



REQUEST FOR PROPOSALS (“RFP”) & RESPONDENT’S ACKNOWLEDGEMENT

RFP TITLE:
BIG DAWG Vessel Preparation & Deployment

RFP NUMBER:
RFP TDD 09-21

ISSUE DATE: November 16, 2020
MANDATORY PRE-PROPOSAL MEETING: December 2, 2020 10:00 A.M. CST
LAST DAY FOR QUESTIONS: December 9, 2020 3:00 P.M. CST
RFP OPENING DATE & TIME: December 30, 2020 3:00 P.M. CST

NOTE: PROPOSALS RECEIVED AFTER THE PROPOSAL OPENING DATE & TIME WILL NOT BE CONSIDERED.

Okaloosa County, Florida solicits interested parties to submit a proposal on the above referenced BIG DAWG Vessel Preparation & Deployment proposal. All terms, specifications and conditions set forth in this RFP must be incorporated into your response. A proposal will not be accepted unless all conditions have been met. All proposals must have an authorized signature in the space provided below. All envelopes containing sealed proposals must reference the “RFP Title,” “RFP Number,” and the “RFP Due Date & Time.” Okaloosa County is not responsible for lost or late delivery of proposals by the U.S. Postal Service or other delivery services used by the Respondent. Neither faxed nor electronically submitted proposals will be accepted. Proposals may not be withdrawn for a period of ninety (90) days after the proposal opening unless otherwise specified.

RESPONDENT ACKNOWLEDGEMENT FORM BELOW MUST BE COMPLETED, SIGNED, AND RETURNED AS PART OF YOUR PROPOSAL. PROPOSALS WILL NOT BE ACCEPTED WITHOUT THIS FORM, SIGNED BY AN AUTHORIZED AGENT OF THE RESPONDENT.

COMPANY NAME _____

MAILING ADDRESS _____

CITY, STATE, ZIP _____

FEDERAL EMPLOYER’S IDENTIFICATION NUMBER (FEIN): _____

TELEPHONE NUMBER: _____ EXT: _____ FAX: _____

EMAIL: _____

I CERTIFY THAT THIS PROPOSAL IS MADE WITHOUT PRIOR UNDERSTANDING, AGREEMENT, OR CONNECTION WITH ANY OTHER RESPONDENT SUBMITTING A PROPOSAL FOR THE SAME MATERIALS, SUPPLIES, EQUIPMENT OR SERVICES, AND IS IN ALL RESPECTS FAIR AND WITHOUT COLLUSION OR FRAUD. I AGREE TO ABIDE BY ALL TERMS AND CONDITIONS OF THIS PROPOSAL AND CERTIFY THAT I AM AUTHORIZED TO SIGN THIS PROPOSAL FOR THE RESPONDENT.

AUTHORIZED SIGNATURE: _____ TYPED OR PRINTED NAME _____

TITLE: _____ DATE: _____

NOTICE TO RESPONDENTS
RFP TDD 09-21

Notice is hereby given that the Board of County Commissioners of Okaloosa County, FL, will accept sealed proposals until **3:00 p.m. (CST) December 30, 2020, for the BIG DAWG Vessel Preparation & Deployment**. Interested Respondents desiring consideration shall provide one (1) original and one (1) thumb drive of their Request for Proposals (RFP) response with the Respondent's proposal. Submissions shall be portrait orientation, unbound, and 8 ½" x 11" where practical. Font shall be 12 point and Respondents are limited to forty (40) pages, excluding the required forms.

All originals must have original signatures in blue ink.

Proposal documents are available for download by accessing the following sites:

<http://www.myokaloosa.com/purchasing/hom>

<https://www.bidnetdirect.com/florida>

https://www.demandstar.com/supplier/bids/agency_inc/bid_list.asp?f=search&mi=2442519

A mandatory pre-proposal meeting will be held **at 10:00 AM CST on Wednesday, December 2, 2020** at the current vessel site located on Hurlburt Field in Mary Esther, Florida. If interested in attending the pre-proposal meeting, please contact Angela Etheridge at 850-689-5960 by 4:00 PM CST on November 30, 2020 for specific directions.

Proposals must be delivered to the Okaloosa County Purchasing Department at the address listed below no later than **3:00 p.m. (CST) December 30, 2020** in order to be considered. All proposals received after the stated time and date will be returned unopened and will not be considered. All submittals must be in sealed envelopes reflecting on the outside thereof **"BIG DAWG Vessel Preparation & Deployment"**. Failure to clearly mark the outside of the envelope as set forth herein shall result in the submittal not being considered.

The County reserves the right to award to the firm submitting a responsive proposal with a resulting negotiated agreement that is most advantageous and in the best interest of Okaloosa County, and to waive any irregularity or technicality in proposals received. Okaloosa County shall be the sole judge of the resulting negotiated agreement that is in its best interest and its decision will be final.

NOTE: Crestview, FL is not a next day guaranteed delivery location by most delivery services. Respondents using mail or delivery service assume all risk of late or non-delivery.

All submittals should be addressed as follows:
BIG DAWG Vessel Preparation & Deployment
RFP TDD 09-21
Okaloosa County Purchasing Department
5479A Old Bethel Road
Crestview, FL 32536

Jeffrey Hyde
Purchasing Manager

Date

OKALOOSA COUNTY
BOARD OF COUNTY COMMISSIONERS

Robert A. "Trey" Goodwin, III
Chairman

PROPOSAL REQUIREMENTS
RFP TDD 09-21
BIG DAWG VESSEL CLEAN-UP, PREPARATION, TOWING,
& DEPLOYMENT AS AN ARTIFICIAL REEF

PROPOSAL ITEM: Okaloosa County Artificial Reef Transportation and Deployment Services

I. INTRODUCTION

Okaloosa County is in the process of receiving a donated 93ft steel military vessel from the US Air Force. Photos and basic specifications of the vessel are attached. The County desires to have this vessel cleaned, prepared, towed, and deployed 14.3 miles offshore for use as an artificial reef. Accordingly, the County is requesting proposals for the 1) transportation of the vessel from its current location in Santa Rosa Sound, Florida to the location it will be prepped; 2) cleaning/preparation following standards outlined in the National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs; and 3) deployment of the vessel approximately 14.3 miles offshore Okaloosa County.

All proposals must include all labor, equipment, disposal fees of items removed, etc. as needed to complete the deployment as an artificial reef. Method of transport and deployment method are up to the contractor. The SOP for deploying vessels of this type offshore of Okaloosa County is attached. All components of this vessel that are removed during the cleaning and preparation process can be salvaged and retained by the selected contractor. (Note - this vessel is currently operational and can be run to the winning contractor's facility for preparation).

II. SCOPE OF WORK

A. Clean-up

1. Clean tanks, lines, bilges, etc.
2. Certified "Clean" as required by state and federal permits.
3. Peeling/flaking paint, likely to come off during the sinking process will be scraped off and removed to appropriate land disposal site.

B. Preparation

1. Environmental Preparations: See EPA Best Management Practices for Preparing Vessels Intended to be Artificial Reefs.
2. Remove all petroleum from tanks, lines, and machinery (e.g., main engine, transmission, pumps, etc.). Machinery may remain if all hazardous fluids are removed. No sheen will be allowed to be visible at surface during/after deployment. Contractor responsible for responding to discharges per state and federal regulations.
3. Remove and properly dispose of all non-compliant materials such as furnishings, appliances, machinery (except main engine and transmission) wood paneling, insulation, plastics, wiring, glass windows, cut and remove all doors, hatches, etc.
4. Vessel hull, superstructure, propeller and shaft are to remain intact and in place to the maximum extent possible. Modifications to the vessel shall be approved by the County.

5. Vessel to be deployed on the seafloor in an upright position, therefore holes will be cut through hull, bulkheads and other structural components to facilitate controlled sinking without the use of explosives.
6. Prepare vessel for sinking via controlled flooding. No explosives will be used for deployment.

C. Towing

1. Provide all towing and docking facilities. Mariners must possess all necessary licenses, documents, etc.
2. Obtain a Towing Permit from US Coast Guard (if required); Prepare Emergency/Contingency Plan for approval by Okaloosa County prior to deployment as artificial reef.

D. Deployment

1. Vessel will be deployed in Okaloosa LAARS C Artificial Reef Site, located approximately 14.3 nautical miles southwest of Destin Pass at a depth of approximately 105 ft. (Approximate Reef deployment coordinates: 30° 09.008'N, 86° 34.544'W); anchored with suitable ship's anchor(s), including sufficient scope of anchor rode to maintain vessel position under existing weather and sea conditions. Substitute anchor(s) may be proposed by contractor, but must be approved, in writing, by Okaloosa County. Deployment vessel will be capable of providing additional positional support.
2. Detailed Deployment Plan will be provided to Okaloosa County for review and approval.
3. Any floatable debris appearing on the surface during and within one-hour post-deployment will be removed by the contractor.

III. SELECTION CRITERIA

A. Experience and Understanding (Average Ranking Weighted 30%)

Describe the qualifications and demonstrate the ability to implement and administer the project. The Contractor must provide the following information:

1. Minimum of three reference names, one of which must be the client from a previous artificial reef project. Addresses and phone numbers must be provided for each reference. Similarly described artificial reef project references are preferred.
2. Number of years of involvement in marine construction projects and the number, name, location, description, cost and year of artificial reef construction projects successfully completed. Greater amount of artificial reef projects in the past 5 years are preferred.

B. Available Deployment Resources (Average Ranking Weighted 20%)

Describe the resources available to successfully complete deployment of the vessel. The contractor must provide the following information:

1. The staging site where the vessel will be transported and stored for preparation. High site capability and accessibility for inspection by the County is preferred.
2. The specifications (load capacity, vessel type, etc.) of the vessel/barge, and crane, and other equipment that will be involved in the vessel deployment, and the port(s) they will be operating from. Well maintained equipment showing dependability are preferred.

3. The GPS specifications and methods to be used to deploy the vessel at the target location and the anticipated deployment accuracy in relation to the target coordinates. Equipment redundancy and methods with the least offset distances are preferred. Methods and procedures assuring greatest deployment accuracy are preferred.

C. Schedule of Operations (Average Ranking Weighted 20%)

Describe the schedule to complete the deployment of the vessel. The contractor must provide the following information:

1. Provide the total number of estimated days at sea number of vessel preparation days. Shortest periods of time and earliest completion dates are preferred.
2. Describe the step-by-step tasks of transporting, preparing, handling and deploying the vessel through the time the vessel is placed on the bottom and any floatable debris is removed. Proven, previously used methods are preferred.
3. Describe how the vessel will be safely transported to the reef construction site, including how the vessel will be secured for transit to the deployment site.
4. Describe the proposed anchoring system and the proposed method to accurately deploy the vessel at the designated coordinates. Describe how coordination with designated County observers will be maintained. Methods with the greatest degree of safety and protection are preferred. Greatest anchoring and deployment methods to ensure placement accuracy are favored.

D. Total Project Cost (Average Ranking Weighted 30%)

Identify the total cost for all aspects of this project including transport, cleaning, preparation and deployment activities that will be provided. Lowest cost is preferred. ***NOTE - Carefully review the insurance requirements to ensure cost of insurance is included in total project cost.***

IV. SPECIAL INSTRUCTIONS

The selection of a Respondent to provide professional services will be based on the following criteria:

- A.** All interested parties shall submit written responses that address each aspect of the Scope of Work and Selection Criteria in the sequence presented in the RFP. **Respondents may also include additional material they deem relevant to their selection.**
- B.** A Review Committee will evaluate the submitted proposals, rank their responsiveness to the Selection Criteria, and identify the top-ranked Respondents.
- C.** The top-ranked Respondents may be invited to make a presentation. Each presentation will be conducted at the Respondent's expense, including all travel costs.
- D.** The Review Committee shall recommend the final, top-ranked Respondent(s) to the Board of County Commissioners for final approval.

NOTE: Failure to provide all the required information, in the required format, may disqualify the vendor from further consideration.

V. TERM OF CONTRACT

The contract start time will begin from issuance of Notice to Proceed and will continue until August 31, 2021. Work is permitted seven (7) days a week during daylight hours only (sunrise to sunset) or as restricted by the specific staging or loading areas not owned by the County.

VI. TIME SCHEDULE (ALL TIMES ARE TENTATIVE)

RFP ACTIVITY	DATE
Issue RFP	16 November 2020
Mandatory Pre-Proposal Meeting	02 December 2020
Questions from potential proposers due	09 December 2020
Issue Addendum (if necessary)	11 December 2020
Proposal Response Due	30 December 2020
Review Committee Meeting	12 January 2021
Intent to Award Issued	15 January 2021
TDD Board Meeting	25 January 2021
Agenda Deadline	05 February 2021

GENERAL SERVICES INSURANCE REQUIREMENTS – w/Watercraft Liability

REVISED: 08/13/2018

CONTRACTORS INSURANCE

1. The Contractor shall not commence any work in connection with this Agreement until he has obtained all required insurance and the certificate of insurance has been approved by the Okaloosa County Risk Manager or designee.
2. All insurance policies shall be with insurers authorized to do business in the State of Florida.
3. All insurance shall include the interest of all entities named and their respective officials, employees & volunteers of each and all other interests as may be reasonably required by Okaloosa County BCC. The coverage afforded the Additional Insured under this policy shall be primary insurance. If the Additional Insured have other insurance that is applicable to the loss, such other insurance shall be on an excess or contingent basis. The amount of the company's liability under this policy shall not be reduced by the existence of such other insurance.
4. Okaloosa County Board of County Commissioners shall be listed as an Additional Insured by policy endorsement on all policies applicable to this agreement except Worker's Compensation. A waiver of subrogation is required on Workers Compensation policies.
5. The County shall retain the right to reject all insurance policies that do not meet the requirement of this Agreement. Further, the County reserves the right to change these insurance requirements with 60-day prior written notice to the Contractor.
6. The County reserves the right at any time to require the Contractor to provide copies of any insurance policies to document the insurance coverage specified in this Agreement.
7. Any subsidiaries used shall also be required to obtain and maintain the same insurance requirements as are being required herein of the Contact
8. Any exclusions or provisions in the insurance maintained by the Contractor that excludes coverage for work contemplated in this agreement shall be deemed unacceptable and shall be considered breach of contract.

WORKERS' COMPENSATION INSURANCE

1. The Contractor shall secure and maintain during the life of this Agreement Workers' Compensation insurance for all of his employees employed for the project or any site connected with the work, including supervision, administration or management, of this project and in case any work is sublet, with the approval of the County, the Contractor shall require the Subcontractor similarly to provide Workers' Compensation insurance for all employees employed at the site of the project, and such evidence of insurance shall be furnished to the County not less than ten (10) days prior to the commencement of any and all sub-contractual Agreements which have been approved by the County.

