers have been increasing every year.

This represents an 1100 percent increase in vessels operating with AWTS in Alaska waters in just about the amount of time it took for the 2003 initiative to make it to the ballot in 2006. (The 4 vessels without AWTS are holding wastewater until they are outside state waters)

FACT #2: Cruise Ships With AWTS Produce Effluent So Clean, They Are Certified To Discharge Continuously While Moving Or Tied Up In Port By The United States Coast Guard.

Captain Roussel and Captain Phillips testified that AWTS represent the state of the art in wastewater treatment technology. The technology was described as "a system of bioreactors and filters that basically treat wastewater through enhanced aerobic digestion and low pressure membrane filtration."

Captain Roussel and Captain Phillips testified that AWTS not only allow the ships to meet Alaska's wastewater discharge requirements (AS 46.03.460 – AS 46.03.490) they allow them to beat them. With discharge levels in some areas far below the legal limits.

Lt. Dan Buschbaum, the Assistant Chief of Inspections for the USCG here in Juneau, Alaska has stated: "Some of the wastewater discharged by cruise ships traveling in Alaska's waters [those with AWTS] is actually clean enough to drink" and "the advanced wastewater treatment systems employed with this option are discharging some of the cleanest wastewater ever seen". *Winter 2005-2006 edition of Coast Guard Proceedings*, "Cleaning up Wastewater".

Ms. Kent from DEC testified there has not been a Notice of Violation for a wastewater violation issued to a large cruise ship in the last 2 years.

(Note: The USCG has jurisdiction over AWTS and has issued regulations describing how AWTS must be designed, constructed, installed, operated, and maintained, as well as setting effluent levels that must be met before a ship with an AWTS will be certified to discharge continuously. 33 *CFR Part 159.*)

FACT #3: The State DEC Tested Effluents From Ships With Advanced Wastewater Systems And Found They Do Not Present A Hazard To Humans Or The Environment.

On February 9, 2004, the State Department of Environmental Conservation issued a report after collecting and studying several years of data from samples of cruise ship wastewater discharge and concluded:

“Since the passage of the Alaska cruise ship laws, large cruise ships [have] installed advanced wastewater treatment systems that meet the stringent U.S. Coast Guard requirements for continuous discharge. The quality of the wastewater on large ships has therefore improved dramatically.” Page 55

“WET testing results and a comparison of sample results with Alaska Water Quality Standards indicate that the effluent from these advanced systems is not expected to cause toxicity to the marine environment. No human health risk is posed by the low concentration of tested pollutants found in wastewater samples. The wastewater samples indicate that hazardous materials are not being discharged through these wastewater treatment systems.” Page 35.

“Test results indicate that wastewater effluent from large ships with advanced wastewater treatment systems does not pose a risk to aquatic organisms, even during stationary discharges. ... None of the pollutants

mentioned above are present in concentrations [that would] cause risks to human health.” Page 55-56.

FACT #4: The Federal EPA Has Tested Effluent From Ships With AWTS And Found The Systems Are Very Effective In Removing Pollutants.

On December 12, 2000, Congress passed HR 4577 which contained Title XIV. Title XIV set discharge standards for sewage and graywater from large cruise ships in Alaska. The law also authorized EPA to develop additional standards if necessary. EPA conducted sampling of wastewater discharge from 4 vessels in 2004 and made finding like these which are from a test of the wastewater from the cruise ship *Veendam*:

“The Zenon treatment system successfully removed almost all pathogen indicators (greater than 99%) and most classical pollutants, metals, and organics. Two pathogen indicators, fecal coliform and *E. coli* were not detected in any of the 15 effluent treatment samples, ... The treatment system removed almost all BOD [biochemical oxygen demand] (greater than 99%), COD [chemical oxygen demand] (97%), total organic carbon (TOC) (93%), settleable residue (greater than 99%) and TSS [total settleable solids] (greater than 99%) ...” *Sampling Episode Report, Holland America Veendam, Executive Summary, March 2006, p. vii.*

FACT #5: Monitoring Of Pollution Discharges From Vessels Is Already Occurring By The USCG, DEC, And Independent Contractors.

Title XIV also required the USCG to expand its current vessel inspection program to include all discharge control equipment on cruise ships, required sampling and testing of sewage and graywater discharges, authorized unannounced inspections and logbooks recording all sewage and graywater discharges. The USCG's system has been put into place in cooperation with DEC and the industry.

Mr. Wetzel from Admiralty Environmental, the independent contractor now conducting sampling and testing on the cruise ships described this process as including unannounced sampling and regularly scheduled sampling by his teams, most of which occur in port.

Mr. Wetzel and Ms. Kent from DEC testified how under the current program, a DEC employee who is actually trained in science and proper monitoring and sample taking, periodically boards a vessel with the teams from Admiralty Environmental, watches them perform their work, evaluates that work, (which includes a list of 25 specific criteria) and reports the results in writing to DEC and the Coast Guard. Admiralty Environmental passed all its DEC and University of Alaska audits in 2006.

Mr. Wetzel also testified that in addition to his two trained employees taking samples, and the DEC employee periodically auditing their work, a scientist with a Ph.D., from the University of Alaska also periodically boards the ships to observe and report on the sample procedures and also reviews the testing techniques of the lab receiving and analyzing the samples.

Mr. Wetzel and Ms. Kent also reviewed for the Transportation committee the sampling and testing procedures in the Quality Assurance / Quality Control Plan which is reviewed and updated annually by the Coast Guard and DEC. This plan is designed by the regulating agencies to ensure proper sample taking, proper testing, proper recording of results, and proper reporting of results to the regulating agencies.

Mr. Wetzel and Ms. Kent also discussed how in addition to complying with the QA / QCP each vessel is required to submit a vessel specific sampling plan (VSSP). A VSSP describes the specific AWTs aboard each vessel (Zenon Bioreactor System, etc.) and how contingencies will be handled in the event of a malfunction.

FACT #6: The United States Public Health Service Is Already Conducting Health And Sanitation Inspections On Cruise Ships And The Ships Are Passing The Inspections.

Federal statutes give the United States Public Health Service jurisdiction over health and safety on cruise ships. Those federal statutes are

cited on pages 152 to 162 of the Vessel Sanitation Program Manual published by the Centers for Disease Control.

The 27 large cruise ships operated by major lines in Alaska in 2006 were inspected a total of 403 times by trained federal health, safety, and sanitation inspectors. These ships passed 99% of those inspections. (All but 5 inspections). None of the 27 vessels had failed a health and safety inspection in the last 5 years, and that single failed inspection was the last one for these vessels in over a decade.

