

Memorandum of Understanding Cruise Operations in Washington State

**Originally signed April 20, 2004
Amendment No. 6 March 2016**

**Washington State Department of Ecology,
Cruise Lines International Association –
North West & Canada, and the
Port of Seattle**

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding, originally signed on April 20, 2004 is amended by and between the State of Washington, the Port of Seattle, and the Cruise Lines International Association – North West & Canada, hereinafter referred to as CLIA-NWC, representing the international cruise lines identified in *Appendix i*.

Whereas the State of Washington is charged with the responsibility of protecting and conserving Washington's environmental resources in relation to the Cruise Industry's environmental practices in Washington; and

Whereas the United States Coast Guard, herein referred to as USCG, has Federal jurisdiction over environmental matters in navigable waters in the United States; and

Whereas the Port of Seattle is charged with providing the services and facilities to accommodate the transportation of passengers, including cruise ship passengers, while protecting and enhancing the environment of the Port of Seattle; and

Whereas, the CLIA-NWC is a non-profit entity organized for the purpose of representing member cruise lines which operate in and about waters subject to this Memorandum of Understanding (MOU), whose current membership is identified in *Appendix i*; and

Whereas, the member lines of CLIA-NWC have adopted the “**Cruise Industry Waste Management Practices and Procedures**” as promulgated by the Cruise Industry's trade association, the Cruise Lines International Association, herein referred to as CLIA, which practices and procedures are attached hereto as *Appendix ii*; and

Whereas, CLIA-NWC member cruise vessels operate in international waters and move passengers to destinations worldwide and, consequently, those cruise vessel waste management practices must take into account environmental laws and regulations in many jurisdictions and international treaties and conventions; and

Whereas, CLIA-NWC, the State of Washington as represented by the Washington Department of Ecology (Ecology), the USCG and the Port of Seattle have met to develop waste management practices that preserve a clean and healthy environment and demonstrate the Cruise Industry's commitment to be a steward of the environment; and

Whereas, research is ongoing to establish the impact of ships' wastewater discharges on the ocean environment, and the results of this research will be taken into account in periodic review of the wastewater discharge practices described in this Agreement; and

Whereas, the cruise industry recognizes Washington's fragile marine environment and is committed to help protect this environment;

Now therefore, based upon mutual understanding, the parties enter into this Memorandum of Understanding to implement the following environmental goals, policies and practices:

Definition of terms for the purpose of this agreement:

“blackwater” means waste from toilets, urinals, medical sinks and other similar facilities;

"cruise ship" means any vessel that is owned or operated by a member of the CLIA-NWC;

“disinfection system upset” means disinfection below levels of four log (99.99%) inactivation of norovirus based on expected results assuming a minimum intensity of ultraviolet (UV) lights used for disinfecting effluent or other shipboard administrative controls as may be accepted by the Washington Department of Health.

“graywater” includes drainage from dishwasher, shower, laundry, bath, galley drains and washbasin drains;

“monitoring for disinfection effectiveness” means using measuring equipment to determine the intensity of ultraviolet (UV) lights used for disinfecting effluent, or other shipboard administrative controls as may be accepted by the Washington Department of Health.

“oily bilge water” includes bilge water that contains used lubrication oils, oil sludge and slops, fuel and oil sludge, used oil, used fuel and fuel filters, and oily waste.

“residual solids” includes grit or screenings, ash generated during the incineration of sewage sludge and sewage sludge, which is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge.

“solid waste” means all putrescible and nonputrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes and recyclable materials [RCW 70.95.030 (22), Solid Waste Management: Reduction and Recycling].

“waters subject to this Memorandum of Understanding (MOU)” include the Puget Sound and the Strait of Juan de Fuca south of the international boundary with Canada; and for off the west coast, the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles as illustrated in *Appendix iii*.

1. Applicability

1.1 The State of Washington agrees that the performance required by CLIA-NWC under the terms of this Memorandum of Understanding shall be directed only to its member cruise lines. CLIA-NWC acknowledges that its members operate cruise vessels engaged in

cruise itineraries greater than one day duration; and further that its members do not operate one-day attraction ships or casino gambling ships. This agreement only applies to voyages during which the commercial passenger vessel actually calls at a port in the State of Washington.

- 1.2 The State of Washington and Port of Seattle accepts the CLIA Waste Management Best Practices and Procedures as posted by CLIA and updated from time to time and described in the attached Appendix ii as CLIA member policy in the management of solid waste, hazardous waste and wastewaters in waters subject to this MOU.
- 1.3 In addition to the CLIA Practices, the member line vessels of CLIA-NWC operating in Washington agree to allow Ecology to conduct a minimum of one vessel inspection per season to verify compliance with the MOU pursuant to the Ecology Statement of Work as attached in Appendix ix and agree to comply with the following unique practices while operating in waters subject to this MOU:

2.1 Wastewater Management

In recognition of the sensitive nature of Washington's marine environment, CLIA-NWC agrees to the following:

- 2.1.1 to prohibit the discharge of untreated blackwater, untreated graywater, and solid waste within waters subject to this MOU (*Appendix iii*); and to prohibit the discharge of oily bilge water if not in compliance with applicable federal and state laws within waters subject to this MOU.
- 2.1.2 other than as set forth in section 2.1.3 below, to prohibit the discharge of treated blackwater and treated graywater in waters subject to this MOU.
- 2.1.3 the discharge of treated blackwater and treated graywater from ships equipped with advanced wastewater treatment systems (AWTS) which meet the higher standards and the testing regime set out in federal law, Title XIV, Certain Alaska Cruise Ship Operations, Section 1404 (c) (*Appendix vi*) is allowed under the following conditions:
 - A. For discharges if the ship is at least one nautical mile away from its berth at a port in Washington and is traveling at a speed of at least 6 knots:
 - 1) No later than 60 days prior to the date the cruise ship wishes to commence discharge of AWTS-treated effluent, the cruise line shall submit the following vessel specific information to Ecology
 - a. Documentation on the type of treatment system in use on the ship including schematic diagrams of the system.
 - b. Documentation that the system is certified by the United States Coast Guard for continuous discharge in Alaska. If the certification has not yet been provided by the Coast Guard at the time the other documentation is submitted to Ecology, it may be submitted less than 60 days prior to

commencement of discharge but in no event less than 30 days prior to the commencement of discharge.

- c. Provision for daily twenty-four hour continuous turbidity or equivalent monitoring of the quality of the effluent generated by the AWTS and, beginning in 2009, daily twenty-four hour continuous monitoring for disinfection effectiveness.
- d. Documentation of system design that demonstrates the AWTS can be automatically shut down if monitoring of treated effluent indicates high turbidity or, beginning in 2009, a disinfection system upset; or documentation that demonstrates that operational controls exist to insure system shut down if monitoring of treated effluent indicates high turbidity or, beginning in 2009, a disinfection system upset. An example of an acceptable operational control is a system that has the continuous monitoring device alarmed as to immediately alert engineering staff on watch to shut down overboard discharges from the system in the event of high turbidity levels or disinfection ineffectiveness in the treated effluent.

B. For continuous discharge:

- 1) No later than 60 days prior to the date a cruise ship wishes to commence discharge of AWTS effluent, the cruise line shall submit the following vessel specific information to Ecology:
 - a. Documentation on the type of treatment system in use on the ship including schematic diagrams of the system.
 - b. Documentation that the system is certified by the United States Coast Guard for continuous discharge in Alaska. If the certification has not yet been provided by the Coast Guard at the time the other documentation is submitted to Ecology, it may be submitted less than 60 days prior to commencement of discharge but in no event less than 30 days prior to commencement of discharge.
 - c. Provision for daily twenty-four hour continuous turbidity or equivalent monitoring of the quality of the effluent generated by the AWTS and, beginning in 2009, daily twenty-four hour continuous monitoring for disinfection effectiveness.
 - d. Documentation of system design that demonstrates the AWTS can be automatically shut down if monitoring of treated effluent indicates high turbidity or, beginning in 2009, a disinfection system upset; or documentation that demonstrates that operational controls exist to insure system shut down if monitoring of treated effluent indicates high turbidity or, beginning in 2009, a disinfection system upset. An example of an acceptable operational control is a system that has the continuous monitoring device alarmed as to immediately alert engineering staff on watch to shut down overboard discharges from the system in the event of high turbidity levels or disinfection ineffectiveness in the treated effluent.
 - e. Documentation that all treated effluent will receive final polishing for disinfection immediately prior to discharge.

- f. Copies of water quality tests results taken from the AWTS effluent during the preceding six months.
- g. A vessel specific plan that: identifies how effluent will be stored until the AWTS is repaired and which indicates the storage capacity of holding tanks; and includes a notification protocol for notifying Ecology of system shut down which occurs while within waters subject to this MOU.

If Ecology determines that the documentation provided is insufficient, it shall so notify the cruise line. The cruise line shall provide supplemental documentation as requested by Ecology. If Ecology and the cruise line are unable to agree on the supplemental documentation and cruise line elects to discharge from the AWTS, cruise line understands that any such discharge will not have been approved by Ecology and further that Ecology may take appropriate action, including, but not limited to, publicizing, such fact.

Any cruise ship discharging from an AWTS in waters subject to this MOU operates within the shipping lanes and this effectively means that vessels are more than a half a mile from shellfish beds with the possible exception of President's Point, Apple Tree Cove and Tyee Shoal for the 2008 cruise season. For specific information relative to shellfish protection measures, see *appendix x*.

C. The vessels that have submitted documentation under A or B above agree to:

- 1) Not discharge within 0.5 nautical miles of bivalve shellfish beds that are recreationally harvested or commercially approved to harvest as identified annually by the Department of Ecology. This season's locations include President's Point, Apple Tree Cove and Tyee Shoal as referenced in *Appendix x*.
- 2) Immediately stop all discharges when high turbidity occurs and, beginning in 2009, when a disinfection system upset condition occurs.
- 3) Immediately notify the Washington State Department of Health in the event of a disinfection system upset at (360) 236-3330 during office hours or (360) 786-4183 after hours (24 hour pager). The agreement to provide this notice is based on the understanding by CLIA-NWC that the Department of Health will not publicize the information provided unless it reasonably determines that a discharge presents a material public health risk.
- 4) Sample the quality of the treated effluent using a Washington state-certified laboratory at least one time per month while at port in Washington during each cruise season using the sampling requirements established per the United States Coast Guard, Captain of the Port, Southeast Alaska Policy for conventional pollutants continued compliance monitoring regime and as referenced in *Appendix vi*. Parameters sampled include pH, Biochemical Oxygen Demand (BOD), Fecal Coliform, Total Suspended Solids (TSS), and Residual Chlorine (RC).
- 5) Meet the limitations on discharge as set in Alaska regulations (*Appendix vi*) for BOD, TSS, pH, Fecal Coliform and Residual Chlorine.¹

- 6) Split samples with Ecology upon Ecology's request when sampling is conducted in Washington waters.
- 7) For vessels that have submitted documentation under B above (continuous discharge), conduct Whole Effluent Toxicity (WET) Testing once every two years for vessels homeported² in Washington and once every 40 port calls or turnarounds to a port in Washington for all other vessels.
- 8) Provide Ecology with duplicates of test results obtained for and provided to the State of Alaska to enable Ecology to monitor the quality of the effluent from such systems.
- 9) Notify Ecology at least a week in advance of sampling and to allow Ecology staff access to the ship in order to observe sampling events.
- 10) Notify Ecology if any material changes are made to the system.

Note 1: There is a presumption that meeting Alaska's standards means that Washington's Water Quality Standards are likely being met and that if Alaska's standards are not being met, Washington's Water Quality Standards are not being met.

Note 2: A "homeported" vessel is a vessel that makes a call or does a turnaround at a port in Washington at least 20 times per year.

2.1.4 The discharge of residual solids from either a type 2 marine sanitation device or an advanced waste water treatment system is prohibited in waters subject to this MOU, within 12 nautical miles from shore, and within the entire boundaries of the Olympic Coast Marine Sanctuary. All parties acknowledge that most of the Olympic Coast National Marine Sanctuary lies beyond 3 miles of shore and therefore is outside the jurisdiction of the State of Washington.

2.2 Hazardous Waste Management

2.2.1 The CLIA Global in consultation with the member lines of CLIA-NWC has developed, in conjunction with the Environmental Protection Agency (EPA), a national practice for the assigning of an EPA Identification Number to each cruise ship as the "generator" of hazardous wastes, which recognizes the multi-jurisdictional itineraries of a cruise vessel. EPA also proposes that the state where company offices are located may issue the national identification numbers provided the criteria and information submitted required for obtaining the number is standard for the United States. The State of Washington and CLIA-NWC agree to a uniform application procedure for the EPA national identification number in accordance with the Resource Conservation Recovery Act (RCRA) (*Appendix v*). The State of Washington shall have the right to inspect all such records upon written request to the cruise vessel operator. The State of Washington recognizes that in some cases EPA Identification Numbers may not be required under federal law for conditionally exempt small quantity generators.

2.2.2 *Appendix ii* includes the uniform procedure adopted by the member lines of CLIA-NWC for the application of RCRA to cruise vessels disposing of hazardous wastes in the State of Washington. The State of Washington accepts this procedure as the appropriate process for vendor selection and management of hazardous wastes in Washington. CLIA-NWC member lines agree to provide an annual report regarding the total hazardous waste offloaded in Washington by each cruise vessel.

2.2.3 The member lines of CLIA-NWC acknowledges that the state of Washington regulates some hazardous wastes differently than EPA and agrees, within the waters subject to this

MOU, to comply with the guidelines for specific waste streams found in *Appendix vii*.

- 2.2.4 The State of Washington and CLIA-NWC agree that all hazardous waste disposal records required by RCRA for cruise vessels entering a Washington port shall be available to the State of Washington upon written request to the cruise vessel operator.
3. The State of Washington and CLIA-NWC understand that the U.S. Coast Guard (USCG) has Federal jurisdiction over environmental matters in navigable waterways in the United States and conducts passenger ship examinations that include review of environmental systems, Safety Management System (SMS) documentation and such MARPOL-mandated documents as the Oil Record Book and the Garbage Record Book. Additionally, CLIA-NWC member cruise vessels will integrate such industry standards into SMS documentation that ensure compliance through statutorily required internal and third party audits.
4. The USCG has developed guidelines relating to the inspection of waste management practices and procedures, which have been adopted by the cruise industry. The State of Washington accepts the USCG Navigation and Vessel Inspection Circular and Environmental Systems Checklist (*Appendix iv*), which will be incorporated into USCG 840 Guidebook as the procedure to conduct waste management inspections on board cruise vessels. To reduce administrative burden on the cruise ship industry, the State of Washington agrees to first request from the USCG any records for cruise vessels entering waters subject to this MOU to the extent that those records are covered by the Memorandum of Agreement, dated May 25th, 2001, between the State of Washington Department of Ecology and the USCG. Other USCG records will be provided to the State directly by the CLIA-NWC member lines upon request.
5. The State of Washington recognizes that waste management practices are undergoing constant assessment and evaluation by cruise industry members. It is understood by the State of Washington and CLIA-NWC that the management of waste streams will be an on-going process, which has as its stated objectives both waste minimization and pollution prevention. Consequently, all parties agree to continue to work with each other in good faith to achieve the stated objectives. This may require additional meetings with the parties to this Agreement to discuss specific issues applicable to the cruise industry in the U.S.
6. The member lines of CLIA-NWC acknowledge that operating practices are required to comply with the applicable provisions of the Marine Mammal Protection Act, the Invasive Species Act and the State of Washington Ballast Water Management law, RCW Ch. 77.120. The member lines of CLIA-NWC agrees to acknowledge and comply with appropriate rules and regulations related to the Olympic Coast National Marine Sanctuary, including but not limited to the regulations for implementing the National Marine Sanctuary Program (subparts A through E and subpart O of Title 15, Chapter IX, Part 922 of the Code of Federal Regulations) and the International Maritime Organization (IMO) "Area To Be Avoided" off the Washington Coast.