2. Contractor must be in compliance with all applicable State and Federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act or Jones Act, if applicable.
3. No class of employee, including the Contractor himself, shall be excluded from the Workers' Compensation insurance coverage. The Workers' Compensation insurance shall also include Employer's Liability coverage.

BUSINESS AUTOMOBILE LIABILITY

Coverage must be afforded for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than \$1,000,000 combined single limit each accident. If the contractor does not own vehicles, the contractor shall maintain coverage for Hired & Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Policy. Contractor must maintain this insurance coverage throughout the life of this Agreement.

WATERCRAFT LIABILITY INSURANCE

1. The Contractor shall carry Watercraft Liability insurance against all claims for Bodily Injury, Property Damage caused by the Contractor.
2. Contractor shall agree to keep in continuous force Watercraft Liability coverage for the length of the contract.

PORT RISK INSURANCE

The vessel's that are in storage or not in use for more that 30-days. This insurance would be purchased by the vessel owner if they choose to purchase it. It is not a requirement for our insurance purposes.

JONES ACT INSURANCE

The Jones Act provides coverage (workers compensation) to seamen who work aboard vessels. Most employees who work aboard ships, tugs, fishing boats etc. will be considered Jones Act seamen.

LONGSHORE HARBOR WORKERS COMPENSATION ACT (LHWCA)

Provides workers compensation to workers (other than crew members of a vessel) injured on or upon the navigable waters of the US, wharf, dry dock, terminal, building way, etc. Workers covered under the Act meet two guidelines that have been established through case law, status and situation.

INSURANCE LIMITS OF LIABILITY

The insurance required shall be written for not less than the following, or greater if required by law and shall include Employer's liability with limits as prescribed in this contract:

	<u>LIMIT</u>
1. Workers' Compensation	
1.) State	Statutory
2.) Employer's Liability	\$500,000 each accident

2.	Business Automobile	\$1,000,000 each accident (A combined single limit)
3.	Watercraft Liability and Property Damage	\$1,000,000 each occurrence for BI \$1,000,000 each occurrence products and completed operations

POLLUTION & REMEDIATION LEGAL LIABILITY (IF ANY HAZARDOUS MATERIALS)

For the purpose of this section, the term “hazardous materials” includes all materials and substances that are designated or defined as hazardous by Florida or Federal law or by the rules or regulations of Florida or any Federal Agency. If work being performed involves hazardous materials, the Contractor shall procure and maintain any or all of the following coverage, which will be specifically addressed upon review of exposure. **All insurance coverages in the section must remain in force until the third anniversary of expiration of this Agreement or the third anniversary of acceptance of work by the County.**

Pollution Liability Coverage

For sudden and gradual occurrences and in an amount not less than \$1,000,000 per claim arising out of this Agreement, including but not limited to, all hazardous materials identified under the Agreement.

Asbestos Liability Coverage (if any)

For sudden and gradual occurrences and in an amount not less than \$1,000,000 per claim arising out of work performed under this Agreement.

Disposal Coverage (if applicable)

The Contractor shall designate the disposal site and furnish a Certificate of Insurance from the disposal facility for Environmental Impairment Liability Insurance, covering liability for sudden and accidental occurrences in an amount not less than \$1,000,000 per claim and shall include liability for non-sudden occurrences in an amount not less than \$1,000,000 per claim.

Hazardous Waste Transportation Coverage

The Contractor shall designate the hauler and furnish a Certificate of Insurance from the hauler for Automobile Liability insurance with Endorsement MCS90 for liability arising out of the transportation of hazardous materials in an amount not less than \$1,000,000 per claim limit and provide a valid EPA identification number.

Commercial General Liability

Coverage must be afforded under a Commercial General Liability policy with limits not less than:

- \$1,000,000 each occurrence and \$2,000,000 project aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$1,000,000 each occurrence and \$2,000,000 project aggregate for Products and Completed Operations
- Policy must include coverage for Contractual Liability, Independent Contractors, and contain no exclusions for explosion, collapse, or underground.

NOTICE OF CLAIMS OR LITIGATION

The Contractor agrees to report any incident or claim that results from performance of this Agreement. The County representative shall receive written notice in the form of a detailed written report describing the incident or claim within ten (10) days of the Contractor's knowledge. In the event such incident or claim involves injury and/or property damage to a third party, verbal notification shall be given the same day the Contractor becomes aware of the incident or claim followed by a written detailed report within ten (10) days of verbal notification.

INDEMNIFICATION & HOLD HARMLESS

To the fullest extent permitted by law, Contractor shall indemnify and hold harmless the County, its officers and employees from liabilities, damages, losses, and costs including but not limited to reasonable attorney fees, to the extent caused by the negligence, recklessness, or wrongful conduct of the Contractor and other persons employed or utilized by the Contractor in the performance of this contract.

CERTIFICATE OF INSURANCE

1. Certificates of insurance indicating the project name and number and evidencing all required coverage must be submitted not less than 10 days prior to the commencement of any of the work. The certificate holder(s) shall be as follows: Okaloosa County BCC, 5479A Old Bethel Road, Crestview, Florida, 32536.
2. The contractor shall provide a Certificate of Insurance to the County with a thirty (30) day prior written notice of cancellation; ten (10) days prior written notice if cancellation is for nonpayment.
3. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of the contractor to provide the proper notice to the County. Such notification shall be in writing by registered mail, return receipt requested, and addressed to the Okaloosa County Purchasing Department at 5479-A Old Bethel Road, Crestview, FL 32536.
4. In the event the contract term goes beyond the expiration date of the insurance policy, the contractor shall provide the County with an updated Certificate of insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The County reserves the right to suspend the contract until this requirement is met.
5. The certificate shall indicate if coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the certificate will show a retroactive date, which should be the same date of the initial contract or prior.
6. All certificates shall be subject to Okaloosa County's approval of adequacy of protection.
7. All deductibles or SIRs, whether approved by Okaloosa County or not, shall be the Contractor's full responsibility.
8. In no way will the entities listed as Additional Insured be responsible for, pay for, be damaged by,

or limited to coverage required by this schedule due to the existence of a deductible or SIR. Specific written approval from Okaloosa County will only be provided upon demonstration that the Contractor has the financial capability and funds necessary to cover the responsibilities incurred as a result of the deductible or SIR.

GENERAL TERMS

Any type of insurance or increase of limits of liability not described above which, the Contractor required for its own protection or on account of statute shall be its own responsibility and at its own expense.

Any exclusions or provisions in the insurance maintained by the contractor that excludes coverage for work contemplated in this contract shall be deemed unacceptable and shall be considered breach of contract.

The carrying of the insurance described shall in no way be interpreted as relieving the Contractor of any responsibility under this contract.

Should the Contractor engage a subcontractor or sub-subcontractor, the same conditions will apply under this Agreement to each subcontractor and sub-subcontractor.

The Contractor hereby waives all rights of subrogation against Okaloosa County and its employees under all the foregoing policies of insurance.

EXCESS/UMBRELLA INSURANCE

The Contractor shall have the right to meet the liability insurance requirements with the purchase of an EXCESS/UMBRELLA insurance policy. In all instances, the combination of primary and EXCESS/UMBRELLA liability coverage must equal or exceed the minimum liability insurance limits stated in this Agreement.

GENERAL PROPOSAL CONDITIONS

I. PRE-PROPOSAL ACTIVITY

Except as provided in this section, Respondents are prohibited from contacting or lobbying the County, County Administrator, Commissioners, County staff, and Selection Committee members, or any other person authorized on behalf of the County related or involved with the solicitation. All inquiries on the scope of work, specifications, additional requirements, attachments, terms and general conditions or instructions, or any issue must be directed in writing, by US mail or email to:

Okaloosa County Purchasing Department
5479A Old Bethel Road
Crestview, FL 32536
Email: aetheridge@myokaloosa.com
(850) 689-5960

All questions or inquiries must be received no later than the last day for questions (reference RFP & Respondent's Acknowledgement form). Any addenda or other modification to the RFP documents will be issued by the County five (5) days prior to the date and time of closing, as a written addenda distributed to all prospective Respondents by posting to the Florida Online Bid System (Florida Purchasing Group) and the Okaloosa County Web Site.

To access the Florida Online Bid System go to: <https://www.bidnetdirect.com/florida> to access the Okaloosa County Web Site go to: <http://www.co.okaloosa.fl.us/purchasing/current-solicitations>.

Such written addenda or modification shall be part of the proposal documents and shall be binding upon each Respondent. Each Respondent is required to acknowledge receipt of any and all addenda in writing and submit with their proposal. No Respondent may rely upon any verbal modification or interpretation.

II. PREPARATION OF PROPOSAL

The proposal form is included with the proposal documents. Additional copies may be obtained from the County. The Respondent shall submit originals and bid forms in accordance with the public notice.

All blanks in the proposal documents shall be completed by printing in ink or by typewriter in both words and numbers with the amounts extended, totaled and the proposal signed. A proposal price shall be indicated for each section, proposal item, alternative, adjustment unit price item, and unit price item listed therein, or the words "No Proposal," "No Change," or "Not Applicable" entered. No changes shall be made to the phraseology of the form or in the items mentioned therein. In case of any discrepancy between the written amount and the numeric figures, the written amount shall govern. Any proposal which contains any omissions, erasures, alterations, additions, irregularities of any kind, or items not called for which shall in any manner fail to conform to the conditions of public notice inviting proposals may be rejected.

A proposal submitted by a corporation shall be executed in the corporate name by the president or a vice president or other corporate officer who has legal authority to sign.

A proposal submitted by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature). The official address of the partnership shall be shown below the signature.

A proposal submitted by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.

A proposal submitted by an individual shall show the Respondent's name and official address.

A proposal submitted by a joint venture shall be executed by each joint venture in the manner indicated on the proposal form. The official address of the joint venture must be shown below the signature.

All signatures shall be in blue ink. All names shall be typed or printed below the signature.

The proposal shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the form. The address and telephone # for communications regarding the proposal shall be shown.

If the Respondent is an out-of-state corporation, the proposal shall contain evidence of Respondent's authority and qualification to do business as an out-of-state corporation in the State of Florida.

III. INTEGRITY OF PROPOSAL DOCUMENTS

Respondents shall use the original Proposal documents provided by the Purchasing Department and enter information only in the spaces where a response is requested. Respondents may use an attachment as an addendum to the Proposal documents if sufficient space is not available. Any modifications or alterations to the original proposal documents by the Respondent, whether intentional or otherwise, will constitute grounds for rejection of a proposal. Any such modifications or alterations that a Respondent wishes to propose must be clearly stated in the Respondent's response in the form of an addendum to the original proposal documents.

IV. SUBMITTAL OF PROPOSAL

A proposal shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to proposal and shall be enclosed in an opaque sealed envelope plainly marked with the project title (and, if applicable, the designated portion of the project for which the proposal is submitted), the name and address of the Respondent, and shall be accompanied by the proposal security and other required documents. It is the Respondent's responsibility to assure that its proposal is delivered at the proper time and place. Offers by telegram, facsimile, or telephone will NOT be accepted.

Note: Crestview is not a next day delivery site for overnight carriers.

V. MODIFICATION & WITHDRAWAL OF PROPOSAL

A proposal may be modified or withdrawn by an appropriate document duly executed in the manner that a proposal must be executed and delivered to the place where proposals are to be submitted prior to the date and time for the opening of proposals.

If within 24 hours after proposals are opened any Respondent files a duly signed written notice with the County and promptly thereafter demonstrates to the reasonable satisfaction of the County that there was a material substantial mistake in the preparation of its proposal, that Respondent may withdraw its proposal, and the proposal security may be returned. Thereafter, if the work is re-proposal, that Respondent will be disqualified from 1) further purposing on the work, and 2) doing any work on the contract, either as a subcontractor or in any other capacity.

VI. PROPOSALS TO REMAIN SUBJECT TO ACCEPTANCE

All proposals will remain subject to acceptance or rejection for ninety (90) calendar days after the day of the proposal opening, but the County may, in its sole discretion, release any proposal and return the proposal security prior to the end of this period.

VII. CONDITIONAL & INCOMPLETE PROPOSALS

Okaloosa County specifically reserves the right to reject any conditional proposal and proposals which make it impossible to determine the true amount of the proposal.

VIII. APPLICABLE LAWS & REGULATIONS

All applicable Federal and State laws, County and municipal ordinances, orders, rules and regulations of all authorities having jurisdiction over the project shall apply to the proposal throughout, and they will be deemed to be included in the contract the same as though they were written in full therein.

IX. DISQUALIFICATION OF RESPONDENTS

Any of the following reasons may be considered as sufficient for the disqualification of a Respondent and the rejection of its proposal:

- a. Submission of more than one proposal for the same work from an individual, firm or corporation under the same or different name.
- b. Evidence that the Respondent has a financial interest in the firm of another Respondent for the same work.
- c. Evidence of collusion among Respondents. Participants in such collusion will receive no recognition as Respondents for any future work of the County until such participant has been reinstated as a qualified Respondent.
- d. Uncompleted work which in the judgment of the County might hinder or prevent the prompt completion of additional work if awarded.

- e. Failure to pay or satisfactorily settle all bills due for labor and material on former contracts in force at the time of advertisement of proposals.
- f. Default under previous contract.
- g. Listing of the Respondent by Local, State or Federal Government on its barred/suspended contractor list.

X. AWARD OF CONTRACT

Okaloosa County Review - A selection committee will review all proposals and will participate in the Recommendation to Award.

The contract shall be awarded to the responsible and responsive Respondent whose proposal is determined to be the most advantageous to the County, taking into consideration the price and other criteria set forth in the request for proposals. The County reserves the right to reject any and all proposals or to waive any irregularity or technicality in proposals received. The County shall be the sole judge of the proposal and the resulting negotiated agreement that is in its best interest and its decision shall be final.

Okaloosa County reserves the right to waive any informalities or reject any and all proposals, in whole or part, to utilize any applicable state contracts in lieu of or in addition to this proposal and to accept the proposal that in its judgment will best serve the interest of the County.

Okaloosa County specifically reserves the right to reject any conditional proposals and proposals which make it impossible to determine the true amount of the proposal. Each item must be proposal separately and no attempt is to be made to tie any item or items to any other item or items.

XI. DISCRIMINATION

An entity or affiliate who has been placed on the discriminatory contractor list may not submit a proposal on a contract to provide goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity.

XII. PUBLIC ENTITY CRIME INFORMATION

Pursuant to Florida Statute 287.133, a Respondent may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted contractor list.

XIII. CONFLICT OF INTEREST

The award hereunder is subject to the provisions of Chapter 112, Florida Statutes. All Respondents must disclose with their proposals the name of any officer, director, or agent who is also a public

officer or an employee of the Okaloosa Board of County Commissioners, or any of its agencies. Furthermore, all Respondents must disclose the name of any County officer or employee who owns, directly or indirectly, an interest of five percent (5%) or more in the firm or any of its branches.