Table updated on 5/22/06 by DEC

2006 Large¹ Commercial Passenger Vessels Discharge Status and Wastewater Treatment

Vessel Operator	Vessel Name	Passenger Capacity (actual)	Crew Capacity	Total Persons on Board ²	Blackwater (BW) Treatment System Manufacturer	Graywater (GW) Treatment System Manufacturer	Discharging in Alaska ³ & Subject to sampling program		Type of Treatment System
							BW	GW	
Carnival Cruise Lines	Carnival Spirit	2125	934	3059	Tinnit/Rochem	Rochem UF	No	Yes	Rochem is a reverse osmosis ultrafiltration system.
Celebrity Cruises	Infinity	2036	997	3035	Zenon	Mixed with BW	Yes	Yes	Zenon is a biological reactor and ultrafiltration system.
Celebrity Cruises	Mercury	1870	909	2779	Biopur/Rochem	Mixed with BW	Yes	Yes	Rochem is a reverse osmosis ultrafiltration system.
Celebrity Cruises	Summit	2449	960	3409	Hamann/Azarus	None	No	No	Hamann/Azarus is dilution and filtration system.
Holland America	Oosterdam	1824	800	2624	Rochem	Mixed with BW	Yes	Yes	Rochem is a reverse osmosis ultrafiltration system.
Holland America	Ryndam	1266	588	1854	Zenon	Mixed with BW	Yes	Yes	Zenon is a biological reactor and ultrafiltration system.
Holland America	Statendam	1266	588	1854	Zenon	Mixed with BW	Yes	Yes	Zenon is a biological reactor and ultrafiltration system.
Holland America	Vaandam	1266	588	1854	Zenon	Mixed with BW	Yes	Yes	Zenon is a biological reactor and ultrafiltration system.
Holland America	Voendam	1440	620	2060	Zenon	Mixed with BW	Yes	Yes	Zenon is a biological reactor and ultrafiltration system.
Holland America	Westerdam	1648	800	2648	Rochem Bio-filtration	Rochem LPRO	Yes	Yes	Rochem is a reverse osmosis ultrafiltration system.
Holland America	Zaandam	1460	620	2080	Zenon	Mixed with BW	Yes	Yes	Zenon is a biological reactor and ultrafiltration system.
Holland America	Zuidendam	1848	800	2648	Rochem Bio-filtration	Rochem LPRO	Yes	Yes	Rochem is a reverse osmosis ultrafiltration system.
Kyma Ship Management	Topaz	999	Unknown	999 + crew	Unknown	Unknown	No	No	
Mitsui O.S.K. Passenger Line	Nippon Maru	500-999	Unknown	Unknown	Unknown	Orca II	No	No	
Norwegian Cruise Lines	Norwegian Star	2240	1100	3340	Scanship	Mixed with BW	Yes	Yes	Scanship is a biological reactor and ultrafiltration system.
Norwegian Cruise Lines	Norwegian Sun	2002	950	2952	Scanship	Mixed with BW	Yes	Yes	Scanship is a biological reactor and ultrafiltration system.
Norwegian Cruise Lines	Norwegian Wind	2100	700	2800	Scanship	Mixed with BW	Yes	Yes	Scanship is a biological reactor and ultrafiltration system.
Princess Cruise Line	Coral Princess	1950	850	2800	Hamworthy Bioreactor	Accommodations mixed with BW	Yes	Accommodations Only	Hamworthy is a biological reactor and ultrafiltration system.
Princess Cruise Line	Dawn Princess	1950	900	2850	Hamworthy Bioreactor	Accommodations mixed with BW	Yes	Accommodations Only	Hamworthy is a biological reactor and ultrafiltration system.
Princess Cruise Line	Diamond Princess	2670	1238	3908	Hamworthy Bioreactor	Accommodations mixed with BW	Yes	Accommodations Only	Hamworthy is a biological reactor and ultrafiltration system.
Princess Cruise Line	Island Princess	1950	850	2800	Hamworthy Bioreactor	Accommodations mixed with BW	Yes	Accommodations Only	Hamworthy is a biological reactor and ultrafiltration system.
Princess Cruise Line	Royal Princess	1599	660	2256	Hamworthy Bioreactor	Accommodations mixed with BW	Yes	Accommodations Only	Hamworthy is a biological reactor and ultrafiltration system.
Princess Cruise Line	Sapphire Princess	2670	1238	3908	Hamworthy Bioreactor	Accommodations mixed with BW	Yes	Accommodations Only	Hamworthy is a biological reactor and ultrafiltration system.
Princess Cruise Line	Sun Princess	1950	870	2820	Hamworthy Bioreactor	Accommodations mixed with BW	Yes	Accommodations Only	Hamworthy is a biological reactor and ultrafiltration system.
Radisson Seven Seas	Seven Seas Manner	769	431	1200	Hamworthy Bioreactor	Mixed with BW	Yes	Yes	Hamworthy is a biological reactor and ultrafiltration system.
Royal Caribbean Cruises Ltd.	Radance of the Seas	2100	850	2950	Unknown	Unknown	No	No	
Royal Caribbean Cruises Ltd.	Serenade of the Seas	2100	850	2950	Scanship	Mixed with BW	Yes	Yes	Scanship is a biological reactor and ultrafiltration system.
Royal Caribbean Cruises Ltd.	Vision of the Seas	2400	800	3200	Hydroxyl	Unknown	No	No	Hydroxyl is an activated oxidation process.
Silver Shadow Shipping	Silver Shadow	435	305	740	Baopure/Manson	Mixed with BW	Yes	Yes	

¹ A large vessel has overnight accommodations for 250 or more passengers.

² Capacity is calculated from Registration, Vessel Specific Sampling Plan, or Juneau Cruiseship Schedule. Actual number of passenger aboard varies dependent upon sales.

³ Alaska water extends 3 miles from the coastline and includes the Alexander Archipelago. Only vessels that discharge into Alaska waters are required to meet wastewater sampling and reporting requirements.

The wastewater systems on these vessels meet stringent effluent limits and are approved by the U.S. Coast Guard to discharge continuously.

These vessels are not discharging in Alaska waters during the 2006 season.