7. This agreement does not prohibit discharges made for the purpose of securing the vessel or saving life at sea, provided that all reasonable precautions have been taken for the purpose of preventing or minimizing the discharge.
8. All parties acknowledge that ongoing discussions of environmental goals are recognized as a necessary component to the successful implementation of management practices for waste minimization and reduction.
9. Compliance, Modification and Review of MOU: CLIA-NWC members agree to immediately self-report non-compliance with any provision of this MOU to the Department of Ecology at the following 24-hour number: 425-649-7000. By December 1st of each year, a report shall be submitted to the Department of Ecology detailing the compliance with this MOU for each vessel operated by CLIA-NWC member lines that calls to a port in Washington for the previous cruise season. The reports should follow the format included in *Appendix viii*. All parties acknowledge that this MOU is not inclusive of all issues, rules or programs that may arise in the future. The State of Washington reserves the right to enter into additional MOUs to address or refine such issues, to take enforcement action in response to violations of state law, or to pursue appropriate legislation. All parties agree to at least one annual meeting to review the effectiveness of the MOU. The State of Washington and CLIA-NWC reserve the right to cancel this MOU upon 90 days written notice.
10. Amendments to the Memorandum of Understanding (MOU) will occur every three years starting in 2012. A request for proposed amendments will be posted on the Port of Seattle and Department of Ecology websites at the beginning of November of the year preceding the amendment adoption (e.g., in the beginning of November 2011 for 2012 adoption). All proposed amendments must be submitted within 21 calendar days of the posting.

A 45-day review period will follow for all of the MOU signatories to review and validate the proposed amendments (around mid January). This period is longer to account for the holiday period, if the timing is different, review periods may be adjusted accordingly.

Amendments that meet the criteria identified below will be then posted for a 30-day public comment period (around mid February).

At the end of the comment period, MOU signatories will review the comments and meet to decide which, if any, of the proposed amendments should be adopted.

Criteria for Proposed Amendments

All proposed amendments meeting the following criteria will be advanced for further review and comment:

- In order to be considered, proposed amendments must be submitted within three weeks of the posted request for proposed amendments.
- Proposed amendments should include only cruise ship activity within the boundaries of the MOU.

- The MOU, as amended, should not duplicate or replace existing regulations that govern cruise ships, however they may be more stringent.
- Proposed amendments must receive the sponsorship of one of the MOU signatories. (*Note: sponsorship does not necessarily mean that the signatory will support adoption of the proposed amendment.*)
- If none of the signatories support a proposed amendment, it will *not* be reviewed or considered for adoption.
- Proposed amendments must include
 - the basis for the amendment (e.g., what environmental concern it addresses)
 - how the amendment is applicable to or compatible with the MOU
 - the anticipated benefits of the amendment
 - potential impacts of the amendment
 - include scientific data that supports the proposed amendment as applicable
- In order for an amendment to be adopted, it must receive unanimous approval from the MOU signatories.

Exceptions

The only exception to this amendment process is an amendment proposed by one of the signatories and supported unanimously by the other two signatories.

11. Funding of Ecology Program

- 11.1 On behalf of its member lines, CLIA-NWC shall, by December 31 of each calendar year, reimburse Ecology for the costs incurred by Ecology to provide oversight and implementation of Appendix ix of the MOU (Statement of Work). The total reimbursement to Ecology for the calendar year 2016 will be a maximum of ten thousand dollars (\$10,000 U.S.) or equivalent to those funds collected by the Port of Seattle Tariff for 2016. For each calendar year after 2016, Ecology and CLIA-NWC will reach agreement by June 30th of the preceding year on the annual amount subject to reimbursement based on the Scope of Work (Appendix ix) and the annual *Cruise Vessel Wastewater Treatment Inspections Budget, by Object* prepared by Ecology.
- 11.2. The funds owed to Ecology under this section 11 will be assessed based on a Port of Seattle (“Port”) tariff item paid by the CLIA-NWC vessels calling at Port facilities. The terminal operator must collect the tariff assessment and remit the amount to the Port on the 15th of each month when there is cruise vessel activity at Port facilities. The Port must transmit the amounts collected from the terminal operators to CLIA-NWC no later than November 30 of each year. CLIA-NWC must transmit the amount received from the Port to Ecology no later than December 31 of each year.
- 11.3. Ecology will maintain an accounting of the work accomplished under Appendix ix at the end of each cruise season. If the funds received by Ecology from CLIA-NWC exceed the amount spent by Ecology, Ecology will hold the excess funds and credit them against Ecology’s costs for the following year’s work under Appendix ix and any excess funds upon cancelation of the MOU will be returned to CLIA-NWC.

11.4. The parties agree that the Port and CLIA-NWC are obligated to forward only the funds that each collects from their respective transmitting parties and that they are not liable for any shortfall amounts.

11.5. Records.

11.5.1. Records Maintenance. Ecology and the Port will each maintain records that provide accurate information of all direct and indirect costs expended by each of them in performing their respective obligations under this Section 11. Ecology and the Port will make these records available for inspection, review, or audit by personnel representing Ecology, the Port, Washington State Auditor, and federal auditors.

11.5.2. Disclosure. Records and other documents, as per Section 11.5.1, in any medium, furnished by Ecology to the Port and the Port to Ecology will remain the property of the furnishing party, unless otherwise agreed. Ecology and the Port are subject to state public disclosure laws. The receiving party will notify the other of requests for public disclosure of the furnishing party's documents by third parties. The receiving party will deny requests for inspection or copies of the documents if permitted by law. If the receiving party intends to make the documents available for disclosure, it is up to the furnishing party to determine if it will seek judicial relief to prevent the disclosure.

11.5.3. Rights in Data. Unless otherwise provided, data created by Ecology under this Agreement as identified under the terms of Section 11.5.1 shall be "works for hire" as defined by the U.S. Copyright Act of 1976 and shall be owned by Ecology. Data shall include, but not be limited to, reports, documents, pamphlets, advertisements, books, magazines, surveys, studies, computer programs, films, tapes, and/or sound reproductions. Ownership includes the right to copyright, patent, register, and the ability to transfer these rights. Notwithstanding the foregoing, data and documents created by Ecology under this Agreement may be subject to state public disclosure laws and no public agency that discloses or transmits such documentation under a proper public disclosure request will be liable to Ecology for such disclosure or transmission.

11.6 Independent Capacity:

The employees or agents of each party who are engaged in the performance of this Agreement shall continue to be employees or agents of that party and shall not be considered for any purpose to be employees or agents of the other party.

Appendix xi includes a summary of amendments.

In recognition of the mutual understandings discussed herein, the parties hereto affix their signatures. This amendment shall be effective upon the date and signature of the final signing party, the Department of ecology.


Washington State Department of Ecology

04/04/2016
Date


Port of Seattle

5-27-2016
Date


Cruise Lines International Association
North West & Canada

Mar 8/2016
Date

APPENDICES
MEMORANDUM OF UNDERSTANDING

Appendix i	List of CLIA-NWC Member Lines
Appendix ii	CLIA Standards
Appendix iii	Navigational Chart of the waters subject to this MOU
Appendix iv	USCG Navigation & Vessel Inspection Circular and Environmental Systems Checklist
Appendix v	Uniform application procedure for EPA National ID Number as per Resource Conservation Recovery Act.
Appendix vi	Alaska Regulations
Appendix vii	Washington Hazardous Waste Management Best Management Practices
Appendix viii	Boilerplate Compliance Letter
Appendix ix	Ecology Statement of Work
Appendix x	Bivalve Shellfish Beds
Appendix xi	Summary of Amendments

Appendix i

List of CLIA-NWC Member Lines

Carnival Cruise Lines
Celebrity Cruises
Compagnie du Ponant
Crystal Cruises
Disney Cruise Line
Holland America Line
Norwegian Cruise Line
Oceania Cruises
Princess Cruises
Regent Seven Seas Cruises
Royal Caribbean International
Silversea Cruises

Appendix ii

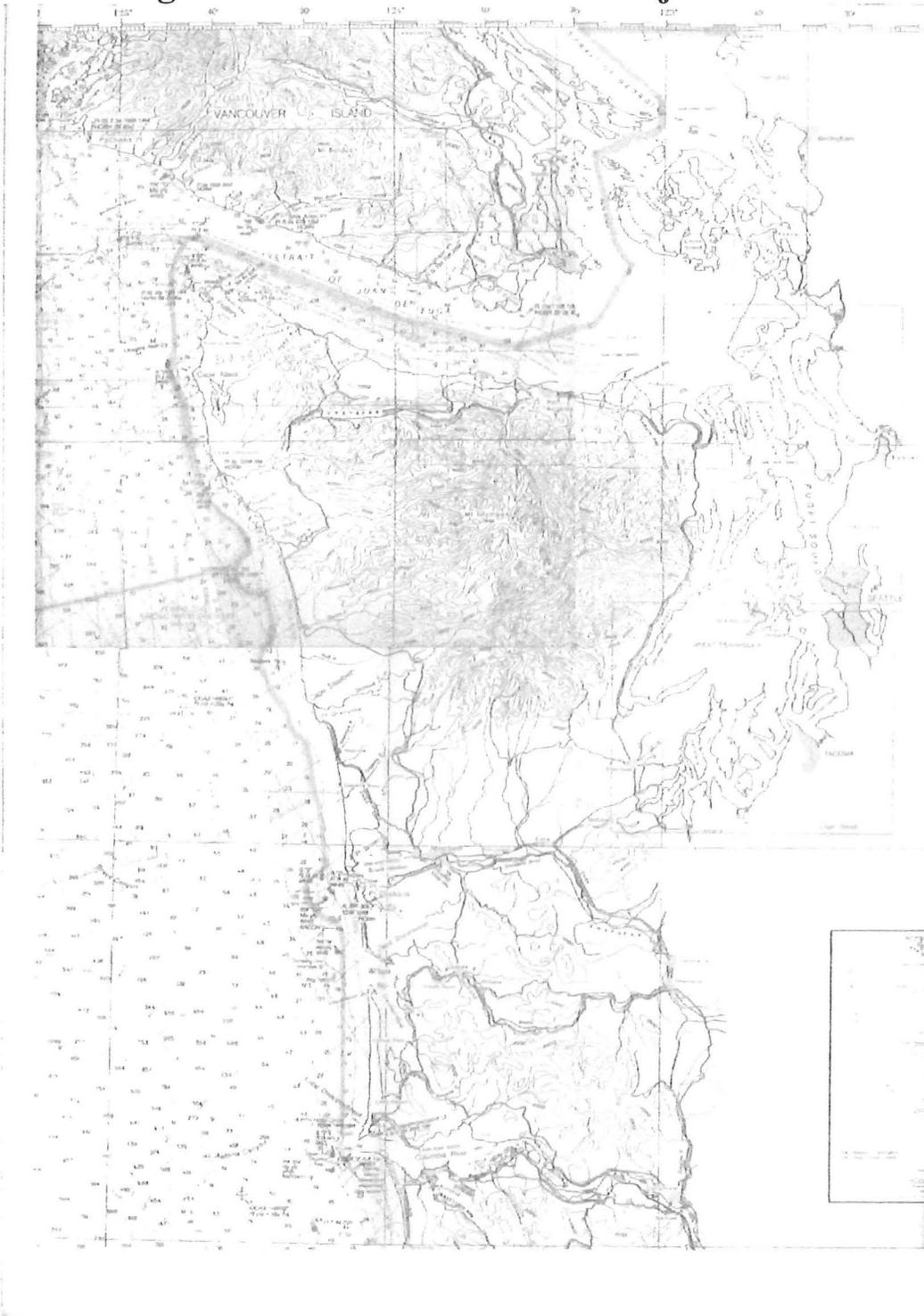
Cruise Industry Policies – Environmental Protection

CLIA is the world's largest cruise industry trade association with representation in North and South America, Europe, Asia and Australasia. Dedicated to the promotion of safe and secure cruise ship environment, CLIA Members have no higher priority than the safety of guests and crew. With the advice and consent of its membership, CLIA advances policies intended to enhance shipboard safety, security, and environmental stewardship, in some cases calling for best practices in excess of existing legal requirements. Annually, the chief executive of every CLIA oceangoing Cruise Line Member specifically verifies his or her line's implementation of every CLIA policy.

Information on the CLIA Cruise Line Member's environmental policies is available from:

<http://www.cruising.org/about-the-industry/regulatory/industry-policies/environmental-protection>

**Appendix iii:
Navigational Chart of Waters Subject to this MOU**



Appendix iv



Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: G-MOC-2
Phone: (202) 267-2978
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COMDTPUB P16700.4
NVIC 04-04

13 FEBRUARY 2004

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 04-04

Subj: ENVIRONMENTAL INSPECTION CHECKLIST; ADDENDUM TO FOREIGN PASSENGER VESSEL EXAMINATION BOOK, CG-840

- Ref: (a) General Accounting Office (GAO) Report of February 2000 on "MARINE POLLUTION - Progress Made to Reduce Marine Pollution by Cruise Ships, but Important Issues Remain."
 (b) Title XIV "Certain Alaskan Cruise Ship Operations" contained in Section 1(a)(4) of Public Law 106-554 enacted on December 21, 2000
 (c) 33 CFR 159, Subpart E - Discharge of Effluents in certain Alaskan Waters by Cruise Vessel Operations
 (d) Memorandum of Understanding (MOU) dated March 14, 2000 entered between Florida Department of Environmental Protection (FDEP) and the Florida-Caribbean Cruise Association (FCCA), a representative of the cruise industry in Florida
 (e) International Council of Cruise Lines (ICCL) Industry Standard E-01-01, "Waste Management Practices and Procedures"
1. **PURPOSE.** As the result of a GAO report and Bluewater Network petition, the FCCA, FDEP, and the Coast Guard began discussing the means to improve and ensure the compliance of large passenger vessels with existing Federal and state environmental standards. These discussions have resulted in the checklist contained in Enclosure 1. This checklist is an extensive list of possible inspection items related to pollution prevention equipment, operation, plans and records. It is intended as a job aid to be used by Coast Guard personnel during certificate of compliance examinations onboard foreign-flagged passenger vessels. Additionally, this document does not change or establish new Coast Guard authorities, but is intended to provide

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G																										
H																										

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NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 04-04

a framework and focus on responsibilities currently possessed. This checklist will be incorporated into a future revision of the existing Foreign Passenger Vessel Examination Book, CG-840.