Note: For Respondent's convenience, this certification form is enclosed and is made a part of the proposal package.

XIV. REORGANIZATION OR BANKRUPTCY PROCEEDINGS

Proposals will not be considered from Respondents who are currently involved in official financial reorganization or bankruptcy proceedings.

XV. INVESTIGATION OF RESPONDENT

The County may make such investigations, as it deems necessary to determine the stability of the Respondent to perform the work and that there is no conflict of interest as it relates to the project. The Respondent shall furnish to the Owner any additional information and financial data for this purpose as the County may request.

XVI. CONE OF SILENCE

The Okaloosa County Board of County Commissioners has established a solicitation silence policy (Cone of Silence) that prohibits oral and written communication regarding all formal solicitations for goods and services (formal proposals, Request for Proposals, Requests for Qualifications) issued by the Board through the County Purchasing Department. The period commences from the date of advertisement until award of contract.

Note: For Respondent's convenience, this certification form is enclosed and is made a part of the proposal package.

XVII. REVIEW OF PROCUREMENT DOCUMENTS

Per Florida Statute 119.071(1)(b)2. sealed bids, proposals, or replies received by the County pursuant to a competitive solicitation are exempt from public disclosure until such time as the County provides notice of an intended decision or until 30 days after opening the bids, proposals, or final replies, whichever is earlier.

XVIII. COMPLIANCE WITH FLORIDA STATUTE 119.0701

The Respondent shall comply with all the provisions of section 119.0701, Florida Statutes relating to the public records which requires, among other things, that the Respondent: (a) Keep and maintain public records; (b) Provide the public with access to public records on the same terms and conditions that the public agency would provide the records; (c) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (d) Meet all requirements for retaining public records and transfer, at no cost, to the public agency all public records in possession of the Respondent upon termination of the contract.

XIX. PROTECTION OF RESIDENT WORKERS

The Okaloosa County Board of County Commissioners actively supports the Immigration and Nationality Act (INA) which includes provisions addressing employment eligibility, employment verifications, and nondiscrimination. Under the INA, employers may hire only persons who may legally work in the United States (i.e., citizens and nationals of the U.S.) and aliens authorized to work in the U.S. The employer must verify the identity and employment eligibility of anyone to be hired, which includes completing the Employment Eligibility Verifications. The Respondent shall establish appropriate procedures and controls so no services or products under the Contract Documents will be performed or manufactured by any worker who is not legally eligible to perform such services or employment. Okaloosa County reserves the right to request documentation showing compliance with the requirements.

Respondents doing construction business with Okaloosa County are required to use the Federal Government Department of Homeland Security's website and use the E-Verify Employment Eligibility Verifications System to confirm eligibility of all employees to work in the United States.

XX. AUDIT

If requested, Respondent shall permit the County or an authorized, independent audit agency to inspect all data and records of Respondent relating to its performance and its subcontracts under this contract from the date of the contract through and until three (3) years after the expiration of contract.

XXI. EQUAL EMPLOYMENT OPPORTUNITY; NON-DISCRIMINATION

Respondent shall not discriminate against any employee or an applicant for employment because of race, color, religion, gender, sexual orientation, national origin, age, familial status or handicap.

XXII. NON-COLLUSION

Respondent certifies that it has entered into no agreement to commit a fraudulent, deceitful, unlawful or wrongful act, or any act which may result in an unfair advantage over other Respondents. See Florida Statute 838.22.

XXIII. UNAUTHORIZED ALIENS/PATRIOT'S ACT

The knowing employment by Respondent or its subcontractors of any alien not authorized to work by the immigration laws is prohibited and shall be a default of the contract. In the event that the Respondent is notified or becomes aware of such default, the Respondent shall take steps as are necessary to terminate said employment with 24 hours of notification or actual knowledge that an alien is being employed. Respondent's failure to take such steps as are necessary to terminate the employment of any said alien within 24 hours of notification or actual knowledge that an alien is being employed shall be grounds for immediate termination of the contract. Respondent shall take all commercially reasonable precautions to ensure that it and its subcontractors do not employ persons who are not authorized to work by the immigration laws.

XXIV. CERTIFICATE OF GOOD STANDING FOR STATE OF FLORIDA

Florida Statute 607.1501 requires that all vendors who wish to do business in the State of Florida be licensed to do business through the Department of State of Florida and be in good standing with the State of Florida. As such, to do business with Okaloosa County a vendor must provide a Certificate of Good Standing with their bid/proposal package to the County. For more information on doing business in the State of Florida, please refer to the Florida Department of State. The website to register is <https://dos.myflorida.com/sunbiz>.

XXV: ADDITIONAL REQUIRED DOCUMENTS

THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED WITH THE BID PACKET. FAILURE TO SUBMIT ALL REQUIRED FORMS MIGHT RESULT IN YOUR SUBMITTAL BEING DEEMED NON-RESPONSIVE:

- A. Drug-Free Workplace Certification Form
- B. Conflict of Interest
- C. Federal E-Verify
- D. Cone of Silence
- E. Indemnification and Hold Harmless
- F. Company Data
- G. System of Awards Management
- H. Addendum Acknowledgement
- I. Certification Regarding Lobbying
- J. Governmental Debarment & Suspension
- K. Vendors on Scrutinized Companies List
- L. List of References
- M. Compliance with Nondiscrimination Requirements
- N. Certificate of Good Standing for State of Florida-see number XXIV

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DRUG-FREE WORKPLACE CERTIFICATION

THE BELOW SIGNED RESPONDENT CERTIFIES that it has implemented a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under quote a copy of the statement specified in subsection 1.
4. In the statement specified in subsection 1, notify the employees that, as a condition of working on the commodities or contractual services that are under quote, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893, Florida Statutes, or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in, drug abuse assistance or rehabilitation program if such is available in employee's community, by any employee who is convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

DATE: _____

SIGNATURE: _____

COMPANY: _____

NAME: _____
(Typed or Printed)

ADDRESS: _____

TITLE: _____

E-MAIL: _____

PHONE #.: _____

CONFLICT OF INTEREST DISCLOSURE FORM

For purposes of determining any possible conflict of interest, all Respondents, must disclose if any Okaloosa Board of County Commissioner, employee(s), elected officials(s), or if any of its agencies is also an owner, corporate officer, agency, employee, etc., of their business.

Indicate either "yes" (a county employee, elected official, or agency is also associated with your business), or "no." If yes, give person(s) name(s) and position(s) with your business.

YES: _____

NO: _____

NAME(S)

POSITION(S)

FIRM NAME: _____

BY (PRINTED): _____

BY
(SIGNATURE): _____

TITLE: _____

ADDRESS: _____

PHONE NO.: _____

E-MAIL : _____

DATE: _____

FEDERAL E-VERIFY COMPLIANCE CERTIFICATION

In accordance with Okaloosa County Policy and Executive Order Number 11-116 from the office of the Governor of the State of Florida, Respondent hereby certifies that the U.S. Department of Homeland Security's E-Verify system will be used to verify the employment eligibility of all new employees hired by the Respondent during the contract term, and shall expressly require any subcontractors performing work or providing services pursuant to the contact to likewise utilize the U.S. Department of Homeland Securities E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term; and shall provide documentation such verification to the COUNTY upon request.

As the person authorized to sign this statement, I certify that this company complies/will comply fully with the above requirements.

DATE: _____

SIGNATURE: _____

COMPANY: _____

NAME: _____

ADDRESS: _____

TITLE: _____

E-MAIL: _____

PHONE NO.: _____

CONE OF SILENCE

The Board of County Commissioners have established a solicitation silence policy (Cone of Silence) that prohibits oral and written communication regarding all formal solicitations for goods and services (ITB, RFP, ITQ, ITN, and RFQ) or other competitive solicitation between the bidder (or its agents or representatives) or other entity with the potential for a financial interest in the award (or their respective agents or representatives) regarding such competitive solicitation, and any County Commissioner or County employee, selection committee member or other persons authorized to act on behalf of the Board including the County’s Architect, Engineer or their sub-consultants, or anyone designated to provide a recommendation to award a particular contract, other than the Purchasing Department Staff.

The period commences from the time of advertisement until contract award.

Any information thought to affect the committee or staff recommendation submitted after bids are due, should be directed to the Purchasing Manager or an appointed representative. It shall be the Purchasing Manager’s decision whether to consider this information in the decision process.

Any violation of this policy shall be grounds to disqualify the Respondent from consideration during the selection process.

All Respondents must agree to comply with this policy by signing the following statement and including it with their submittal.

I _____ representing _____
Signature Company Name

On this _____ day of _____ 2020, I hereby agree to abide by the County’s “Cone of Silence Clause” and understand violation of this policy shall result in disqualification of my proposal/submittal.

INDEMNIFICATION AND HOLD HARMLESS

Respondent shall indemnify and hold harmless the County, its officers and employees from liabilities, damages, losses, and costs including but not limited to reasonable attorney fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Respondent and other persons employed or utilized by the Respondent in the performance of this Agreement.

Respondent's Company Name

Authorized Signature – Manual

Physical Address

Authorized Signature – Typed

Mailing Address

Title

Phone Number

FAX Number

Cellular Number

After-Hours Number(s)

Date

Email

COMPANY DATA

Respondent's Company Name:

Physical Address & Phone #:

Contact Person (Typed-Printed):

Phone #:

Cell #:

Email:

Federal ID or SS #:

Respondent's License #:

Respondent's DUNS #:

Fax #:

Emergency #'s After Hours,
Weekends & Holidays:

SYSTEM FOR AWARD MANAGEMENT (OCT 2016)

(a) Definitions. As used in this provision.

“Electronic Funds Transfer (EFT) indicator” means a four-character suffix to the unique entity identifier. The suffix is assigned at the discretion of the commercial, nonprofit, or Government entity to establish additional System for Award Management records for identifying alternative EFT accounts (see [subpart 32.11](#)) for the same entity.

“Registered in the System for Award Management (SAM) database” means that.

(1) The Offeror has entered all mandatory information, including the unique entity identifier and the EFT indicator, if applicable, the Commercial and Government Entity (CAGE) code, as well as data required by the Federal Funding Accountability and Transparency Act of 2006 (see [subpart 4.14](#)) into the SAM database;

(2) The offeror has completed the Core, Assertions, and Representations and Certifications, and Points of Contact sections of the registration in the SAM database;

(3) The Government has validated all mandatory data fields, to include validation of the Taxpayer Identification Number (TIN) with the Internal Revenue Service (IRS). The offeror will be required to provide consent for TIN validation to the Government as a part of the SAM registration process; and

(4) The Government has marked the record “Active”.

“Unique entity identifier” means a number or other identifier used to identify a specific commercial, nonprofit, or Government entity. See www.sam.gov for the designated entity for establishing unique entity identifiers.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the SAM database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The Offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “Unique Entity Identifier” followed by the unique entity identifier that identifies the Offeror’s name and address exactly as stated in the offer. The Offeror also shall enter its EFT indicator, if applicable. The unique entity identifier will be used by the Contracting Officer to verify that the Offeror is registered in the SAM database.

(c) If the Offeror does not have a unique entity identifier, it should contact the entity designated at www.sam.gov for establishment of the unique entity identifier directly to obtain one. The Offeror should be prepared to provide the following information:

- (1) Company legal business name.
- (2) Tradestyle, doing business, or other name by which your entity is commonly recognized.
- (3) Company Physical Street Address, City, State, and Zip Code.
- (4) Company Mailing Address, City, State and Zip Code (if separate from physical).
- (5) Company telephone number.
- (6) Date the company was started.
- (7) Number of employees at your location.
- (8) Chief executive officer/key manager.

(9) Line of business (industry).

(10) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the SAM database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) Offerors may obtain information on registration at <https://www.acquisition.gov> .

Offerors SAM information:

Entity Name: _____

Entity Address: _____

Duns Number: _____

CAGE Code: _____

LOBBYING - 31 U.S.C. 1352, 49 CFR Part 19, 49 CFR Part 20

APPENDIX A, 49 CFR PART 20--CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

(To be submitted with each bid or offer exceeding \$100,000)

The undersigned [Contractor] certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, *et seq.*)]
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1) -(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date

Government Debarment & Suspension

Instructions

1. By signing and submitting this form, the prospective lower tier participant is providing the certification set out in accordance with these instructions.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person(s) to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Orders 12549, at Subpart C of OMB 2 C.F.R. Part 180 and 3000.332. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the System for Award Management (SAM) database.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph (5) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

**Certification Regarding Debarment, Suspension,
Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

The following statement is made in accordance with the Privacy Act of 1974 (5 U.S.C. § 552(a), as amended). This certification is required by the regulations implementing Executive Orders 12549, Debarment and Suspension, and OMB 2 C.F.R. Part 180, Participants' responsibilities. The regulations were amended and published on August 31, 2005, in 70 Fed. Reg. 51865-51880.

**[READ INSTRUCTIONS ON PREVIOUS PAGE BEFORE COMPLETING
CERTIFICATION]**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal or State department or agency;

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal

Printed Name and Title of Authorized Representative _____

Signature

Date

VENDORS ON SCRUTINIZED COMPANIES LISTS

By executing this Certificate, the bid proposer, certifies that it is not: (1) listed on the Scrutinized Companies that Boycott Israel List, created pursuant to section 215.4725, Florida Statutes, (2) engaged in a boycott of Israel, (3) listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to section 215.473, Florida Statutes, or (4) engaged in business operations in Cuba or Syria. Pursuant to section 287.135(5), Florida Statutes, the County may disqualify the bid proper immediately or immediately terminate any agreement entered into for cause if the bid proposer is found to have submitted a false certification as to the above or if the Contractor is placed on the Scrutinized Companies that Boycott Israel List, is engaged in a boycott of Israel, has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or has been engaged in business operations in Cuba or Syria, during the term of the Agreement. If the County determines that the bid proposer has submitted a false certification, the County will provide written notice to the bid proposer. Unless the bid proposer demonstrates in writing, within 90 calendar days of receipt of the notice, that the County’s determination of false certification was made in error, the County shall bring a civil action against the bid proposer. If the County’s determination is upheld, a civil penalty shall apply, and the bid proposer will be ineligible to bid on any Agreement with a Florida agency or local governmental entity for three years after the date of County’s determination of false certification by bid proposer.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

DATE: _____

SIGNATURE: _____

COMPANY: _____

NAME: _____
(Typed or Printed)

ADDRESS: _____

TITLE: _____

E-MAIL: _____

PHONE NO.: _____

LIST OF REFERENCES

1. Owner's Name and Address: _____

Contact Person: _____ Telephone # (_____) _____

Email: _____

2. Owner's Name and Address: _____

Contact Person: _____ Telephone # (_____) _____

Email: _____

3. Owner's Name and Address: _____

Contact Person: _____ Telephone # (_____) _____

Email: _____

4. Owner's Name and Address: _____

Contact Person: _____ Telephone # (_____) _____

Email: _____

5. Owner's Name and Address: _____

Contract Person: _____ Telephone # (_____) _____

Email: _____

Exhibit “B”

Title VI Clauses for Compliance with Nondiscrimination Requirements

Compliance with Nondiscrimination Requirements

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts And Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor’s obligations under this contract and the Nondiscrimination Acts And Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts And Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor’s noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
 - a. Withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers.

