FORM APPROVED — OMB CONTROL NO. 2040-0213 — APPROVAL EXPIRES: June 30, 2006

Industry Technical Questionnaire:
Phase III Cooling Water Intake Structures

Offshore and Coastal Oil and Gas Extraction Facilities

September 2003

U.S. Environmental Protection Agency (EPA)
Office of Science and Technology
Washington, DC

Notice of Estimated Burden

EPA estimates that completion of the entire *Industry Technical Questionnaire: Phase III Cooling Water Intake Structures – Offshore and Coastal Oil and Gas Extraction Facilities* will require an average of 8 hours per facility/MODU. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID No. OW-2003-0005, which is available for public viewing at the Water Docket in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW, Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426. An electronic version of the public docket is available through EPA Dockets (EDOCKET) at http://www.epa.gov/edocket. Use EDOCKET to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the docket ID number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Office for EPA. Please include the EPA Docket ID No. (OW-2003-0005) and OMB control number (2040-0213) in any correspondence.

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Certification Statement

Instructions

The individual responsible for directing or supervising the preparation of the enclosed *Industry Technical Questionnaire: Phase III Cooling Water Intake Structures – Offshore and Coastal Oil and Gas Extraction Facilities* must read and sign the Certification Statement below before returning both documents to the U.S. Environmental Protection Agency. The certifying official must be a responsible corporate official or his/her duly authorized representative. The Certification Statement must be completed and submitted in accordance with the requirements contained in the *Code of Federal Regulations* at 40 CFR 122.22.

I certify under penalty of law that the attached questionnaire was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, accurate and complete. In those cases where we did not possess the requested information, we have provided best engineering estimates or judgments. We have, to the best of our ability, indicated what we believe to be company confidential business information as defined under 40 CFR Part 2, Subpart B. We understand that we may be required at a later time to justify our claim in detail with respect to each item claimed confidential. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment as explained in Section 308 of the Clean Water Act (33 U.S.C., Section 1318).

_____ _____

Signature of Certifying Official Date

_____ ( )_____

Printed Name of Certifying Official Telephone No.

_____

Title of Certifying Official

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General Information and Instructions

What is the Purpose of this Questionnaire?

The U.S. Environmental Protection Agency (EPA) is currently developing regulations under Section 316(b) of the Clean Water Act, 33 U.S.C., Section 1326(b). Section 316(b) provides that any standard established pursuant to Sections 301 or 306 of the Clean Water Act (CWA) and applicable to a point source requires that the location, design, construction, and capacity of *cooling water intake structures* (CWIS) reflect the best technology available (BTA) for minimizing *adverse environmental impact*. Answers to the enclosed questionnaire will help EPA identify the types and sizes of facilities that are subject to Section 316(b).

Please note that data from this questionnaire are *not* intended to identify whether a specific facility's cooling water intake structures are having an adverse impact on the environment. Moreover, questionnaire responses are *not* intended to identify whether a specific facility is employing BTA with respect to minimizing adverse environmental impacts from cooling water intake structures, though they may help EPA determine BTA options for various classes of facilities. This questionnaire is a tool for gathering the following information: (1) type and nature of facilities using cooling water; (2) specific uses of cooling water; (3) design and configuration of cooling water systems and cooling water intake structures; (4) types of technologies being used at intake structures; and (5) whether facilities have previously evaluated the environmental impacts of their cooling water intake structures. Data from this questionnaire will be factored into ongoing research being conducted by EPA that is more specifically designed to determine the nature of adverse impacts and the types of control technologies that might minimize such impacts. All of EPA's research efforts will support the development of regulatory options, some of which will subsequently be fashioned into a proposed rulemaking that will be put forth for public review and comment. The current schedule for Phase III 316(b) regulations is for EPA to finish a proposed rule by November 1, 2004 and to take final action by June 1, 2006. More information at www.epa.gov/waterscience/316b/.

This questionnaire requests information about each facility or platform selected to receive the survey. If a firm owns facilities not selected for the survey, the firm does not need to complete the survey for those facilities. Please note that it is not the intent of EPA to require facility personnel to go to unusual lengths to retrieve information to respond to this questionnaire. Responses should be based on data that can be accessed from facility records with reasonable diligence.

This questionnaire consists of four main sections. Section A requests general facility information, such as facility name and location. Section B requests information from facilities on such topics as National Pollutant Discharge Elimination System (NPDES) permit status, whether cooling water is used and, if so, whether it is withdrawn by the facility from surface water. Information is also requested on the design intake flow. The purpose of the scoping section is to help EPA identify (i.e., "screen") facilities that are not subject to Section 316(b). These out-of-scope facilities will be exempted from completing the remaining sections of the questionnaire. Facilities that will be considered "out-of-scope" will include those that; (1) are not point sources as defined under Section 502(14) of the Clean Water Act (33 U.S.C., 1362(14)); (2) do not use cooling water as that term is defined for the purposes of this questionnaire; or (3) do not receive any of their cooling water supply from a surface water source. Section C requests facilities to provide basic design and operational data on their cooling water intake structures and cooling water systems. Many of the questions are in multiple-choice format. The following types of information are being requested: (1) total number of cooling water intake structures; (2) originating sources of cooling water; (3) total cooling water intake flow rates and operating days for a typical calendar year; (4) total number of cooling water systems and their respective configurations; (5) placement of cooling water intake structures; (6) control technologies being used at intake struc-

tures; (7) and whether facility or parent firm owners have ever conducted or commissioned environmental or ecological studies of the potential impacts of any of their cooling water intake structures. Section D requests facility and parent firm economic data. It is only applicable to facilities that are out-of-scope and therefore not required to complete a separate economic questionnaire. This section of the questionnaire requests information on the: (1) number of facility full time employees and revenue; (2) name of the domestic parent firm; (3) domestic parent full time employees; and (4) the SIC codes of the domestic parent firm. EPA is requesting this basic financial information for the purpose of completing a Small Business Regulatory Enforcement Fairness Act (SBREFA) analysis.

What is the Authority for This Questionnaire?