2. ACTION. Officers in Charge Marine Inspections (OCMIs) and their designated marine inspectors should:
 - a. Bring this circular to the attention of appropriate individuals in the marine industry within their zones, especially those in the industry who are not members of ICCL. This circular is available on the world-wide web at: <http://www.uscg.mil/hq/g-m/nvic/index.htm>. Internet release authorized.
 - b. Follow the guidance in this circular while conducting Certificate of Compliance examinations on foreign-flag passenger vessels, choosing one of the five waste streams to inspect.
 - c. If any non-conformities are noted between the procedures listed in the vessel's Safety Management System (SMS) documentation and the actual procedures being followed on the ship, notify the Company immediately and follow the guidance contained in NVIC 4-98. If major non-conformities are identified, an OCMI should use risk-based decision-making and exercise discretion with regard to the level of control action utilized on the vessel.
 - d. If deficiencies or discrepancies are noted in the execution of the hazardous waste management program, notify the applicable Environmental Protection Agency (EPA) office or the State Resource Conservation and Recovery Act (RCRA) program office immediately.
3. DIRECTIVES AFFECTED. The existing Foreign Passenger Vessel Examination Books CG-840, CV1, CV2 and CV3 will be revised to include the checklist contained in Enclosure (1), as soon as practicable.

4. BACKGROUND.

- a. From 1993 to 1998, nearly 2400 documented cases of pollution by foreign-flagged vessels were investigated, of which nearly four percent involved passenger vessels. As a result, Congress requested the GAO to examine the nature and extent of cruise ship involvement in these incidents; current and planned federal agency enforcement efforts; and cruise company actions to prevent future recurrences of pollution incidents. On February 1, 2000, the GAO completed a report to Congress, reference (a), recommending that the Coast Guard initiate discussions with the cruise ship industry, other federal and state agencies, and environmental groups as appropriate, on the need for improved water quality standards for gray water and black water discharged from cruise ships and other vessels. In addition, the report recommended an assessment of the need to periodically monitor the water quality of these discharges. This GAO report is available on the world-wide web for review at <http://frwebgate.access.gpo.gov/cgi-bin/useftp.cgi?IPaddress=162.140.64.21 &filename=rc00048.pdf&directory=/diskb/wais/data/ao>.

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 04-04

- b. At the time reference (a) became public, federal responsibilities were in place for various vessel waste stream control systems including effluent from the oily water separators, effluent from the sewage treatment plants, hazardous waste, and garbage. Subsequently, legislation was passed and regulations were promulgated (see references (b) and (c)) that expanded federal responsibilities to include requirements for gray water discharge and for monitoring and sampling of black water and gray water waste streams on cruise ships in Alaska¹.
 - c. On March 14, 2000, the Florida Caribbean Cruise Association (FCCA) signed a MOU with the Florida Department of Environmental Protection (FDEP), reference (d), that is available for review on the world-wide web at http://www.iccl.org/resources/fdep_mou.htm. Under this MOU, the FDEP recognized ICCL's Industry Standard E-01-01, "Waste Management Practices and Procedures," reference (e), as meeting or exceeding the standards set forth in Florida laws and applicable regulations. Though not a party to the MOU, the Coast Guard participated in discussions that resulted in the MOU. In the MOU, the FDEP recognized the Coast Guard as the primary federal agency with responsibility for examining passenger vessel waste streams. As a result, the Coast Guard worked in conjunction with FDEP and ICCL to develop a checklist related to monitoring of hazardous waste and disposal.
5. DISCUSSION. The enclosed checklist reflects the collective work of the USCG, FCCA and FDEP and has been tested for use by several Coast Guard Marine Safety Offices. The checklist is not a listing of all items to be inspected; rather the marine inspector should use it as a reminder of the various items that may be examined during a certificate of compliance examination of a foreign passenger vessel. As always, the marine inspector's experience, knowledge, and judgment will determine the depth and scope of each examination. However, each marine inspector should select at least one waste stream for a thorough and detailed inspection during every annual or periodic foreign passenger vessel examination. The stream selection will be based on the marine inspector's discretion, taking into account the inspector's impression about the condition of the various waste stream systems on board the vessel. The selection will also be based on the need to inspect all systems over a reasonable period of time, whether a particular waste stream is applicable for examination (e.g. there may be no requirement applicable to gray water at the port of examination or the vessel does not discharge/offload hazardous waste), and maintaining randomness so that the operator has no advance knowledge of the waste stream that may be selected. During the examination, the operator should be able to present to the marine inspector a clear description of the practices and procedures for handling each waste stream and also to produce such records, as the inspector might need to verify compliance with these guidelines. In performing pollution prevention examinations, inspectors should be especially familiar with the contents of the Marine Safety Manual (MSM), Volume II, Material Inspection, Section B, Chapter 6, "Pollution Prevention," and Section C, Chapter 2, Paragraph K, "Marine Sanitation Devices" and this NVIC. Marine inspectors should also be familiar with ICCL's Industry Standard E-01-01 "Waste Management Practices and Procedures", reference (e), and the vessel's Safety Management System (SMS) documentation, which should address all the elements discussed in

¹ Presently, there are no other federal requirements applicable to the control or filtering of gray water discharge from foreign-flagged passenger ships.

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this standard. Note reference (e) is available at the ICCL website at http://www.iccl.org/resources/exhibit_a.pdf. If any elements are not addressed there should be a rationale for its omission. The different waste streams may be categorized as follows:

- a. Oil pollution prevention systems: include the oily water separator, the fuel/lubricating oil transfer, and sludge containment system. The marine inspector should verify that the oily water separator is operating within the desired range; that the alarms are working; that crew is knowledgeable and operating instructions are posted; and that maintenance is carried out at regular intervals. Actual piping may be verified against the approved piping diagram if the marine inspector notices modifications made to the system.
- b. Black water system: includes marine sanitation devices (MSDs) and other systems to treat, store, and discharge sewage. The checklist is designed to guide the marine inspector through some basic questions to ascertain whether the system is working as designed and that the crew is properly trained in its operation. For example, does the MSD appear to be properly installed? Is the MSD approved for use on this particular vessel (USCG Approved, IMO or Administration Approved to MARPOL Annex IV)? Is there adequate capacity or throughput for the number of persons on board? Are maintenance procedures being followed, including procedures outlined in the vessel's SMS? Are there records of expendables being ordered: filters, chemicals, et cetera? Are the units operating within the manufacturer's design specifications? Are there clear and simple operating instructions? Is the crew knowledgeable in the use of the equipment/system?
- c. Hazardous waste: includes dry cleaning (containing Perchloroethylene, or commonly-called "PERC") waste, used paints and thinners that contain hazardous substances, silver-bearing photo-processing waste, cleaning solutions and other items that contain hazardous substances. Each vessel may vary in both the type and volumes of hazardous waste generated depending on the technology and processes used aboard. This checklist is designed to evaluate onboard management of hazardous waste streams, to ensure that hazardous constituents are not released into the environment, and that accountability is demonstrated via adequate waste disposal records.
- d. Non-hazardous waste: includes shipboard garbage including plastics and synthetic material, medical waste, food wastes and recyclables such as glass, cardboard, aluminum and metal cans. Items to be checked should include: disposal and incineration records; waste sorted to prevent hazardous waste from entering the non-hazardous waste stream; no plastics or synthetics discharge overboard; separate and proper disposal of hazardous and non-hazardous incinerator ash; and proper disposal of cooking grease from grease traps.
- e. Gray water system: includes discharges from galley, sinks, washbasin drains, showers, and baths, excluding drains and sinks from medical spaces. These may be held in large tanks before being pumped overboard. The handling and discharge of gray water will *vary* from ship to ship and the inspector should ensure the procedures followed by the ship correspond to those described in its SMS documentation. If gray water is directed to MSD systems, the marine inspector shall ensure that combined gray water/black water throughput does not exceed the throughput of the MSD systems. Other waste streams such as hazardous waste

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or medical waste must also not be mixed with gray water. Drains from hospitals, photo labs (if hazardous substances are used and stored therein), and slops, must be separate from the gray water system.



T. H. GILMOUR
Rear Admiral, U. S. Coast Guard
Assistant Commandant for Marine Safety,
Security, and Environmental Protection

Encl: (1) Foreign Passenger Vessel Pollution Survey Exam Book (CG-840 PSEB)

United States Coast Guard



**FOREIGN PASSENGER VESSEL
POLLUTION SURVEY EXAM BOOK
(FOR ALL PASSENGER VESSELS)**

Name of Vessel	Flag <input type="checkbox"/> No Change
IMO Number	Case Number
Date Completed	
Location	
Senior Marine Inspectors / Port State Control Officers	
1.	5.
2.	6.
3.	7.
4.	8.

Use of Foreign Passenger Vessel Pollution Survey Exam Book

This Checklist is an extensive list of possible examination items related to pollution prevention equipment, operation, plans and records. It is intended as a job aid to be used by Coast Guard senior marine inspectors during boardings of foreign-flagged passenger vessels. It is not the Coast Guard's intention to inspect all the items listed in the checklist at every exam; rather the inspector should use it as a reminder of the various items that may be examined during a foreign passenger vessel certificate of compliance examination. As always, the inspector's experience, knowledge, and judgment will determine the depth and scope of each examination; however, the inspector should select at least one waste stream for a thorough and detailed inspection. The stream selection will be based on the marine inspector's discretion, taking into account the inspectors impression about the condition of the various waste stream systems on board the vessel, weighing the need to inspect all systems over a reasonable period of time, and maintaining randomness so that the operator has no advance knowledge of the waste stream that may be selected.

It is incumbent on the vessel operator to be familiar with this checklist. The individuals responsible for different segments of the various waste streams should be able to present to the inspector a clear description of the practices and procedures for handling each waste stream and also to produce such records, as the marine inspector might need, to verify compliance with these guidelines. Inspectors should obtain a clear picture about the selected waste stream(s) and associated environmental processes by observing onboard practices and through questioning of the individuals that perform these practices. Inspectors should avoid circumstances in which a shore-side representative is the sole company liaison during the environmental inspection.

As a port state responsibility, marine inspectors and port state control officers must verify that the vessels and their crews are in substantial compliance with international conventions and applicable U.S. laws. The marine inspectors and port state control officers, based on their observations, must determine the depth and scope of the examination.

This document does not establish or change Federal laws or regulations. References given are only general guides. Refer to IMO publications, United States Code, Code of Federal Regulations, the Port State Control Job Aid, NVIC's, and any locally produced guidance for specific regulatory references. Marine inspectors should be especially familiar with all equipment standards and the contents of the Marine Safety Manual (MSM), Volume II, Material Inspection, Section B, Chapter 6, "Pollution Prevention," Section C, Chapter 2, Paragraph K, "Marine Sanitation Devices," and Volume IV, Technical, Chapter 3, Section K, "Special Engineering Applications for Pollution Prevention".

NOTE: Guidance on how to examine foreign passenger vessels for compliance with pollution prevention equipment standards, can be found in NVIC_-04.

Conducting the exam

- Complete Certificates/Equipment Data/Records information (Section A).
- Review SMS Environmental Procedures (Section B).
- Examine MSD, OWS, Garbage logs, Oil Record Book as per CG-840 Exam books.
- Determine if gray water requirements apply in the vessel's AOR and in inspection zone (If not, do not select C2)
- Make waste stream selection for a detailed exam (Section C)
Section
 - C1 Oil Pollution Handling Waste Stream (Bilge, Sludge, Fuel, Lube Oil etc)
 - C2 Gray Water Waste Stream
 - C3 Black Water/Sewage Waste Stream
 - C4 Hazardous Waste Stream
 - C5 Non-hazardous Waste Stream

NOTE: Many items listed are not mandatory requirements, but fall under the umbrella of "Management Policy". Marine inspectors should be familiar with ICCL's Industry Standard E-01-01 "Waste Management Practices and Procedures," and SMS documentation on all cruise ships should address all the elements discussed in this standard. If any elements are not addressed there should be a rationale for its omission. If the areas listed are corporate policy as set out in the company's SMS documentation, then the vessel should be held accountable for the actions as required in 33 CFR 96 and SOLAS Chapter IX. If state or local laws exist that are more stringent than U.S. or international law, then the local or state laws must be followed. These vessels are not exempt simply because they are a foreign-flagged vessel.

Pre-inspection Items

- Review MISLE records
- Deficiency History
 - Critical Profile
- Review Court-ordered requirements and environmental audit reports, if applicable
- CG Activity History
- Print Center for Disease Control Green Sheet
- <http://www2.cdc.gov/nceh/vsp/vspmain.asp>

Post-inspection Items

- Issue letters/certificates to vessel
- Issue Port State Control Report of Inspection-Form A
- Issue Port State Control Report of Inspection-Form B (if needed)
- Complete COC endorsement (include "Waste Stream" area inspected)
- MISLE activity case

Certificates / Reports (complete at annual exam or to update MISLE Certificate data)

Name of Certificate	Issuing Agency	ID #	Port Issued	Issued Date	Expiration Date	No Change	Endorsement Date
International Oil Pollution Prevention (leave blank if completed in the CVE 840 book)							
International Sewage Pollution Prevention Certificate (if issued)							
International Anti-Fouling System Certificate (if issued)							
State Certificates of Emission (only if applicable)							
State Certificates of Ballast Water (only if applicable)							

Equipment Data

Equipment Name	Capacity	US or MEPC Approval Nr	Authority/Agency	No Change	Date of approval/acceptance
Oily Water Separator	Throughput				
Oily Water Separator	Throughput				
Oily Water Separator	Throughput				
Waste Oil Holding Tank(s) Capacity(ies)					
Marine Sanitation Device Certificate of Type Test	Volume/day				
Marine Sanitation Device Certificate of Type Test	Volume/day				
Marine Sanitation Device Certificate of Type Test	Volume/day				
Black Water Tank Capacity					
Gray Water Tank Capacity					

Pollution Records

	Date	Location	Amount
Last time bunkers were taken on			
Next time bunkers will be taken on			
Last time sludge/oily bilge water pumped ashore			
Last operation of OWS or overboard discharge			
Garbage incinerated			
Garbage discharged overboard at sea			
Garbage discharged ashore			
Required U.S. Ballast Water Report			

SECTION A
Certificates/Equipment Data/Records
Information

<p><u>Section B</u> Environmental Procedures</p>
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Environmental Procedures can be found in the ship's Safety Management System (SMS) documentation or in company policies and maintenance manuals, inspection logs, oil record books, etc. Marine inspectors should question the ship staff on procedures and normal operations, and compare the answer to what is written in procedures and manuals. For each waste stream, persons with specific responsibilities should be questioned at each step in the waste handling process. Inspectors should require being shown specific process step by the person responsible for that step. Inspectors should ask extensive questions regarding availability of documents and supporting material relevant to the individual performing the specific activity in the waste handling process. Other questions should focus upon training provided and reporting procedures when problems with waste management processes are identified.