Table updated 5/4/06 by DEC

2006 Small¹ Commercial Passenger Vessels Wastewater Treatment

Vessel Operator	Vessel Name	Passenger Capacity (lower berth)	Crew Capacity	Total Persons on Board	Blackwater Treatment System Manufacturer	Graywater treatment	Discharging in Alaska ² & Subject to sampling program		Type of Treatment System
							BW	GW	
Alaska Marine Highway System	<i>Columbia</i>	157	66	223	Omnipure	Mixed with BW	Yes	Yes	Macerator Chlorinating System
Alaska Marine Highway System	<i>Kennicott</i>	162	42	204	Orca	Mixed with BW	Yes	Yes	Macerator Chlorinating System
Alaska Marine Highway System	<i>Malaspina</i>	138	50	188	Omnipure	Mixed with BW	Yes	Yes	Macerator Chlorinating System
Alaska Marine Highway System	<i>Matanuska</i>	136	50	186	Omnipure	Mixed with BW	Yes	Yes	Macerator Chlorinating System
Alaska Marine Highway System	<i>Taku</i>	55	42	97	Effluent Technology	Mixed with BW	Yes	Yes	Macerator Chlorinating System
America West Steamship	<i>Empress of the North</i>	235	85	320	Orca	Chlorine	Yes	Yes	Macerator Chlorinating System
CruiseWest	<i>Spirit of 98</i>	96	26	122	Red Fox	None	Yes	Yes	Biological Chemical
CruiseWest	<i>Spirit of Alaska</i>	78	21	99	Omnipure	None	Yes	Yes	Macerator Chlorinating System
CruiseWest	<i>Spirit of Columbia</i>	78	21	99	Omnipure	None	Yes	Yes	Electrocatalytic
CruiseWest	<i>Spirit of Discovery</i>	84	21	105	Red Fox	None	Yes	Yes	Biological Chemical
CruiseWest	<i>Spirit of Endeavour</i>	102	28	130	Omnipure	None	Yes	Yes	Electrocatalytic
CruiseWest	<i>Spirit of Oceanus</i>	114	64	178	Hamworthy	None	Yes	Yes	Biological & Filtration
Hapaq-Lloyd	<i>Bremen</i>	164	94	258	unknown	unknown	No	No	Unknown
New World Management	<i>Yorktown Clipper</i>	138	37	175	Omnipure 12MX824-27	Chlorine	Yes	Yes	Electrocatalytic
Lindblad Expeditions	<i>Sea Bird</i>	70	28	98	Omnipure 12M	Chlorine	Yes	Yes	Electrocatalytic
Lindblad Expeditions	<i>Sea Lion</i>	68	28	96	Omnipure 12M	Chlorine	Yes	Yes	Electrocatalytic
New World Management	<i>Clippcr Odyssey</i>	128	76	204	Consillium Neplumatic	Chlorine	Yes	Yes	Macerator Chlorinating System

¹A small vessel has overnight accommodations for 50-249 passengers. A large vessel has overnight accommodations for 250 or more passengers.

²Alaska water extends 3 miles from the coastline and includes the Alexander Archipelago. Vessels discharging in Alaska water must sample their wastewater twice per season.

Cleaning Up Wastewater



The Coast Guard, state and federal regulators, and the cruise ship industry collaborate to improve wastewater quality.

by I.T. DAN BUCHSBAUM

Assistant Chief of Inspections, U.S. Coast Guard Marine Safety Office Juneau, Alaska

and Ms. JENNIFER KIEFER

Technical Writer, SAGE Systems Technologies

We all know that the quality of drinking water is stringently regulated. But did you know that wastewater is also regulated? In fact, some of the wastewater discharged by cruise ships traveling in Alaska's waters is actually clean enough to drink! Perhaps drinkable wastewater does not sound too exciting, but the partnership and technology that has created it definitely is.

Regulating Wastewater...as a Team

Alaska is renowned for its spectacular scenery, and cruise ships are a highly visible part of that scene. Each year, the ships transport more than one million people around the beautiful coastlines, bringing with them great revenue—and leaving behind a considerable amount of wastewater. Concerned by this growing environmental pollution, Alaska has spent the last

decade focused on implementing cleaner wastewater standards. The result has been crystal clear success.

In 1999 the Alaska Department of Environmental Conservation (ADEC) organized the Alaska Cruise Ship Initiative (ACSI) to review the cruise ship industry's waste management and disposal practices within Alaskan waters. There were many groups involved, including the U.S. Coast Guard, Environmental Protection Agency (EPA), cruise industry representatives, various Alaskan tribes, environmental groups, and concerned Alaskans. It quickly became apparent that the concern first voiced by Alaskans was shared by many.

In a great display of solidarity, the regulatory agencies

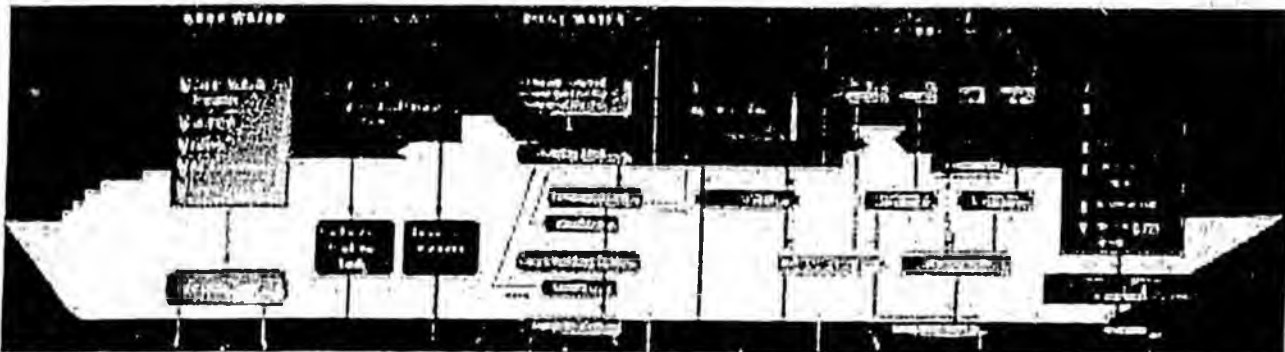


Figure 1: Different types of wastewater. Courtesy Alaska Department of Environmental Conservation.

tion regarding the type of wastewater being discharged (Figure 1), but also the location and quantity of the discharges. With the passing of the various regulations, this information is now effectively captured and monitored. Specifically, the state's CPVEC program requires that each ship maintain comprehensive records of its wastewater discharges. Included in these records are the amount and types of pollutants being discharged.

Understandably, there is some overlap between the federal and state requirements, so ADEC (specifically, its CPVEC program staff) and the Coast Guard work together closely. For example, if a ship plans to discharge in Alaskan waters, it must provide both ADEC and the Coast Guard with a vessel specific sampling plan (VSSP). The VSSP contains the intended sampling techniques and analytical testing methods of the ship's discharge; it must demonstrate that samples will be representative of the wastewater discharged from that specific ship.

According to Ms. Moana Leirer, an environmental program specialist with ADEC, large cruise ships—which are defined by Alaskan law as 250+ passengers and federal law as 500+ passengers—have one of three options for wastewater discharge that must first be approved by the CPVEC program. These ships can:

1. hold their wastewater, discharging it outside of Alaskan waters (wastewater is therefore not sampled);
2. discharge their wastewater once they are at least one nautical mile from shore and traveling at least six knots (wastewater samples are required and must meet certain effluent standards); or
3. operate advanced wastewater treatment systems that are certified by the Coast Guard for continuous discharge.