EPA has authority to administer this questionnaire under Section 308 of the CWA (33 U.S.C., Section 1318). Late filing of the questionnaire, or failure to follow any related EPA instructions, may result in civil penalties, criminal fines, or other sanctions provided by law.

Who Must Complete This Questionnaire?

This questionnaire has been designed for completion by industries that are point-sources as defined under Section 502 of the Clean Water Act (33 U.S.C. Section 1362). Entities potentially affected by this action are those existing facilities that use cooling water intake structures to withdraw water from waters of the U.S. for cooling purposes and that have or are required to have a National Pollutant Discharge Elimination System (NPDES) permit issued under section 402 of the Clean Water Act (CWA). This questionnaire is primarily intended for Offshore and Coastal Oil and Gas Extraction Facilities.

Where to Get Help?

☎ **Toll-Free Help Line**

Industry Technical Questionnaire: Phase III Cooling Water Intake Structures

Staffed by:
Tetra Tech, Inc.
Available weekdays, 9:00 a.m. to 5:00 p.m., Eastern Time

Toll-Free Phone No.: (888) 733-1449

Direct Dial Phone No.: (703) 385-5073 (long distance charges will apply)

Certification Statement

A responsible corporate official or his/her duly authorized representative must verify the accuracy of the facility's responses to the questionnaire by reading and signing the enclosed Certification Statement. This statement must be returned to EPA along with the completed questionnaire.

When and How to Return the Questionnaire?

You must complete and return the questionnaire and Certification Statement to EPA within *30 calendar days* after receiving the materials at your facility or firm. Please return your materials, in the enclosed self-addressed envelope, to:

✉ **Industry Technical Questionnaire: Phase III Cooling Water Intake Structures**

316(b) Survey
U.S. Environmental Protection Agency
c/o Tetra Tech, Inc.
10306 Eaton Place, Suite 340
Fairfax, VA 22030

NOTE: *Please keep a copy of the completed questionnaire and Certification Statement for your records*.

If you have extenuating circumstances that preclude you from meeting the 30 day deadline, please contact Jennifer Chan at the following email address: chan.jennifer@epa.gov to discuss your situation.

Confidential Business Information

You may assert a business confidentiality claim for *some* or *all* of your responses to this questionnaire, as described in 40 CFR 2.203(b) *(see full text below)*. Complete regulations governing confidentiality of business information (CBI) appear in 40 CFR, Part 2, Subpart B (see the following website: www.access.gpo.gov/nara/cfr/cfrhtml_00/Title_40/40cfr2_00.html).

> 40 CFR 2.203(b) Method and time of asserting business confidentiality claim. A business which is submitting information to EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to EPA, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as 'trade secret,' 'proprietary,' or 'company confidential.' Allegedly confidential portions of otherwise nonconfidential documents should be clearly identified by the business, and may be submitted separately to facilitate identification and handling by EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.

You may claim confidentiality of business information for any of your responses by one of the methods described above. If no claim of confidentiality has been made, EPA may make the data available to the public without further notice. Please note that you may be required to justify any claim of confidentiality at a later time. Note, however, that certain types of information cannot be considered confidential under the CWA (e.g., facility location, water body, water body type, intake flow data). Your answers to these questions will be part of the public record.

If EPA reveals information covered by a claim of confidentiality, the Agency will strictly follow the requirements and procedures set forth in 40 CFR Part 2, Subpart B. Overall, EPA may reveal submitted information protected by a CBI claim *only* to other employees, officers, or authorized representatives of the United

States who are responsible for implementation of the Clean Water Act. EPA has extensive standard operating procedures in place to handle, store, and transmit CBI data and has a long history of successfully managing this type of information. In addition, personnel expected to handle CBI data are required by the Agency to be trained and certified.

Agency contractors will have access to CBI data so that work can be performed under their contracts relative to the Section 316(b) rulemaking. All EPA contracts require that contractor employees must use CBI data *only* to perform work specified by EPA. The information is not to be shown to anyone, other than EPA officials, without prior written approval having been received from the affected business or from EPA's legal office.

You may check the circle below to assert a business confidentiality claim for all eligible information in this questionnaire.

All eligible data are CBI ○

Specific Instructions for Completing the Questionnaire

Facility or parent firm personnel most knowledgeable of the subject areas covered by the questions posed should complete the questionnaire:

- **Please answer the questions in sequence unless you are directed to SKIP forward in the questionnaire.** This is important since many questions are only applicable to some respondents.
- **Clearly mark responses to all questions with a black or blue ink pen, *or* type responses in the spaces provided.**
- For each question, **please read all instructions and definitions carefully**. Respondents should only report facility specific data for the facility identified on page 1.
- Most key terms are defined at the point where they first appear in the questionnaire. They are also defined in the ***Glossary to Questionnaire***, which is attached to the back of the questionnaire. **Before responding to a given question, please read the definitions of any key terms used and any question-specific instructions.**
- **Please use the units specified when responding to questions requesting measurement data (e.g., gallons per day).**
- **Please provide responses on the basis of the time period(s) cited in each question.** Note that the time periods under which information is requested may vary from question to question.
- **Please indicate whether information provided in any of your responses is confidential.** Such information will be protected under EPA's confidentiality procedures. To claim a particular response as containing confidential business information, simply mark (✓) the circle at the end of each question, if one is provided or follow the identification procedures described on the previous page and found under 40 CFR 2.203(b).

Section A: General Facility Information

1. (a) Does the above label reflect the facility's name, parent firm, and current lease block?

DEFINITION: "Facility" includes the following:

"Development facility" means any fixed or mobile structure that is engaged in the drilling of productive wells.

"Exploratory facility" means any fixed or mobile structure that is engaged in the drilling of wells to determine the nature of potential hydrocarbon reservoirs.

"Production facility" means any fixed or mobile structure that is either engaged in well completion or used for active recovery of hydrocarbons from producing formations.