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| <ul style="list-style-type: none"> <input type="checkbox"/> Current pollution prevention records <ul style="list-style-type: none"> • Person-in-charge designated and qualified (certificated/licensed) • Transfer equipment tests and inspections • Declaration of Inspection (available and retained for at least one month) • Ship to provide PMS logs and required PMS activities for the selected waste stream for verification. • Verify SMS incorporates PMS activities and logs for all Waste Streams. • Court required logs to track oil usage in systems having oil to sea interfaces (if applicable) • Recent environmental audit reports when available <input type="checkbox"/> Oil Record book (Part 1) (spot-check) <ul style="list-style-type: none"> • Each operation signed by person-in-charge • Each complete page signed by master • Book maintained for 3 years • Use of proper codes and version for vessel • Transfer receipts/manifest match oil record book entries • OWS rates not exceeding design criteria • Incinerator rates not exceeding design criteria • Consistent bilge water management patterns • Comparison of oil record book entries to vessel's daily tank sounding book <input type="checkbox"/> Shipboard Oil Pollution Emergency Plan <ul style="list-style-type: none"> • Approved by Administration (class society) • Updated and current • In English and working language of crew • Correct contact numbers for National and Local Authorities (Port Authorities for ports visited not every COTP) • Immediate Actions List • Non Mandatory Provisions (if listed in SOPEP). Spill kits located and inspected <input type="checkbox"/> MARPOL Annex V <ul style="list-style-type: none"> • Placard posted • Record book • Garbage management plan <input type="checkbox"/> Non-Hazardous Waste Disposal Documentation (if applicable) <ul style="list-style-type: none"> • EPA Generator ID# _____ (if applicable) • Records • Non-Hazardous Waste Manifests <input type="checkbox"/> Recycling policy being followed (requires a detailed assessment) <input type="checkbox"/> Hazardous Waste Disposal Documentation (if applicable) <ul style="list-style-type: none"> • EPA Generator ID# _____ (if applicable) • Records • Uniform Hazardous Waste Manifests • Land Disposal Restriction Notification Certification Forms (LDR) • Shipping Document for Regulated Medical Waste • Interview Person(s) responsible for landing of wastes • Specialized training for Responsible person(s) and related documentation • Evidence of disposal in other countries to bona fide receivers documented | <p>33 CFR 155.700</p> <p>33 CFR 156.150</p> <p>33 CFR 156.170</p> <p>ISM Code/SMS</p> <p>33 CFR 96</p> <p>MARPOL Annex. 1/20</p> <p>33 CFR 151.25</p> <p>MARPOL Annex. 1/26.1</p> <p>33 CFR 151.26</p> <p>MARPOL Annex V/9</p> <p>U.S. Local Regulations as applicable</p> <p>Shipboard policy SMS</p> <p>40 CFR 262</p> <p>Shipboard policy SMS</p> |
|--|--|

Oil pollution prevention systems include, but are not limited to, the oily water separator, other filtering or flocculation devices, bilge water management, fuel/lubricating/waste oil transfer, purifier and lantern space sludge collection, transfer and containment systems. Marine inspectors should verify that the oily water separator is operating within the required range; that the alarms are working and sound at appropriate levels; that crew is knowledgeable and operating instructions are posted; that maintenance is carried out at regular intervals and repairs are documented; and that system operation and maintenance are in accordance with the vessel's SMS. Marine inspectors should verify the actual pollution prevention system piping against vessel's approved piping diagrams, if modifications such as blanked off tees, connections points, hoses, or temporary piping segments associated with these systems are observed.

- Oily Water Separator (OWS)
 - Verify bilge piping, no modifications & matches approved diagram (direct to OWS, to holding tank, etc.)
 - No blanked flanges, pipe caps, or dead-ended valves, or tees on inlet or outlet piping
 - Evidence of bolting/unbolting of associated piping segments
 - Recent paint on pipe segments
 - Observe general housekeeping and cleanliness
 - Witness operational test of OWS, evaluate operator competency. System operating in published ranges
 - Verify unit is processing contaminated source. Operate system for sufficient time (15 minute minimum) to identify reduction in contaminated source
 - Test 15 ppm Oil Content Meter and alarm
 - On units with multiple Oil Content Meters, compare readings
 - Ensure sample analyzed by Meter is OWS output (Trace sample line for presence of unacceptable clean water connection)
 - Verify no electrical bypasses, jumpers, extra switches on or within unit or Meter control panel
 - Verify system automatically re-circulates (3-way valve) or shuts down when >15ppm. Verify proper operation of valve
 - Verify proper operation of system backflush or oil purge cycle
 - Visually sample processed water for gross contamination (sheen or visible oil)
 - Compare ship's operational maintenance routine with actual Preventative Maintenance conducted. Request proof/documentation of maintenance completed (used consumables from OWS, receipts of service, technician reports, contractor disposal records)
 - Review meter calibration records
 - Review strip charts if fitted
 - Examine other machinery space overboard piping for unusual connections
 - Review records pertaining to system repairs

- Oil Pollution placard posted 33 CFR 155.450
- Oil Transfer Procedures 33 CFR 154.340
 - Posted / available in crew's language 33 CFR 155.720
 - Person in Charge (PIC) fluent in English or language mutually agreed upon w/ shoreside PIC 33 CFR 155.750
 - Format in CFR order or cross reference index page 33 CFR 154.310
 - List/description of products carried by vessel
 - Description of transfer system including a line diagram of piping system (pumps, vents, valves, alarms, shutoffs, etc.)
 - Number of persons required on duty
 - Duties by title of each person
 - Means of communication (two-way voice)
 - Procedures to top off tanks and disconnect
 - Procedures to report oil discharges
 - Emergency response procedures (fire, spill, human exposure)

- Standard discharge connection MARPOL Annex 1/19
- Fuel/lube/sludge oil fill, vent & overflow discharge containment 33 CFR 155.430
 - Size (<1600GT/2 bbl, >1600GT 1 bbl) 33 CFR 155.320
 - Fixed (Built after 30Jun74) or Portable (before 30Jun74)
 - Drains
 - Scupper closures

- Prohibited oil spaces (no oil/hazardous substances carried fwd of collision bulkhead) 33 CFR 155.470

- Lighting at each Transfer Operations Work Area 33 CFR 155.790
 - Adequate
 - Located/Shielded to not interfere with navigation
- Oil transfer hose (if vessel uses to transfer in U.S. waters) including Lifeboat/Tender Hoses 33 CFR 155.800/805
 - Condition 33 CFR 154.500
 - Markings (MAWP, Mfg. Date, Test date) - 33 CFR 156.170
 - Hose assembly requirements (blanked off if not new, gas free or in use)
 - Tests and inspections
- Bilge Water Management MARPOL Annex I
 - Examine machinery space bilges (stem to stem)
 - Contamination / oily residues in bilges on bulkheads, piping, structures, within roseboxes
 - Leakage from systems and engines into machinery spaces (may not be seen during port ops)
 - Engine oil usage, quantities, where lost, consumed or in bilges
 - Evidence of recent cleaning of systems, equipment and components
 - Status of oily bilge water tanks, last cleaned, at capacity
 - Adequate capacity all tanks
 - Levels of tanks during inspection — high or low?
 - If tanks near full — what are the vessel's processing plans?
 - Evidence of detergent usage (Note- emulsions cannot separate in gravity separator and are likely to result in discharges over 15 PPM)
 - Other methods to discharge bilge water
 - Evidence of excess water ingress, pump glands, seals, valve glands
 - Portable (diaphragm /other) pumps present
 - Hoses, fittings, and connections in areas — usage unknown
 - Unlocked overboard valves on bilge, bilge & ballast, salt water service
 - Seal management program-used
 - Designated clean or exempted areas — oil free status
 - Lifeboat / Security / Tender vessel engineering systems leak free
 - Lifeboat / Security / Tender vessel bilges clean
 - Lifeboat / Security / Tender vessel- oily bilge handling when leakages present (when in use off vessel or once reloaded)
- Waste/Sludge oil incineration
 - Tests and inspections
 - Record keeping
 - Incinerator operates with sludge / waste oils
 - Clean / dirty furnace, evidence of use
 - Operators capable & prove operation
 - Purifier sludge tanks full / empty
 - Connections to bilge main or other areas
 - Transfer pump operable
 - Transfer pump to sludge system, ashore, incinerator settler only
 - Estimated quantities of sludge produced — normal or excessive (fuel sludge production can exceed 2% of total fuel used)
- Systems with Oil to Sea Interfaces
 - Oil lubricated stern tubes, bow and stern thruster seals, fin stabilizer seals, etc.
 - Exterior examination in way of systems for evidence of leaking seals
 - Presence of barrels, drums, hoses, pumps, and other equipment/supplies/arrangements necessary to refill systems at equipment.
 - Check consumption records if SMS or environmental compliance programs require such records.

<u>Section C2</u> <u>Gray Water Waste Stream</u>

Gray water system includes discharges from galley, sinks, washbasin drains, showers, and baths. These may be held in large tanks before being pumped overboard. The handling and discharge of gray water will vary from ship to ship and the marine inspector should ensure the procedures followed by the ship correspond to those described in its SMS documentation. If gray water is pumped through a/the Marine Sanitation Device(s) (MSD), ensure that the total volume does not exceed the MSD's capacity. Other waste streams such as hazardous waste or medical waste (RCRA biomedical wastes) must not be mixed with gray water. Drains from hospitals (U.S. restriction), photo labs (if commingled with hazardous wastes), slops, must be separate from the gray water system.

Sources

- Galley (ex. Dishwashers, floor drains, sinks)
- Showers/Baths & washbasin drains
- Laundry
- Deck drains throughout vessel

(Clean Water Act)
 33 USC 1251 et seq.
 33 CFR 159.300
 Subpart E for (D17)
 Local Regulations
 ISM Code
 33 CFR 96

- Prohibited Sources (hazardous materials, bilges, photo shop & print shop if hazardous wastes are commingled, hospital spaces (U.S. only), etc.)
- Evidence of other drained fluids into scuppers or other entry points (photo lab, hospital, specialty spaces)
- Drains from spaces containing machinery (fan rooms, hotel equipment, etc.) oil free or segregated
- Connections to the Black Water System (if permitted in MSD Operation Manual, if so, is MSD capacity sufficient?)
- Connections to Ballast Water System
- Number of tanks
- Total tank capacity _____ m³
- Volume Produced _____ (m³ per day)
- Maximum number of days in port without discharging.
- Current capacity sufficient for persons on board and time in port?
- Review vessel's gray water handling procedures (SMS).
- Ensure that Quality Assurance / Quality Control Plan is vessel specific.
- Is Gray water processed and discharged?
- What are Gray water disposal procedures: Shore and at Sea. (company policy)
- Does vessel have sampling procedures? (if so, review)
- Types of tests performed, equipment and useable testing supplies readily available?
- Sampling equipment/supplies useable and available?
- How often do they take samples? Review samples record book.
- What are the state, federal and local regulations for gray water discharge?
- Responsible crew interviewed
- Disposal and Records
 - Shore (receipts available)
 - At sea (logs maintained)
 - Sampling/Testing (logs maintained)
 - Note some gray water treatment employs advanced ultra-filtration systems, these systems claim to reduce gray water waste by 85% - 90%, or more.
 - Alaska - Effective July 2001, Operators of cruise vessels carrying 500 or more passengers & transiting applicable waters of Alaska are restricted in where they may discharge effluents & will be required to perform testing of sewage & gray water discharges. The Coast Guard will inspect, monitor, & oversee this process to ensure compliance with applicable water quality laws & regulations. (33 CFR 159)

Black water system includes MSDs and other systems to collect, treat, store, and discharge sewage. This checklist is designed to guide the marine inspector through some basic questions to ascertain whether the system is working as designed and that the crew is properly trained in its operation. For example, does the MSD appear to be properly installed? Is there adequate capacity for the number of persons on board? Are maintenance procedures, including SMS procedures, being followed? Are there records of expendables being ordered: filters, chemicals, et cetera? Are the units operating within the manufacturer's design specifications? Are there clear and simple operating instructions? Is the crew knowledgeable in the use of the equipment/system?

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| <ul style="list-style-type: none"> <input type="checkbox"/> Sources <ul style="list-style-type: none"> • Toilets, Urinals, scuppers • All Drainage from Medical Premises (U.S. restriction) • System installed, maintained and operated in accordance with approved plans and manufacturers specifications. • Tank Capacity and Volume Produced • Current volume in tanks • Modifications documented
 <input type="checkbox"/> Operations and Treatment (new section) <ul style="list-style-type: none"> • Chemical/Biological treatment & protective equipment • Chemical Treatment Level • Sufficient chemicals, additives, approved cleaning materials onboard. (enzymes, "Gamazyme", chlorine) • Compressors operating, inlet filters maintained • Vacuum system operable, if applicable • Flow indicators clear — indicating flow • Last system cleaning • Macerator operating maintenance • Methods to dilute discharge? • Operating instructions/SMS procedures
 <input type="checkbox"/> U.S. Marine Sanitation Device Requirements <ul style="list-style-type: none"> • Type (II, III) • Nameplate (Should be designed to resist efforts of removal or efforts to alter the information) • Placard • Proper operation (macerators, treatment chemicals) and structural integrity, no leaks
 • Certificate of Type Test. For Foreign Flag Vessels in U. S. Waters
 A foreign flag vessel that has a "Certificate of Type Test" under MARPOL Annex IV indicating that its sewage treatment plant meets the test requirements of Resolution MEPC.2 (VI) of the International Maritime Organization (IMO) will be accepted by the Coast Guard as being in compliance with 33 CFR 159.7(b) or (c). The Certificate of Type Test must be issued by or on behalf of a government that is a party to the MARPOL convention. Such a plant will be considered as fully equivalent to a Coast Guard certified Type II MSD as long as the unit is in operable condition. However, the unit may not be labeled as USCG certified. U.S. registered vessels will continue to be required to have Coast Guard certified MSDs per 33 CFR 159.
 <input type="checkbox"/> Standard Discharge Connection (NLT 27 Sep 03) <ul style="list-style-type: none"> • New ships 200 gross tons and above • New ships less than 200 gross tons and carry more than 10 persons. • Existing ships 200 gross tons and above and exiting ship less than 200 gross tons and carry more than 10 persons after 27 Sep 13 (10 years after the date entry into force of Annex IV)
 <input type="checkbox"/> Disposal <ul style="list-style-type: none"> • Shore (last done, reasons?) • Overboard valves secured • MSD bypass piping noted? (Condition of valves, pipe tees and caps, evidence of frequent usage) • At sea (provide proof of discharge location) • Logged position, speed (if required by management) MARPOL Annex IV* <ul style="list-style-type: none"> • When comminuted and disinfected greater than 3 miles. 33 CFR 159 • Company policy followed? • When not comminuted or disinfected greater than 12 miles. • Both to be discharged while ship is underway at greater than 4 knots.
Locations of discharges compared to deck logs. • Not in EPA "No Discharge Zones" • Connections to the gray water system (effluent routed to gray water system to dilute effluent?) | <p>MARPOL Annex IV*
40 CFR 140.3 & .4
33 CFR 159.57
33 CFR 159.7
33 CFR 159.55
33 CFR 159.59
MARPOL Annex IV/9*
40 CFR 140.3
MARPOL Annex IV/11 *
Resolution MEPC.2(VI)
33 CFR 159.65
NVIC 9-82
ISM Code
33 CFR 96</p> <p>MARPOL Annex IV/2*
MARPOL Annex IV/10*</p> <p>MARPOL Annex IV*
33 CFR 159.7
40 CFR 140.4
40 CFR 136</p> |
|--|---|

- Alaskan Waters:
Effective July 2001, Operators of cruise vessels carrying 500 or more passengers and transiting applicable waters of Alaska are restricted in where they may discharge effluents and will be required to perform testing of sewage and gray water discharges. The Coast Guard will inspect, monitor, and oversee this process to ensure compliance with applicable water quality laws and regulations. (33 CFR 159).

