

APPENDIX A
Survey Questionnaires

Appendix A-1

**2003 NDZ Boater Owner/Operator Survey
(Boater Survey)**



No-Discharge Zone _____ Date _____

U.S. ENVIRONMENTAL PROTECTION AGENCY
2003 No-Discharge Zone Effectiveness Survey
Boat Owner/Operator

The purpose of this survey is to gather background information to help EPA assess its Vessel Sewage Discharge Program, and to ensure that it is being implemented to be protective of the aquatic environment. The information collected will not be linked to any individual or facility.

- This survey is anonymous; respondents will not be identified in the analysis.
Please only complete this survey if you operate a boat.
The survey is not intended to take much of your time to complete; we estimate it should take no more than 15 minutes to answer all the questions. Please make estimates if you don't know the precise answer.

Please describe the boat you operate:

- 1. Do you own the boat that you operate? [] Yes [] No
2. What is the length of the boat you operate? _____ feet
3. What is the draft of the boat you operate? _____ feet
4. Is the boat you operate
a. commercial? [] Yes [] No
b. recreational? [] Yes [] No
c. a live-aboard? [] Yes [] No
5. Is the boat you operate a
a. powerboat? [] Yes [] No
b. sailboat? [] Yes [] No
6. Does the boat you operate have
a. a portable toilet (e.g., a Porta-Potty™)? [] Yes [] No
b. an installed toilet (head)? [] Yes [] No

If you answered "No" to both parts of question 6, please skip to question 23. If you answered "No" to question 6.b. please skip to question 12.

- 7. If the boat you operate has an installed toilet, is it a
a. flow-through device? [] Yes [] No
b. holding tank? [] Yes [] No
8. If the boat you operate has an installed toilet, do you
a. regularly service it? [] Yes [] No
b. know if you need to add chemicals? [] Yes [] No
c. regularly add chemicals? [] Yes [] No
d. believe that it is performing adequately? [] Yes [] No

9. If the boat you operate has an installed toilet, what type of training did you receive regarding the proper operation of it?
- I was trained by the boat dealer
 - I was trained by the MSD manufacturer
 - I was trained by a marina operator
 - I learned to operate the device using the instruction manual
 - I have not received any training or instruction
10. If you received training by a vendor, MSD manufacturer, or marina operator regarding proper use of your MSD, how long was the training?
- less than 30 minutes
 - 30 minute - 1 hour
 - 2 hours
 - half day
 - full day
11. If the boat you operate has an installed toilet, how do you operate it in the area designated on the attached map?
- I close the Y valve
 - The waste is sent to a holding tank
 - I don't use it
 - I operate it normally
 - Don't know/other

Please describe your boating activity so far this season (2003):

12. How many days have you boated this season? _____ days
13. How many days have you boated in the area designated on the attached map this season?
_____ days
14. *This season* have you used a
- | | |
|--|--|
| a. stationary pumpout facility (e.g., on piers or bulkhead)? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| b. mobile pumpout facility onboard a boat? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| c. shore-based, portable pumpout facility? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| d. portable toilet dump station? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
15. Do you have an arrangement to notify marina staff (by flag, for example) to pump out the holding tank during your absence? Yes No
16. Have you used a pumpout facility or toilet dump *this season* in the area designated on the attached map? Yes No
- a. How many times? _____ times (If none, enter "0")
17. Have you had trouble using a pumpout facility or toilet dump *this season* in the area designated on the attached map? Yes No I have not attempted to pump out in this area
- a. How many times? _____ times (If none, enter "0")
18. Did you have trouble using a pumpout or toilet dump on your *last trip* in the area designated on the attached map? Yes No I have not attempted to pump out in this area