○ Yes (if "Yes," skip Question 1(c))

○ No

(b) Please provide the complete name, parent firm for the facility, and current lease block:

Name of Facility: _____

Parent Firm: _____

Current Lease Block: _____

NOTE: *If you are not the operator, contractor, owner, or lessee for this facility, please telephone the helpline (see Page iv) to notify us.*

(c) Type of facility

Fixed Facility	
Platform	○
Compliant Tower	○
Articulated Gravity Platform	○

Tension Leg Platform	○
Spar	○
Subsea System	○
Permanently Moored Semi-Submersible	○
Floating Production, Storage and Offloading Facility (FPSO)	○
Artificial Island	○
Other _____	○
Mobile Offshore Drilling Unit	
Drill Barge	○
Submersible	○
Jack-Up	○
Semi-Submersible (Dynamically Positioned)	○
Drill Ship (Dynamically Positioned)	○
Other _____	○

2. Please identify the person responsible for questionnaire responses, and please provide the appropriate title and contact information:

NOTE: *The facility contact person provided here should be the person most knowledgeable about the information provided in this survey. This person is not required to be the certifying official.*

Name: _____

Title: _____

Employer *(full legal name)***:** _____

Relationship to Facility *(e.g., domestic parent firm, contractor, etc.)***:** _____

Telephone No: (_____) _____

Fax No: (_____) _____

Best Time to Contact: _____

Section B: General Scoping Data

3. Is the facility presently (in 2003) used in commercial service for the exploration, development, or production of oil and/or gas?

NOTE: *If the facility has been permanently decommissioned, converted to another industry use, or otherwise permanently removed from commercial service as an oil and gas exploration, development or production facility, answer "No". If the facility is temporarily out of service, but may be in service in the future, answer "Yes".*

- ○ Yes (if "Yes," continue)
- ○ No (if "No," stop. Please sign the certification statement and return with the questionnaire)

4. Since January 1, 2002, was the facility regulated or is the facility in the process of obtaining regulatory coverage by a general or specific *National Pollutant Discharge Elimination System (NPDES) permit*?

NOTE: *NPDES permits are required to be held under Section 402 of the Clean Water Act (33 U.S.C. 1342 et seq.) by any point source that discharges pollutants directly to waters of the United States. Facilities that discharge 100 percent of their wastewater (including deck drainage, drill cuttings, and drilling fluids) to injection wells and/or to on shore disposal facilities should answer "No" to this question.*

- ○ Yes (if "Yes," continue)
- ○ No (if "No," stop. Please sign the certification statement and return with the questionnaire)

5. Since January 1, 2002, has *cooling water* been used for contact or noncontact cooling purposes at the facility?

NOTE: *Please consider all cooling water used regardless of the type of water source from which it has been obtained.*

- ○ Yes (if "Yes," continue)
- ○ No (if "No," stop. Please sign the certification statement and return with the questionnaire)

6. Since January 1, 2002, has the facility directly obtained <u>any</u> portion of its cooling water from a surface water source? (e.g., ocean, estuary, bay)?

- ○ Yes (if "Yes," continue)
- ○ No (if "No," stop. Please sign the certification statement and return with the questionnaire)

7. **(a)** What is the design intake flow for this facility?

_____	_____
Design Intake Flow	units, e.g., million gallons per day (mgd), gallons per minute (gpm), cubic feet per second (cfs), gallons per day (gpd)

DEFINITION: "Design intake flow" is the sum total intake capacity of all the cooling water intake structures at this facility. A cooling water intake structure is an intake structure that withdraws any portion of water for cooling purposes, even if a large portion of that water is used for non-cooling purposes. For example, if an intake structure (e.g., seachest, deepwell) has one or more lines and pumps withdrawing from it, some supplying cooling systems, and some not, the capacity of all pumps withdrawing through the intake structure would be counted. If a fire main or a ballast tank is supplied through a separate intake structure (e.g. simple pipe, seachest, or deepwell) that does not have any lines and pumps supplying cooling water, that capacity would not be counted for this question (e.g., this situation may occur on fixed platforms and jackup rigs).

(b) Is the design intake flow less than 2 million gallons per day?

- ○ Yes (if "Yes," skip to Section D, you need not answer Section C)
- ○ No (if "No," continue to the next question)

Unit conversions:

1 mgd = 0.001440 x gpm = 0.6463 x cfs

1 gpd = 1440 x gpm = 646,300 x cfs

1 gpm = 694.4 x mgd = 448.8 x cfs

1 cfs = 0.002228 x gpm = 1.547 x mgd

Section C: Design and Operational Data for Cooling Water Intake Structures and Cooling Water Systems

8. List the components of the design intake flow (see Question 7(a)) that are used intermittently or infrequently (e.g., firemain, ballast water, pre-load). You should identify the pump or service function (e.g., firemain, ballast water, pre-load), the facility's design intake capacity for this function, the units reported (e.g., gpm, gpd, cfs), and estimate the percentage of the time these functions are used during the exploration, development, or production of oil and/or gas.

NOTE: *Interpret "intermittently or infrequently" to mean "operating less than 25% of the time that the facility is in use for the exploration, development, or production of oil and/or gas." For example, the capacity of pumps used to supply fire mains may have been included when estimating design intake flow in Question 7(a). You would list here the design intake capacity required for supplying these fire mains, the units reported (e.g., gpm, gpd, cfs), and the estimated percent of the time this design intake capacity is used for operating the fire mains during the exploration, development, or production of oil and/or gas. Please group facility pumps having similar functions (e.g. fire mains, ballasting, pre-loading).*

If there are more than four additional infrequent or intermittent components of the design intake flow, please copy this page, fill the table for these additional infrequent or intermittent components, and attach it to this questionnaire.

	Pump or Service Function	Design Intake Capacity	Units of Measurement	Percent of Time This Capacity Is Used (%)
8(a)			○ gpm cfs ○ ○ gpd m^3/hr ○	
8(b)			○ gpm cfs ○ ○ gpd m^3/hr ○	
8(c)			○ gpm cfs ○ ○ gpd m^3/hr ○	
8(d)			○ gpm cfs ○ ○ gpd m^3/hr ○	
Please mark this circle if you are copying this page for additional infrequent or intermittent components of the design intake flow ○				

8. **(e)** If this facility uses surface water for ballasting or pre-loading, how much surface water is used (in gallons) for each individual ballasting or pre-loading operation?