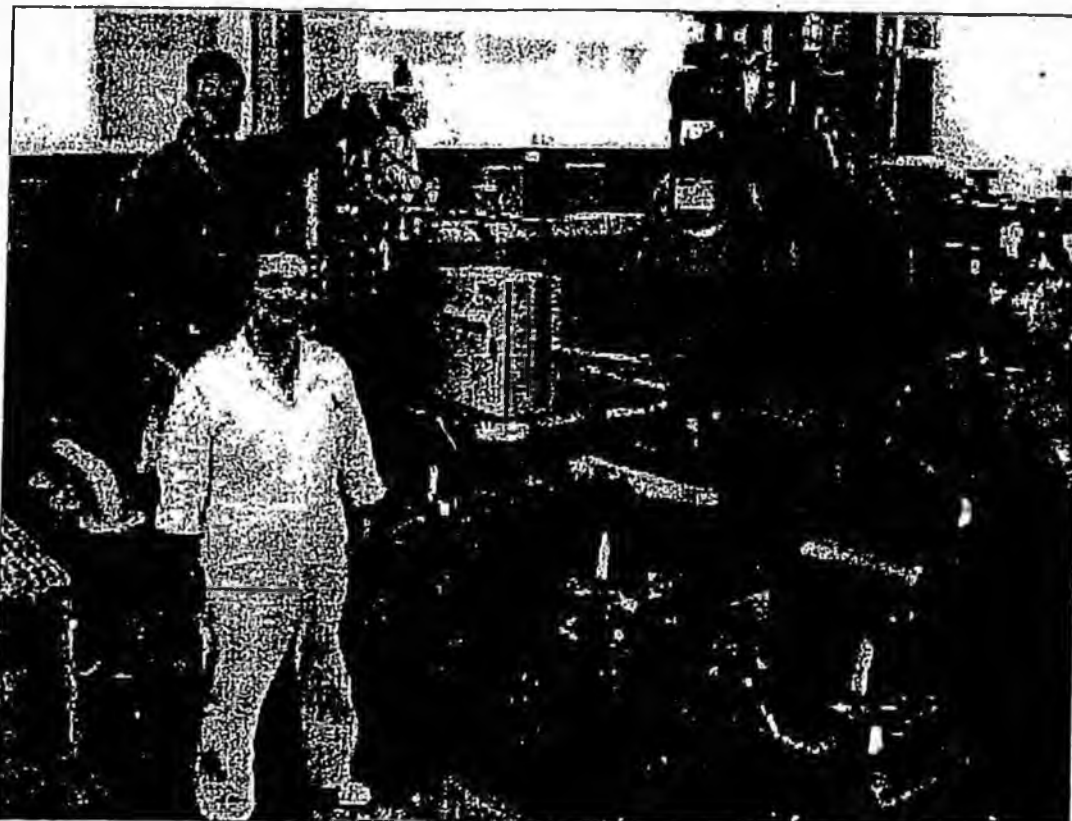


Figure 3: Scanship advanced wastewater treatment system on a Norwegian Cruise Line vessel. Pictured are two shipboard marine engineers charged with running the system. Courtesy Norwegian Cruise Lines.

A continuous discharge of wastewater, allowed by option three, initially sounds contradictory to the environmental concerns that provided the impetus for the many wastewater discharge regulations. However, the advanced wastewater treatment systems employed with this option are discharging some of the cleanest wastewater ever seen.

Advanced Wastewater Treatment Systems

In addition to the great partnership forged between the regulatory agencies and industry for this massive environmental cleanup, the second part of this success story is the technology that has been developed to improve the wastewater itself. While the regulations were first being formed, many of the cruise ship companies were already evaluating several advanced wastewater treatment systems. These included chemical treatment and mechanical decanting, activated oxidation and oxidant disinfection, reverse osmosis filtration, and bio-reactor/filtration.

Today, while some employ a reverse osmosis filtration system, the majority of cruise ships are using various combinations of enhanced bio-reactor/filtration systems. There are currently four basic designs from dif-

NWCA's QA/QCP Program Organization Chart

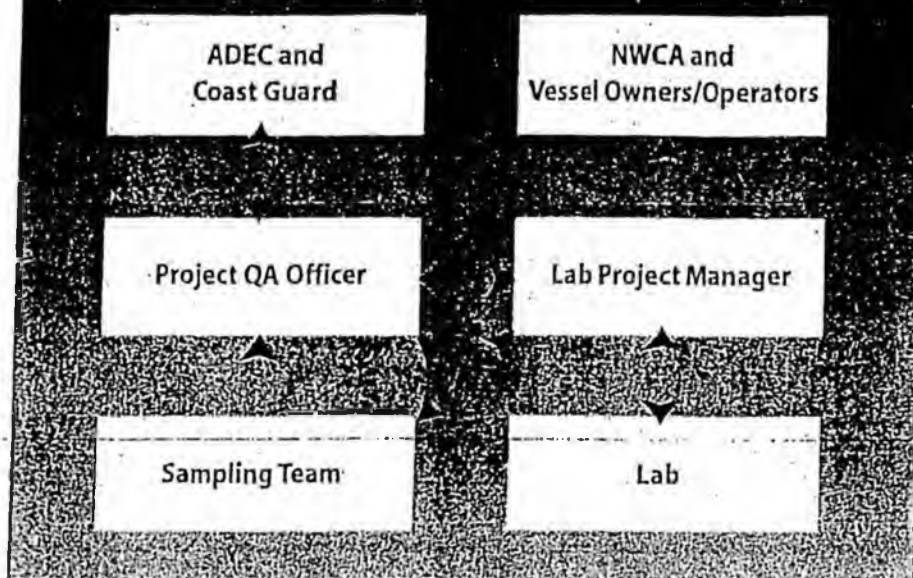


Figure 4: North West Cruise Ship Association's QA/QCP organization chart. Courtesy North West Cruise Ship Association.

set of sampling standards and lab analysis. According to Mr. Wetzel, reliable and representative samples are crucial to achieving valid readings. Therefore, specific sample collection procedures are detailed in each QA/QCP and each ship's VSSP is also submitted to the sampling team. With all groups working from the same documents, there is a stronger certainty that consistent sampling methods are followed and that samples are collected from appropriate and representative locations.

The Coast Guard also verifies installation of the sampling ports on the ships and reviews operations of the advanced wastewater treatment systems during their annual vessel examinations. Additional verification occurs during sampling events because exactness is vital to obtaining a true reading. For example, if a sample port is located too close to certain equipment, then the wastewater has not had a chance to mix before discharging and can produce a tainted sample.

While a third-party sampler takes all the required wastewater samples, it is the responsibility of the ship owner or operator to submit a report on the analytical results of sampling. The sampling analytical report must include the following:

1. date, time, and onboard location where each sample was collected;

2. sampling technique and analytical testing method used for each sample;
3. quality assurance and quality control analysis of the sampling, analytical testing, and analytical data;
4. analytical results;
5. any deviation from the approved plans submitted under 18 AAC 69;
6. type of wastewater sampled; and
7. if necessary, a notification that re-sampling is occurring.¹

All sample analysis results are submitted by the independent labs directly to the Coast Guard and are reviewed to ensure that each ship is actually meeting all the requirements. The information is later released by ADEC. While sam-

ples do occasionally fall out of range, a compliance scheme allows the Coast Guard to average samples to ensure a ship meets compliance on a monthly basis versus an individual sampling event. Since the QA/QCP's inception in 2002, there has been an average of only one bad sample every two months, but these bad samples are usually later shown to have been tainted.