19. Have you had occasions *this season* where you looked for but could not find a working pumpout or toilet dump facilities in the area designated on the attached map? Yes No
20. Have you discharged sewage outside the area designated on the attached map *this season*? Yes No
- a. How many times? _____ times (If none, enter "0")
21. Have you found any of the following conditions at any pumpout or toilet dump facilities in the area designated on the attached map *this season*?
- a. Marina closed Yes No
- b. No pumpout or toilet dump facilities at marina Yes No
- c. Marina open, pumpout or toilet dump facilities not functional Yes No
- d. Marina open, no staff available at pumpout or toilet dump facilities Yes No
- e. Marina open, I didn't know how to use pumpout or toilet dump facilities Yes No
- f. Pumpout inaccessible (e.g., water not deep enough or hose too short) Yes No
- g. Mobile pumpout boat not available Yes No
- h. Waiting time too long Yes No
- i. Pumpout cost too high Yes No
- j. Pumpout facility too far away Yes No
- k. I have not had any problems Yes No
22. Have any of the above conditions or problems deterred you from using pumpout facilities? Yes No
- a. How many times _____ times (If none, enter "0")

Facts About No-Discharge Zones

23. Do you know that the area designated on the attached map is a no-discharge zone? Yes No
24. Do you know that the discharge of treated and untreated vessel sewage is prohibited in no-discharge zones? Yes No
25. Have you seen or heard information about no-discharge zones from any of the following sources?
- a. Television Yes No
- b. Radio Yes No
- c. Boat Show Yes No
- d. Signs at this marina Yes No
- e. Brochures or handouts at this marina Yes No
- f. Verbal instruction by staff at this marina Yes No
- g. Signs somewhere else Yes No
- h. Brochures or handouts somewhere else Yes No
- i. Verbal instruction somewhere else Yes No
- j. Told by someone who stopped me while I was boating Yes No
- k. Heard it first in this survey Yes No
- l. Nautical maps Yes No
- m. Other, please describe

26. To your knowledge, who enforces no-discharge zone requirements in the area designated on the attached map?
- | | | | |
|---|------------------------------|-----------------------------|-------------------------------------|
| a. U.S. Coast Guard | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't Know |
| b. State | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't Know |
| c. Local government | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't Know |
| d. Harbormaster | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't Know |
| e. Marina(s) within the no-discharge zone | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't Know |
| g. EPA | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't Know |
27. Are you aware of anyone receiving a citation for discharging sewage in the area designated on the attached map? Yes No
28. The area designated on the attached map was designated as a no-discharge zone on the date indicated on the attached map. Have you noticed a change in water quality since the designation?
- Yes, the water seems cleaner
 - Yes, the water seems dirtier
 - No, the water seems the same
 - Don't know

**THANK YOU FOR COMPLETING THIS SURVEY!
ENJOY BOATING ON CLEAN WATERS!**

Appendix A-2

2003 NDZ Marina Owner/Operator Survey (Marina Survey)



No-Discharge Zone _____ Date _____

U.S. ENVIRONMENTAL PROTECTION AGENCY
2003 No-Discharge Zone Effectiveness Survey
Marina Owner/Operator

The purpose of this survey is to gather background information to help EPA assess its Vessel Sewage Discharge Program, and to ensure that it is being implemented to be protective of the aquatic environment. The information collected will not be linked to any individual or facility. No respondents will be identified in the analysis. The survey is not intended to be difficult to complete; we estimate that it should take no more than 15 minutes to answer all the questions. Please use estimates for any question you don't know the precise answer. Thank you for your participation.

Marina Description

- 1. How many boat slips does this marina have? _____ slips
2. Please estimate the number of boats currently at this marina _____ boats
3. Does this marina have (Please check all that apply)
a. Onshore pumpout facilities? [] Yes, how many? _____ [] No
b. Mobile pumpout boat(s)? [] Yes, how many? _____ [] No
c. Toilet dump station(s)? [] Yes, how many? _____ [] No
d. Portable pumpout facilities? [] Yes, how many? _____ [] No

If you answered no to all parts of question 3, please skip to question 21.