_____ gal

9. What is the facility's total installed horsepower capacity that requires:

(a) Cooling relying on forced or ambient air convection _____ hp

(b) Cooling relying on once-through non-contact or contact water cooling _____ hp

NOTE: *Cooling relying on forced or ambient air convection includes closed cooling systems that use water filled radiators or other cooling systems that do not require the intake of water for once-through cooling.*

10. (a) In the table below, please indicate the major activities for which your facility has used cooling water directly withdrawn from surface water since January 1, 2002.

NOTE: *Please mark (✓) all applicable activities. Please identify any explanations or qualifications that you think necessary on an additional sheet.*

Activities Requiring Cooling Water Directly Withdrawn by Facility From Surface Water		
Item No.	**Activities**	
10(a) (1)	Engine cooling (including engine oil cooling)	○
10(a) (2)	Brake water cooling (e.g., drawworks, anchor winches)	○
10(a) (3)	Winch cooling	○
10(a) (4)	Cooling produced oil or gas for transmission to shore	○
10(a) (5)	Cooling produced gas during stages of compression	○
10(a) (6)	Air compressor	○
10(a) (7)	Hydraulic Units	○
10(a) (8)	Distillers	○
10(a) (9)	Cooling Water for Flares	○
10(a) (10)	Other _____	○

10. (b) In the following table, please indicate the major activities for which your facility has used water directly withdrawn from surface waters since January 1, 2002, not for cooling?

NOTE: *Please mark (✓) all applicable activities. Please identify any explanations or qualifications that you think necessary on an additional sheet.*

Activities Requiring Water Directly Withdrawn by Facility from Surface Water (Not for Cooling)		
10(b) (1)	Ballast Operations	○
10(b) (2)	Pre-load Operations	○
10(b) (3)	Firemain Charging	○
10(b) (4)	Drill Water, Mud Pit Supply, Shale Shakers	○
10(b) (5)	Sanitary Systems	○
10(b) (6)	Desalinization Unit Supply	○
10(b) (7)	Wash Water	○
10(b) (8)	Water Flood for reservoir maintenance	○
10(b) (9)	Water for re-injection of produced waters, drill cuttings, or other wastes	○
10(b) (10)	Other _____	○

11. From what type of surface water sources does the facility withdraw cooling water ?

Ocean ○

DEFINITION: For the purposes of this questionnaire, an ocean is defined as marine open coastal waters other than those water bodies classified as estuaries, embayments, or bays, which are semi-enclosed and have readily identifiable geographic boundaries.

Estuary or Tidal River ○

DEFINITION: For the purposes of this questionnaire, an estuary is a semi-enclosed coastal body of water (e.g., bay) that has a free connection with the open sea and is strongly affected by tidal action. In an estuary, sea water is mixed (and usually measurably diluted) with fresh water inflow from rivers.

Other *(Please name or describe)* ○

12. (a) Please provide the longitude and latitude of the facility's current location:

Lat._____ **Degrees** _____ **Minutes**_____**Seconds**

Long. _____ **Degrees** _____ **Minutes**_____**Seconds**

(b) For fixed facilities, what is the water depth (in feet) at your location? _____ feet

(c) For fixed facilities, what year was the facility installed? _____

The information in Question 12 is confidential business information (CBI). ○

13. How many cooling water intake structures (e.g., seachest, simple perforated pipe) does the facility have that directly withdraw surface water to support, at least in part, contact or noncontact cooling operations within the facility? _____

NOTE: *Consider only those intake structures presently operating or temporarily offline (i.e., expected to operate again in the future). Do not include intake structures planned or under construction or permanently offline.*

14. For each cooling water intake structure (CWIS) identified in Question 13, please provide in the table below, for a *typical calendar year* since January 1, 2002, the name and the total number of days per year that each cooling water intake structure was operational. If there are more than eight CWISs at this facility, please copy this page, fill the table for CWISs numbered nine and above, and attach it to this questionnaire.

NOTE: *Operating days may be determined by adding the number of hours the CWIS was operational during the year and then dividing by 24 hours per day to get the total number of operating days. For example, if a CWIS has operated 5,840 hours during the calendar year, the total hours divided by 24 hours per day are equal to 243 calendar days.*

NOTE: *Please provide each CWIS with a unique name (e.g., Aft Main Seachest, Raw Water Tower #1)*

DEFINITION: For the purposes of this questionnaire, a typical calendar year is one in which the facility and its cooling water intake structures are operated in a normal, routine, regular, or otherwise standard fashion. The data provided should apply to recent calendar years of operation or to projected, near future years of operation (i.e., 2002 to 2004).

DEFINITION: For the purposes of this questionnaire, the term operating days refers to the total number of days (1 day = 24 hours) a cooling water intake structure was operational during a calendar year, excluding any days the intake structure was offline for routine maintenance or otherwise was not operational.

(a) Intake No.	(b) Cooling Water Intake Name	(c) Operating days / year
1		
2		
3		
4		
5		
6		
7		
8		
Please mark this circle if you are copying this page for any additional CWISs		○

The information in Question 14 is confidential business information (CBI). ○

15. For each cooling water intake structure (CWIS) identified in Questions 13 and 14, please describe each CWIS and its approximate dimensions. You must include in your description: (1) the CWIS depth below water surface during the drilling or production of oil and/or gas; (2) the bars, screens or strainers (and the size of openings) at the first point of entry of source water to the CWIS or where impingement or entrainment of aquatic organisms is most likely to occur; (3) whether the CWIS has a flange.

NOTE: *Please provide actual data to the extent they are readily available; otherwise, best engineering estimates may be provided. For design flow and average flow, be sure to report the units you used. If you need more lines to add cooling water intake structures, either duplicate the table or extend the table below.*

The numbering of CWISs should correspond to the numbers used in Question 14. If there are more than eight CWISs at this facility, please copy the following page, fill the table for CWISs numbered nine and above, and attach it to this questionnaire.

Example Descriptions:

Ex.1: (1&2) Two seachests each 24"L x 20"W x 18"D, covered by strainer grates with ½ inch openings, at approx. 26 ft. below waterline. No flange.