While it may sound confusing, the primary goal of a QA/QCP is to keep wastewater discharge as clean and pollutant-free as possible. In fact, NWCA's QA/QCP tests for 250 different pollutants, substantially more than the 16 pollutant tests required by the Coast Guard.

Other States Implement Alaska's Standards

Alaska's success story has traveled far, including to such distant states as Maine, Washington, and Hawaii. In a great example of knowing when not to reinvent the wheel, the state of Maine essentially adopted the Coast Guard's existing regulations for Alaska (33CFR159, Subpart E) with only two noticeable changes: substituting "Maine" for "Alaska" and "State of Maine Department of Conservation" for "Coast Guard Captain of the Port." Regulations in Washington have also adopted many of Alaska's regulations but require additional record keeping requirements. Officials in Hawaii are currently working on



Assessment of Cruise Ship and Ferry Wastewater Impacts in Alaska

Alaska Department of Environmental Conservation

Commercial Passenger Vessel Environmental Compliance Program

February 9, 2004

Risk Characterization

ADEC expects that only large cruise ships with advanced wastewater treatment systems will discharge wastewater in Alaska in the future. WET testing results and a comparison of sample results with Alaska Water Quality Standards indicate that the effluent from these advanced systems is not expected to cause toxicity to the marine environment. No human health risk is posed by the low concentration of tested pollutants found in wastewater samples.

The wastewater samples indicate that hazardous materials are not being discharged through these wastewater treatment systems.

Most organisms need some minimum concentration of zinc to function properly. Toxicity of zinc to an organism depends on feeding habits. Plants and most fish would not be adversely affected, but many invertebrates could be affected by ingestion of sufficient quality of particulates containing zinc. The toxicity of zinc, as well as other metals, is reported to be influenced by a number of chemical factors including cadmium, magnesium, hardness, pH, and ionic strength. These factors appear to affect the toxicity of zinc by influencing the proportion of available zinc or by inhibiting the sorption or binding available by biological tissues. Alaska has a water quality standard of 81.0 µg/L of dissolved zinc in saltwater based on chronic effects to aquatic life.

As with copper, zinc is an essential element in humans at low doses. Human ingestion of zinc is generally not a concern. The Recommended Daily Allowances for adults is 15 mg/day.⁹⁸

7.2. Cumulative Impact

Large Ships

Since the passage of the Alaska cruise ship laws, large cruise ships installed advanced wastewater treatment systems that meet the stringent U.S. Coast Guard requirements for continuous discharge. The quality of the wastewater on large ships has therefore improved dramatically. During 2003, all the large cruise ships that discharged wastewater in Alaska had these advanced systems. Ships that did not have advanced systems discharged outside 3 nautical miles. The 2003 data is the most representative of the wastewater quality that ADEC expects in the future. Therefore, we will focus on the risks presented by the 2003 data.

In 2003, ships were sampled for 16 conventional pollutants and 160 priority pollutants. The vast majority of these pollutants were not detected. Only ammonia, copper, nickel, and zinc did not regularly meet Alaska Water Quality Standards at the end of pipe (Table 10).

The Science Advisory Panel concluded in *The Impact of Cruise Ship Wastewater Discharge on Alaska Waters* that effluent from a typical large ship will be diluted by a factor of at least 50,000 during underway discharge.⁹⁹ By applying this dilution factor, the concentration of all pollutants would meet Alaska Water Quality Standards in the receiving water during underway discharge.

ADEC was concerned about the impacts on the receiving water caused by stationary wastewater discharge. In order to address this issue, ADEC calculated the dilution factor during stationary discharge for each large ship during a worst case scenario. (See Appendix D Cruise Ship Stationary Discharge Modeling for more information.) The lowest dilution value for each effluent type was then used to calculate the anticipated concentration of each pollutant in receiving water during stationary discharge (Table 11). After applying the dilution factor, no tested pollutant would exceed Water Quality Standards.

Whole Effluent Toxicity (WET) testing was done in 2003 on 4 of the 18 large ships that discharged in Alaska. Test results indicate that wastewater effluent from large ships with advanced wastewater treatment systems does not pose a risk to aquatic organisms, even

⁹⁸ EPA 440/5-80-079 October 1980 Ambient Water Quality Criteria for Zinc.

⁹⁹ Science Advisory Panel "The Impact of Cruise Ship Wastewater Discharge on Alaska Waters," November 2002
<http://www.water.alaska.gov/press/press/box/uncertis/impaw/dilutionwastewater.htm>

during stationary discharges. ADEC will continue WET testing on the advanced wastewater treatment systems during 2004. This test gives insight into the wastewater's effect on marine organisms. This test indicates that exceedances of ammonia, copper, nickel and zinc Water Quality Standards at the end of pipe are not harming aquatic life.

None of the pollutants mentioned above are present in concentrations should cause risks to human health.

Small Ships

ADEC reviewed data collected from small commercial passenger vessels from 2001 through 2003. These ships have not installed new wastewater treatment systems on their vessels and the effluent quality has remained relatively consistent.

During the evolution of the sampling protocol, pollutants have been added and deleted as appropriate. In 2003, ships were sampled for 16 conventional pollutants and 160 priority pollutants. The vast majority of these pollutants were not detected. The eight (8) pollutants that did not regularly meet Alaska Water Quality Standards at the end of pipe are included in Table 15.

The Science Advisory Panel concluded that the dilution factor caused by the underway discharge by a small ship would be based on the width, draft, and speed of the vessel divided by the discharge rate and multiplied by a factor of 3.¹⁰⁰ With the aid of this dilution, we would expect all pollutants to meet Alaska Water Quality Standards during underway discharge.

ADEC was concerned about the impacts on the receiving water caused by stationary wastewater discharge. In order to address this issue, ADEC calculated the dilution factor caused by stationary discharge for each small ship during a worst case scenario. (See Appendix D Cruise Ship Stationary Discharge Modeling for more information.) The lowest dilution value for each effluent type was then used to calculate the expected concentration of each pollutant in receiving water during stationary discharge (Table 16). Even with the benefit of dilution, we predict the stationary discharge of wastewater from small ships contain concentrations of free chlorine, fecal coliform, copper, and zinc that exceed Alaska Water Quality Standards.

The marine environment is very sensitive to the concentrations of free chlorine. In fact the water quality standards are below the methods of detection for chlorine. The concentration of chlorine in mixed blackwater and graywater during 2002 was found in excess of 100 times the Alaska Water Quality Standards. The predicted concentration of chlorine from this discharge was 10 times the standard in receiving water and therefore did pose a risk to aquatic life during stationary discharges.