- 4. What other services does this marina offer? (Please check all that apply)
a. Fuel [] Yes [] No
b. Boat service and repair [] Yes [] No
c. Boat sales [] Yes [] No
d. Equipment and parts sales [] Yes [] No
e. Bait and tackle [] Yes [] No
f. High and dry boat storage [] Yes [] No
g. Food and beverage sales [] Yes [] No
5. If this marina has pumpout facilities or toilet dump stations, (use the back of this page if more space is needed)
a. List the equipment brand name(s) _____
b. List the year(s) the pumpout equipment was installed _____
6. What is the maximum vessel draft this marina's pumpout facilities can service? _____ feet
7. Has this marina received any Clean Vessel Act monies to assist with no-discharge zone requirements? [] Yes [] No
8. How much does this marina charge per pumpout or toilet dump? \$ _____
9. How much does it cost annually to operate and maintain this marina's pumpout facilities and/or toilet dump? \$ _____

Pumpout Operations

10. Who performs the pumpout or toilet dump operation? Marina staff Boaters
11. Do you require the marina staff who operate and/or maintain the pumpout facilities and/or toilet dumps to be trained? Yes No
12. If the marina staff are trained on the operation or maintenance of pumpout facilities and/or toilet dumps, how many hours of training is each person given?
- Less than 30 minutes
 - 30 minutes -1 hour
 - 1- 5 hours
 - 5- 10 hours
 - More than 10 hours
13. If the marina staff are trained on the operation or maintenance of pumpout facilities and/or toilet dumps, describe the nature of the pumpout operations training (formal or self-directed).
Check all that apply.
- Staff members review instructions or manuals from the vendor or marina
 - Basic hands-on training on operation, maintenance, and safety conducted by the marina
 - Basic hands-on training on operation, maintenance, and safety conducted by the vendor
 - Off-site training on operation, maintenance, safety, and environmental protection
14. What are the marina's hours of operation?
- _____
- _____
15. What are the pumpout facilities' and/or toilet dumps' scheduled hours of operation?
- _____
16. During the 2003 season, approximately what percentage of time have the pumpout facilities and/or toilet dumps been functional?
- 100% the time
 - 75% to 99% of the time
 - 50% to 74% of the time
 - 26% to 49% of the time
 - 0% to 25% of the time
17. *If the pumpout facilities and/or toilet dumps have not been functional during operating hours in the 2003 season, what were the causes? (Please check all that apply.)*
- a. Not applicable, 100% availability Yes No
 - b. Equipment failure Yes No
(Please provide additional information on the type of significant repairs that have been conducted on your pumpout equipment)
 - c. Waiting for equipment parts/repairs Yes No
 - d. Boater misoperation of equipment Yes No
 - e. Insufficient sewage disposal capacity (For example, sewer pipe backups or capacity reached before septage pickup occurs) Yes No
 - f. No staff available Yes No
 - g. Other, please describe:

18. During the 2003 season, has a boater needed to wait more than 15 minutes to use the pumpout facilities or toilet dumps at this marina? Yes No
19. If boaters have needed to wait more than 15 minutes to use a pumpout facility or toilet dump at this marina so far during the 2003 season, how often has this occurred?
- Never
 - Rarely
 - Occasionally
 - At certain times (e.g., weekends at sunset)
 - Frequently
20. Please estimate the number of pumpout and toilet dump operations or the total volume of sewage collected at this marina so far during the 2003 season. Use whichever measure is simpler to provide.
- _____ number of pumpouts and toilet dumps operations
or
_____ gallons of pumped and dumped material

Roles and Responsibilities

21. Do you know that the area designated on the attached map is in a no-discharge zone? Yes No
22. Does this marina use any of the methods listed below to inform boaters that they are in a no-discharge zone? *(Please check all that apply)*
- a. Signs Yes No
 - b. Brochures/handouts Yes No
 - c. We tell people Yes No
23. Does this marina use any of the methods listed below to inform boaters on how to properly operate their marine sanitation devices? *(Please check all that apply)*
- a. Signs Yes No
 - b. Brochures/handouts Yes No
 - c. We tell people Yes No
24. To your knowledge, who enforces no-discharge zone requirements in this no-discharge zone (the area designated on the attached map)? *You may identify more than one organization.*
- a. U.S. Coast Guard Yes No Don't Know
 - b. State Yes No Don't Know
 - c. Local government Yes No Don't Know
 - d. Harbormaster Yes No Don't Know
 - e. Marina(s) within the no-discharge zone Yes No Don't Know
 - f. EPA Yes No Don't Know
25. Are you aware of anyone receiving a citation for discharging sewage within this no-discharge zone? Yes No