Ex.2: (1) Deepwell containing one 6" pipe (with end cap and no flanges) having multiple 3/8" perforations in the last eight feet of pipe about 80' below surface.

(2) Simple pipe, 47" diameter with 2" perforated holes last 10.5', bottom plate perforated with 2" holes. Extends approximately 560' below surface. No flange.

Ex.3: (1) Simple pipe 8" diameter, the entry point (end) covered by strainer with 3/8" mesh. No flange.

(2) Simple pipe, 47" diameter with 2" perforated holes last 10.5', bottom plate perforated with 2" holes. Extends approximately 560' below surface. No flange.

Ex.4: (1, 2 &3) Three raw water tower pumps, 2 stage. Each pump for the three raw water towers is two stage, 75 hp, and rated @ 1200 gpm. Basket strainers, 14' mesh on pump itself. 80' below water surface. No flange.

(4) 1 seachest (28" w x 24" h) with 6.5" radiused corners. Open Area is 462 sq. in. Used only while under tow. Flanged (Doubler plate with tapped blind holes) port and starboard. 1-1/4" x 1/4" Serrated Grating. Approximately 26' below water surface.

Intake No.	Description of Cooling Water Intake Structure
1	
2	
3	
4	
5	
6	
7	
8	
Please mark this circle if you are copying this page for any additional CWISs ○	

16. For each cooling water intake structure (CWIS) identified in Question 13, please report the cross-sectional area (e.g., sq. in., sq. ft.) allowing entry of water, design intake flow, and average intake flow during drilling or production operations. The numbering of CWISs should correspond to the numbers used under 14 &15. If there are more than eight CWISs at this facility, please copy this page, fill the table for CWISs numbered nine and above, and attach it to this questionnaire.

DEFINITION: Average intake flow does not include intake flows associated with intermittent or infrequent intakes identified in Question 8.

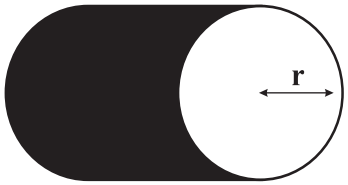
NOTE: *The data (area and flow) should apply to that point where the impingement or entrainment of aquatic organisms is most likely to occur. If that point is unknown, report data for the area where water first enters the system from the surface water.*

NOTE: *The sum total of the design intake flows for the different CWISs identified in the following table should equal the value listed in Question 7(a).*

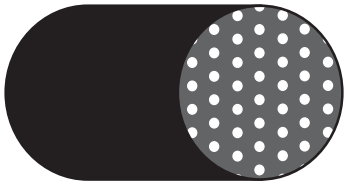
NOTE: *"Intake Area Allowing Water Entry" must account for bars, strainers, and screen surface area blocking the intake. Only the area through which water may pass (slots, mesh perforations, etc.) should be reported.*

Sample calculations for measuring <u>the intake area allowing water entry</u> (A):

Ex 1: Cooling water intake structure is a simple, open-ended pipe. Intake Area Allowing Water Entry (A) $=\pi r^2$, where r = radius of the pipe .



Ex 2: Cooling water intake structure is a pipe with a perforated end cap. Intake Area Allowing Water Entry (A) = $n\pi r^2$, where n = number of perforations and r = radius of each perforation



Intake No.	Intake Area Allowing Water Entry	Units for Area	Design Intake Flow	Units for Flow	Average Intake Flow	Units for Flow
1		○ in^2 cm^2 ○		○ gpm cfs ○ ○ gpd m^3/hr ○		○ gpm cfs ○ ○ gpd m^3/hr ○
2		○ in^2 cm^2 ○		○ gpm cfs ○ ○ gpd m^3/hr ○		○ gpm cfs ○ ○ gpd m^3/hr ○
3		○ in^2 cm^2 ○		○ gpm cfs ○ ○ gpd m^3/hr ○		○ gpm cfs ○ ○ gpd m^3/hr ○
4		○ in^2 cm^2 ○		○ gpm cfs ○ ○ gpd m^3/hr ○		○ gpm cfs ○ ○ gpd m^3/hr ○
5		○ in^2 cm^2 ○		○ gpm cfs ○ ○ gpd m^3/hr ○		○ gpm cfs ○ ○ gpd m^3/hr ○
6		○ in^2 cm^2 ○		○ gpm cfs ○ ○ gpd m^3/hr ○		○ gpm cfs ○ ○ gpd m^3/hr ○
7		○ in^2 cm^2 ○		○ gpm cfs ○ ○ gpd m^3/hr ○		○ gpm cfs ○ ○ gpd m^3/hr ○
8		○ in^2 cm^2 ○		○ gpm cfs ○ ○ gpd m^3/hr ○		○ gpm cfs ○ ○ gpd m^3/hr ○
Please mark this circle if you are copying this page for any additional CWISs ○						

17. (a) Has this facility or its parent firm ever conducted or commissioned a study of the impingement or entrainment of fish and shellfish of any of the facility's intake structures?

○ Yes (if "Yes," continue)

○ No (if "No," go to question 17(c))

(b) If you answered Yes to Question 17(a), please provide the name of the most recent study completed. In addition, please provide the name and telephone number of the individual(s) we should contact if we require additional information regarding the study.

Name of Most Recent Study: _____

Contact Name: _____

Telephone No: (_____) _____

(c) Describe the mitigation measures for reducing biofouling. (Mark all that apply)

	Biofouling Control Measure for this Facility	
17 (c) (1)	Chemical Treatment (e.g., chlorination/dechlorination)	○
17 (c) (2)	Back Flush	○
17 (c) (3)	Cold Water Back Flush	○
17 (c) (4)	Hot Water Back Flush	○
17 (c) (5)	Cathodic Protection	○
17 (c) (6)	Anti-Biofouling Materials or Jackets (e.g., screens made from Cu-Ni alloys, structured jacketed with copper flashing)	○
17 (c) (7)	Other _____	○

STOP [End of Section C]

If your design intake flow (Question 7) was equal to or greater than 2 million gallons per day, you need not complete the next section, Section D, Facility and Firm-Level Economic Data. Instead, you (or someone else in your firm) will complete a separate questionnaire, *Industry Economic Questionnaire: Phase III Cooling Water Intake Structures - Offshore and Coastal Oil and Gas Extraction Facilities.*

Section D: Facility and Firm-Level Economic Data

18. Please report employment for the *facility* in terms of *full-time equivalent employees (FTE)* and total annual sales revenue for FY2000-2002.