The [*contractor* | *consultant*] has full responsibility to monitor compliance to the referenced statute or regulation. The [*contractor* | *consultant*] must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division

OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor’s compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

E-VERIFY

Enrollment and verification requirements.

- (1) If the Contractor is not enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall-

- a. Enroll. Enroll as a Federal Contractor in the E-Verify Program within thirty (30) calendar days of contract award;
 - b. Verify all new employees. Within ninety (90) calendar days of enrollment in the E-Verify program, begin to use E-Verify to initiate verification of employment eligibility of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within three (3) business days after the date of hire (but see paragraph (b)(3) of this section); and,
 - c. Verify employees assigned to the contract. For each employee assigned to the contract, initiate verification within ninety (90) calendar days after date of enrollment or within thirty (30) calendar days of the employee's assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section.)
- (2) If the Contractor is enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall use E-Verify to initiate verification of employment eligibility of
- a. All new employees.
 - i. Enrolled ninety (90) calendar days or more. The Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within three (3) business days after the date of hire (but see paragraph (b)(3) of this section); or
 - b. Enrolled less than ninety (90) calendar days. Within ninety (90) calendar days after enrollment as a Federal Contractor in E-Verify, the Contractor shall initiate verification of all new hires of the contractor, who are working in the United States, whether or not assigned to the contract, within three (3) business days after the date of hire (but see paragraph (b)(3) of this section); or
 - ii. Employees assigned to the contract. For each employee assigned to the contract, the Contractor shall initiate verification within ninety (90) calendar days after date of contract award or within thirty (30) days after assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section.)
- (3) If the Contractor is an institution of higher education (as defined at 20 U.S.C. 1001(a)); a State of local government or the government of a Federally recognized Indian tribe, or a surety performing under a takeover agreement entered into with a Federal agency pursuant to a performance bond, the Contractor may choose to verify only employees assigned to the contract, whether existing employees or new hires. The Contractor shall follow the applicable verification requirements of (b)(1) or (b)(2), respectively, except that any requirement for verification of new employees applies only to new employees assigned to the contract.
- (4) Option to verify employment eligibility of all employees. The Contractor may elect to verify all existing employees hired after November 6, 1986 (after November 27, 2009, in the Commonwealth of the Northern Mariana Islands), rather than just those employees assigned to the contract. The Contractor shall initiate verification for each existing employee working

in the United States who was hired after November 6, 1986 (after November 27, 2009, in the Commonwealth of the Northern Mariana Islands), within one hundred eighty (180) calendar days of-

- i. Enrollment in the E-Verify program; or
- ii. Notification to E-Verify Operations of the Contractor's decision to exercise this option, using the contract information provided in the E-Verify program Memorandum of Understanding (MOU)

(5) The Contractor shall comply, for the period of performance of this contract, with the requirements of the E-Verify program MOU.

- i. The Department of Homeland Security (DHS) or the Social Security Administration (SSA) may terminate the Contractor's MOU and deny access to the E-Verify system in accordance with the terms of the MOU. In such case, the Contractor, will be referred to a suspension or debarment official.
- ii. During the period between termination of the MOU and a decision by the suspension or debarment official whether to suspend or debar, the contractor is excused from its obligations under paragraph (b) of this clause. If the suspension or debarment official determines not to suspend or debar the Contractor, then the Contractor must reenroll in E-Verify.
- iii. Web site. Information on registration for and use of the E-Verify program can be obtained via the Internet at the Department of Homeland Security Web site: <http://www.dhs.gov/E-Verify>.

Individuals previously verified. The Contractor is not required by this clause to perform additional employment verification using E-Verify for any employee-

- (a) Whose employment eligibility was previously verified by the Contractor through the E-Verify program;
- (b) Who has been granted and holds an active U.S. Government security clearance for access to confidential, secret, or top secret information in accordance with the National Industrial Security Program Operating Manual; or
- (c) Who has undergone a completed background investigation and been issued credentials pursuant to Homeland Security Presidential Directive (HSPD)-12. Policy for a Common Identification Standard for Federal Employees and Contractors.

Subcontracts. The Contractor shall include the requirements of this clause, including this paragraph € (appropriately modified for identification of the parties in each subcontract that-

- (1) Is for-(i) Commercial and noncommercial services (except for commercial services that are part of the purchase of a COTS item (or an item that would be a COTS item, but for minor modifications), performed by the COTS provider, and are normally provided for that COTS item); or (ii) Construction;
 - (2) Has a value of more than \$3,500; and
 - (3) Includes work performed in the United States.
-
-

As the person authorized to sign this statement, I certify that this company complies/will comply fully with the above requirements.

DATE: _____

SIGNATURE: _____

COMPANY: _____

NAME: _____

ADDRESS: _____

TITLE: _____

E-MAIL: _____

PHONE NO.: _____

**BIG DAWG VESSEL CLEAN-UP, PREPARATION, TOWING,
& DEPLOYMENT AS AN ARTIFICIAL REEF
RFP TDD 09-21
RANKING SHEET**

VENDORS

RANKING CRITERIA			
Experience and Understanding 0 – 30 Points			
Available Deployment Resources 0 – 20 Points			
Schedule of Operations 0 – 20 Points			
Total Project Cost 0 – 30 Points			
TOTAL POSSIBLE – 100 PTS			

COMMITTEE MEMBER: _____

DATE: _____

SIGNATURE: _____

DRAFT CONTRACT

Please note: This sample contract is a draft contract for proposers to view and understand the County's standard terms and conditions. It is subject to revisions. By submitting a proposal, respondent understands and acknowledges that the draft contract is not an offer. Respondents are not to sign this draft contract.

AGREEMENT BETWEEN OKALOOSA COUNTY, FLORIDA
AND
CONTRACT ID

THIS AGREEMENT (hereinafter referred to as the “Agreement”) is made this _____, day of _____, 20_____, by and between Okaloosa County, a political subdivision of the state of Florida, (hereinafter referred to as the “County”), with a mailing address of 1250 N. Eglin Parkway, Suite 100, Shalimar, Florida, 32579, and _____, a _____ authorized to do business in the State of Florida (hereinafter referred to as “Contractor”) whose Federal I.D. # is _____.

RECITALS

WHEREAS, the County is in need of a contractor to provide clean-up, preparation, towing & deployment of donated vessel to be used as artificial reef (“Services”); and

WHEREAS, pursuant to the Okaloosa County Purchasing Manual, the County issued a Request for Proposals to competitively procure the Services and received responses to perform these Services. A copy of the procurement and Contractor’s responsive to the procurement is included as Attachment “A”; and

WHEREAS, Contractor is a certified and insured entity with the necessary experience to provide the desired Services; and

WHEREAS, the County wishes to enter into this Agreement with Contractor to provide the Services to the County for an amount of _____ Dollars (\$ _____), as further detailed below.

NOW THEREFORE, in consideration of the promises and the mutual covenants herein, the parties agree as follows:

1. Recitals and Attachments. The Recitals set forth above are hereby incorporated into this Agreement and made part hereof for reference. The following documents are attached to this Agreement and are incorporated herein.

- Attachment “A” – Procurement RFP TDD 09-21 and Contractor’s Response;
- Attachment “B” – Insurance Requirements;
- Attachment “C” – Title VI list of pertinent nondiscrimination acts and authorities;
- Attachment “D” – Scrutinized Companies Certification;

2. Services. Contractor agrees to perform the following services, clean-up, preparation, towing, and deployment of donated vessel to be used as artificial reef. The Services to be provided are further detailed in the Contractor’s proposal attached as Attachment “A” and incorporated herein by reference. The Services shall be performed by Contractor to the full satisfaction of the County. Contractor agrees to have a qualified representative to audit and inspect the Services provided on a regular basis to ensure all Services are being performed in accordance with the County’s needs and pursuant to the terms of this Agreement and shall report to the County accordingly. Contractor agrees to immediately inform the County via

telephone and in writing of any problems that could cause damage to the County. Contractor will require its employees to perform their work in a manner befitting the type and scope of work to be performed.

3. Term and Renewal. The term of this Agreement shall begin _____, and shall continue for a period of _____ six _____ (6) _____ months _____ from the date of full execution of this Agreement, subject to the County’s ability to terminate in accordance with Section 7 of this Agreement. The terms of Section 20 entitled “Indemnification and Waiver of Liability” shall survive termination of this Agreement.

This agreement may not be renewed; or

4. Compensation. The Contractor agrees to provide the Services to the County, including materials and labor, in a total amount of _____ Dollars (\$ _____).

a. Contractor shall submit an invoice to the County upon _____. The invoice shall indicate that all services have been completed for that invoice period. In addition, Contractor agrees to provide the County with any additional documentation requested to process the invoices.

b. Disbursement. Check one:

There are no reimbursable expenses associated with this Agreement.

The following are reimbursable expenses associated with this Agreement:

c. Payment Schedule. Invoices received from the Contractor pursuant to this Agreement will be reviewed by the initiating County Department. Payment will be disbursed as set forth above. If services have been rendered in conformity with the Agreement, the invoice will be sent to the Finance Department for payment. Invoices must reference the contract number assigned by the County after execution of this Agreement. Invoices will be paid in accordance with the State of Florida Local Government Prompt Payment Act.

d. Availability of Funds. The County’s performance and obligation to pay under this Agreement is contingent upon annual appropriation for its purpose by the County Commission.

Contractor shall make no other charges to the County for supplies, labor, taxes, licenses, permits, overhead or any other expenses or costs unless any such expenses or cost is incurred by Contractor with the prior written approval of the County. If the County disputes any charges on the invoices, it may make payment of the uncontested amounts and withhold payment on the contested amounts until they are resolved by agreement with the Contractor. Contractor shall not pledge the County’s credit or make it a guarantor of payment or surety for any contract, debt, obligation, judgment, lien, or any form of indebtedness. The Contractor further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of this Agreement.

5. Ownership of Documents and Equipment. All documents prepared by the Contractor pursuant to this Agreement and related Services to this Agreement are intended and represented for the ownership of the County only. Any other use by Contractor or other parties shall be approved in writing by the County. If requested, Contractor shall deliver the documents to the County within fifteen (15) calendar days.

6. Insurance. Contractor shall, at its sole cost and expense, during the period of any work being performed under this Agreement, procure and maintain the minimum insurance coverage required as set forth in Attachment “B” attached hereto and incorporated herein, to protect the County and Contractor against all loss, claims, damages and liabilities caused by Contractor, its agents, or employees.

7. Termination and Remedies for Breach.

- a. If, through any cause within its reasonable control, the Contractor shall fail to fulfill in a timely manner or otherwise violate any of the covenants, agreements or stipulations material to this Agreement, the County shall have the right to terminate the Services then remaining to be performed. Prior to the exercise of its option to terminate for cause, the County shall notify the Contractor of its violation of the particular terms of the Agreement and grant Contractor _____ (_____) days to cure such default. If the default remains uncured after _____ (_____) days the County may terminate this Agreement, and the County shall receive a refund from the Contractor in an amount equal to the actual cost of a third party to cure such failure. If Contractor fails, refuses or is unable to perform any term of this Agreement, County shall pay for services rendered as of the date of termination.
 - i. In the event of termination, all finished and unfinished documents, data and other work product prepared by Contractor (and sub-Contractor (s)) shall be delivered to the County and the County shall compensate the Contractor for all Services satisfactorily performed prior to the date of termination, as provided in Section 4 herein.
 - ii. Notwithstanding the foregoing, the Contractor shall not be relieved of liability to the County for damages sustained by it by virtue of a breach of the Agreement by Contractor and the County may reasonably withhold payment to Contractor for the purposes of set-off until such time as the exact amount of damages due the County from the Contractor is determined.
- b. Termination for Convenience of County. The County may, for its convenience and without cause immediately terminate the Services then remaining to be performed at any time by giving written notice. The terms of Section 7 Paragraphs a(i) and a(ii) above shall be applicable hereunder.
- c. Termination for Insolvency. The County also reserves the right to terminate the remaining Services to be performed in the event the Contractor is placed either in voluntary or involuntary bankruptcy or makes any assignment for the benefit of creditors.
- d. Termination for failure to adhere to the Public Records Law. Failure of the Contractor to adhere to the requirements of Chapter 119 of the Florida Statutes and Section 9 below, may result in immediate termination of this Agreement.

8. Governing Law, Venue and Waiver of Jury Trial. This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. All parties agree and accept that jurisdiction of any dispute or controversy arising out of this Agreement, and any action involving the enforcement or interpretation of any rights hereunder shall be brought exclusively in the First Judicial Circuit in and for Okaloosa County, Florida, and venue for litigation arising out of this Agreement shall be exclusively in such state courts, forsaking any other jurisdiction which either party may claim by virtue of its residency or other jurisdictional device. In the event it becomes necessary for the County to file a lawsuit to enforce any term or provision under this Agreement, then the County shall be entitled to its costs and attorney’s fees at the pretrial, trial and appellate levels. BY ENTERING INTO THIS AGREEMENT, CONTRACTOR AND COUNTY HEREBY EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY

MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT. Nothing in this Agreement is intended to serve as a waiver of sovereign immunity, or of any other immunity, defense, or privilege enjoyed by the County pursuant to Section 768.28, Florida Statutes.

9. Public Records. Any record created by either party in accordance with this Contract shall be retained and maintained in accordance with the public records law, Florida Statutes, Chapter 119. Contractor must comply with the public records laws, Florida Statute chapter 119, specifically Contractor must:

- a. Keep and maintain public records required by the County to perform the service.
- b. Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in chapter 119 Florida Statutes or as otherwise provided by law.
- c. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the County.
- d. Upon completion of the contract, transfer, at no cost, to the County all public records in possession of the contractor or keep and maintain public records required by the County to perform the service. If the contractor transfers all public records to the public agency upon completion of the contract, the contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the contractor keeps and maintains public records upon completion of the contract, the contractor shall meet all applicable requirements for retaining the public records. All records stored electronically must be provided to the public agency, upon the request from the public agency's custodian of public records, in a format that is compatible with the information technology systems of the public agency.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT OKALOOSA COUNTY RISK MANAGEMENT DEPARTMENT 302 N. WILSON ST., CRESTVIEW, FL 32536 PHONE: (850) 689-5977 riskinfo@myokaloosa.com.