26. To your knowledge, does the State do any of the following? *(Please check all that apply)*
- a. Designate no-discharge zones Yes No Don't Know
 - b. Answer marina operators questions about no-discharge zone responsibilities Yes No Don't Know
 - c. Answer boat operators' questions about their responsibilities in no-discharge zones Yes No Don't Know
 - d. Provide information about no-discharge zones on TV or radio Yes No Don't Know
 - e. Provide written information to marina operators to inform them of no-discharge zone requirements Yes No Don't Know
 - f. Provide signs and posters to marinas to inform boat owners and operators of their responsibilities in a no-discharge zone Yes No Don't Know
 - g. Provide written information to boat owner and operators about no-discharge zone requirements Yes No Don't Know
 - h. Track complaints about lack of pumpout availability Yes No Don't Know
 - i. Other no-discharge zone activities (Please describe)
-

27. This marina is in a harbor that was designated as a no-discharge zone on the date shown on the map. Have you noticed a change in water quality since the designation?
- Yes, the water seems cleaner
 - Yes, the water seems dirtier
 - No, the water seems the same
 - Don't know
-

**THANK YOU FOR COMPLETING THIS SURVEY!
ENJOY BOATING ON CLEAN WATERS!**

Appendix A-3

2003 State/Local Government Survey (State Survey)



U.S. ENVIRONMENTAL PROTECTION AGENCY
2003 No-Discharge Zone Effectiveness Survey
State/Local Government

The purpose of this survey is to gather background information to help EPA assess its Vessel Sewage Discharge Program, and to ensure that it is being implemented to be protective of the aquatic environment. The information collected will not be used in any manner against an individual or facility.

EPA is asking your help to understand State/Local government experience with no-discharge zones (NDZs). Battelle, Inc. and the Eastern Research Group (ERG) is assisting EPA in this effort. We would like to ask what type of information your office keeps on no-discharge zones and to request a copy of the available information for this study.

Contact Information

Please provide contact information for the person who is filling out this survey.

Name: _____ Organization: _____
 Telephone: _____ Date: _____
 E-mail: _____ Fax: _____

Location Identification

The following no-discharge zones were randomly selected for analysis:

- a. (Name of 1st NDZ; designation year)

Data Availability

Instructions to Interviewer: For every box marked "Yes" in Questions 1-5, request that the information be sent to you. Ask if there is a user fee or other charge to obtain the data. If so, check to whom the request and check are sent. Offer to provide a Federal Express number to expedite the transfer.

- 1. Does your office have the following type of information for 2000, 2001, or 2002 for these no-discharge zones? (If applicable)

	2000		2001		2002	
a. Beach closures	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. Shellfish bed health	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Water quality data	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

- 2. Does your office have the following type of information for these areas prior to them being designated as no-discharge zones?

- a. Beach closures Yes No
- b. Shellfish bed health Yes No
- c. Other water quality data Yes No

3. Does your office have any of the following information for these no-discharge zones?
- a. Anecdotal data on no-discharge zone effectiveness Yes No
 - b. Other no-Discharge zone information Yes No

Available Reports

4. Does your office have any reports that use the 2000, 2001, or 2002 data to assess water quality or the effectiveness of this (these) no-discharge zone(s)? Yes No
5. Does your office have any reports that assess water quality in this (these) area(s) prior to them being designated as no-discharge zone(s)? Yes No

State/Local Government Understanding of Roles and Responsibilities

6. Which organization enforces no-discharge zone requirements?
- a. U.S. Coast Guard Yes No
 - b. State Yes No
 - c. Local government Yes No
 - d. Harbormaster Yes No
 - e. Marina(s) within the no-discharge zone Yes No
 - f. EPA Yes No
7. What is your organization's responsibility regarding no-discharge zones?
- a. Designation of this area as a no-discharge zone Yes No
 - b. Enforcement of no-discharge zone requirements Yes No
 - c. Answering marina operator questions about their no-discharge zone responsibilities Yes No
 - d. Answering boat owner and operator questions about their no-discharge zone responsibilities Yes No
 - e. Providing informational advertising on TV or radio Yes No
 - f. Providing written information to marina operators Yes No
 - g. Providing signs and posters to marinas to inform boat owners and operators of their responsibilities in a no-discharge zone Yes No
 - h. Providing written information to boat owner and operators Yes No
 - i. Tracking complaints about pump-out facility operations
If yes, please provide any information on the actions taken or results. Yes No
 - j. Seeking Clean Vessel Act funding Yes No
 - k. Other _____ Yes No