NOTE: *1 FTE equals 1 person-year or 2,000 hours. Include all full-time and part-time employees.*

DEFINITION: For the purposes of this questionnaire, total annual sales revenue is the total amount of money received by a firm from sales of its products and/or services over 365 days. The value does not include gains from investments or extraordinary gains, such as increases in owners' equity from capital adjustments or gains from the sale or exchange of assets. If sales revenues are not available at the facility level, they may be estimated from records or estimates of facility-level production and unit prices.

Consolidated Financial Information for the Facility (Report monetary values in whole dollars)				
		FY 2000	**FY 2001**	**FY 2002**
(a)	Total Employment (FTE)			
(b)	Total Revenues			

(c) Date that your fiscal years begin each year (for example, January 1) _____

The information in Question 18 is confidential business information (CBI). ○

19. (a) What is the complete legal name, mailing address, and primary SIC code for the *domestic parent firm* that owned the facility as of December 1, 2002?

DEFINITION: For the purposes of this questionnaire, the domestic parent firm is the highest level of domestic business entity in the organizational structure. For example, if the company that owns the facility is a wholly-owned subsidiary of another U.S. company, the second company would be the parent firm (if it is not owned by another U.S. company). A firm that is owned by another U.S. firm is not a domestic parent firm. A U.S. firm that is owned by a foreign firm is a domestic parent firm.

Name of Domestic Parent Firm: _____

Mailing Address/P.O. Box: _____

City, State, ZIP Code: _____

Primary SIC Code: _____

NOTE: *Please use the SIC codes contained in the Office of Management and Budget's 1987 Standard Industrial Classification Manual. These codes can also be found at the following Internet site: www.osha.gov/cgi-bin/sic/sicser5.*

(b) Is the *domestic parent firm* owned by a foreign firm as of the last day of Fiscal Year 2002?

○ Yes (if "Yes," continue)

○ No (if "No," skip to Question 20)

Name of Foreign Ultimate Parent Firm:_____

Total Employment, in terms of full time equivalent employees (FTE):_____

NOTE: *1 FTE equals 1 person-year or 2,000 hours. Please include all full-time and part-time employees.*

20. (a) Please complete the table below with the *domestic parent firm's* total employment, in terms of *full-time equivalent employees (FTE)* and total annual sales revenues for FY 2000–2002.

NOTE: *1 FTE equals 1 person-year or 2,000 hours. Include all full-time and part-time employees.*

DEFINITION: For the purposes of this questionnaire, total annual sales revenue is the total amount of money received by a firm from sales of its products and/or services over 365 days. The value does **not** include gains from investments or extraordinary gains, such as increases in owners' equity from capital adjustments or gains from the sale or exchange of assets.

Consolidated Financial Information for the Domestic Parent Firm (Report monetary values in whole dollars)				
		FY 2000	**FY 2001**	**FY 2002**
(a)	Total Employment (FTE)			
(b)	Total Revenues			

(b) This firm is reporting data for the fiscal years beginning _____ / _____ / _____ and ending _____ / _____ (as MM/DD/2002).

The information in Question 20 is confidential business information (CBI). ○

THANK YOU FOR COMPLETING EPA'S *INDUSTRY TECHNICAL QUESTIONNAIRE: PHASE III COOLING WATER INTAKE STRUCTURES–OFFSHORE AND COASTAL OIL & GAS EXTRACTION FACILITIES*. WE APPRECIATE YOUR COOPERATION. PLEASE RETURN THE QUESTIONNAIRE WITH A SIGNED CERTIFICATION STATEMENT IN THE ENVELOPE PROVIDED.

STOP—END OF SURVEY

Glossary to Questionnaire

NOTE: *The following terms are defined for purposes of this questionnaire only. The definitions at present do not have any legal meaning with respect to Section 316(b) of the Clean Water Act.*

Act: The Outer Continental Shelf Lands Act of 1953 (43 U.S.C. 1331 et seq.), as amended by the Outer Continental Shelf Lands Act Amendments of 1978 (Pub. L. 95-372).

Air Conditioning: The process and equipment used to control the temperature and humidity of indoor air. Cooling water is used in some types of air conditioning systems.

Annual Cooling Water Intake Flow Rate: The total volume of cooling water withdrawn by a specific intake structure divided by the number of days the intake was operating.

Attending Vessel: A vessel which is moored close to and readily accessible from an OCS facility for the purpose of providing power, fuel, or other services to the operation being conducted on the facility.

Average Daily Intake Flow: The total volume of cooling water withdrawn by a specific intake structure over a 24-hour day.

Average of Daily Values for 30 Consecutive Days: The average of the daily values obtained during any 30 consecutive day period.

Bar Rack/Trash Rack: A device placed at or near the opening of an intake structure to mechanically stop debris and /or large organisms from entering a facility's water system.

Commandant: Commandant of the Coast Guard or that person's authorized representative.

Contact Cooling Water: Cooling water that directly meets any raw material, intermediate product, finished product, by-product, or water product as part of a facility's operation.

Cooling Operations: Activities that transfer heat from one medium or activity to cooling water (with the exception of nonprocess air conditioning).

Cooling Water: Refers to both contact and non-contact cooling water, including water used for air conditioning, equipment cooling, and dilution of effluent heat content. The intended use of the cooling water is to absorb waste heat rejected from the process or processes employed or from auxiliary operations on the facility's premises.

Cooling Water Discharge Outfall: The total structure used to direct water that has been used for contact and non-contact cooling purposes within a facility into Waters of the United States.

Cooling Water Intake Flow Rate: The total volume of cooling water withdrawn by a specific intake structure over a specific time-period.

Cooling Water Intake Structure: The total structure and associated technologies used to direct water from a water body into a facility up to the point of the first intake pump or series of pumps. The intended use of the cooling water is to adsorb waste heat rejected from processes employed or from auxiliary operations on the facility's premises.