The fecal coliform concentrations in receiving water indicate that it is important for these ships to avoid anchoring in areas used for shellfish aquaculture or areas frequently used for subsistence and recreational shellfish harvesting. Most of the shellfish farms in Southeast Alaska are located between Ketchikan and Petersburg. ADEC evaluated the small ship routes and the location of

¹⁰⁰ The Science Panel has developed a formula for predicting dilution/dispersion in the wake of small cruise ships.

Dilution factor = $3 \times (\text{ship width} \times \text{ship draft} \times \text{ship speed}) / (\text{volume discharge rate})$

<http://www.state.ak.us/dec/arc/cruise/documents/impact/dilutionwastewater.htm>

-CFR Data is current as of August 4, 2005

Title 33: Navigation and Navigable Waters

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PART 159—MARINE SANITATION DEVICES

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- § 159.321 Enforcement.

Authority: 33 U.S.C. 1322(b)(1); 49 CFR 1.45(b). Subpart E also issued under authority of sec. 1(a)(4), Pub. L. 106-554, 114 Stat. 2763; Department of Homeland Security Delegation No. 0170.1.

Source: CGD 73-83, 40 FR 4624, Jan. 30, 1975, unless otherwise noted.

Subpart A—General

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§ 159.1 Purpose.

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This part prescribes regulations governing the design and construction of marine sanitation devices and procedures for certifying that marine sanitation devices meet the regulations and the standards of the Environmental Protection Agency promulgated under section 312 of the Federal Water Pollution Control Act (33 U.S.C. 1322), to eliminate the discharge of untreated sewage from vessels into the waters of the United States, including the territorial seas. Subpart A of this part contains regulations governing the manufacture and operation of vessels equipped with marine sanitation devices.

§ 159.3 Definitions.

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In this part:

Coast Guard means the Commandant or his authorized representative.

Discharge includes, but is not limited to, any spilling, leaking, pouring, pumping, emitting, emptying, or dumping.

Existing vessel includes any vessel, the construction of which was initiated before January 30, 1975.

Fecal coliform bacteria are those organisms associated with the intestine of warm-blooded animals that are commonly used to indicate the presence of fecal material and the potential presence of organisms capable of causing human disease.

Inspected vessel means any vessel that is required to be inspected under 46 CFR Ch. I.

Length means a straight line measurement of the overall length from the foremost part of the vessel to the aftermost part of the vessel, measured parallel to the centerline. Bow sprits, bumpkins, rudders, outboard motor brackets, and similar fittings or attachments are not to be included in the measurement.

Manufacturer means any person engaged in manufacturing, assembling, or importing of marine sanitation devices or of vessels subject to the standards and regulations promulgated under section 312 of the Federal Water Pollution Control Act.

Marine sanitation device and device includes any equipment for installation on board a vessel which is designed to receive, retain, treat, or discharge sewage, and any process to treat such sewage.

New vessel includes any vessel, the construction of which is initiated on or after January 30, 1975.

Person means an individual, partnership, firm, corporation, or association, but does not include an individual on board a public vessel.

Public vessel means a vessel owned or bare-boat chartered and operated by the United States, by a State



This PDF file is an excerpt from the EPA sampling report entitled *Sampling Episode Report - Holland America Veendam - Sampling Episode 6503* (March 2006). The full report can be downloaded from http://www.epa.gov/owow/oceans/cruise_ships/veendam.html

Sampling Episode Report Holland America Veendam Sampling Episode 6503

Executive Summary

March 2006

EXECUTIVE SUMMARY

Sampling Episode Report for Holland America Veendam

This Sampling Episode Report describes the sampling and analysis activities to characterize wastewater (graywater and sewage) generated and discharged by the cruise vessel Holland America Veendam while in Alaska waters. This sampling took place from June 20 through June 25, 2004, under the direction of the U.S. Environmental Protection Agency (EPA). The sampling program is part of EPA's data collection effort to evaluate whether to develop wastewater discharge standards, under 33 USC 1901 Note, for cruise vessels authorized to carry 500 or more passengers for hire when operating in the waters of the Alexander Archipelago or the navigable waters of the United States within the State of Alaska or within the Kachemak Bay National Estuarine Research Reserve. EPA will use information from the sampling of this vessel and three other cruise ships in Alaska to characterize wastewater generated and discharged by large cruise vessels with advanced wastewater treatment systems.

EPA selected the Holland America Veendam to characterize the performance of the Zenon Environmental Inc. membrane bioreactor treatment system, an advanced wastewater treatment system that uses aerobic biological oxidation followed by ultrafiltration and ultraviolet disinfection. Samples were collected of various wastewater sources (laundry, accommodations, food pulper, and galley wastewater); influent to the treatment system (combined graywater and sewage); influent to the ultraviolet (UV) disinfection component of the treatment system; effluent from the treatment system; source water; wastewater treatment residuals (screening solids and wastewater biosludge); and incinerator ash. Wastewater source samples were collected for a single 24-hour sampling period, while samples of the influent to and effluent from the treatment system were collected for five consecutive 24-hour sampling periods.

Strap-on ultrasonic flow meters were installed near the sampling locations for laundry wastewater, influent to treatment, and effluent from treatment to collect flow data and, in some cases, to trigger automatic sampling machines. In addition, flow data were collected from the Veendam's in-line flow meters installed on the graywater and sewage feeds to the treatment

system (which, combined, represent the influent to the treatment system) and on the effluent from the treatment system.

Various sample collection methods (composite by flow, composite by time, grab, and grab composite) were used depending on the sampling point and analyte. Tested analytes included pathogen indicators (fecal coliform, *E. coli*, enterococci), classical pollutants, total and dissolved metals, volatile and semivolatile organics, pesticides, polychlorinated biphenyls, and dioxins and furans. Not all samples were analyzed for all target analytes.

The food pulper wastewater samples showed the highest concentration among graywater sources for the majority of analytes, most notably *E. coli* and enterococci, oil and grease, nutrients, and solids. Accommodations wastewater samples had the highest concentration for 11 of the analytes, including fecal coliform, organics, and several metals. Laundry wastewater samples showed the highest concentration for five analytes, including alkalinity and several dissolved metals.

Because of water conservation measures onboard cruise ships (such as vacuum toilets), key analytes such as pathogen indicators, biochemical oxygen demand (BOD₅), chemical oxygen demand (COD), and total suspended solids (TSS) are found at much higher concentrations in the influent to the Veendam wastewater treatment system than in typical domestic wastewater. Of the 54 metal analytes tested for, 27 were detected in every influent to treatment system sample. Among the 365 target analytes for volatile and semivolatile organics, pesticides, and polychlorinated biphenyls, only 9 were detected in any influent to treatment samples, most at concentrations close to their detection limits.