10. Audit. The County and/or its designee shall have the right from time to time at its sole expense to audit the compliance by the Contractor with the terms, conditions, obligations, limitations, restrictions, and requirements of this Contract and such right shall extend for a period of three (3) years after termination of this Contract.

11. Notices. All notices and other communications required or permitted to be given under this Agreement by either party to the other shall be in writing and shall be sent (except as otherwise provided herein) (i) by certified mail, first class postage prepaid, return receipt requested, (ii) by guaranteed overnight delivery by a nationally recognized courier service, or (iii) by facsimile with confirmation receipt (with a copy simultaneously sent by certified mail, first class postage prepaid, return receipt requested or by overnight delivery by traditionally recognized courier service), addressed to such party as follows:

If to the County:	Jennifer Adams, Director Tourist Development Department 1540 Miracle Strip Parkway, SE Fort Walton Beach, FL 32548 (850) 651-7131 jadams@myokaloosa.com	With a copy to: County Attorney Office 1250 N. Eglin Pkwy, Suite 100 Shalimar, FL 32579 (850) 224-4070
If to the Contractor:		

12. Assignment. Contractor shall not assign this Agreement or any part thereof, without the prior consent in writing of the County. If Contractor does, with approval, assign this Agreement or any part thereof, it shall require that its assignee be bound to it and to assume toward Contractor all of the obligations and responsibilities that Contractor has assumed toward the County.

13. Subcontracting. Contractor shall not subcontract any services or work to be provided to County without the prior written approval of the County's Representative. The County reserves the right to accept the use of a subcontractor or to reject the selection of a particular subcontractor and to inspect all facilities of any subcontractors in order to make a determination as to the capability of the subcontractor to perform properly under this Agreement. The County's acceptance of a subcontractor shall not be unreasonably withheld. The Contractor is encouraged to seek minority and women business enterprises for participation in subcontracting opportunities. Additionally, any subcontract entered into between the Contractor and subcontractor will need to be approved by the County prior to it being entered into and said agreement shall incorporate in all required terms in accordance with local, state and Federal regulations.

14. Civil Rights. The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

15. Compliance with Nondiscrimination Requirements. During the performance of this Agreement, the Contractor, for itself, its assignees, and successors in interest, agrees as follows:

- a. Compliance with Regulations: The Contractor will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated and attached hereto as Attachment "C".
- b. Nondiscrimination: The Contractor, with regard to the work performed by it during the Agreement, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the

Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

- c. Solicitations for Subcontracts, including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
- d. Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the County or other governmental entity to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the County or the other governmental entity, as appropriate, and will set forth what efforts it has made to obtain the information.
- e. Sanctions for Noncompliance: In the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the County will impose such contract sanctions as it or another applicable state or federal governmental entity may determine to be appropriate, including, but not limited to:
 - i. Withholding payments to the Contractor under the Agreement until the Contractor complies; and/or
 - ii. Cancelling, terminating, or suspending the Agreement, in whole or in part.
- f. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the County may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the County to enter into any litigation to protect the interests of the County. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

16. Compliance with Laws. Contractor shall secure any and all permits, licenses and approvals that may be required in order to perform the Services, shall exercise full and complete authority over Contractor's personnel, shall comply with all workers' compensation, employer's liability and all other federal, state, county, and municipal laws, ordinances, rules and regulations required of an employer performing services such as the Services, and shall make all reports and remit all withholdings or other deductions from the compensation paid to Contractor's personnel as may be required by any federal, state, county, or municipal law, ordinance, rule, or regulation.

17. Conflict of Interest. The Contractor covenants that it presently has no interest and shall not acquire any interest, directly or indirectly which could conflict in any manner or degree with the performance of

the Services. The Contractor further covenants that in the performance of this Agreement, no person having any such interest shall knowingly be employed by the Contractor. The Contractor guarantees that he/she has not offered or given to any member of, delegate to the Congress of the United States, any or part of this contract or to any benefit arising therefrom.

18. Independent Contractor. Contractor enters into this Agreement as, and shall continue to be, an independent contractor. All services shall be performed only by Contractor and Contractor's employees. Under no circumstances shall Contractor or any of Contractor's employees look to the County as his/her employer, or as partner, agent or principal. Neither Contractor, nor any of Contractor's employees, shall be entitled to any benefits accorded to the County's employees, including without limitation worker's compensation, disability insurance, vacation or sick pay. Contractor shall be responsible for providing, at Contractor's expense, and in Contractor's name, unemployment, disability, worker's compensation and other insurance as well as licenses and permits usual and necessary for conducting the services to be provided under this Agreement.

19. Third Party Beneficiaries. It is specifically agreed between the parties executing this Agreement that it is not intended by any of the provisions of any part of the Agreement to create in the public or any member thereof, a third party beneficiary under this Agreement, or to authorize anyone not a party to this Agreement to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this Agreement.

20. Indemnification and Waiver of Liability. The Contractor agrees, to the fullest extent permitted by law, to defend, indemnify and hold harmless the County, its agents, representatives, officers, directors, officials and employees from and against claims, damages, losses and expenses (including but not limited to attorney's fees, court costs and costs of appellate proceedings) relating to, arising out of or resulting from the Contractor's negligent acts, errors, mistakes or omissions relating to professional Services performed under this Agreement. The Contractor's duty to defend, hold harmless and indemnify the County its agents, representatives, officers, directors, officials and employees shall arise in connection with any claim, damage, loss or expense that is attributable to bodily injury; sickness; disease; death; or injury to impairment, or destruction of tangible property including loss of use resulting therefrom, caused by any negligent acts, errors, mistakes or omissions related to Services in the performance of this Agreement including any person for whose acts, errors, mistakes or omissions the Contractor may be legally liable. The parties agree that TEN DOLLARS (\$10.00) represents specific consideration to the Contractor for the indemnification set forth herein.

The waiver by a party of any breach or default in performance shall not be deemed to constitute a waiver of any other or succeeding breach or default. The failure of the County to enforce any of the provisions hereof shall not be construed to be a waiver of the right of the County thereafter to enforce such provisions.

21. Taxes and Assessments. Contractor agrees to pay all sales, use, or other taxes, assessments and other similar charges when due now or in the future, required by any local, state or federal law, including but not limited to such taxes and assessments as may from time to time be imposed by the County in accordance with this Agreement. Contractor further agrees that it shall protect, reimburse and indemnify County from and assume all liability for its tax and assessment obligations under the terms of the Agreement.

The County is exempt from payment of Florida state sales and use taxes. The Contractor shall not be exempted from paying sales tax to its suppliers for materials used to fulfill contractual obligations with the

County, nor is the Contractor authorized to use the County's tax exemption number in securing such materials.

The Contractor shall be responsible for payment of its own and its share of its employees' payroll, payroll taxes, and benefits with respect to this Agreement.

22. Prohibition Against Contracting with Scrutinized Companies. Pursuant to Florida Statutes Section 215.4725, contracting with any entity that is listed on the Scrutinized Companies that Boycott Israel List or that is engaged in the boycott of Israel is prohibited. Contractors must certify that the company is not participating in a boycott of Israel. Any contract for goods or services of One Million Dollars (\$1,000,000) or more shall be terminated at the County's option if it is discovered that the entity submitted false documents of certification, is listed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or has been engaged in business operations in Cuba or Syria after July 1, 2018.

Any contract entered into or renewed after July 1, 2018 shall be terminated at the County's option if the company is listed on the Scrutinized Companies that Boycott Israel List or engaged in the boycott of Israel. Contractors must submit the certification that is attached to this agreement as Attachment "D". Submitting a false certification shall be deemed a material breach of contract. The County shall provide notice, in writing, to the Contractor of the County's determination concerning the false certification. The Contractor shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination was in error. If the Contractor does not demonstrate that the County's determination of false certification was made in error, then the County shall have the right to terminate the contract and seek civil remedies pursuant to Florida Statute Section 215.4725.

23. Inconsistencies and Entire Agreement. If there is a conflict or inconsistency between any term, statement, requirement, or provision of any attachment attached hereto, any document or events referred to herein, or any document incorporated into this Agreement, the term, statement, requirement, or provision contained in this Agreement shall prevail and be given superior effect and priority over any conflicting or inconsistent term, statement, requirement or provision contained in any other document or attachment, including but not limited to Attachments listed in Section 1.

24. Severability. If any term or condition of this Contract shall be deemed, by a court having appropriate jurisdiction, invalid or unenforceable, the remainder of the terms and conditions of this Contract shall remain in full force and effect. This Contract shall not be more strictly construed against either party hereto by reason of the fact that one party may have drafted or prepared any or all the terms and provisions hereof.

25. Entire Agreement. This Agreement contains the entire agreement of the parties, and may be amended, waived, changed, modified, extended or rescinded only by in writing signed by the party against whom any such amendment, waiver, change, modification, extension and/or rescission is sought.

26. Representation of Authority to Contractor/Signatory. The individual signing this Agreement on behalf of Contractor represents and warrants that he or she is duly authorized and has legal capacity to execute and deliver this Agreement. The signatory represents and warrants to the County that the execution and delivery of this Agreement and the performance of the Services and obligations hereunder have been duly authorized and that the Agreement is a valid and legal agreement binding on the Contractor and enforceable in accordance with its terms.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in duplicate on the day and year first written above.

WITNESS:

Signature

BY: _____

Print Name

ATTEST:

OKALOOSA COUNTY, FLORIDA

J.D. Peacock II, Clerk of Courts

BY: _____
Robert A. "Trey" Goodwin, III, Chairman



STANDARD OPERATING PROCEDURE

Vessel Preparation and Deployment Process

Okaloosa County, Florida

The objective of this Standard Operating Procedure (SOP) is to provide the individual or entity considering a reef construction project using a vessel with a clear understanding of what will be required by the County to obtain a permit. The County's objective for a vessel reef deployment is to reduce the risk of detrimental impacts to the environment and assure the safety of the operation. This SOP is intended to comply with Federal and State guidelines for the preparation, transportation and sinking of a vessel for use as an artificial reef.

Permit applications for deployment of a vessel in the Large Area Artificial reef Sites (LAARS) A, B or C through the Okaloosa County Artificial Reef Program (OCARP) will require additional documentation requirements. The regulatory framework for State and Federal artificial reef construction utilizing vessels is currently being developed. The nature of work performed by vessels in their operational life distinguishes them from other potential reef materials on many levels. Two primary distinguishing characteristics are that vessels have the potential to introduce hazardous substances into the marine environment and they are typically constructed as a whole reef unit.

It is highly recommended that the individual or entity desiring to permit a vessel deployment in LAARS A, B or C should open a dialog with OCARP as early in the project as possible. A meeting should be arranged to discuss the objectives of the permit applicant and the general nature of the vessel. Less complex vessels like barges that have had no self-propulsion capabilities are far less complex than tugboats, commercial fishing vessels or most military vessels. A pre-planning meeting is a timely opportunity for the permit applicant to request a reduction of requirements. However, the decision to drop particular requirements is not a guarantee since the County will be liable for many of the actions taken by the applicant during the implementation of the project and for years after the vessel is deployed. As an alternative, the individual or entity can permit the vessel deployment directly through the US Corps of Engineers for deployment locations outside of LAARS A, B or C.

1. USCG Inspection

The USCG must be solicited by the applicant to provide and inspection to determine the whether the vessel is seaworthy and to determine towing requirements/configuration. The applicant should provide a narrative that documents the physical USCG inspection. The narrative should include a list of the persons present at the time of inspection and their contact information. The applicant should solicit the results of the inspection from the USCG with the determinations and recommendations of the USCG. The narrative should also address whether additional inspections have been requested. The USCG may or may not provide additional comments relative to the deployment but not necessarily related to sea-worthiness. These comments should also be documented. Any photographs or video obtained during the inspection should also be included in the inspection report.



2. OCARP Inspections – Permit and Process Compliance

It is recommended that the applicant request an inspection by OCARP prior to vessel preparation. This inspection will provide the County with a baseline to assist in evaluation of the applicant's progress throughout the project. Recommendations from OCARP may be provided at this inspection that will expedite the project and/or identify potential issues that need to be addressed early in the project. The inspector can generally determine additional inspection requirements at this time. The final OCARP inspection will be performed as part of the project permitting phase. The final inspection is the point in time where the County assumes liability of the project. It is expected that the applicant comply with the recommendations of the inspector.

3. Application for Approval to Use the Okaloosa County Artificial Reef Sites A, B, & C

The *Application for Approval to Use the Okaloosa County Artificial Reef Sites A, B, & C* is the permitting instrument used for documenting the transfer of liability of the vessel from the vessel owner to OCARP. Before this instrument is executed (generally at the Final Inspection) the permit applicant should be ready for vessel deployment and all vessel preparation activities should be complete.

4. Indemnification Instrument

Liability issues must be recognized and addressed by permit applicants because the LAARS permit holder (Okaloosa County) is required to provide long-term responsibility for materials on LAARS A, B and C, including vessels. Demonstration of this responsibility by the permit applicant could include liability insurance, posting a bond or other indemnifying instrument to ensure resolution of liability issues associated with the towing, cleaning and sinking of vessels on State or Federal submerged lands. This liability includes damages caused by movement of the materials during storm events well after deployment activities have concluded.

➤ Liability Insurance

Based on the complexity of the project and other considerations, the County may require the applicant to carry liability insurance.

➤ Bonds

Based on the complexity of the project and other considerations, the County may require the applicant to be bonded.

5. Vessel Preparation Plan (ref. USEPA - National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs)

The intent of vessel preparation is threefold. First, the vessel should be prepared in a manner that enables the vessel to be transported to a pre-determined location and sunk in an efficient and safe manner. Secondly, preparation activities are performed to reduce the potential risk of detrimental environmental impacts as a result of the vessel components and configuration. Thirdly, proper



preparation of the vessel prior to deployment can affect the accessibility of the vessel after deployment and the potential to attract targeted marine life.

➤ **Vessel Description, Specifications and History**

- Vessel Titled Name
- Vessel Ownership Record and Proof of Current Ownership

Note: The permit applicant should also provide documentation that certifies that the owner of the vessel supports the efforts of the permit applicant.