Further Contact

8. If you do not know the answer to any of the questions, please identify someone who might have the information.

Name: _____ Organization: _____
 Telephone: _____ E-mail: _____

Appendix A-4

**2003 Performance of MSD Manufacturers Survey
(MSD Manufacturer Survey)**



**U.S. Environmental Protection Agency
2003 Performance of Marine Sanitation Devices (MSD) Survey
MSD Manufacturers**

The purpose of this survey is to gather background information to help EPA assess its Vessel Sewage Discharge Program, and to ensure that it is being implemented to be protective of the aquatic environment. The information collected will not be used in any manner against an individual or facility. This survey is designed to gather information regarding the performance of marine sanitation devices (MSDs). It is understood that this information may be gathered during the Coast Guard certification process, however, we would like you to provide any of this information that you have.

Contact Information

Please provide contact information for the person who is filling out this survey.

Name: _____ Company: _____

Telephone: _____ Date: _____

E-mail: _____ Fax: _____

1. Do you manufacture MSDs?

- Yes Please continue with survey.
- No Thank you. You have completed the survey. Please return it to EPA.

Questions 2 through 46 ask for information **for each MSD** model with U.S. Coast Guard certification or IMO Certificate of Type Test that you manufacture. Please fill out one of the surveys enclosed for each MSD you manufacture. Copies of the survey are provided for additional devices. You may claim any information on this survey as confidential business information (CBI) by checking the CBI box or write CBI beside the question.

Basic Information

2. Device model name: _____

3. Device model number: _____

4. Has this device been issued a letter of certification from the United States Coast Guard indicating compliance with the design and testing criteria of Title 33, Code of Federal Regulations, Part 159?
 Yes No

If yes, when was the letter of certification issued? _____ / _____ / _____ (m m/dd/yyyy)

5. Model type (check one)
 - Type I (flow-thru device that can be installed on vessels less than 65 feet)
 - Type II (flow-thru device that can be installed on any size vessel)
 - Type III (holding tank)

6. Has this device been issued an IMO Certificate of Type Test indicating compliance with IMO resolution MEPC.2(VI) Recommendation on International Effluent Standards and Guidelines for Performance Tests for Sewage Treatment Plants? Yes No
 - a. If yes, when was Certificate of Type Test issued? ____/____/____ (mm/dd/yyyy)

7. Is this device designed to meet the effluent requirements for cruise ships in Alaska (33 CFR 159.309)? Yes No

8. Is this device designed to treat gray water, which is defined as galley, dishwasher, bath, shower and/or laundry wastewater? Yes No

9. Is this device designed to treat drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises? Yes No

10. Was the device tested for certification: (Check one)
 - This specific model
 - Another model relying on the same treatment process. (Please provide the model name _____ and model number _____ for the device that was tested.)

11. What are the space requirements for this device?
 - a. Width _____ units_____
 - b. Length _____ units_____
 - c. Height _____ units_____

12. What is the design capacity of this device?
 - a. Average daily capacity _____ units_____
 - b. Peak capacity _____ units_____

13. What is the average daily energy use of this device? _____ units_____

14. What is the average volume of effluent discharged per flush? _____ units_____

15. When you return this survey, please enclose a copy of the instruction manual.

Treatment Process

16. What treatment process does this device use? (Check all that apply.)
 - Biological
 - Filtration
 - Chlorination
 - Ozone treatment
 - Ultraviolet irradiation
 - Heat
 - Other (please describe: _____)