Sampling/Testing

- Lab analysis of fecal coliform/total suspended solids in effluent (recorded on ISPP if issued)
 - Results of residual chlorine content in effluent testing
 - Calibration records for dosing pump/proportioner

* Although the United States is not signatory to MARPOL Annex IV, the requirements of Annex IV may be enforced for those vessels that have committed to comply with Annex IV requirements in addition to 33 CFR Part 159 requirements as part of the vessels' SMS. This commitment is typical for ICCL Member vessels and many other cruise ships.

Hazardous waste must be handled in accordance with the ship's SMS. If such waste is disposed of in U. S. waters, the SMS hazardous waste handling procedures must meet or exceed 40 CFR Part 262 requirements. Hazardous waste includes dry cleaning (PERC) waste, used paints and thinners that contain hazardous substances, silver-bearing photo-processing waste, cleaning solutions and other similar items. Each vessel may vary in both the type and volumes of hazardous waste generated depending on the technology and processes aboard ship. This checklist is designed to evaluate on-board management of hazardous waste streams and to ensure that hazardous constituents are not released into the environment, disposed of properly and that accountability is demonstrated via adequate waste disposal records.

Hazardous Waste

- Has the company conducted a waste determination? Through Process Knowledge or Waste Analysis (circle one)? If not, hazardous waste may not be landed.
- Have responsible personnel received initial and refresher training? Has the training been documented?
- Is there any evidence that hazardous wastes are being incinerated, diluted, neutralized, or evaporated as a means of disposal.
- Is there any evidence (e.g. lack of disposal records) of hazardous material being discharged overboard?
- Are hazardous wastes being properly stored, maintained, labeled, and placarded? Note any observations made of deficiencies, dates and nature of repairs.
- Are proper storage devices available?
- Waste not commingled
- Quantities on board consistent with receipt/disposal documentation?
- Does the crew have ready access to spill control and decontamination equipment?
- Are records maintained and manifests completed for potential hazardous waste streams, for example:
 - Silver Bearing Photo Processing Waste (developers, wash water, Silver Recovery Units)
 - X-Ray equipment
 - Print Shop Waste (inks, dyes, cleaning solvents)
 - Used Solvents, Paints & Thinners
 - Fluorescent/Mercury Vapor Bulbs
 - Batteries (universal wastes): Nickel Cadmium (Nicad); Lead Acid; Lithium; Alkaline
 - Certain Pharmaceuticals/Narcotics
 - Dry Cleaning Waste (PERC, lint, sludge, filters, condensate water)
- Aerosol Cans
- Cleaning Solutions (de-scalers, acids, bases, other corrosives)
- Expired pyrotechnics (from safety equipment and entertainment use)
- Rags contaminated with hazardous wastes (also - in approved storage containers?)
- Incinerator ash if contaminated with toxic/hazardous substances (plastics containing heavy metals)
- Do records reflect reasonable accumulations of waste with respect to the capacity of the vessel, its age, technologies onboard, and amounts of repair/maintenance?
- Used lead acid batteries not mixed and kept dry?

40 CFR 262
49 CFR 173
RCRA
SARA Title III
42 USC 11002(a)(3) 40
CFR 355 App A / B ISM
Code
33 CFR 96

- Records of hazardous consumables kept updated
Used and unused

Shipboard Records
ISM Code
33 CFR 96

The following excerpt from 40 CFR 262 regarding Resource Conservation and Recovery Act (RCRA) requirements is provided for background information only. The Federal or State RCRA program office must be consulted if any clarifications are needed for a particular situation.

HAZARDOUS WASTE HANDLING REQUIREMENTS

§ 262.11 Hazardous waste determination.

A person who generates a solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste using the following method: (a) Determine if the waste is listed as a hazardous waste in subpart D of 40 CFR part 261.

(c) Or if not listed in subpart D of 40 CFR part 261, generator must determine if the waste is identified in subpart C of 40 CFR part 261 by either:

- (1) Testing the waste according to the methods set forth in subpart C of 40 CFR part 261
- (2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

262.12 EPA identification numbers.

(a) A generator must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification number from the Administrator.

262.20 General requirements.

- (a) A generator who transports, or offers for transportation, hazardous waste for offsite treatment, storage, or disposal must prepare a Manifest OMB control number 2050-0039 on EPA form 8700-22, and, if necessary, EPA form 8700-22A, according to the appendix to part 262.
- (b) Generator must designate on manifest one facility that is permitted to handle the waste described on the manifest.

262.23 Use of the manifest.

- (a) The generator must:
 - (1) Sign the manifest certification by hand; and
 - (2) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and
 - (3) Retain one copy, in accordance with § 262.40(a) and give the transporter the remaining copies of the manifest.

262.30, .31, .32 & .33 Packaging, Labeling, Marking and Placarding.

Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must package, label, mark and placard the waste in accordance with the applicable Department of Transportation regulations on packaging under 49 CFR parts 172, 173, 178, and 179. Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must mark each container of 110 gallons or less used in such transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304: **HAZARDOUS WASTE Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency. Generator's Name and Address ----- . Manifest Document Number ----- .**

262.34 Accumulation time.

A generator may accumulate hazardous waste on-site for 90 days or less for large quantity generator and 180 days or less for small quantity generator, without a permit or without having interim status.

The date upon which each period of accumulation begins must be clearly marked and visible for inspection on each container and while being accumulated on-site, each container and tank is labeled or marked clearly with the words, "Hazardous Waste."

§ 262.40 Recordkeeping.

- (a) A generator must keep a copy of each manifest signed in accordance with § 262.23(a) for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.
- (b) A generator must keep a copy of each Biennial Report and Exception Report for a period of at least three years from the date of the report.
- (c) A generator must keep records of any test results, waste analyses, or other determinations made in accordance with § 262.11 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

Non-hazardous wastes include shipboard garbage containing plastics and synthetic material, certain medical wastes, food wastes and recyclables such as glass, cardboard, aluminum and metal cans. Items to be checked should include waste sorted to prevent hazardous waste from entering the non-hazardous waste stream; no plastics or synthetics are to be discharged overboard, separate; proper disposal of hazardous (i.e. containing residual plastics or un-burnt food waste) and non-hazardous incinerator ash; and proper disposal of cooking grease from grease traps.

- Shipboard Garbage Management Plan
 - Shipboard garbage properly handled in accordance with Garbage Management Plan
 - Garbage Record Book entries
 - Type, amount, location, date/time
 - Receipts
 - Each entry signed by Officer-in-Charge and each page by Master
 - Any reports of alleged inadequacy of port reception facilities for garbage on file
 - Person-in-Charge Designated
 - No plastics or synthetics discharged overboard
 - Waste sorted to prevent hazardous waste entering non-hazardous waste stream or incinerated. Separate defined storage areas for hazardous/non-hazardous — no commingled waste.
 - Signage in working language of crew and in English, French or Spanish
 - Incinerator ash if discharged overboard free of plastic residue (clinkers) or free of unburned food wastes if landed ashore.
 - Trash chutes clean, free from oil residue (No oil stains on decks, side of hull adjacent to trash chutes)
 - Foreign Food Wastes handled per APHIS regulations
 - Medical Wastes-incinerated or manifested as Bio-Hazardous Waste.
 - Discharged outside of special areas only (when special area restrictions are in effect)
 - Incinerator operation observed (if in operation)
- Garbage Pollution Placards posted
- Procedures to minimize amount of potential garbage
 - Is vessel encouraging ship suppliers to consider alternate means of packing, use of other than plastics? Examine stores being loaded.
 - Is vessel using reusable packing? Examine stockpiles for use
 - Is waste generated while in port disposed to shore reception facility prior to sailing? Examine waste being offloaded.
- Recycling
 - Is ships crew following policy for recycling. Interview crewpersons in varied work areas, casino, galley, housekeeping, etc. with recycling responsibilities for procedures used.
- Maintenance and repair conducted on equipment
 - Incinerator
 - Grinders
 - Valves and flappers on chutes
- Human factors
 - Warning signs posted around equipment.
 - Master and crew familiar with essential shipboard garbage handling procedures.
 - Personal protective equipment available, functioning and in place (ILO 134).
 - Sanitation, from a health standpoint, being maintained (ILO 147).

33 CFR 151.63
MARPOL Annex V
MARPOL Annex V/9
MARPOL Annex V/3
7 CFR 330.400

MARPOL Annex V/
33 CFR 151

AGENT

Vessel representative hired by the ship's owners. Ship's agent may be tasked with various jobs such as: ensuring proper vessel documentation and compliance.

AUTOMATIC STOPPING DEVICE

Is a control mechanism that ensures discharge of an oily water separator is stopped when the oil content of the effluent exceeds 15 parts per million (PPM). The automatic stopping device may be initiated by the operation of the oil content meter.

BALLAST

Used to improve the stability and control the draft of a ship. (In Ballast - having only ballast for a load)

BLACK OIL

A viscous and black or very dark brown colored oil. Depending on the quantity spilled, oil tends to quickly spread out over the water surface to a thickness of about one-millimeter.

BLACK WATER (sewage)

Examples - possible sources toilets, urinals and drainage from medical facilities (U.S. restriction).

COC

Certificate of Compliance, CG Form 3585.

COTP

Captain of the Port.

CWA

Clean Water Act.

CVE

Control Verification Examination is the examination of vessel for compliance with SOLAS requirements and applicable U. S. regulations. More properly referred to as the Passenger Vessel Certificate of Compliance Examination.

DISPERSION

The breaking up of an oil slick into small droplets which are mixed into the water column as a result of breaking waves and other sea surface turbulence.

EFFLUENT

To flow out. (Waste material, refuse, and sewage)

EMULSIFICATION

The formation of a water - in - oil mixture. In the environment, the tendency for emulsification to occur varies with different oils and is much more likely to occur under high-energy conditions (wind and waves). Emulsions may also be formed by surfactants, including detergents, which cause the oil and water to mix, or by mechanical means such as pressure washing or pump action.

EPA

Environmental Protection Agency

EQUIPMENT HAVING AN OIL TO SEA INTERFACE

Equipment that uses a seal to prevent leakage of oil into the sea. Examples, oil-lubricated stern tube seals, hydraulically-driven stabilizer fin seals, bow and stern thruster seals. An indicator that system seals are leaking to the sea may be evidence of frequent filling of system reservoirs, presence of barrels, drums, hoses, pumps, and other equipment/supplies/arrangements necessary to refill systems. Some ships' SMS or environmental compliance programs may require that records of refilling such systems are kept. If so, these records should be checked.

15 PPM ALARM

An alarm that activates when the effluent passing through oil-filtering equipment exceeds 15 parts per million (ppm) of oil.

GRAY WATER

Includes discharges from galley, sinks, washbasins, drains, showers and baths. These may be held in large tanks prior to being discharged overboard (State, Fed, regulation permitting).

HSSC

International Convention to Harmonized System of Survey and Certification.

ICCL

International Council of Cruise Lines, a cruise ship industry association which participates in industry standards and policy development process to promote all measures that foster a safe, secure, healthy cruise ship environment.

ICLL

International Convention for Load Lines.

IMO

International Maritime Organization; a specialized agency of the United Nations concerned solely with maritime affairs. IMO is responsible for international treaties, conventions, resolutions and codes to improve maritime safety.

ISM Code

International Safety Management Code. (Chapter IX of SOLAS)

MARPOL

The International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978.

MSC

Maritime Safety Committee. One of five technical committees of the IMO which deals with issues such as aids to navigation, vessel equipment and construction, manning requirements, handling dangerous cargoes, hydrostatic and marine casualty information.

MSD

Marine Sanitation Device.

OIL CONTENT METER

An instrument used to measure continuously the oil content of the effluent in the OWS output line, in parts per million, to ensure that the operation does not contravene the convention.

OIL FILTERING EQUIPMENT

Equipment that uses any combination of a separator, filter or coalescer, and also a single unit designed to produce an effluent with oil content less than 15 parts per million (ppm). (MARPOL Annex I, Reg 16)

OILY WATER SEPARATOR (OWS)

The basic principle of oil / water separation is their difference in specific gravity. The specific gravity of most oils is less than water; therefore, it will naturally float to the top of an oil and water solution. Small droplets of oil float to the top much slower than large droplets. This is due to the large surface area to mass ratio. To speed up the process of separation, OWS units form larger oil droplets out of smaller ones, thus decreasing the surface area to mass ratio. The increased mass of the oil droplet increases its buoyancy, thus causing it to rise more quickly. Gravitational-based systems are not effective processors of oil-water emulsions formed by detergents or mixtures containing high specific gravity oils.

PASSENGER SHIP

A ship which carries more than 12 passengers.

PMS

Preventative Maintenance System

QUALIFIED INDIVIDUAL (QI)

The person authorized by the responsible party to act on their behalf, authorize expenditures and obligate organization's resources.

RCRA

Resource Conservation and Recovery Act (RCRA), was enacted by the U.S. in 1976 to address the issue of how to safely manage and dispose of the huge volumes of municipal and industrial hazardous waste generated nationwide.

RECOVERABLE OIL

Oil that is in a thick enough layer on the water to be recovered by conventional techniques and equipment. Only black or dark brown oil, mousse, and heavy sheens (dull brown) are generally considered thick enough to be effectively recovered by skimmers.

SEPARATION EQUIPMENT

A device designed to remove enough oil from an oil-water mixture to provide a resulting mixture with an oil content of less than 100ppm, or 15ppm, such as an Oily Water Separator (OWS).

SLICK

Oil spilled on the water, which absorbs energy and dampens out the surface waves making the oil appear smoother or slicker than the surrounding water.

SHEEN

A sheen is a very thin layer of oil (less than 0.0001 inches or 0.003mm) floating on the water surface and is the most common form of oil seen in the later stages of a spill. According to their thickness, sheens vary in color ranging from dull brown for the thicker layers to rainbows, grays silvers and almost transparent for the thinnest layers.

SLUDGE TANKS

Tanks used to contain sludge formed by fuel and lube oil purifiers and from other sources or cleaning activities. Sludge is not readily processed by many oily water separators and frequently requires treatment ashore or incineration. Every ship of 400 GT or more must be provided with a tank or tanks of adequate capacity, in regard to type of machinery and length of voyage, to receive the oil residues (sludge) that cannot be dealt with otherwise in accordance with MARPOL Annex I.

SMS

Safety Management System (sometimes referred to as an SQM). Required by the ISM Code and Chapter IX of SOLAS.

SOLAS

Safety of Life at Sea. The International Convention for the Safety of Life at Sea.

SOPEP

Shipboard Oil Pollution Emergency Plan. (MARPOL Annex I, Reg. 26)

STCW

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers.

TANKER

Is a self-propelled vessel constructed or adapted for the carriage of bulk liquid cargoes of oil or hazardous materials.

TRANSFER

Any movement of oil or hazardous material to, from or within a vessel by means of pumping, gravitation, or displacement.

Appendix v

MEMORANDUM SUBJECT: Cruise Ship Identification Numbers and State Required Annual Reporting Components

FROM: Elizabeth Cotsworth, Director Office of Solid Waste
TO: RCRA Senior Policy Managers

Regions 1-10

Over the last several months, the Environmental Protection Agency (EPA), Office of Solid Waste has been working with Region 4, Region 9, Region 10, and ten states having cruise ship traffic to facilitate national acceptance of one EPA hazardous waste identification (ID) number per individual cruise ship. This came about because the ships were receiving different numbers from each state in which hazardous waste was off-loaded. Having multiple identification numbers causes the ships to create and maintain duplicate copies of hazardous waste management records, leading to an increased paperwork burden.