- Vessel Captains Log
- Vessel Dimensions and Displacement/Weight
- Anecdotal Information
- Vessel Maintenance Records

➤ **Vessel Location for Preparation**

- GPS Coordinates and/or Street Address of Preparation Activities
- Access Restrictions and Liability Waivers (Hold Harmless Agreement)
- Property Damage Contingencies and Liabilities
- Emergency Contact Information

➤ **Assessment of Applicable Laws, Regulations, Guidelines and Permits**

- Provide the following Statement in all plans: *<Your name or entity name>* shall comply with all applicable Federal, State and local rules and regulations in the effort to sink this vessel. Including the general and special conditions specified in permits issued by the US Department of Army, Corps of Engineers or the Florida Department of Environmental Protection. *<Your name or entity name>* acknowledges that this requirement includes all Federal, State and Local health and safety rules and regulations. This provision will be included in all subcontracts issued as a result of this vessel deployment effort.
- Discuss Turtle Entrapment Evaluation and Rectification
- Discuss Diver Snag and/or Entrapment Evaluation and Rectification

➤ **Hazardous Material Management**

- Discuss Potential Exposures during Preparation and Risk Mitigation
Note: Applicant should be prepared to comply with all local, state and federal regulations concerning hazardous and non-hazardous substances throughout the preparation period as defined by the USEPA. Demonstration of compliance with applicable regulations should be available to OCARP upon request.
- Hazardous/Non-Hazardous Material Handling Protocols
- Insulation/Asbestos Assessment
 - Asbestos containing materials which may be disturbed by actions related to preparing the vessel for sinking or that are likely to be loosened from or fall off vessel components during the sinking or a result of environmental forces following the sinking must be removed prior to the sinking of the vessel.
 - Such materials must be disposed of at a landfill operating in compliance with asbestos disposal requirements.



- An asbestos inspection and demonstration of compliance with inspection results is required.
- For inspection assistance and guidance, contact the Department's Air Resources Management Section in the Pensacola Northwest District Regulatory Office (Ph. 850-695-8300).
- PCB Assessment
 - Vessels built prior to 1978 must have polychlorinated biphenyl (PCB) testing performed on sample wire insulation, paint, rubber gasketing and other suspect materials remaining in the vessel.
 - PCB levels above 50 parts per million (ppm) in any material evaluate may eliminates the vessel from being sunk as an artificial unless the material can be easily and safely removed..
- Radiological Assessment (Military Vessels)
- Refrigerant and Halon Removal Documentation
- MSDS Sheets
- Amount of Material Removed
- Disposition of Material
 - Dispose of oil, muck, and debris in approved areas ashore in compliance with acceptable local, state and Federal disposal requirements for these materials.
- Amount and Specification of Material Inaccessible
- Exterior Hull Paint Assessment – Type, Last Application, Leachate Potential Assessment
- **Schematics and Photographs of Vessel, Machinery, Compartments and Tank Layouts**
- **Tanks and Contained Areas**
 - Tank Soundings – Volume of Tanks and Contents
 - Open and vent all tanks.
 - Clean tanks, fuel lines, pneumatic systems, hydraulic systems, machinery lubrication systems, voids, bilges, and any other materials containing oil, gas, debris, and muck.
 - Remove fuel oil in tanks and machinery spaces by pumping to barge, tank truck or suitable container designated compatible with the material and acceptable for transport/disposal.
 - Remove oil and greases from tanks, bilges, and machinery spaces by washing areas with approved chemicals and water.
 - Remove fuel oil in tanks and machinery spaces by pumping to barge, tank truck or suitable container designated compatible with the material and acceptable for transport/disposal.
- **Cleaning and Preparation - Miscellaneous**
 - Remove all trash, cleaning compounds, floatable materials, and loose gear stored in holds and compartments and sweep spaces, and on deck.
 - Secure propeller shaft or remove propeller and seal shaft log.
 - Secure rudder amidships.
 - All valves on major through-hull fillings must be left in place.
 - No loose materials shall be left on deck.



- **List of Removable Items Available for Reuse or Recycling**
- **List and Specifications of Material Added to the Vessel for Ballast or Reef Enhancement**
- **Target Deployment Location**
 - Discussion of Alternate Sites Considered
 - Specify Relationship to Safety Fairways
 - Discussion of Potential User Group Conflicts
 - County GPS Reporting Requirements
 - Horizontal
 - System – State Plane
 - Horizontal Datum - NAD83 Florida North Zone 903
 - Units - US Survey Foot
 - Vertical
 - Datum - 1988 - NAVD88
 - Units - US Survey Foot
 - All Coordinates in Degree, Decimal-Minutes Format - $xx^{\circ} xx.xxx'N$, $-xx^{\circ} xx.xxx'W$
 - Navigational Clearance
 - State Applicable Navigational clearance
 - Discuss Requirements for Site Marking
 - Discuss Requirements for NOAA Charting
 - Proximity of Public reef Sites
- **Target Deployment Survey**
 - Copies of Diving Logs and Captains Log
 - Verification of Proposed Deployment Location Coordinates.
 - Date
 - Time of Departure, Arrival on-site, Dive Start, Dive End, Time of Departure from Site, Arrival at Port
 - Sea State
 - Sea Current On-Site
 - Climatic Condition
 - Visibility
 - Survey Participants with POC Information and Area of Responsibility
 - Narrative of Observations
 - Photographs and or Video
- **Flooding Aids**
 - Void space and Hull Breach (i.e., Flooding Patches)
Any holes cut through the exterior hull prior to towing shall be firmly patched and sealed securely enough to remain in place without leaking during offshore vessel transport.
 - Identify Locations and Dimensions of Flooding Holes
 - Detail Patching Specifications (Size and Location)
 - Determine the Schedule for Cutting and Installation of Removable Patches



- Describe Patch Removal Process
- Document Equipment Used and Specifications
 - Describe Equipment Testing
 - Describe Equipment Failure Contingency
- **Ballast Evaluation and Addition**
- **Vessel Enhancements for Structural Complexity, Marine Life Attraction and Diver Safety**
- **Demolition Plan (Explosive Deployment Plan)**
 - Explosives Qualifications
 - Charge Specifications – Type, Poundage, Placement, Method of Detonation, Back-up
 - Aerial Surveys
 - Explosives Mitigation
 - Explosives Transport, Site Security and Public Safety Plan
 - Demolition Detonation Verification

6. Vessel Deployment Plan

- **Statement of Project Objectives and Potential User Groups**
 - Examples
 - Enhance and conserve targeted fishery resources to the maximum extent practicable;
 - Minimize conflicts among competing uses of water and water resources;
 - Minimize the potential for environmental risks related to site location;
 - Be consistent with international law and national fishing law and not create an obstruction to navigation;
 - Be based on scientific information; and
 - Conform to any federal, State, or local requirements or policies for artificial reefs.
 - Facilitating access and use by recreational and/or commercial fishermen; and
 - Facilitating access and use by recreational divers.
- **Definition of Authorities**

Note: Provide a statement that defines the authority of a particular individual or entity in relation to specific deployment activities.
- **Statement of Liability**
 - Provide Liability Statement: It is the responsibility of <your company or entity name> sinking the vessel to assure that the vessel is sunk within the designated Large Area Artificial Reef Site and within 100' of the proposed vessel sink site. If these conditions are not met, the cost of relocating the vessel to the proposed site is the responsibility of <your company or entity name>. All liability, risk of loss and responsibility for the safe handling, storage, cleaning, transportation and deployment of the vessel shall be borne by <your company or entity name>.
- **Notifications**



- Post Inspection – Page 1 and 2 of *Application for Approval to Use the Okaloosa County Large Area Artificial Reef Sites A, B, & C* to USACE, USCG – Mobile, Destin and Panama City, Florida Marine Patrol – Pensacola – **COUNTY**
- 24 Hour Pre Deployment Notification – County, USCG and USACE -- **APPLICANT**
- Post Deployment Coordinates (within 10 days after deployment) – Page 4 or of Final Coordinates Supplemental Sheet from the *Application for Approval to Use the Okaloosa County Large Area Artificial Reef Sites A, B, & C* -- **APPLICANT**
- **Vessel Ownership Verification**
 - Provide Copy of Title
 - Provide Copy Maintenance Records
 - Provide Owners Notice of Intent
- **Stability Analysis**
 - Artificial Reef Stability Analysis Software (FWC/Paul Lin Associates)
 - Provide Inputs for STABLE Condition – Use 20 Year Storm Event
 - Alternate/Enhanced Stability Plan and Specifications
- **List of Souls**
 - Name, Address, Telephone, Function and Emergency POC Information
 - Provide Roll Call and Substitutions or Additions the Day of Deployment
- **Safety Statement**
 - Provide Regulatory Standard Compliance for Each Work Function
- **Reef Construction Site Safety Plan**
 - Work Perimeter Marking
 - Law Enforcement Notification and Participation
- **Vessel Tow Plan**

Note: The Contractor shall tow the vessel in accordance with all Federal, State and local laws, rules and regulations pertaining to such work. The County observer reserves the right to suspend operations if positioning and other deployment objectives are not being met or change in sea or weather conditions or other circumstances place persons or equipment in harms way.

 - Identification of Tow Vessels and Captains
 - A vessel licensed for offshore service and manned with an appropriately licensed crew shall be used for ocean towing.
 - Distribution of Responsibilities
 - Tow and Assist Vessel(s) Specifications
 - Towing Vessel, Assist Vessels and Observation Vessel shall be equipped with a working/accurate differential GPS unit, a working VHF radio and an accurate fathometer.
 - Communications
 - Navigational Lighting aboard the Vessel to be Deployed
 - VHF Radio Monitoring
 - Abort Procedures



- Acceptable Sea State Conditions
 - Maximum Wave Height
 - Maximum Sustained Wind
 - Probability of Thunderstorms
 - Contingency - Forecast the Day after Scheduled Deployment
- Diagram of Lashings and Vessel Configuration while Underway
- Schedule of Events
- Towing Sequence Description
- Contingency Plans
 - Pump Out Description and Capabilities
 - Tow Vessel Malfunction
 - Sea State Anomaly
 - Rigging Failure
- **Vessel Sink Plan**
 - Site Safety
 - No vessels other than the Contractors vessel or the County observation vessel, may approach within 300 feet of the vessel to be sunk
 - No diving or fishing activity shall be authorized within 600 feet of the vessel being sunk during sinking operations.
 - Law Enforcement Notification Procedures
 - Safety Area Identification
 - Target Buoy Placement
 - Target Buoy/Anchor Description
 - One or more colored buoys no less than 12 inches in diameter.
 - Sufficiently anchored so that it will not drift.
 - Provide narrative of target buoy plan and explain any multiple buoy placement clearly
 - Anchoring Plan
 - Wind and Current Corrections
 - Describe Anchoring w/Specification Pre-Scuttle
 - An anchor of appropriate size to firmly anchor the vessel to be sunk, chain, and sufficient scope of anchor line must be onboard for towing and anchoring at the deployment site.
 - Describe Anchoring w/Specification Post-Scuttle
 - The Contractor shall insure adequate anchoring capability of the vessel under tow.
 - Sequence of Events
 - Sequence Schematics
 - Description of Activities
 - Deployment Verification



- Dive Log
 - Orientation of Vessel
 - Anchoring Condition
 - Vessel Listing Angle
 - Dive Stats – Depth on Bottom, Depth on Vessel Appurtenances
- Video and Photography
- GPS Coordinates and Fathometer Readings

7. **Post Deployment Report**

- **Final Deployment Coordinates**
 - All Coordinates in Degree, Decimal-Minutes Format - $xx^{\circ} xx.xxx'N$, $-xx^{\circ} xx.xxx'W$
 - Photograph of Reef Profile on Bottom Machine w/Coordinates
- **Compilation of Captains Logs**
- **Compilation of Diver Logs**
- **Comparison of Proposed Location of Deployment with Actual**
- **Plan Variations**
- **Status of Project Objectives**
- **Lessons Learned**



U.S. Environmental Protection Agency

U.S. Maritime Administration

National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs



May 2006

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ACKNOWLEDGEMENTS

This document was jointly developed by the U.S. Environmental Protection Agency's (EPA) Oceans and Coastal Protection Division within the Office of Water and the Department of Transportation's Maritime Administration. To assist in early stages of document development, an interagency workgroup was established by Laura S. Johnson of EPA. The following agencies actively participated on this workgroup:

- Maritime Administration
- National Oceanic and Atmospheric Administration
- United States Army Corps of Engineers
- United States Fish and Wildlife Service
- United States Coast Guard
- United States Department of the Navy
- United States Environmental Protection Agency



Photo courtesy of Laura S. Johnson

Maritime Administration's James River Reserve Fleet, Virginia.

Cover Photos

Top photo: Ex-USS Spiegel Grove en route to artificial reef sink site. Photo courtesy of Andy Newman, Florida Keys News Bureau.

Middle photo: Ex-USS Spiegel Grove resting at its artificial reef site. Photo courtesy of Florida Fish and Wildlife Conservation Commission, Division of Marine Fisheries Management, Artificial Reef Program.

Bottom photo: The scuttling of Navy Dive Tender YDT-14 on April 1, 2000, approximately 18 miles SE of Pensacola Pass, Escambia County, Florida. Photo courtesy of Florida Fish and Wildlife Conservation Commission, Division of Marine Fisheries Management, Artificial Reef Program.

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Photo courtesy of Florida Fish and Wildlife Conservation Commission
 The scuttling of Adolphus Busch on Dec. 5, 1998, approximately 7 miles S of
 Summerland Key, Monroe County, Florida.

EXECUTIVE SUMMARY

This guidance document was developed to satisfy the mandate of Section 3516 of the National Defense Authorization Act for Fiscal Year 2004, which requires that the Maritime Administration (MARAD) and the U.S. Environmental Protection Agency (EPA) jointly develop guidance recommending environmental best management practices to be used in the preparation of vessels for use as artificial reefs. It also responds to MARAD's request for the EPA to provide national environmentally-based best management practices for the preparation of vessels to be sunk with the intention of creating artificial reefs in permitted artificial reef construction areas.

Options for managing obsolete and decommissioned military and commercial vessels include re-use of the vessel or parts of the vessel, recycling or scrapping, creating artificial reefs, and disposal on land or at sea. This document discusses the preparation of obsolete and decommissioned military and commercial vessels when employing the vessel management option of artificial reefing. Artificial reefs should only be developed where such reefs will enhance native marine resources and benefit the natural marine environment. Strategically sited artificial reefs not only can enhance aquatic habitat, but also provide an additional option for conserving, managing, and/or developing fishery resources.

Although the best management practices presented in this document are intended for use when preparing vessels to serve as artificial reef habitat, the best management practices may have applicability to other in-water uses of vessels, such as the creation of recreational diving opportunities. It is recommended that these best management practices be implemented for such in-water uses of vessels, with the caveat that further vessel preparation beyond that employed for artificial reef habitat may be needed. When preparing a vessel for such in-water uses, consideration should be given to vessel stability and integrity prior to and after final placement.

This guidance identifies materials or categories of materials of concern that may be found aboard vessels and specifically identifies where they may be found. For each material or category of material, this document provides a narrative clean-up performance goal and information on methods for achieving those goals in preparation of the vessel prior to sinking. Materials of concern include, but are not limited to: oil and fuel, asbestos, polychlorinated biphenyls (PCBs), paint, solids/debris/floatables, and other materials of environmental concern. Exhibit 1 provides a summary of the narrative clean-up goals for materials of concern.