17. If this device uses biological treatment, is the wastewater aerated during treatment?
 Check box if CBI
 Yes (wastewater is aerated)
 No (wastewater is not aerated)
 This device does not use biological treatment.
18. If this device uses filtration, please provide the following information on the filtration process.
 Check box if CBI
 a. Filter material _____
 b. Pore size _____ units _____
 c. Expected filter life _____ units _____
 d. This device does not use filtration.
19. If this device uses chlorination, please provide the following information for chlorination processes.
 Check box if CBI
 a. Mechanism for adding chlorine _____
 b. Chlorine dose added to wastewater _____ units _____
 c. Chlorine concentration achieved _____ units _____
 in wastewater
 d. Residence time at this chlorine concentration _____ units _____
 e. Is there a dechlorination step? Yes No
 If yes,
 please describe: _____
 f. This device does not use chlorination.
20. If this device uses ultraviolet irradiation, please provide the following information for ultraviolet irradiation processes.
 Check box if CBI
 a. Ultraviolet intensity _____ units _____
 b. This device does not use ultraviolet irradiation.
21. If this device uses heat, please provide the following information for this process.
 Check box if CBI
 a. Identify the heat source _____
 b. Temperature during treatment _____ units _____
 c. Residence time at treatment temperature _____ units _____
 d. Average temperature of the effluent _____ units _____
 e. This device does not use heat.
22. Does this device use chemical additives to reduce odors? Yes No
 Check box if CBI
23. If this device uses chemical additives to reduce odors, please identify the additive(s)?
 (Check all that apply.)
 Check box if CBI
 Glutaraldehyde
 Formaldehyde
 Enzymes (please identify: _____)
 Perfume(s) (please identify: _____)
 Other(s) (please identify: _____)
24. Does this device use chemical additives to reduce offensive colors? Yes No
 Check box if CBI
25. If this device uses chemical additives to reduce offensive colors, please identify the additive(s)?
 (Check all that apply.)
 Check box if CBI

- Dyes (please identify: _____)
- Other (please identify: _____)

Cost Data

26. Please provide the following cost information for this device as of January 1, 2003.
- a. Equipment price (wholesale, f.o.b.) \$US _____ .00
 - b. Annual operating and maintenance cost \$US _____ .00
 - c. Installation cost - new vessel \$US _____ .00
 - d. Installation cost - retrofit on existing vessel \$US _____ .00

Performance Data

27. Please complete the following table on performance data for the model. Specify actual test results, e.g., 183 fecal coliform bacteria per 100 milliliters; do not report effluent concentration as a range, e.g. "below 200 fecal coliform bacteria per 100 milliliters."
 Check box if CBI

Constituent	Test (Y/N)	Test Method (e.g., USCS # or EPA#)	Concentration		
			Influent	Effluent	Units
Fecal Coliform	Y				
Total Suspended Solids (TSS)	Y				
Enterococci					
E. coli					
5 day Biochemical Oxygen Demand (BOD)					
Chemical Oxygen Demand (COD)					
Residual Chlorine					
pH					
Additives for odors and color					
Hepatitis A					
Other, please specify					

28. Please attach a copy of the raw data collected or any additional performance data on this model.
 Check box if CBI
29. Test location
 Laboratory
 On vessel

- 30. Device age at time of test
 - New
 - Used, months in operation: _____
- 31. Test duration _____ days
- 32. Test temperature _____ units _____
- 33. Flow rate _____ units _____
- 34. Influent source _____
- 35. Has the performance of this device at treating gray water been tested? Yes No
- 36. If yes, please attach a copy of all testing data that you have on the performance of this device at treating gray water.
- 37. Has the performance of this device at treating drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises been tested? Yes No
- 38. If yes, please attach a copy of all testing data that you have on the performance of this device at treating drainage from medical premises.
- 39. Has the performance of this device been tested for any period longer than required for certification? Yes No
- 40. If yes, please provide all testing data that you have.