Cooling Water System: A system that provides water to/from a facility to transfer heat from equipment or processes therein. The system includes, but is not limited to, water intake and outlet structures, pumps, and pipes. A system begins at the first barrier(s) to ingress and/or egress by fish and other aquatic wildlife and ends at the discharge outlet(s). ***See also Cooling Water Intake Structure.***

Critical Habitat: Biological or physical features of an area that are essential for the conservation and preservation of a protected species and may require special management considerations or protection.

Daily Maximum Flow: The maximum flow recorded for any one day during a given month.

Daily Minimum Flow: The minimum flow recorded for any one day during a given month.

Development: Those activities which take place following discovery of minerals in paying quantities, including, but not limited to, geophysical activity, drilling, and platform construction, and which are for the purpose of ultimately producing the minerals discovered.

Development Facility: Any fixed or mobile structure subject to this subpart that is engaged in the drilling of productive wells.

Discharge: Outflow of wastewater from a facility to waters of the United States.

Discrete Biological Study of Entrainment: A study that has been distinctly undertaken to evaluate the biological effects of entrainment over a specified time period. The study has discrete starting and ending points. The purpose of the study is to evaluate the rate and/or number of organisms withdrawn from the intake water body and into the cooling water flow and thus, into a cooling water system. The study may involve evaluations of one or more intake structures.

Discrete Biological Study of Impingement: A study that has been distinctly undertaken to evaluate the biological effects of impingement over a specified time period. The study has discrete starting and ending points. The purpose of the study is to evaluate the rate and/or number of organisms are trapped against the outer part of one or more intake structures during periods of cooling water withdrawal.

Domestic Parent Firm: The highest level domestic business entity in a facility's organizational structure. A firm owned by another U.S. firm is *not* a domestic parent firm. On the contrary, a U.S. firm owned by a foreign firm *is* a domestic parent firm.

DUNS Number: A number assigned to a business using the Data Universal Numbering System (DUNS) developed by the Dun and Bradstreet Corporation.

Effluent: Outflow of wastewater from a plant to waters of the United States.

Entrainment: The merging of small aquatic organisms with the flow of cooling water entering and passing through a cooling water intake structure, and, thus, into a cooling water system.

Environmental Impact: Human induced change or pressure on the natural environment.

Exploration: The process of searching for minerals, including, but not limited to, (1) geophysical surveys where magnetic, gravity, seismic, or other systems are used to detect or imply the presence of such minerals, and (2) any drilling, whether on or off known geological structures, including the drilling of a well in which a discovery of oil or natural gas in paying quantities is made and the drilling of any additional delineation well after the discovery which is needed to delineate any reservoir and to enable the lessee to determine whether to proceed with development and production.

Exploratory Facility: Any fixed or mobile structure subject to this Subpart that is engaged in the drilling of wells to determine the nature of potential hydrocarbon reservoirs.

Facility: Any fixed or mobile structure subject to this subpart that is engaged in the drilling of productive wells.

Far-Field: The area of a water body, from which cooling water is obtained, where the water velocity and/or salinity/density is primarily influenced by ambient water conditions and where the cooling water intake is shown to have minimal effect.

Fish Diversion or Avoidance System: Mechanisms designed to deflect or divert fish away from an intake structure.

Fixed OCS Facility: A bottom founded OCS facility permanently attached to the seabed or subsoil of the OCS, including platforms, guyed towers, articulated gravity platforms, and other structures.

Floating OCS Facility: A buoyant OCS facility securely and substantially moored so that it cannot be moved without a special effort. This term includes tension leg platforms and permanently moored semi-submersibles or shipshape hulls but does not include mobile offshore drilling units and other vessels.

Full-Time Equivalent Employee (FTE): The normalized unit for counting employees at a facility. One FTE equals 2,000 hours of work (8 hours per day for 250 days) during a calendar year. As such, two part-time employees, each working 1,000 hours per year, would be counted together as one FTE.

Impingement: The trapping and holding of larger aquatic organisms against the outer part of a cooling water intake structure or against screening devises during periods of cooling water withdrawal.

Intake Structure: ***See Cooling Water Intake Structure.***

Latitude: The angular distance north or south of the equator measured in degrees or in hours, minutes, and seconds along a meridian.

Longitude: The angular distance on the earth east or west of the prime meridian, expressed in degrees or in hours, minutes, and seconds.

M9IM: Those offshore facilities continuously manned by nine (9) or fewer persons or only intermittently manned by any number of persons.

M10: Those offshore facilities continuously manned by ten (10) or more persons.

Manned Facility: An OCS facility on which people are routinely accommodated for more than 12 hours in successive 24 hour periods.

Manned Platform: A fixed OCS facility on which people are routinely accommodated for more than 12 hours in successive 24 hour periods.

Migratory Routes: Route taken by animal populations during seasonal movement from one region to another.

Minerals Management Service Inspector or MMS Inspector: An individual employed by the Minerals Management Service who inspects fixed OCS facilities on behalf of the Coast Guard to determine whether the requirements of this subchapter are met.

Mobile Offshore Drilling Unit or MODU: A vessel, other than a public vessel of the United States, capable of engaging in drilling operations for exploration or exploitation of subsea resources.

Monthly Average Flows: An average flow calculated by summing all of the actual or calculate daily flows during a particular month and dividing that sum by the total number of calendar days in the month.

National Geodetic Vertical Datum (NGVD): Commonly referred to as mean sea level. Established by the National Geodetic Survey, NGVD are the permanent landmarks of know position and elevation throughout

the United States from which elevations can be surveyed. The location of the nearest benchmark can be obtained by contacting either the local or national U.S.G.S. office.

Near-Field: Area of the intake water body where velocity and/or salinity/density become affected by the removal of water.

Non-Contact Cooling Water: Cooling water that does **not** come into contact with any raw materials, intermediate products, finished products, by-products, or waste products.

North American Industrial Classification System (NAICS): A new system initiated in January 1997 to classify industries. This new system replaces the existing Standard Industrial Code (SIC) system and identifies industries according to the type of production activities performed. NAICS industries are identified using a 6-digit code.