Through meetings and conference calls, the participants on this project reached an agreement on the issue. Today, we are asking that individual cruise ships be assigned only one EPA hazardous waste identification number as a generator of hazardous waste for purposes of the Resource Conservation and Recovery Act. The following procedures would apply:

- a) A cruise ship would determine its American-based home port state (the state in which it has corporate offices or its main port of call).
- b) After determining the home port state, the cruise line will notify the selected state or corresponding EPA regional office of its hazardous waste activities.
- c) The cruise ship will identify its hazardous waste generator size in accordance with 40 CFR 261.5(c).
- d) The home port state or EPA regional office will issue an EPA hazardous waste identification number for each individual cruise ship using the current established procedure. The number will reflect the home port state initials and ten alphanumeric characters.

We are recommending that the state or region consider using a ship's registry number, which is known as the International Maritime Organization (IMO) number, as part of the EPA hazardous waste identification number. The IMO number is generally a five to seven digit number; zeros can be added before or after the number to reach the ten characters required for the EPA hazardous waste identification number. Using the IMO number will allow for coordination with the Coast Guard, as this is the number they use most often.

After the identification number is assigned, it will remain with that ship and be used on all hazardous waste manifests regardless of where the waste is off-loaded in the U.S. The assignment of the EPA ID number will not impact the applicability of state-specific RCRA requirements. For example, when waste is off-loaded in a state, the cruise ship will comply with that particular state's RCRA requirements whether or not that state assigned the ID number. The ship will be required to provide records to the individual state as required by state law.

Many of the states who will not be issuing the ID number expressed an interest in obtaining

information provided by the cruise ship in either an annual or biennial report to its home port state. This request for annual report information can be addressed through the existing Biennial Reporting System (BRS). The attachment to this memo provides more specific information on how the ID numbers and annual reports will be incorporated into the EPA = s BRS databases.

If you have any questions, please contact Teena Wooten at (703) 308-8751.

Attachment (1)

cc: Key RCRA Contacts, Regions 1 - 10

RCRA Enforcement Contacts, Regions 1 - 10

RCRA Data Management Contacts, Regions 1-10

Tom Kennedy, Association of State and Territorial Solid Waste

Management Officials (ASTSWMO)

Anne Dobbs, Texas Natural Resource Conservation Commission (TNRCC)

Dangerous Waste Site Identification Form

Site ID



Washington State Department of Ecology
Hazardous Waste Information
P.O. Box 47658
Olympia, WA 98504-7658
(800) 874-2022 (within state)
(360) 407-6170
Web site: www.ecy.wa.gov/programs/hwtr

For Ecology Use Only		Date Received:	
Form	Reviewed	Entered	Verified
Site ID			
GM			
WR			
OI			

1. Reason for Submittal

- To provide **New Notification of Regulated Waste Activity** (complete entire form)
- To provide **Revised Site Identification** information (complete entire form)
- To **Withdraw Site Identification Number** (skip sections 10 and 11)
- To **Reactivate Site Identification Number** (complete entire form) Effective Date: _____ (mm/dd/yyyy)
- A component of the **Dangerous Waste Annual Report** (skip section 11) Reporting Year: _____ (yyyy)

2. RCRA Site ID Number:

3. Site Location Information

Company Name: _____
Site Address: _____
City/State/Zip: _____
County: _____
Tax Registration Number: _____
NAICS Code: _____
Type of Business: _____

4. Company Mailing Address

Name: _____
Mail Address: _____
City/State/Zip: _____
Country: _____

5. Legal Owner

Name: _____
Mail Address: _____
City/State/Zip: _____
Phone Number (Ext): (____) _____
Owner Since: _____ (mm/dd/yyyy)
Owner Type: Federal State County Municipal
 District Private Tribal Other

6. Land Owner

Name: _____
Mail Address: _____
City/State/Zip: _____
Phone Number (Ext): (____) _____
Owner Type: Federal State County Municipal
 District Private Tribal Land
 Puyallup Trust Other

Dangerous Waste Site Identification Form (continued)

Site ID

RCRA Site ID Number: _____

7. Site Operator

Name: _____

Mail Address: _____

City/State/Zip: _____

Phone Number (Ext): (____) _____

Operator Since: _____ (mm/dd/yyyy)

Operator Type: Federal State County Municipal
 District Private Tribal Other

8. Site Contact

Name: _____

Mail Address: _____

City/State/Zip: _____

Phone Number (Ext): (____) _____

Email Address: _____

9. Form Contact

Name: _____

Mail Address: _____

City/State/Zip: _____

Phone Number (Ext): (____) _____

Email Address: _____

10. Type of Regulated Waste Activity (Mark the appropriate boxes for activities that apply to your site)

A. Hazardous Waste Activities

1. Generator of Hazardous Waste

(Choose only one of the following four categories)

- a. LQG: Large Quantity Generator (Greater than 2,200 lbs/mo)
- b. MQG: Medium Quantity Generator (Between 220 – 2,200 lbs/mo)
- c. SQG: Small Quantity Generator (Less than 220 lbs/mo)
- d. XQG: No Regulated Waste Generated

2. Frequency of Generation

(Choose only one of the following three types)

- a. Monthly
- b. Batch
- c. One-time only

3. Transporter of Hazardous Waste

- a. Transport own waste
- b. Transport for commercial purposes

4. Recycler of On-Site Waste

(i.e., on-site use, reuse or reclamation of a waste after it has been generated)

5. Transfer Facility of Hazardous Waste

6. Permit-by-Rule (PBR)

7. Treatment-by-Generator (TBG)

8. Generator of Mixed Radioactive Waste

9. Importer of Hazardous Waste

10. Treatment, Storage, Disposal or Recycling (TSDR) Facility

(Note: A RCRA Permit is required for this activity)

11. 24-Hour Recycler of Off-Site Waste

(i.e., Immediate Recycler)

12. Dangerous Waste Fuel Activity

- a. Generator of dangerous waste fuel
- b. Generator marketing to burner
- c. Other marketers (i.e., blender, distributor, etc.)
- d. Burner (indicate type of combustion unit)
 - 1. Utility boiler
 - 2. Industrial boiler
 - 3. Industrial furnace
- e. Deferrals/Exemptions (in federal registry only)
 - 1. Smelter deferral
 - 2. Small quantity exemption
 - 3. Other (specify): _____

Dangerous Waste Site Identification Form (continued) **Site ID**

RCRA Site ID Number:

<p>B. Universal Waste Activities</p> <p>1. Large Quantity Handler of Universal Waste (Mark all boxes that apply)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;"></td> <td style="text-align: center; border-bottom: 1px solid black;"><u>Generate</u></td> <td style="text-align: center; border-bottom: 1px solid black;"><u>Accumulate</u></td> </tr> <tr> <td>a. Batteries</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>b. Mercury containing thermostats</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>c. Lamps</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> <p><input type="checkbox"/> 2. Destination Facility for Universal Waste (Note: A RCRA Permit is required for this activity)</p>		<u>Generate</u>	<u>Accumulate</u>	a. Batteries	<input type="checkbox"/>	<input type="checkbox"/>	b. Mercury containing thermostats	<input type="checkbox"/>	<input type="checkbox"/>	c. Lamps	<input type="checkbox"/>	<input type="checkbox"/>	<p>C. Used Oil Activities</p> <p>1. Off-specification used oil burner Indicate type(s) of combustion devices</p> <p><input type="checkbox"/> 1. Utility boiler <input type="checkbox"/> 2. Industrial boiler <input type="checkbox"/> 3. Industrial furnace</p> <p>2. Used oil transporter Indicate type(s) of activity(s)</p> <p><input type="checkbox"/> a. Transporter <input type="checkbox"/> b. Transfer facility</p> <p>3. Used oil processor/re-refiner Indicate type(s) of activity(s)</p> <p><input type="checkbox"/> a. Process <input type="checkbox"/> b. Re-refine</p> <p>4. Used Oil Fuel Marketer</p> <p><input type="checkbox"/> a. Directs shipment of used oil to used oil burner <input type="checkbox"/> b. First claims the used oil meets the specifications</p>
	<u>Generate</u>	<u>Accumulate</u>											
a. Batteries	<input type="checkbox"/>	<input type="checkbox"/>											
b. Mercury containing thermostats	<input type="checkbox"/>	<input type="checkbox"/>											
c. Lamps	<input type="checkbox"/>	<input type="checkbox"/>											

11. Description of Hazardous Wastes

A. Waste Codes for Federally Regulated Hazardous Wastes: Identify those codes that best describe your waste. (e.g., D001 – Ignitable, D002 – Corrosive, D003 – Reactive, etc.)

B. Waste Codes for State Regulated (i.e., non-Federal) Hazardous Wastes: Identify those codes that best describe your waste. (e.g., WT02 – Toxic, WP02 – Persistent, WL02 – Labpack, WSC2 – Solid Corrosive, etc.)

12. Comments

Additional sheets may be attached for comments if needed.

13. Certification **This form cannot be processed without a signature**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature	Date
Name (print or type)	Title

If you have special accommodation needs or require this document in an alternative format, please contact the Hazardous Waste and Toxics Reduction Program at 1-800-833-6388 (TTY) or quick dial 711-833-6388 (TTY).

14. Electronic Submittals

I am interested in the electronic filing of my Dangerous Waste Annual Reporting and Site Identification information to Ecology over the Internet. Ecology will issue a PIN number, along with electronic filing instructions, in a letter addressed to the Form Contact in Section 9 on this form.

Appendix vi

Alaska Regulations

Title XIV – Certain Alaskan Cruise Ship Operations

SEC. 1404. LIMITATIONS ON DISCHARGE OF TREATED SEWAGE OR GRAYWATER.

.....

(c) Until such time as the Administrator promulgates regulations under paragraph (b) of this section, treated sewage and graywater may be discharged from vessels subject to this Title in circumstances otherwise prohibited under paragraphs (a)(1) and (a)(2) of this section, provided that—

- (1) the discharge satisfies the minimum level of effluent quality specified in 40 CFR 133.102, as in effect on the date of enactment of this Section;
- (2) the geometric mean of the samples from the discharge during any 30-day period does not exceed 20 fecal coliform/100 ml and not more than 10% of the samples exceed 40 fecal coliform/100 ml;
- (3) concentrations of total residual chlorine may not exceed 10.0 µg/l; and,
- (4) prior to any such discharge occurring, the owner, operator or master, or other person in charge of a cruise vessel, can demonstrate test results from at least five samples representative of the effluent to be discharged, taken from the vessel on different days over a 30-day period, conducted in accordance with the guidelines promulgated by the Administrator in 40 CFR Part 136, which confirm that the water quality of the effluents proposed for discharge is in compliance with paragraphs (1), (2) and (3) of this subsection. To the extent not otherwise being done by the owner, operator, master or other person in charge of a cruise vessel pursuant to section 1406, the owner, operator, master or other person in charge of a cruise vessel shall demonstrate continued compliance through periodic sampling. Such sampling and test results shall be considered environmental compliance records that must be made available for inspection pursuant to section 1406 (d) of this Title.

Title 40 CFR 133.102 Secondary treatment.

The following paragraphs describe the minimum level of effluent quality attainable by secondary treatment in terms of the parameters—BOD₅, SS and pH. All requirements for each parameter shall be achieved except as provided for in §§ 133.103 and 133.105.

(a) *BOD₅*.

- (1) The 30-day average shall not exceed 30 mg/l.
- (2) The 7-day average shall not exceed 45 mg/l.
- (3) The 30-day average percent removal shall not be less than 85 percent.

(4) At the option of the NPDES permitting authority, in lieu of the parameter BOD5 and the levels of the effluent quality specified in paragraphs (a)(1), (a)(2) and (a)(3), the parameter CBOD5 may be substituted with the following levels of the CBOD5 effluent quality provided:

- (i) The 30-day average shall not exceed 25 mg/l.
- (ii) The 7-day average shall not exceed 40 mg/l.
- (iii) The 30-day average percent removal shall not be less than 85 percent.

(b) SS.

- (1) The 30-day average shall not exceed 30 mg/l.
- (2) The 7-day average shall not exceed 45 mg/l.
- (3) The 30-day average percent removal shall not be less than 85 percent.

(c) *pH*. The effluent values for pH shall be maintained within the limits of 6.0 to 9.0 unless the publicly owned treatment works demonstrates that: (1) Inorganic chemicals are not added to the waste stream as part of the treatment process; and (2) contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0.

Appendix vii

Hazardous Waste Management

This Appendix is to be used as guidance for hazardous waste discharged in Washington State waters or landed ashore in Washington. The following is a list of Resource Conservation Recovery Act (RCRA) and Washington State Criteria hazardous waste that may be found on cruise ships, and appropriate guidance for its discharge or offloading from the ship.

Terms

Hazardous Waste – Includes all hazardous waste as defined by RCRA and Chapter 173-303 of the Washington Administrative Code (WAC), where Washington State Criteria hazardous waste is defined.

Publicly Owned Treatment Works (POTW) - Ecology's Hazardous Waste Toxics Reduction (HWTR) Program will acknowledge Advanced Wastewater Treatment Systems (AWTS) as a substitute for a POTW. Type 2 Marine Sanitation Devices (MSDs) are not considered a POTW for purposes of this MOU.

WASTE STREAMS

Antifreeze- Excluded as a hazardous waste if recycled. (WAC 173-303-522)

Aqueous Degreasing - If the resulting waste is hazardous it can be treated to remove the hazard and the resulting effluent can be sent to the AWTS or Oily Water Separator. If no treatment is performed it can be landed ashore for proper disposal.

Batteries & Mercury Containing Thermostats - These are universal waste if sent for recycling. (Ecology Publication Number 98-407, Universal Waste Rule for Batteries and Mercury Containing Thermostats)

Spent Lead Acid Batteries - Spent lead-acid batteries are conditionally excluded if recycled. (WAC 173-303-520)

Cathode Ray Tubes (CRTs) - Excluded if recycled, otherwise are to be managed as a hazardous waste. (Ecology Publication Number 02-04-017, Interim Enforcement Policy Conditional Exclusion for Cathode Ray Tubes* and Related Electronic Wastes)

Dry Cleaner – Perchloroethylene (PERC) and other chlorinated dry cleaning fluids, contaminated sludge and filter materials are hazardous waste and must be landed ashore in accordance with RCRA requirements.

Florescent Tubes - Handling procedures for fluorescent tubes do not allow for crushing of the bulbs. (WAC 173-303-573 and Ecology Focus Sheet, Publication # 00-04-020, Universal Waste Rule for Dangerous Waste Lamps)

HVAC - CFC's or HCFC's are excluded as a hazardous waste if recycled. (WAC 173-303-506)

Filters from HVAC units that use Halogenated Organic Compounds (HOC's) as fire retardants would be a State Criteria hazardous waste and must be managed as such.

Mercury Switches - Are a hazardous waste and must be managed as such.

Painting - Discarded Paints & Cleanup Solvents. All spent paints and solvents must be properly designated and if hazardous waste, managed as such.