The Zenon treatment system successfully removed almost all pathogen indicators (>99%) and most classical pollutants, metals, and organics. Two pathogen indicators, fecal coliform and *E. coli*, were not detected in any of the 15 effluent treatment samples, while one indicator, enterococci, was detected in 2 samples at close to the detection limit. The treatment system removed almost all BOD₅ (>99%), COD (97%), total organic carbon (TOC) (93%), settleable residue (>99%) and TSS (>99%). The treatment system reduced ammonia, total

Kjeldahl nitrogen (TKN, which measures both ammonia and organic forms of nitrogen), and total phosphorus by approximately 75%, while nitrate/nitrite levels remained relatively unchanged. The treatment system was highly efficient at removing particulate metals, and removed dissolved metals at an average of 37%. The treatment system removed most of the volatile and semivolatile organics to concentrations below detection levels.

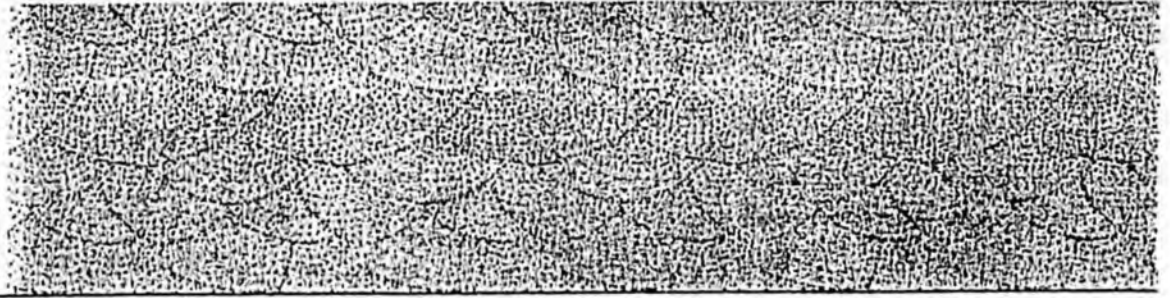
The Zenon wastewater treatment system generates two types of residual waste: screening solids (from two coarse screens at the beginning of the treatment system) and waste biosludge (excess biological mass from the treatment system's bioreactor). Screening solids are collected monthly for disposal on shore. Waste biosludge is pumped to a double-bottom holding tank for overboard discharge outside of 12 nautical miles from shore. Most of the analytes detected in these residual wastes were also detected in the influent to the treatment system. For many analytes, concentrations in the screening solids and waste biosludge exceeded those in the influent to treatment, suggesting that these analytes are removed from the system in these waste streams.

On average, each person generated approximately 62 gallons of untreated sewage (17 gallons) and graywater (45 gallons) per day. The average discharge from the treatment system was approximately 58 gallons of treated wastewater per person per day.

Summary of CDC Health Inspections
Cruise Ships Operating in Alaska

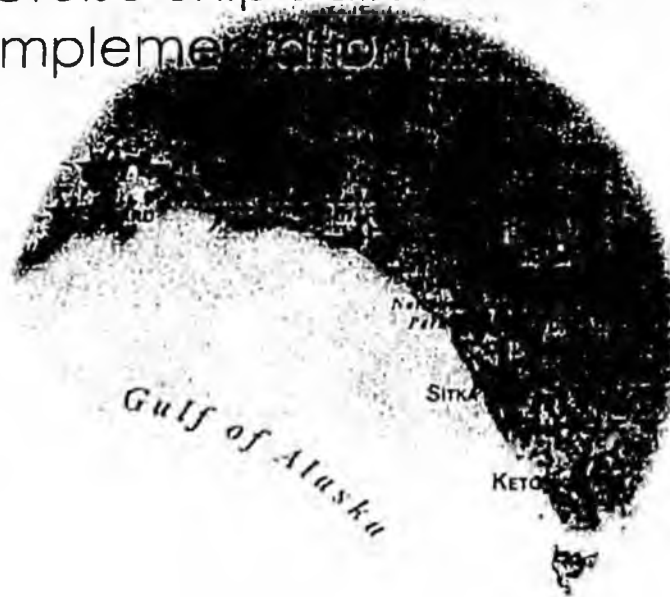
Cruise Ships Of Major Cruise Lines Operating in Alaska / 2006	Number of Inspections / Time Period	Failed Inspections
Carnival Spirit	13 inspections / 6 year time period	0
Infinity	12 inspections / 6 year time period	0
Mercury	19 inspections / 10 year time period	0
Summit	11 inspections / 7 year time period	0
Oosterdam	7 inspections / 4 year time period	0
Ryndam	26 inspections / 14 year time period	0
Statendam	30 inspections / 14 year time period	2 failed inspections both of which occurred in 1993 ship first put into service. No failed inspections since 1993.
Veendam	23 inspections / 12 year time period	0
Volendam	15 inspections / 7 year time period	0
Westerdam	5 inspections / 3 year time period	0
Zaandam	15 inspections / 8 year time period	0
Zuiderdam	9 inspections / 5 year time period	0
Norwegian Star	11 inspections / 6 year time period	0
Norwegian Sun	11 inspections / 6 year time period	0
Norwegian Wind	28 inspections / 15 year time period	0
Coral Princess	9 inspections / 4 year period	0
Dawn Princess	23 inspections / 11 year period	0
Diamond Princess	7 inspections / 4 year period	0
Island Princess	8 inspections / 4 year period	0
Regal Princess	33 inspections / 16 year period	2 failed inspections, no failed inspections since 1994.
Sapphire Princess	5 inspections / 3 year period	0

Sun Princess	23 inspections / 11 year period	0
Seven Seas Mariner	13 inspections / 6 year period	1 failed inspection, no failed inspection since 2001.
Radiance of the Seas	13 inspections / 6 year period	0
Serenade of the Seas	8 inspections / 4 year period	0
Silver Shadow	8 inspections / 6 year period	0
Vision of the Seas	18 inspections / 10 year period	0
27 Ships	Total: 403 inspections	Total failed inspections: 5



Commercial Passenger Vessel Environmental Compliance Program Technical Assistance

Ocean Ranger Program
Cruise Ship Ballot Measure
Implementation



March 7, 2007

Prepared on behalf of the
Alaska Department of Environmental Conservation

Submitted by:

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Ocean Ranger Program Implementation

Table 4A: Estimated Costs to Deploy One Ocean Ranger on Each Ship for Options 1-4 (Based on 2006 Season)