Sewage Sludge Management

- 41. Does this device produce sewage sludge?
 - Check box if CBI
 - Yes Please complete questions 42 - 46.
 - No You have completed the survey. Please return it to EPA
- 42. How much sewage sludge is produced daily when the unit is operated at average capacity? _____ pounds/day
- 43. Does this device treat or manage sewage sludge? Yes No
- 44. Identify all sewage sludge treatment processes this device uses. (*Check all that apply.*)
 - No sewage sludge treatment
 - Concentration
 - De-watering
 - Drying
 - Incineration
 - Other (please identify: _____)
- 45. Please provide the following data on sewage sludge quality if available.
 - No data on sludge quality available

Constituent	Concentration	Units
Percent solids		
Metals		
Nutrients		
Fecal Coliforms		
5 day Biochemical Oxygen Demand (BOD)		
Enterococci		
E. coli		
Chemical Oxygen Demand (COD)		
Other, please specify		

46. Please attach any additional information on the quantity and/or quality of the sewage sludge produced by this device.

Appendix A-5

**2003 Performance of MSD Survey
U.S. Coast Guard Accepted Independent Laboratories
(Laboratory Survey)**



**U.S. Environmental Protection Agency
2003 Performance of Marine Sanitation Devices (MSD) Survey
US Coast Guard Independent Accepted Labs**

The purpose of this survey is to gather background information to help EPA assess its Vessel Sewage Discharge Program, and to ensure that it is being implemented to be protective of the aquatic environment. The information collected will not be used in any manner against an individual or facility. It may be used in future decisions associated with the implementation of the Vessel Sewage Discharge Program. It is understood that this information may be gathered during the Coast Guard certification process, however, we would like for you to provide any of this information that you have.

Contact Information

Please provide contact information for the person who is filling out this survey.

Name: _____ Company: _____

Telephone: _____ Date: _____

E-mail: _____ Fax: _____

1. Do you test the performance of MSDs?

- Yes Please continue the survey.
- No Thank you. You have completed the survey. Please return it to EPA.

Questions 2 through 40 ask for information **for each MSD** model with U.S. Coast Guard certification or IMO Certificate of Type Test that this lab has tested. Please fill out one of the copies of the survey enclosed for each MSD this lab has tested. We are enclosing 10 copies. If you have certified more than 10 devices, please make additional copies of the survey as needed. You may claim any information on this survey as confidential business information (CBI) by checking the CBI box or write

Basic Information

2. Device model name: _____

3. Device model number: _____

4. Has this device been issued a letter of certification from the United States Coast Guard (indicating compliance with the design and testing criteria of Title 33, Code of Federal Regulations, Part 159)? Yes No

If yes, when was the letter of certification issued? _____/_____/_____ (mm/dd/yyyy)

5. MSD model type (check one)

- Type I (flow-thru device that can be installed on vessels less than 65 feet)
- Type II (flow-thru device that can be installed on any size vessel)
- Type III (holding tank)

6. Has this device been issued an IMO Certificate of Type Test (indicating compliance with IMO resolution MEPC.2(VI), Recommendation on International Effluent Standards and Guidelines for Performance Tests for Sewage Treatment Plants)? Yes No
 a. If yes, when was Certificate of Type Test issued? ____/____/____ (mm/dd/yyyy)
7. What are the space requirements for this device?
 a. Width _____ units
 b. Length _____ units
 c. Height _____ units
8. What is the design capacity of this device?
 a. Average daily capacity _____ units
 b. Peak capacity _____ units
9. What is the average daily energy use of this device? _____ units
10. What is the average volume of effluent discharged from the treatment device per flush? _____ units

Treatment Process

11. What treatment process does this device use? (Check all that apply.)
 Biological
 Filtration
 Chlorination
 Ozone treatment
 Ultraviolet irradiation
 Heat
 Other (please describe: _____)
12. If this device uses biological treatment, is the wastewater aerated during treatment?
 Check box if CBI
 Yes (wastewater is aerated)
 No (wastewater is not aerated)
 This device does not use biological treatment.
13. If this device uses filtration, please provide the following information on its filtration process.
 Check box if CBI
 a. Filter material _____
 b. Pore size _____ units
 c. Expected filter life _____ units
 d. This device does not use filtration.
14. If this device uses chlorination, please provide the following information for the chlorination process.
 Check box if CBI
 a. Mechanism for adding chlorine _____
 b. Chlorine dose added to wastewater _____ units
 c. Chlorine concentration achieved in wastewater _____ units
 d. Residence time at this chlorine concentration _____ units
 e. Is there a dechlorination step? Yes No
 If yes, please describe: _____
 f. This device does not use chlorination.