PCB's - Regulated as a state hazardous waste if they come from transformers, capacitors and bushings if PCB's are from 2ppm to 50ppm. If PCB's are above 50 ppm they must be managed as a TSCA waste. (WAC 173-303-9940)

Pharmaceuticals - Drugs that designate as RCRA waste, but that are not controlled substances must be sent ashore as hazardous waste. If the drug is a RCRA waste and a controlled substance, contact the US Drug Enforcement Agency (DEA) about suitable destruction methods and then manage the residue from destruction as a hazardous waste (disposal to water, regular garbage or incineration would be illegal). If the drug is not a RCRA waste, regardless whether it is a controlled substance or not, it can be incinerated on board or sent ashore for incineration at a facility permitted to incinerate municipal solid waste. (WAC 173-303-071(nn))

Photo Waste - Silver can be removed from fixer and the resulting effluent would be allowed to go to an advanced wastewater treatment system (AWTS), but not to graywater or to a Type 2 MSD. If the fluids can not go to the AWTS, they must be landed ashore in accordance with RCRA requirements. (Ecology Publication 94-138R, A Guide For Photo Processors)

Printer Wastes - Inks, solvents and rags, used for cleaning, will need to be properly designated, and if hazardous waste, managed as such.

Spray Cans - Cans that are not empty must be properly designated, and if hazardous waste, managed as such.

Solvent Degreasing - Solvents, when used, must be properly designated, and if hazardous waste, managed as such.

Appendix viii

Regional Director
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

Dear Director:

Re: Washington Cruise MOU Compliance Report: XXXX (enter year) Cruise Season

Section 9 of the Memorandum of Understanding for Cruise Operations in Washington State (signed XXX (enter signature date)), requires an annual submittal detailing the compliance with the MOU for the each vessel within the CLIA-NWC that calls to a port in Washington for the previous cruise season. Please accept this letter on behalf of XXX (name your cruise line) for the XXXX (enter year) cruise season.

The following ships operated Washington waters during XXXX (enter year):

- Name the ship or ships; list the port of call and the dates.

XXX's operations in Washington State addressed the following key provisions of the MOU as follows:

Section 2.1 Wastewater Management. XXX managed its wastewater in compliance with this section as follows:

[Choose one or more options as appropriate]

- In compliance with Section 2.1.1 and 2.1.2, XXX held all treated and untreated gray and black water while in Washington waters and did not discharge solid waste or oily bilge water if not in compliance with applicable federal and state laws while in Washington waters. List the ships that held their effluent and describe the type of treatment system each ship in this category has. Based on a thorough review of ships' logs and records we certify that our ship(s) complied with these provisions of the MOU. XXX will make these records available to Ecology upon request.
- In compliance with Section 2.1.3 (A), XXX submitted the information required to allow discharge of treated wastewater one mile from berth to Ecology on XX date for the following ship(s): ----- . Describe the type of treatment system each ship in this category has. Approval of the information was received from Ecology on XX date.
- In compliance with Section 2.1.3 (B), XXX submitted information supporting its request to discharge treated wastewater continuously to Ecology on XX date for the following ship(s) --

---. Describe the type of treatment system each ship in this category has. Approval to discharge while at berth was received from Ecology on XX date.

Section 2.1.3 (C)(1-3) Shellfish and “upset” conditions. Based on a review of XXX ship’s logs and records, XXX certifies that we complied with the prohibition on discharging within 0.5 nautical miles of bivalve shellfish beds that are recreationally harvested or commercially approved to harvest as identified annually by the Department of Ecology and that any “upset” conditions were stopped and immediately reported to the Washington State Department of Health.

Section 2.1.3 (C)(4-10) Other discharge approval requirements. Based on a review of XXX ship’s logs and records and other knowledge, XXX certifies that the requirements in this section were met.

Section 2.1.4 Discharge of Residual Solids. Based on a review of XXX ships’ logs and records, XXX certifies that we complied with the prohibition on discharging residual solids coming from any type of treatment system within 12 nautical miles from shore and within the Olympic Coast National Marine Sanctuary. XXX will make these records available to Ecology upon request.

Section 2.2.1 through 2.2.4 Hazardous Waste Management. Based on a review of XXX ship’s logs and records, XXX certifies that Hazardous Wastes were managed in accordance with these sections of the MOU. XXX will make these records available to Ecology upon request. Add a description of how hazardous waste is managed while in Washington.

Section 6. Marine Mammal Protection Act, Invasive Species Act, and the Washington Ballast Water Management Act. Based on a review of XXX ship’s logs and records, XXX certifies that the provisions of the above laws were implemented as required by these laws. XXX will make these records available to Ecology upon request. Add a description of how compliance with these laws was achieved.

Section 9. Immediate self-reporting to Ecology of any incidences of non-compliance with any provisions of the MOU. Describe any incidences of non-compliance and when they were reported to Ecology and any corrective actions taken.

I hereby certify that the above information is true and can be verified through documentation. If you have any questions or concerns, please call me at XXX-XXX-XXXX.

Sincerely,

Name
Position/Title
Company

Appendix ix

Statement of Work

Ecology is charged with protecting and conserving Washington's environmental resources in relation to the cruise industry's environmental practices in Washington. Ecology shall furnish the necessary personnel, equipment, material and/or service(s) and otherwise do all things necessary for or incidental to the performance of the work to implement the MOU. This work includes:

Task 01

Compliance Work:

Work with stakeholders on drafting necessary amendments to cruise MOU. Provide technical assistance for cruise lines and vessel staff. Field questions from the public, press, environmental groups, and cruise lines. Monitor compliance with the MOU. Work with other programs within Ecology on hazardous waste, biosolids, solid waste, spill prevention, and other MOU elements. Work with Ecology policy and fiscal staff on cruise related issues. Research issues related to vessel discharges. Evaluate, draft and update guidance on Whole Effluent Toxicity (WET) testing for cruise ships and evaluate WET testing results. Work with Department of Health Shellfish program on shellfish and virus related studies and issues. Manage and update Ecology's cruise ship website.

Task 02

Inspections:

Conduct annual inspections of cruise vessels to verify the operation of the treatment systems and to evaluate compliance with the MOU. Write up inspection reports and provide recommendations for improvement. Take samples from vessels and evaluate results.

Task 03

Wastewater Discharge Approvals:

Verify documentation submitted for approval of discharges. Evaluate documentation and treatment systems for requirements of MOU to discharge and based on the information submitted and an engineering review, provide approval for discharges as appropriate.

Task 04

Annual Reports:

Draft annual assessment of cruise ship environmental effects report. Evaluate monthly sampling data results and summarize annually.

Task 05

Project Management:

Oversee the cruise ship MOU program and assist as needed. Provides Administrative oversight for compliance with the MOU, represents senior program management in duties related to protection of water quality from cruise ship discharges including negotiations.

Task 06

Additional tasks may become part of this agreement by mutual concurrence of Ecology and CLIA-NWC, or upon extension of the agreement.

Appendix x

Bivalve Shellfish Beds

Cruise ships that discharge treated sewage into Puget Sound under this MOU employ advanced systems that treat sewage to a very high degree using a combination of filtration, biological treatment, ultra-filtration, and disinfection. These systems are called Advanced Wastewater Treatment Systems (AWTS). The ultra-filtration process effectively removes nearly all bacteria from the treated sewage. However, viruses which tend to be smaller organisms may pass through the ultra-filtration membranes but are typically destroyed by the disinfection unit.

The Centers for Disease Control & Prevention reported 18 norovirus outbreaks on cruise ships in the Pacific Northwest since 2000. Cruise ships discharge into shallow waters along the shipping lanes, near some commercial shellfish beds. Today, national standards provide little guidance on setting shellfish closure zones based on viral risk and there is no reliable viral indicator standard in part due to difficulties in sampling and testing for norovirus.

Because shellfish in Puget Sound and Admiralty Inlet are valuable resources for Washington State, the Washington State Legislature commissioned the Washington State Department of Health (DOH) Office of Shellfish and Water Protection (OSWP) to study the potential risk to shellfish beds from virus contamination associated with cruise ship waste water discharges. DOH contracted with the University of Washington School of Public Health and Community Medicine to perform a risk assessment, which was completed in November 2007. The study used a quantitative microbial risk assessment method coupled with water quality modeling in Puget Sound. Some key findings of the study include:

- When advanced wastewater treatment systems (AWTS) are functioning well, there is low concern for viral illness. Adequate disinfection is the key to effective norovirus inactivation.*
- Loss of disinfection could lead to potentially unacceptable virus levels in water over shellfish beds, even with the large dilution provided by ships under sail. However, using minimum dilution factors for when ships are moving at least 6 knots along the current route, dilution is estimated at 1,500,000:1 between the ship and the shore.*
- The UW study did not gather samples of norovirus concentrations in treated sewage from cruise ships or in the salt water over shellfish beds. Norovirus remains non-culturable, so there is very limited environmental data that is “norovirus specific.” In response, UW researchers used data for norovirus “surrogates” from other studies in their analysis.*
- Consumption data from Tribes that use shellfish beds closest to the path of cruise ships was used in the risk analysis. These rates are higher than for the general population. Raw oyster consumption rates were used as a conservative assumption for these areas.*

The study included many conservative assumptions, but nonetheless concluded that well functioning AWTSs would not lead to norovirus accumulation in shellfish beds such that the median annual risk of potential illness to shellfish consumers from cruise ship discharges in Puget Sound is less than 10,000,000:1. This compares quite favorably with the calculated annual risk of norovirus illness from consumption of raw oysters in the general population, which the UW researchers calculated as about 1,000:1.

As described above, the potential risk of viral contamination of shellfish beds from cruise ship is extremely low when AWTs systems are functioning well. Additionally the geography of Puget Sound and the configuration of shipping lanes provide most shellfish beds some protection from potential contamination from passing ships. However, the signatories to the MOU understand the importance of shellfish resources to Washington State and have agreed to take the actions outlined on page ___ of the MOU to protect shellfish beds and human health while operating in Washington MOU waters.

Appendix x continued Bivalve Shellfish Beds 2011 Season

2011 Cruise Season Boundary Points

Id	Tract Name	LATITUDE	LONGITUDE
1	Apple Tree Cove	47.81274089040	-122.48047265700
2	Apple Tree Cove	47.81255672180	-122.47941651600
3	Apple Tree Cove	47.81197112760	-122.47872458000
4	Apple Tree Cove	47.81129443870	-122.47812835500
5	Apple Tree Cove	47.81056937740	-122.47758747000
6	Apple Tree Cove	47.80992145700	-122.47684781100
7	Apple Tree Cove	47.80931916930	-122.47604614700
8	Apple Tree Cove	47.80895286530	-122.47498673900
9	Apple Tree Cove	47.80852971000	-122.47419683400
10	Apple Tree Cove	47.80812779070	-122.47315426700
11	Apple Tree Cove	47.80748647770	-122.47257436300
12	Apple Tree Cove	47.80668065230	-122.47239303200
13	Apple Tree Cove	47.80586169470	-122.47237830900
14	Apple Tree Cove	47.80507505630	-122.47246917900
15	Apple Tree Cove	47.80443177020	-122.47321819700
16	Apple Tree Cove	47.80389497510	-122.47389983000
17	Apple Tree Cove	47.80348525790	-122.47492954200
18	Apple Tree Cove	47.80310261180	-122.47598949400
19	Apple Tree Cove	47.80237402570	-122.47638256900
20	Apple Tree Cove	47.80219450150	-122.47688158400

Id	Tract Name	LATITUDE	LONGITUDE
21	President Point	47.76301811440	-122.46531995900
22	President Point	47.76227795780	-122.46478860500
23	President Point	47.76153965240	-122.46425163200
24	President Point	47.76079984240	-122.46372318400
25	President Point	47.76012732540	-122.46302154800
26	President Point	47.75945808780	-122.46231363200
27	President Point	47.75877611500	-122.46163224400
28	President Point	47.75821701680	-122.46249970800
29	President Point	47.75769964180	-122.46344179800
30	President Point	47.75709757920	-122.46424411400
31	President Point	47.75642784290	-122.46495166300
32	President Point	47.75568013190	-122.46545052600
33	President Point	47.75491428200	-122.46589325600
34	President Point	47.75413762450	-122.46629389900
35	President Point	47.75340374390	-122.46683607100
36	President Point	47.75266140050	-122.46720422800
37	President Point	47.75189295980	-122.46684018600
38	President Point	47.75123556490	-122.46610769300
39	President Point	47.75058390610	-122.46579489800
40	President Point	47.74994707310	-122.46656628000
41	President Point	47.74921684450	-122.46711888700
42	President Point	47.74848682750	-122.46768011900
43	President Point	47.74775279740	-122.46822961800
44	President Point	47.74701858040	-122.46877863300
45	President Point	47.74627675290	-122.46930377000
46	President Point	47.74561278720	-122.46984543000

2011 Cruise Season Boundary Points continued

Id	Tract Name	LATITUDE	LONGITUDE
47	Tyee Shoal	47.61916098460	-122.48420272400
48	Tyee Shoal	47.61865190330	-122.48324910700
49	Tyee Shoal	47.61814655430	-122.48229042500
50	Tyee Shoal	47.61761807860	-122.48135871800
51	Tyee Shoal	47.61718007830	-122.48033341700
52	Tyee Shoal	47.61670845870	-122.47935532600
53	Tyee Shoal	47.61609072620	-122.47855854300
54	Tyee Shoal	47.61543441750	-122.47782569300
55	Tyee Shoal	47.61469777070	-122.47729421200
56	Tyee Shoal	47.61394668260	-122.47679893700
57	Tyee Shoal	47.61317098590	-122.47657100600
58	Tyee Shoal	47.61237442300	-122.47686659800
59	Tyee Shoal	47.61162109430	-122.47735159900
60	Tyee Shoal	47.61083929010	-122.47772883400
61	Tyee Shoal	47.61005751060	-122.47810617700
62	Tyee Shoal	47.60927581650	-122.47848390200
63	Tyee Shoal	47.60847990770	-122.47877353100
64	Tyee Shoal	47.60766507680	-122.47893589300
65	Tyee Shoal	47.60687831460	-122.47927979300
66	Tyee Shoal	47.60609769090	-122.47964967100
67	Tyee Shoal	47.60531536900	-122.48000498600
68	Tyee Shoal	47.60457213290	-122.48052049900
69	Tyee Shoal	47.60398226870	-122.48118881300
70	Tyee Shoal	47.60407102430	-122.48180079600

71	Middle Point	48.15109017620	-122.82296755300
72	Middle Point	48.15156870030	-122.82260588400
73	Middle Point	48.15125511720	-122.82167106000