NPDES (National Pollutant Discharge Elimination System) Permit: A permit required to be held under Section 402 of the Clean Water Act (33 U.S.C. 1342 *et seq*.) by any point source discharging pollutants to waters of the United States. Permits may address effluent discharges, storm water, or sewage sludge management practices and may be issued by an EPA Region or a Federally-approved State NPDES program.

Ocean: Marine open coastal waters other than those water bodies classified as estuaries, embayments or fjords, each of which are semi-enclosed and have readily identifiable geographic boundaries.

OCS Activity: Any offshore activity associated with exploration for, or development or production of, the minerals of the Outer Continental Shelf.

OCS Facility: Any artificial island, installation, or other device permanently or temporarily attached to the subsoil or seabed of the Outer Continental Shelf, erected for the purpose of exploring for, developing, or producing resources therefrom, or any such installation or other device (other than a ship or vessel) for the purpose of transporting such resources. The term includes mobile offshore drilling units when in contact with the seabed of the OCS for exploration or exploitation of subsea resources. The term does not include any pipeline or deepwater port (as the term "deepwater port'' is defined in section 3(10) of the Deepwater Port Act of 1974 (33 U.S.C. 1502)).

Open Area: The wetted area (in square feet) of the opening to the cooling water intake structure minus the area (in square feet) of any structural members associated with technologies located at the intake opening.

Operating Days: The total number of days (1 day = 24 hours) the cooling water intake structure was operating during the month excluding any days when the cooling water intake structure was down for routine

Operator: (1) In the case of a vessel, a charterer by demise or any other person who is responsible for the operation, manning, victualing, and supplying of the vessel; or (2) In the case of an OCS facility, the operator as defined in 30 CFR 250.2(gg).

Other Intake Screen System: Devices placed at or near the opening of an intake structure to mechanically stop smaller debris and/or organisms from entering a plant's water system.

Outer Continental Shelf Or OCS: All submerged lands lying seaward and outside of the area of "lands beneath navigable waters'' as defined in section 2(a) of the Submerged Lands Act (43 U.S.C. 1301(a)) and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control.

Owner: A person holding title to or, in the absence of title, other indicia of ownership of a unit; however, this does not include a person who holds indicia of ownership primarily to protect a security interest in the unit and does not participate in the management or operation of the unit.

Passive Intake System: Devices placed at or near the opening of an intake structure that, with little or no mechanical activity, stops debris and/or organisms from entering a plant's water system. Most passive intake systems achieve very low withdrawal velocities at the screening medium.

Pass-Through Velocity: The speed of cooling water intake water as it is passing through the cooling water intake technology (if applicable) or into the cooling water system.

Person: An individual, association, partnership, consortium, joint venture, private, public, or municipal firm or corporation, or a government entity.

Personnel: Individuals who are employed by leaseholders, permit holders, operators, owners, contractors, or subcontractors and who are on a unit by reason of their employment.

Planned or Under Construction: Cooling water intake structures for which funds have been authorized and are expected to go into commercial service within the next 7 years. It does *not* include structures that are presently operational, temporarily offline, permanently offline, or operating under test conditions.

Point Source: Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. The term does not include return flows from irrigated agriculture or agricultural storm water run off. ***See also 40 CFR 122.2.***

Presently Operating: Cooling water systems that are currently in commercial service.

Process Operations: Industrial activities that directly result in the production of a facility's primary output.

Produced Sand: The slurried particles used in hydraulic fracturing, the accumulated formation sands and scales particles generated during production. Produced sand also includes desander discharge from the produced water waste stream, and blowdown of the water phase from the produced water treating system.

Produced Water: The water (brine) brought up from the hydrocarbon-bearing strata during the extraction of oil and gas, and can include formation water, injection water, and any chemicals added downhole or during the oil/water separation process.

Production: Those activities which take place after the successful completion of any means for the removal of minerals, including, but not limited to, such removal, field operations, transfer of minerals to shore, operation monitoring, maintenance, and workover.

Production Facility: Any fixed or mobile structure subject to this Subpart that is either engaged in well completion or used for active recovery of hydrocarbons from producing formations.

Rebuilt: Having had substantial alteration or reconstruction of the hull or principal structural component.

Revenues: The total amount of money received by a firm from sales of its products and/or services, gains from the sales or exchange of assets, interest and dividends earned on investments, and other increases in the owner's equity except those arising from capital adjustments.

Standard Industrial Classification (SIC) Code: A national classification system that organizes business entities into production-based and market-based categories identified by a 4-digit code. There are three levels of SIC codes: primary, secondary, and tertiary. Primary SIC codes are assigned based on the principal product or group of products produced or distributed by an establishment or for services rendered by the plant. Additional SIC codes are assigned for any secondary and tertiary products produced or for services rendered by an establishment.

Surface Water: Bodies of water including lakes, ponds, or reservoirs; non-tidal rivers or streams; tidal rivers; estuaries; fjords; oceans; and bays/coves.

Temporarily Offline: Cooling water systems that are presently out of commercial service but are expected to return. The category includes systems on inactive reserve and systems deactivated (i.e., systems not normally used but available for service).

Total Capital Costs: The total sum of all construction costs; design, engineering, and architectural costs; equipment costs; construction material costs; instrumentation costs; installation labor costs; and allowances for funds used during construction (AFUDC).

Trash Rack: ***See Bar Rack.***

Typical Calendar Year: A year in which the facility and its cooling water intake structures are operated in a normal, routine, regular, or otherwise standard fashion.

Unit: Any OCS facility, vessel, rig, platform, or other vehicle or structure, domestic or foreign.

Unmanned Facility: An OCS facility, other than a floating facility or mobile offshore drilling unit, which is not a manned facility even though it may be continuously serviced by an attending vessel.

Unmanned Platform: A fixed, bottom-founded OCS facility which is not a manned facility even though it may be continuously serviced by an attending vessel.

Vessel: Every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

Waters of the United States (U.S.): All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. Waters of the United States include, but are not limited to, all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. ***See 40 CFR 122.2 for a more complete definition.***