In keeping with Section 3516 of the National Defense Authorization Act for Fiscal Year 2004, this guidance document addresses only recommended clean-up practices for vessels that are intended to be placed as artificial reefs. It neither endorses such placement nor does it address the potential availability or environmental effects associated with alternatives to placement of vessels as artificial reefs.

Exhibit 1. Summary of Narrative Clean-up Goals for Materials of Concern

Material of Concern	Narrative Clean-up Goal
<i>Oil And Fuel</i>	Remove liquid fuels and oils and semi-solids (greases) so that: no visible sheen is remaining on the tank surfaces (this includes all interior fittings, piping, structural members); no film or visible accumulation is remaining on any vessel structure or component (e.g., on machinery or from spills on decking or carpet). The end result of such clean-up should be that no sheen be visible upon sinking a vessel.
<i>Asbestos</i>	Remove any loose asbestos and asbestos that may become loose during vessel sinking; remove or seal accessible friable asbestos.
<i>Polychlorinated Biphenyls (PCBs)</i>	Remove all manufactured products containing greater than or equal to (\geq) 50 parts per million (ppm) of solid PCBs; remove all liquid PCBs regardless of concentration; remove all materials contaminated by PCB spills where the concentration of the original PCB source is \geq 50 ppm.
<i>Paint</i>	Remove harmful exterior hull anti-fouling systems that are determined to be active; remove exfoliating (peeling) and exfoliated paint.
<i>Solids/Debris/ Floatables</i>	Remove loose debris, including materials or equipment that are not permanently attached to the vessel that could be transported into the water column during a sinking event.
<i>Other Materials of Environmental Concern</i>	Remove other materials that may negatively impact the biological, physical, or chemical characteristics of the marine environment.

The narrative clean-up performance goals for the materials of concern highlighted in this guidance should be achieved while preparing a vessel intended for artificial reefing. There are statutory requirements and associated regulations, as well as permit processes applicable to the process of preparing a vessel for reefing that are not highlighted in this document. These include, but are not limited to, issues such as vessel inspections by appropriate authorities and storage and disposal of waste generated during clean-up/preparation. Further, this document does not provide information on how to sink a vessel or the required actions or regulatory procedures/processes associated with the actual act of sinking a vessel.

INTRODUCTION

Several options exist for managing obsolete and decommissioned military and commercial vessels. These options include re-use of the vessel or parts of the vessel, recycling or scrapping, creating artificial reefs, and disposal on land or at sea. This document discusses the vessel management option of artificial reefing. This guidance document was developed to satisfy the mandate of Section 3516 of the National Defense Authorization Act for Fiscal Year 2004, which requires that the Maritime Administration (MARAD) and the U.S. Environmental Protection Agency (EPA) jointly develop guidance recommending environmental best management practices (BMPs) to be used in the preparation of vessels for use as artificial reefs. It also responds to MARAD's request for the EPA to provide national environmentally-based best management practices for the preparation of vessels to be sunk with the intention of creating artificial reefs in permitted artificial reef construction areas.

An interagency workgroup, chaired by EPA, was established to develop the BMPs. The workgroup included representatives from the EPA, U.S. Coast Guard, U.S. Navy, MARAD, U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration, and the U.S. Fish and Wildlife Service.

Although these best management practices are intended for use when preparing vessels to serve as artificial reef habitat, such best management practices may have applicability to other in-water uses of vessels, such as the creation of recreational diving opportunities. The best management practices presented in this document should be implemented for all permitted in-water uses of vessels; further diver safety preparations may be needed based on the intended in-water use, such as recreational diving.

Objectives of the Guidance Document

The BMPs, jointly developed by EPA and MARAD, are to serve as national guidance for federal agencies for the preparation of vessels for use as artificial reefs. Section 3516 of the National Defense Authorization Act for Fiscal Year 2004 provides that the BMPs are to (1) ensure that vessels prepared for use as artificial reefs "will be environmentally sound in their use as artificial reefs"; (2) "promote consistent use of such practices nationwide"; (3) "provide a basis for estimating the costs associated with the preparation of vessels for use as artificial reefs"; and (4) include measures that will "enhance the utility of the Artificial Reefing Program of the Maritime Administration as an option for the disposal of obsolete vessels." Appendix A provides further detail on Section 3516 and MARAD's authority to transfer obsolete vessels for artificial reefing. Below is a description of how this document addresses the four requirements of the statute.

- The use of this guidance will help ensure that vessels prepared for use as artificial reefs "will be environmentally sound in their use as artificial reefs." For each material of concern identified, this document provides a narrative clean-up performance goal and information on methods for addressing those goals in preparation of the vessel prior to sinking. The preparation of vessels in this manner will help ensure that their use as artificial reefs is environmentally sound. The purpose of creating an artificial reef is to benefit the environment by enhancing aquatic habitat and marine resources, as well as

providing an additional option for conserving, managing, and/or developing fisheries resources. This document describes appropriate vessel preparation that could achieve such benefits as an artificial reef and avoid negatively impacting the environment with pollutants. The narrative clean-up performance goals provided in this document, if implemented and complemented with strategic site selection (siting), will maximize the opportunity for these vessels to benefit the environment as artificial reefs.

- The use of this guidance document will “promote consistent use of such practices nationwide” and in turn will also provide measures that will “enhance the utility of the Artificial Reefing Program of the Maritime Administration as an option for the disposal of obsolete vessels.” The best management practices described in this document serve as national guidance for the preparation of vessels for use as artificial reefs. As the use of vessels as artificial reefs is becoming a more common management option for obsolete vessels, the development of this guidance document is timely. Currently, no guidance of this kind is available. The use of this guidance document can enhance the utility of MARAD’s Artificial Reefing Program, by establishing a national approach to cleaning and preparing candidate obsolete vessels, while also promoting consistent use of such practices for vessel-to-reef projects.
- The use of this document will “provide a basis for estimating the costs associated with the preparation of vessels for use as artificial reefs.” Although the best management practices were developed independent of costs associated with clean-up, the narrative clean-up performance goals in this document can be used as a basis for estimating the cost for appropriate vessel preparation. In order to determine the estimated cost to prepare a specific vessel for use as an artificial reef, the narrative clean-up performance goals, along with the vessel preparation BMPs, can be used to scope the volume of work to be accomplished based on a detailed ship-check and implementation of a representative PCB sampling protocol. There is wide variability of ships and associated kinds and amounts of material found on a particular ship, as well as wide variability of remediation and disposal costs in different geographic locations within the U.S. Therefore, it is not possible to provide in this document representative cost estimates associated with the preparation of a ship for reefing. A reasoned estimate of the actual cost of preparation will require a ship-by-ship analysis.

In order to provide some insight into the costs that have been incurred for vessel-to-reef projects, some pertinent vessel-specific information is provided here. Two recent examples of vessels that have been prepared with the intent of serving as artificial reefs are the ex-USS Spiegel Grove and the ex-USS Oriskany. The total cost of reefing the ex-USS Spiegel Grove, which was a MARAD vessel, was \$1.3 million.¹ This total cost includes costs for both vessel clean-up/preparation, as well as costs other than vessel clean-up/preparation. Details of the project cost estimates are presented in Exhibit 2. Vessel specifications for the ex-USS Spiegel Grove are presented in Exhibit 3. The ex-USS Spiegel Grove was cleaned/prepared prior to the availability of the BMPs presented in this document. Further information regarding the ex-USS Spiegel Grove can be found

¹ Communication between Captain Spencer Slate, ex-USS Spiegel Grove vessel-to-reef project co-manager, and Laura S. Johnson, EPA.

at <http://www.fla-keys.com/spiegelgrove/>.

Exhibit 2. Ex-USS Spiegel Grove Total Project Costs

PCB sampling protocol and removal	\$75,000
Reorienting the vessel	\$550,000
Towing and berthing	\$125,000
Other clean-up and scuttling preparation and execution	\$550,000
Ship clean-up time	7 months
Project duration	8 years

Exhibit 3. Ex-USS Spiegel Grove Vessel Specifications

Type of vessel	Landing Ship Dock (LSD)
Overall length	510 feet
Extreme beam	84 feet
Keel date	Sept. 7, 1954
Launch date	Nov. 10, 1955
Decommission date	Oct. 2, 1989
Location of reefed vessel	6 miles off the Florida Keys in the Florida Keys National Marine Sanctuary



Photo courtesy of Andy Newman
Ex-USS Spiegel Grove, once a MARAD vessel, under way to Florida Keys for final sinking preparations.

The total cost of reefing the ex-USS Oriskany, which is a Navy vessel, was \$15.63 million. This total cost includes costs for both vessel clean-up/preparation, as well as costs other than vessel clean-up/preparation. Details of the project cost estimates are presented in Exhibit 4. As noted later in this document, the Navy is required to clean/prepare vessels intended for use as artificial reefs in accordance with this BMP guidance. The Draft BMP guidance was available for the ex-USS Oriskany vessel clean-up/preparation. Vessel specifications for the ex-USS Oriskany are presented in Exhibit 5. Further information regarding the ex-USS Oriskany can be found at <http://peos.crane.navy.mil/reefing/oriskany.htm>.

Exhibit 4. Ex-USS Oriskany Total Project Costs

Ship remediation (BMP-related)	\$8.28M
Flight deck remediation (BMP-related)	\$3.61M
PCB model and risk assessment development (BMP-related)	\$3.74M
Towing and berthing	\$3.07M
Scuttling preparation and execution	\$4.90M
Ship clean-up time	12 months
Project duration	3 years (FY03 through FY06)

Exhibit 5. Ex-USS Oriskany Vessel Specifications

Type of vessel	Essex Class aircraft carrier (CV-34)
Overall length	911 ft
Extreme beam	107 ft
Keel date	May 1, 1944
Launch date	Oct. 13, 1945
Decommission date	Sept. 30, 1976
Location designated for reefing this vessel	23 miles south off Pensacola, Florida



Photo courtesy of U.S. Navy

Ex-USS Oriskany arriving at NAS Pensacola, Florida. March 23, 2006.

If the narrative clean-up goals provided in this document cannot be economically achieved, for example because of very significant amounts of materials of concern on the vessel, then the vessel would not be a good candidate for reefing. The methods, approach, and level of effort for clean-up, as well as worker safety concerns, are directly dependent on the vessel's condition and the amount of materials of environmental concern that are found aboard. Vessels where clean-up could pose potential worker safety risks or could incur high costs may not be good candidate vessels for reefing.²

Some portions of a candidate vessel may be economically salvageable. Any such salvage operations should occur in a manner that will minimize debris and contamination with oils or other products that have to be cleaned up at a later date. This activity should allow for improved access for subsequent clean-up efforts, and the salvage proceeds may help offset some costs for vessel preparation.

Operations associated with salvage, clean-up, and diver access have the potential to adversely impact vessel stability. Failure to consider the impact of these activities on vessel stability before and during scuttling operations could result in premature and uncontrolled capsizing and/or sinking of the vessel. Therefore, vessel stability considerations should be an integral part of the salvage, clean-up, modification (for diver access), transport, and sinking plans of a vessel-to-reef project.

² The BMP guidance does not address worker safety issues. Readers with an interest in such safety issues and concerns should consult other relevant documents, such as those prepared by OSHA, State or local safety agencies, and other relevant EPA documents. For example, EPA's *A Guide for Ship Scrappers – Tips for Regulatory Compliance* presents important information related to environmental and worker safety and health issues for ship scrapping/ship breaking operations when handling specific hazardous materials. This document can be accessed via the World Wide Web at <http://www.epa.gov/oecaerth/resources/publications/civil/federal/shipscrapguide.pdf>.



Photo courtesy of U.S. Navy

Metal recovery and salvage operations onboard the ex-USS Oriskany while being cleaned.

In the process of preparing a vessel for reefing, there are requirements and regulations, including permit processes, appropriate disposal of waste generated during vessel clean-up/preparation, and vessel inspections by appropriate authorities to consider that are not discussed in great detail in this document, with the exception of TSCA requirements applicable to PCBs. Appendix B does provide, however, an overview of principal federal environmental statutes potentially affecting preparation or placement of a vessel for use as an artificial reef. Further, other than siting considerations that would affect how a vessel is prepared for use as an artificial reef, this document does not detail the legal requirements applicable to transfer, siting, or sinking of vessels as artificial reefs in vessel-to-reef projects, except for the overview offered in Appendix B. The information in Appendix B is intended only for the convenience of the reader in order to provide a useful starting point for identifying the principal environmental statutes of interest. On a case-by-case basis, additional federal statutes also may apply, though the federal statutes identified in Appendix B would be most relevant for the preparation of a vessel for use as an artificial reef. The final preparation plan for any particular artificial reef project will necessarily be vessel-specific, and will depend on the characteristics of the vessel and final permitted artificial reef construction site, as well as regulatory considerations. In addition, State and local laws also may apply to vessel preparation, but the document does not attempt to identify such laws in Appendix B.

This guidance identifies materials or categories of materials of concern that may be present aboard vessels, indicates where these materials may be found, and describes their potential adverse impacts if released into the marine environment (Appendix C provides related information). The materials of concern include, but are not limited to: fuels and oil, asbestos, polychlorinated biphenyls (PCBs), paints, debris (e.g., vessel debris, floatables, introduced material), and other materials of environmental concern (e.g., mercury, refrigerants). With the

exception of materials containing PCBs, this document does not comprehensively discuss applicable legal requirements, although those requirements that are directly applicable to vessel preparation must also be met prior to vessel sinking and placement. Because the best management practices described in this document are directed at the environmental concerns associated with using vessels as artificial reefs, other sources of information should also be used with regard to preparation of the vessel from a diver safety perspective or for any other potential in-water uses.

A detailed description and characterization of the potential sources of contamination from a vessel intended for use as an artificial reef should be conducted and a plan developed. The purpose of this plan is to assure that materials potentially contributing to pollution of the marine environment are addressed. Appendix D of this document presents information regarding the development of workplans; Appendix E provides information regarding general principles for clean-up operations.

When preparing a vessel that is intended to serve as an artificial reef, documenting the clean-up procedures used and the contaminants that will remain onboard the vessel is a key element of the BMPs. More specifically, a description of how the BMP narrative clean-up performance goals were achieved, and a visual inspection, are needed to determine whether and how the vessel has been cleaned to the level recommended in this guidance document so the vessel can be managed appropriately. A recommended checklist for documenting vessel clean-up using this guidance can be found in Appendix F. A vessel inspection by qualified personnel should be conducted to confirm satisfactory clean-up/preparation. It also should be noted that applicable regulatory regimes may require such an inspection.