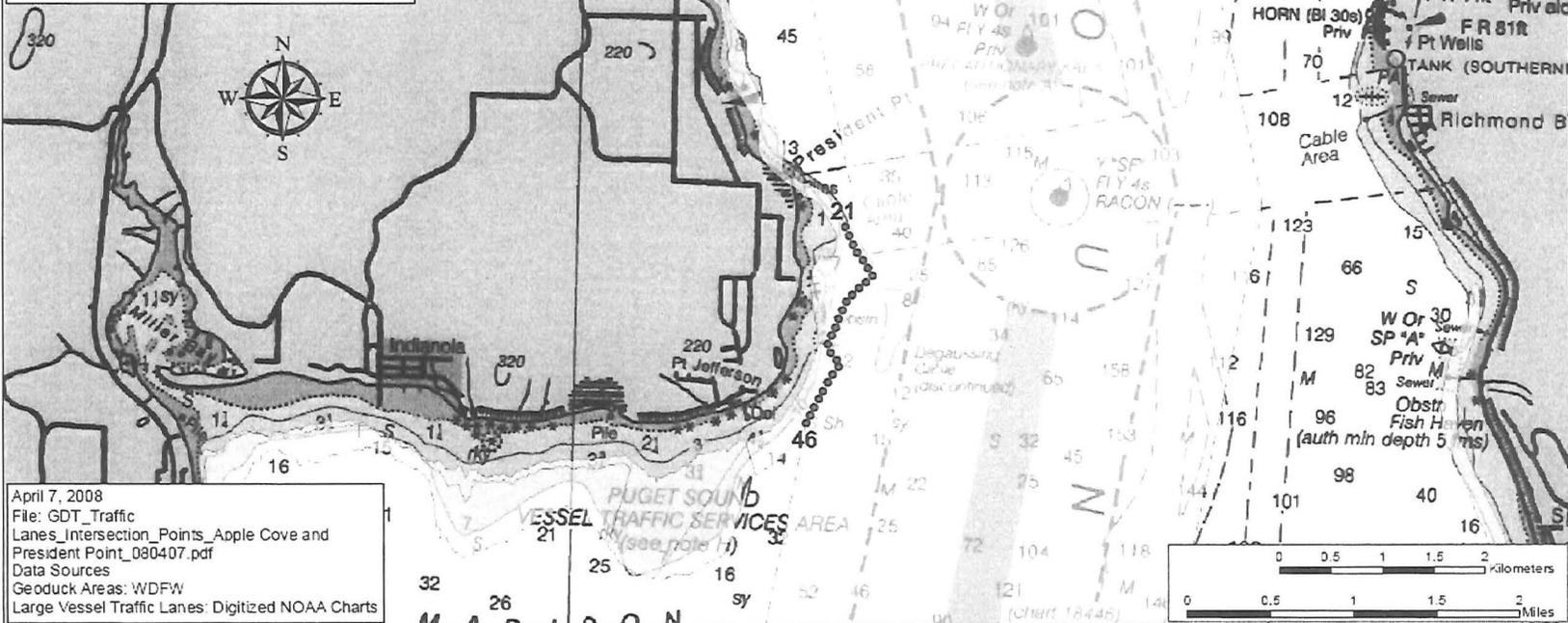
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HARN 83

Apple Tree Cove and President Point Geoduck Tracts / Large Vessel Traffic Lane Intersection

- BoundaryPoint
-  Geoduck Tract
-  Large Vehicle Traffic Lane
-  .5 mile buffer

Boundary points are drawn every 100 yards where geoduck tracts intersect a .5 mile buffer of the Large Vehicle Traffic Lane.

See spreadsheet for coordinates.



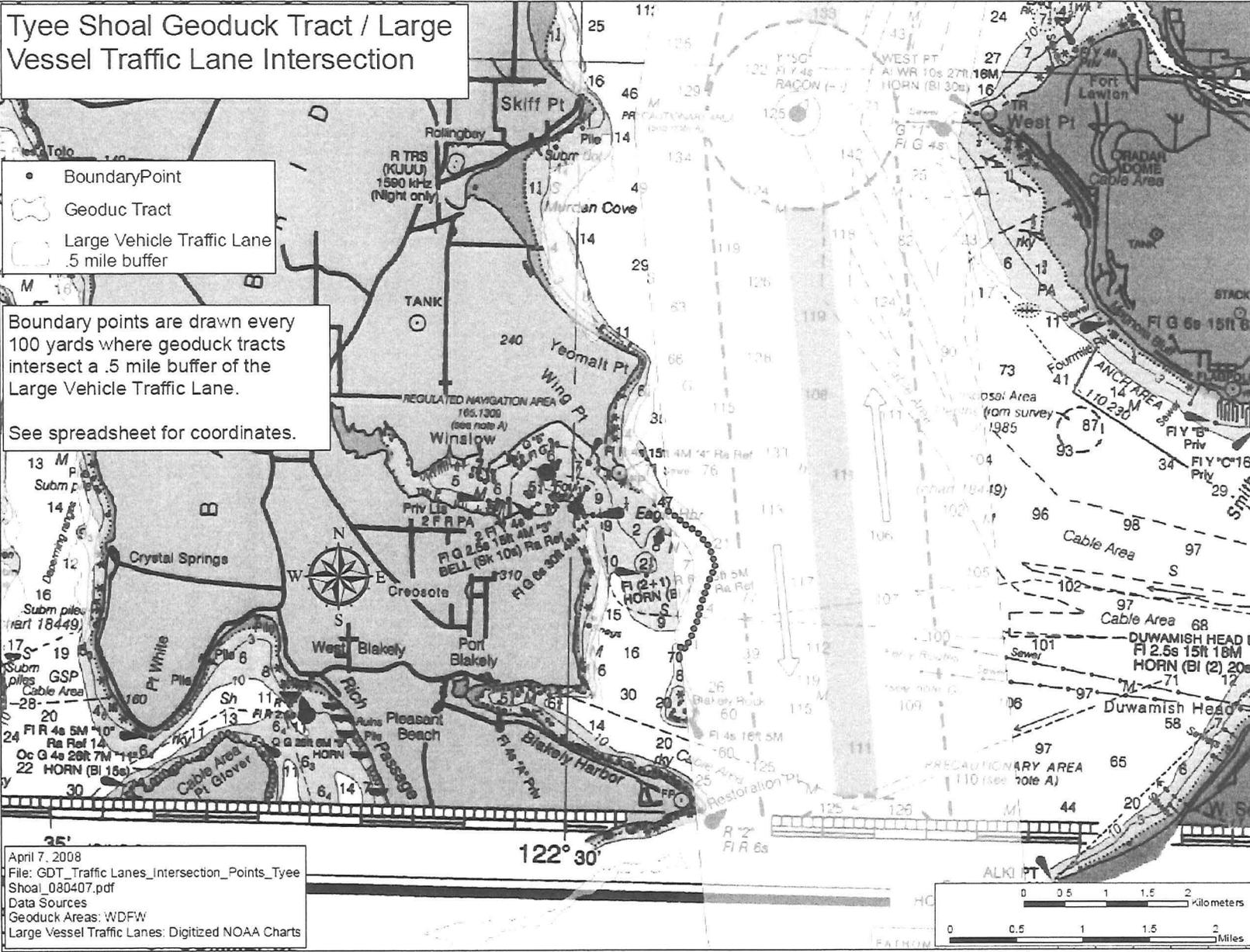
April 7, 2008
 File: GDT_Traffic
 Lanes_Intersection_Points_Apple Cove and
 President Point_080407.pdf
 Data Sources
 Geoduck Areas: WDFW
 Large Vessel Traffic Lanes: Digitized NOAA Charts

Tye Shoal Geoduck Tract / Large Vessel Traffic Lane Intersection

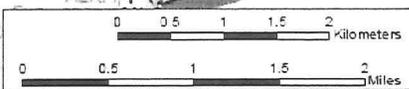
- Boundary Point
- Geoduck Tract
- Large Vehicle Traffic Lane .5 mile buffer

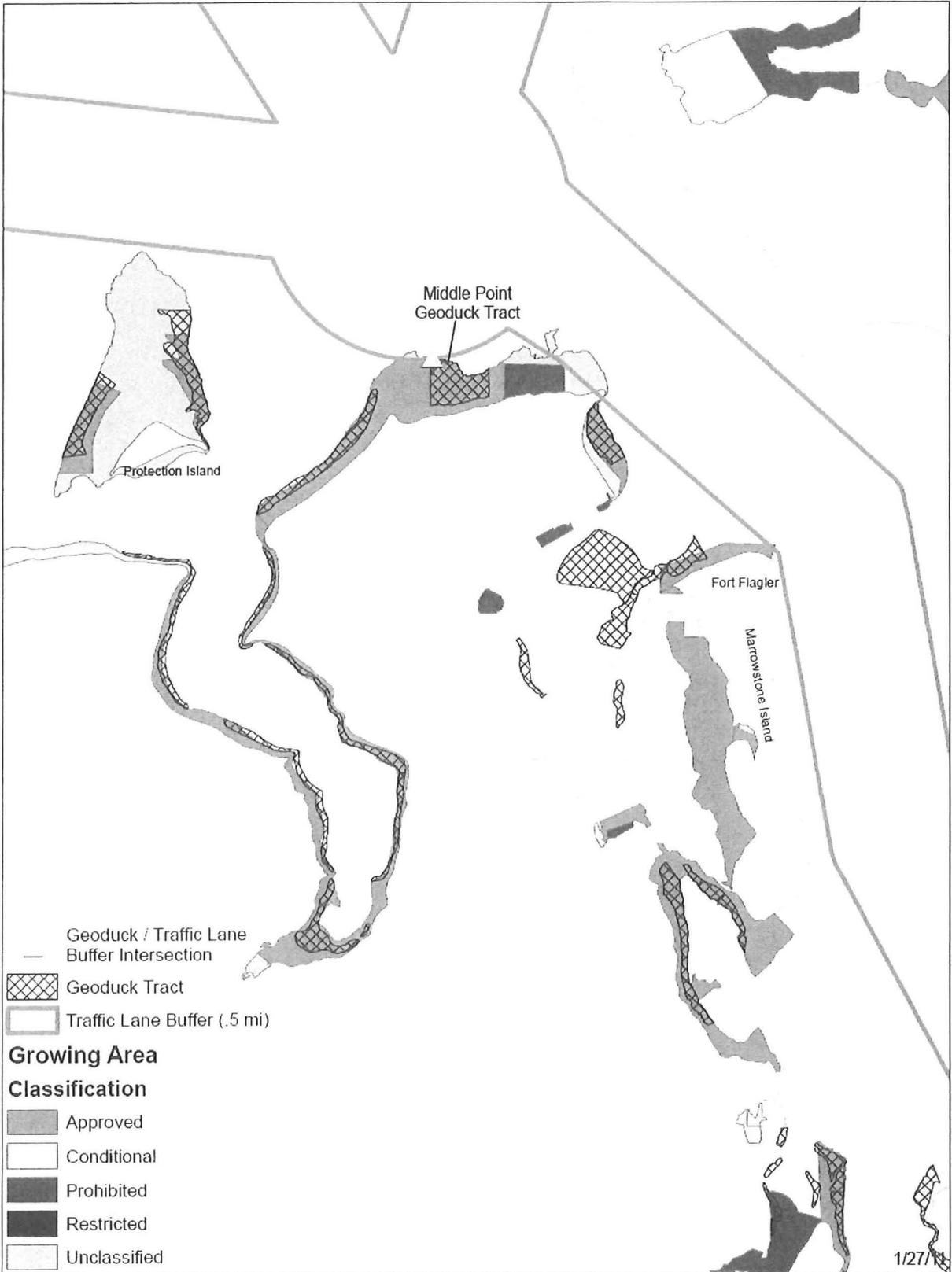
Boundary points are drawn every 100 yards where geoduck tracts intersect a .5 mile buffer of the Large Vehicle Traffic Lane.

See spreadsheet for coordinates.



April 7, 2008
 File: GDT_Traffic Lanes_Intersection_Points_Tye
 Shoal_080407.pdf
 Data Sources
 Geoduck Areas: WDFW
 Large Vessel Traffic Lanes: Digitized NOAA Charts





Appendix xi
MEMORANDUM OF UNDERSTANDING
CRUISE OPERATIONS IN
WASHINGTON STATE
SUMMARY OF AMENDMENTS

AMENDMENT NO. 1

Signed July 8, 2005

1. Changing references to the Seattle being the only port berthed to all ports in Washington.
 - While the ships typically call only to Seattle, there is potential for port calls to other ports.
2. Adding a requirement for all vessels within the NWCCA to submit an annual report of compliance with MOU.
 - This requirement is being added due to the need to know if ships complied with the MOU whether or not they go through the process of authorization to discharge. For ships that choose to hold their discharge while in Washington waters, it is important to know if they complied.
3. Adding regulation language referenced in Appendix vi to show all effluent limits required for discharge.
 - Ships that discharge must meet the higher standards as set in Alaska which is referenced in the MOU and in appendix vi.

AMENDMENT NO. 2

Signed April 28, 2006

1. Adding a requirement to prohibit the discharge of oily bilge water and a definition was also added. The purpose of this addition is to include specific prohibition language on all major sources of potential pollutants from the vessels.
2. Adding a definition for residual solids. Residual Solids has gone undefined although we have had the requirement to prohibit the discharges. This has been added to clarify exactly what types of residual solids are being managed per this MOU.
3. Adding specific language about what limits must be met for monitoring results. The purpose of this addition is to make it clear to the cruise lines and to the public what limits need to be met.
4. Changing the requirement on WET testing from once per 2 years to once per 40 port calls or turnarounds for vessels that are not homeported due to the fact that vessels come and go from this route from year to year.
5. Other minor changes for organization of the document.

Appendix xi

continued

AMENDMENT NO. 3

Signed May 25, 2007

1. Changing all references and the appendix from the International Council of Cruise Lines (ICCL) to the Cruise Line International Association (CLIA) as the association changed.
2. Adding language about the interagency agreement for cost recovery and referencing the appendix.
3. Changing where residual solids (sludge) can be discharged to disallow any residual solids discharges in the entire Olympic Coast National Marine Sanctuary.
4. Clarifying the language to allow for inspections of all vessels, whether approved for discharge or not for compliance with the MOU. The language currently only allows for inspections of vessels discharging.
5. Clarifying the language to say that all vessels approved for discharge, not just those actually discharging agree to the sampling requirements set out in the MOU. The current language has been confusing for some vessels approved for discharge, but mostly holding discharges anyways.

AMENDMENT NO. 4

1. Incorporating recommendations from the Washington State Department of Health virus report:
 - a) Not allow discharges within a half mile of shellfish beds. Include an appendix identifying the areas where bivalve shellfish beds that are recreationally harvested or commercially approved within half a mile of the shipping lanes and update annually. And include an appendix with background information on the virus related elements.
 - b) Define a “disinfection system upset” condition as a disinfection below levels of four log (99.99%) inactivation of norovirus.
 - c) Require immediate shutdown capability from an upset condition of disinfection below levels of four log (99.99%) inactivation of norovirus for all vessels that have submitted documentation to discharge.
 - d) Require immediate notification to the Department of Health for an upset condition.
2. Require whole effluent toxicity testing for only those vessels that are have submitted documentation for continuous discharge.
3. Other minor changes for organization of the document.

AMENDMENT NO. 5

1. Including a process for amending the MOU including a public review process. Proposed amendments will be accepted for the 2012 cruise season and then every three years thereafter.
2. Updating the name of the cruise association. In 2010, the North West CruiseShip Association changed its name to the North West & Canada Cruise Association (NWCCA).
3. Including an additional shellfish area to Appendix X.

AMENDMENT NO. 6

1. Updating the name of the cruise association. The North West & Canada CruiseShip Association changed its name to Cruise Lines International Association – North West & Canada (CLIA-NWC).
2. Amending Section 11 and appendix ix on funding to include new language for a restructured funding mechanism and terms.
3. Updating appendix i “List of CLIA-NWC Member Lines” to include Compagnie du Ponant.
4. Updating Appendix ii, “Cruise Industries Policies - Environmental Protection”.
5. Other minor changes for organization of the document.