15. If this device uses ultraviolet irradiation, please provide the following information for ultraviolet irradiation processes.
 Check box if CBI
- a. Ultraviolet intensity _____ units _____
 - b. This device does not use ultraviolet irradiation.

16. If this device uses heat, please provide the following information for this process.
 Check box if CBI
- a. Identify the heat source _____
 - b. Temperature during treatment _____ units _____
 - c. Residence time at treatment temperature _____ units _____
 - d. Average temperature of the effluent _____ units _____
 - e. This device does not use heat.

17. Does this device use chemical additives to reduce odors? Yes No
 Check box if CBI

18. If this device uses chemical additives to reduce odors, please identify the additive(s)?
 (Check all that apply.)
 Check box if CBI
- Glutaraldehyde
 - Formaldehyde
 - Enzymes (please identify: _____)
 - Perfume(s) (please identify: _____)
 - Other(s) (please identify: _____)

19. Does this device use chemical additives to reduce offensive colors? Yes No
 Check box if CBI

20. If this device uses chemical additives to reduce offensive colors, please identify the additive(s)?
 (Check all that apply.)
 Check box if CBI
- Dyes (please identify: _____)
 - Other (please identify: _____)

Performance Data

21. Please complete the following table on performance data for the model. Specify actual test results, e.g., 183 fecal coliform bacteria per 100 milliliters; do not report effluent concentration as a range, e.g. "below 200 fecal coliform bacteria per 100 milliliters."
 Check box if CBI

Constituent	Test (Y/N)	Test Method (e.g., USCS # or EPA#)	Concentration		
			Influent	Effluent	Units
Fecal Coliform	Y				
Total Suspended Solids (TSS)	Y				
Enterococci					
E. coli					
5 day Biochemical Oxygen Demand (BOD)					
Chemical Oxygen Demand (COD)					
Residual Chlorine					
pH					
Additives for odors and color					
Hepatitis A					
Other, please specify					

22. Please attach a copy of the raw data collected or any additional performance data on this model.
 Check box if CBI

23. Test location
 Laboratory
 On vessel

24. Device age at time of test
 New
 Used, months in operation: _____

25. Test duration _____ days

26. Test temperature _____ units _____

27. Flow rate _____ units _____

28. Influent source _____

29. Was the performance of this device at treating gray water tested at this lab? Yes No
30. If yes, please attach a copy of all testing data that you have on the performance of this device at treating gray water.
Check box if CBI
31. Was the performance of this device at treating drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises tested at this lab? Yes No
32. If yes, please attach a copy of all testing data that you have on the performance of this device at treating drainage from medical premises.
Check box if CBI
33. Was the performance of this device beyond the required test period tested at this lab? Yes No
34. If yes, please attach a copy of any testing data that you have on the performance of this device beyond the required test period.

Sewage Sludge Management

35. Does this device produce sewage sludge?
Check box if CBI
 Yes Please complete questions 36-40
 No Thank you, you have completed the survey. Please return it to EPA.
36. How much sewage sludge is produced daily when the unit is operated at average capacity? _____ pounds/day
37. Does this device treat or manage sewage sludge? Yes No
38. Identify all sewage sludge treatment processes this devices uses. (Check all that apply.)
 No sewage sludge treatment
 Concentration
 De-watering
 Drying
 Incineration
 Other (please identify: _____)

39. Please provide the following data on sewage sludge quality if available.
 No data on sludge quality available

Constituent	Concentration	Units
Percent solids		
Metals		
Nutrients		
Fecal Coliforms		
5 day Biochemical Oxygen Demand (BOD)		
Enterococci		
E. coli		
Chemical Oxygen Demand (COD)		
Other, please specify		

40. Please attach any additional information on the quantity and/or quality of the sewage sludge produced by this device.