Week of	Number of Ships in Alaska	Option 1: Ride Continuously	Option 2: Embark & Disembark at Canadian Pilot Station	Option 3: Board/Disembark at First/Last Alaska Pilot Station	Option 4: Board/Disembark at First/Last Alaska Port of Call
4/30/2006	1	\$ 5,200.00	\$ 9,000.00	\$ 6,900.00	\$ 4,650.00
5/7/2006	5	\$ 26,000.00	\$ 45,000.00	\$ 34,500.00	\$ 23,250.00
5/14/2006	18	\$ 93,600.00	\$ 162,000.00	\$ 124,200.00	\$ 83,700.00
5/21/2006	24	\$ 124,800.00	\$ 216,000.00	\$ 165,600.00	\$ 111,600.00
5/28/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
6/4/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
6/11/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
6/18/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
6/25/2006	27	\$ 140,400.00	\$ 243,000.00	\$ 186,300.00	\$ 125,550.00
7/2/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
7/9/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
7/16/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
7/23/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
7/30/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
8/6/2006	27	\$ 140,400.00	\$ 243,000.00	\$ 186,300.00	\$ 125,550.00
8/13/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
8/20/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
8/27/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
9/3/2006	27	\$ 140,400.00	\$ 243,000.00	\$ 186,300.00	\$ 125,550.00
9/10/2006	25	\$ 130,000.00	\$ 225,000.00	\$ 172,500.00	\$ 116,250.00
9/17/2006	18	\$ 93,600.00	\$ 162,000.00	\$ 124,200.00	\$ 83,700.00
9/24/2006	7	\$ 36,400.00	\$ 63,000.00	\$ 48,300.00	\$ 32,550.00
Season Total		\$ 2,490,800.00	\$ 4,311,000.00	\$ 3,305,100.00	\$ 2,227,350.00

Table 4B: Estimated Costs to Deploy Ocean Rangers for Cruise Season Using Options 5 and 6

	Option 5: Ride Randomly Selected Legs (Port to Port) of a Cruise Ship Voyage	Option 6: Inspect Vessels While in Port
Number of Ocean Rangers deployed	10	6-8
Cost per Week	\$52,000.00	\$25,200.00 - \$33,600.00
Cost for Season (20 weeks)	\$1,040,000.00	\$504,000.00 - \$672,000.00

SEVEN SEAS MARINER – 2007 SAILING DATES

DEPARTURE DATE	NIGHTS	FROM/TO	MASTER SUITE	GRAND SUITE	MARINER SUITE	SEVEN SEAS SUITE	HORIZON SUITE	A PENTHOUSE	B PENTHOUSE	C PENTHOUSE	DELUXE SUITE D	DELUXE SUITE E	DELUXE SUITE F	DELUXE SUITE G	DELUXE SUITE H
May 12	11	San Francisco, At Sea, Astoria, Seattle, Cruise the Inside Passage, Prince Rupert, Cruise the Inside Passage, Cruise Tracy Arm, Skagway, Juneau, Sitka, Cruise the Inside Passage, Vancouver	'17,487	'15,122	'11,657	'9,897	'7,862	'7,587	'7,422	'6,982	'5,387	'5,222	'4,947	'4,672	'4,397
May 23	7	Vancouver, Cruise the Inside Passage, Ketchikan, Cruise Tracy Arm, Juneau, Skagway, Sitka, Cruise Hubbard Glacier, Seward (Anchorage)	'14,557	'12,607	'9,682	'8,252	'6,497	'6,302	'6,172	'5,782	'4,482	'4,352	'4,157	'3,897	'3,697
May 30	7	Seward (Anchorage), Cruise Hubbard Glacier, Sitka, Cruise Tracy Arm, Juneau, Skagway, Ketchikan, Cruise the Inside Passage, Vancouver	'14,557	'12,607	'9,682	'8,252	'6,497	'6,302	'6,172	'5,782	'4,482	'4,352	'4,157	'3,897	'3,697
June 6, 20; July 4; August 15	7	Vancouver, Cruise the Inside Passage, Ketchikan, Cruise Tracy Arm, Juneau, Skagway, Sitka, Cruise Hubbard Glacier, Seward (Anchorage)	'15,677	'13,577	'10,427	'8,887	'6,997	'6,787	'6,647	'6,227	'4,827	'4,687	'4,477	'4,197	'3,987
June 13, 27; August 22	7	Seward (Anchorage), Cruise Hubbard Glacier, Sitka, Cruise Tracy Arm, Juneau, Skagway, Ketchikan, Cruise the Inside Passage, Vancouver	'15,677	'13,577	'10,427	'8,887	'6,997	'6,787	'6,647	'6,227	'4,827	'4,687	'4,477	'4,197	'3,987
July 11, 25; August 8	7	Seward (Anchorage), Cruise Hubbard Glacier, Sitka, Cruise Tracy Arm, Juneau, Skagway, Ketchikan, Cruise the Inside Passage, Vancouver	'16,796	'14,546	'11,171	'9,521	'7,496	'7,271	'7,121	'6,671	'5,171	'5,021	'4,796	'4,496	'4,271
July 18, August 1	7	Vancouver, Cruise the Inside Passage, Ketchikan, Cruise Tracy Arm, Juneau, Skagway, Sitka, Cruise Hubbard Glacier, Seward (Anchorage)	'16,796	'14,546	'11,171	'9,521	'7,496	'7,271	'7,121	'6,671	'5,171	'5,021	'4,796	'4,496	'4,271
August 29	7	Vancouver, Cruise the Inside Passage, Ketchikan, Cruise Tracy Arm, Juneau, Skagway, Sitka, Cruise the Inside Passage, Vancouver	'14,557	'12,607	'9,682	'8,252	'6,497	'6,302	'6,172	'5,782	'4,482	'4,352	'4,157	'3,897	'3,697
September 5	7	Vancouver, Cruise the Inside Passage, Ketchikan, Cruise Tracy Arm, Juneau, Skagway, Sitka, Cruise Hubbard Glacier, Seward (Anchorage)	'14,557	'12,607	'9,682	'8,252	'6,497	'6,302	'6,172	'5,782	'4,482	'4,352	'4,157	'3,897	'3,697
September 12	14	Seward (Anchorage), Kodiak, Cruise Shelikof Strait, Dutch Harbor, Cruise the Aleutian Islands, Cross the International Dateline, Petropavlovsk, Cruise Kuni Islands, Cruise the Sea of Okhotsk, Hakodate, Sendai, Yokohama (Tokyo), Osaka (overnight)	'20,349	'17,752	'14,890	'11,922	'9,484	'9,272	'8,901	'8,318	'6,622	'6,357	'5,039	'5,668	'5,297

Fares are cruise only, per person, double occupancy and do not include air, port, handling and security charges or NAFTA fees. Fares shown are Early Booking Savings and may not reflect current promotional offers. Please contact your travel professional or visit our website at www.TheRegentExperience.com for special offers and promotions. Air and fuel charges may apply at the discretion of RSCC.

SPECIAL PROGRAMS

SPECIAL GUEST-JEAN-MICHEL COUSTEAU

On September 12 sailing.

JEAN-MICHEL COUSTEAU'S OCEAN FUTURES SOCIETY LECTURER PROGRAM

On May 12, September 5 and September 12 sailings.

CLUB MARINER YOUTH PROGRAM



RIES AND PRICING