Achieving and verifying satisfaction of the BMP clean-up goals could help support permit applications under the Clean Water Act Section 404 (33 U.S.C. 1344) or Rivers and Harbors Act Section 10 (33 U.S.C. 403), if a permit application is submitted to the U.S. Army Corps of Engineers. Further, robust BMP documentation might prove useful for demonstrating consistency with Coastal Zone Management Act programs (16 U.S.C. 1452, et seq.), as well as for any other State or local certifications necessary to carry out a vessel-to-reef project. Also, EPA officials may find BMP documentation useful as part of their review under EPA certification authority pursuant to the Liberty Ship Act. (Note: this Act only applies to DOT/MARAD-owned obsolete vessels intended for use as an artificial reef for the conservation of marine life.)

This guidance does not substitute for any statute or regulation, nor is it a regulation itself. The document recommends environmental best management practices for use in the preparation of vessels for use as artificial reefs. Associated with the recommended environmental best management practices are narrative environmental clean-up performance goals, as well as recommendations and suggestions in furtherance of those goals. By its terms, the guidance itself does not impose binding requirements on any federal agency, States, other regulatory or resource management authorities, or any other entity. Among other things, the document includes mechanisms to enhance the utility of the Artificial Reefing Program of the Maritime Administration as an option for the disposal of obsolete vessels. It should be noted that under 10 U.S.C. 7306b(c), the Secretary of the Navy must ensure that the preparation of a vessel (that is stricken from the Naval Vessel Register) for use as an artificial reef is conducted in accordance

with the environmental best management practices in this guidance. This latter statutory requirement, not today's guidance document itself, governs the Navy's application and use of this document.

Organization of this Guidance Document

This document describes guidelines for the preparation of vessels in a manner that will help ensure that the marine environment will benefit from their use as artificial reefs. Strategic siting is an essential component of a successful artificial reef project. Before the discussion of vessel preparation is presented, a cursory description of reef site selection recommendations is provided.

For each material or category of material of concern identified, this document provides a narrative clean-up performance goal and information on methods for addressing those goals in preparation of the vessel prior to sinking. Additional information for each material includes a description of its shipboard use and where it may be found on a vessel, as well as its expected impacts if released into the marine environment.

Although the best management practices presented in this document are intended for use when preparing a vessel to serve as artificial reef habitat, it is recommended that these best management practices be implemented for other in-water uses of vessels such as recreational diving. This potential obsolete vessel management option is briefly described in this document.

SITING OF ARTIFICIAL REEFS

Artificial reefs can enhance marine resources and in turn benefit the marine environment; however, creating a successful reef entails more than randomly placing miscellaneous materials in ocean, estuarine, or other aquatic environments. Planning (including siting), long-term monitoring, and evaluation are necessary components of each project to help ensure that the anticipated benefits of artificial reefs are attained. Improperly planned, constructed, or managed reefs may be ineffective, may cause conflict among competing user groups of the reef site, may increase the potential to over harvest targeted species, or may damage natural habitats. In such cases, the anticipated benefits of an artificial reef project may be negated.

Because the purpose of creating an artificial reef is to benefit the environment by enhancing aquatic habitat and marine resources, as well as providing an additional option for conserving, managing, and/or developing fisheries resources, artificial reefs should not cause harm to existing living marine resources and habitats. Properly prepared and strategically sited artificial reefs can enhance fish habitat, provide more access to quality fishing grounds, and provide managers with another option for conserving, managing and/or developing fishery resources.

Placement of a vessel to create an artificial reef should:

- enhance and conserve targeted fishery resources to the maximum extent practicable;
- minimize conflicts among competing uses of water and water resources;
- minimize the potential for environmental risks related to site location;
- be consistent with international law and national fishing law and not create an obstruction to navigation;
- be based on scientific information; and
- conform to any federal, State, or local requirements or policies for artificial reefs.

Additional considerations that may be relevant to the placement of a vessel for the creation of an artificial reef include:

- facilitating access and use by recreational and/or commercial fishermen; and
- facilitating access and use by recreational divers.

Artificial reef project planners should identify the habitat type and/or species targeted for enhancement and determine which biological, physical, and chemical site conditions will be most conducive to meeting the reef objectives. Once these siting conditions, including community settlement and recruitment dynamics, are determined, they should be used in identifying potential construction sites. Existing communities (e.g., infaunal, epifaunal, benthic, demersal, mid-water, surface-oriented) in the area where the artificial reef is to be placed should

be considered prior to placement -- this should include monitoring to establish baselines for the fishing resources.

Caution should be exercised when developing artificial reefs in nearshore areas due to the increased potential for resource competition as well as competition for niche space. Improperly sited reefs might enhance a recreational fish resource at the expense of other species or habitat; it may also alter the ecological balance of the area. For example, sandy estuarine habitat often provides critical nursery grounds for the juveniles of many species of bottom fish. During this life stage, the primary predator protection for these juvenile fish is the absence of large fish -- which are favored by recreational anglers. Oftentimes, sandy estuarine locations tend to be popular choices for siting artificial reefs to attract large fish for recreational fishing, thereby altering existing predatory/prey interactions and creating resource competition. Strategic project planning can minimize these conflicts.

Artificial reefs should not be constructed such that they are placed on or threaten the integrity of natural habitats such as:

- existing coral reefs;
- significant beds of aquatic grasses or macroalgae;
- oyster reefs;
- scallop, mussel, or clam beds;
- existing live bottom (i.e., marine areas supporting growth of sponges, sea fans, corals, and other sessile invertebrates generally associated with rock outcrops); or
- habitats of Endangered Species Act listed species and species of State and local concern.

The goals and priorities of an artificial reef project should direct overall site selection. Within the identified target area, existing natural and artificial reefs and known bottom obstructions should be identified. Exclusion areas for potential artificial reef projects should include, but are not limited to:

- shipping lanes;
- restricted military areas;
- areas of poor water quality (e.g., low dissolved oxygen, dredged material disposal sites);
- traditional trawling grounds;
- unstable bottoms;
- areas with extreme currents, or high wave energy;

- existing right-of-ways (e.g., oil and gas pipelines and telecommunication cables);
- sites for purposes that are incompatible with artificial reef development; and
- areas designated as habitat areas of particular concern or special aquatic sites.

The bottom composition and configuration at an artificial reef site affects reef stability and longevity and should be carefully evaluated in the site selection process. In most cases, soft sediments such as clays, silts, and loosely packed sands should be avoided. Over time, artificial reef materials may sink into these sediments or become partially covered.

Project planners should evaluate vessel-to-reef projects and potential sites with regard to chemical and biological conditions as well as long-term durability and stability, as these will affect future habitat value.

Coastal physical processes can greatly influence a potential artificial reef site. Artificial reef planners should be aware that bottom sediments shift and may change significantly during storms, hurricanes, and geologic events. Materials that present large amounts of surface area may scour deeply into almost any bottom type, depending upon storm events, currents, or wave action.

The principal hydrographic factors to be considered in selecting sites for artificial reef placement include water depth, potential wave height, currents, and tides. Water depth is a significant siting criterion. Artificial reefs should be placed in water at sufficient depths to avoid creating a hazard to navigation – minimum clearance above the reef should accommodate the draft of the largest vessels expected to operate in the vicinity with an adequate safety margin. Water depth at the site may critically affect artificial reef material stability and long-term structural integrity. In large, open bodies of water, average wave energy as a function of water depth is the major concern.

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Guidance for Preparing Vessels to Create Artificial Reef Habitat



Photo courtesy of Laura S. Johnson
Worker sweeping debris during flight deck removal onboard the ex-USS Oriskany.

OIL AND FUEL

Narrative Clean-up Goal: Remove liquid fuels and oils and semi-solids (greases) so that: no visible sheen is remaining on the tank surfaces (this includes all interior fittings, piping, structural members); no film or visible accumulation is remaining on any vessel structure or component (e.g., on machinery or from spills on decking or carpet). The end result of such clean-up should be that no sheen be visible upon sinking a vessel.

What are oil and fuel?

For purposes of this guidance, the term oil includes crude oil; petroleum and petroleum-refined products (e.g., diesel fuel, gasoline, kerosene, and bunkers); and non-petroleum oils such as synthetic oils (e.g., silicone fluids), wood-derivative oils (e.g., resin/rosin oils), animal fats and oil, and edible and inedible seed oils from plants, which might be more relevant for cargo vessels.

Some common refined petroleum products and their characteristics are as follows:

- ***No. 2 Fuel Oil*** is a lightweight substance that flows easily, spreads rapidly, and disperses readily. It is neither volatile nor likely to form emulsions.
- ***No. 4 Fuel Oil*** is a medium weight substance that flows easily and is readily dispersed if treated promptly. It has a low volatility and moderate flash point.
- ***No. 5 Fuel Oil (Bunker B)*** is a medium to heavyweight substance with a low volatility and moderate flash point. Dispersion is very difficult and potentially impossible.
- ***No. 6 Fuel Oil (Bunker C)*** is a thick substance that is difficult to pump and requires preheating for use. No. 6 fuel oil may be heavier than water. It is not likely to dissolve, and is likely to form tar balls, lumps, or emulsions. No. 6 fuel oil is very difficult or impossible to disperse. It has a low volatility and moderate flash point and is especially persistent in the environment.

What are the potential environmental impacts of oil and fuel?

The impacts of fuel and/or oil introduced into the marine environment are influenced by a variety of factors, including the physical properties of the oil, whether the oil is petroleum-based or non-petroleum-based, and the hydrodynamic properties of the receiving waters. Each type of oil has distinct physical properties that affect the way it disperses and breaks down, the hazard it may pose to ecosystems, and the likelihood that it will pose a threat to manmade resources. For example, the rate at which surface dispersion occurs will help to determine the effect of an oil spill on the environment. Most oils spread horizontally into a smooth and continuous layer, called a “slick,” on the water surface.

Petroleum-based and non-petroleum-based oils can have both immediate and long-term adverse

effects on the environment. These oils can be dangerous, or even deadly to wildlife. Light refined petroleum products, such as gasoline and kerosene, spread on water surfaces. The risk of fire and toxic exposure is high, but the products evaporate quickly and leave little residue. Alternatively, heavier petroleum-based refined oil products may pose lesser fire and toxic hazards and do not spread on water as readily. However, heavier oils are more persistent in the environment, and may present a greater clean-up challenge.

Many non-petroleum oils have physical properties similar to those of petroleum-based oils. For example, they both have limited solubility in water, they both create slicks on the water surface, and they both form emulsions and sludge. However, non-petroleum oils tend to be persistent, remaining in the environment for long periods of time.

Oil spills can harm the environment in several ways, including the physical damage that directly impacts wildlife and their habitats and the toxicity of the oil and its constituents, which can poison exposed organisms. Spilled oil in the environment immediately begins to disperse and degrade, with concomitant changes in physical and chemical properties. As these processes occur, the oil threatens natural resources, including birds and mammals as well as a wide range of marine organisms linked in a complex food web. Some organisms can be seriously injured (non-lethal effects) or killed (lethal effects) very soon after contact with the oil in a spill (acute effects); however, non-lethal toxic effects are often more subtle and often longer lasting (chronic effects).

Where are oils and fuels found in a ship?

Diesel fuel and fuel oil may be contained in various tanks throughout a ship. For example, lubricating oil is found in engine sumps, drums of unused lubricating oil in ship storerooms or engineering spaces, and sludge in fuel and cargo tanks. Hydraulic systems and components also contain oils.

The vessel's piping and tank arrangements generally will contain some oil, fuel, sludge, and associated residues. Fuel oil may be found in both integrated and freestanding tanks throughout the ship. Lubricating oils may be found in a variety of tanks depending on their individual use. System oils are generally located in engine room sump tanks, while cylinder oils and lubrication oils will be stored in tanks dedicated for a specific purpose. Other types of fuels and oils may be contained in cargo tanks.

“Used oil” -- any oil that has been refined from crude oil or any synthetic oil that has been used and, as a result of such use, is contaminated by physical or chemical impurities -- also may be found on ships. Used oil includes spent lubricating fluids that have been removed from engine crankcases, transmissions, and gearboxes; industrial oils such as compressor, turbine, and bearing oil; metal working oil; and refrigeration oil.

Spills of fuels and oils may be found near cargo holds, ship store rooms, engineering spaces, and any other equipment that may house fuel and oil.

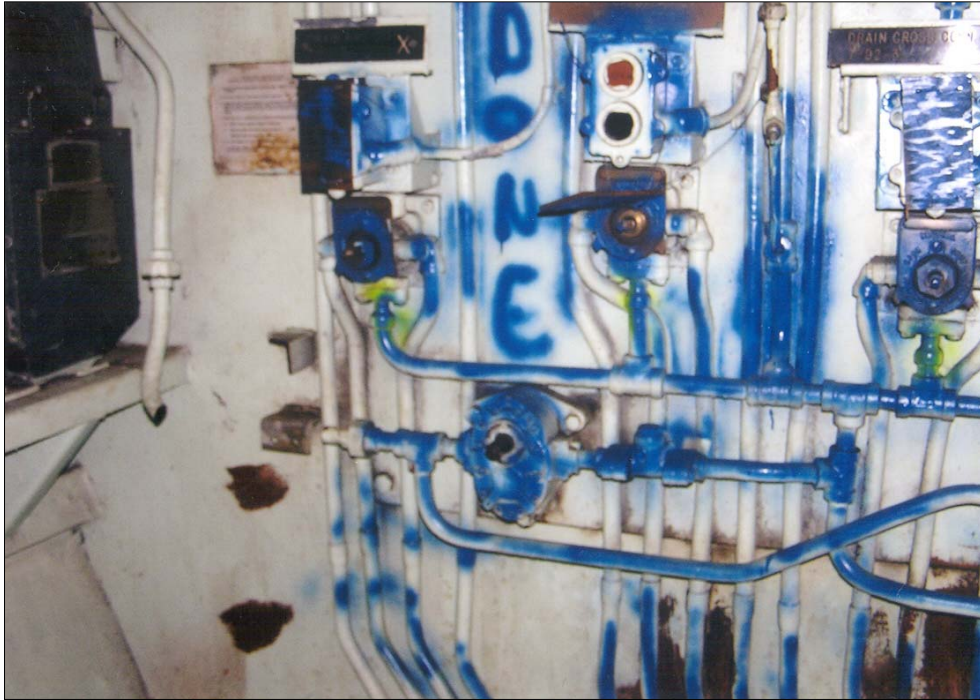


Photo courtesy of Laura S. Johnson

Flushed hydraulic system onboard the ex-USS Oriskany.

How should the vessel be prepared; what are the appropriate BMPs for oil and fuel?

The aim of clean-up is to remove liquid fuels, oils, and grease. Although it is impossible to remove all fuels, oils, and grease, a very thorough clean-up is achievable. In general, all liquid fuels and oils and semi-solids (greases) should be drained, flushed, and cleaned from fuel/lube and fluid system equipment (including piping, interior fittings, and structural members) so that no visible sheen remains on the tanks or other associated fluid system structures. The opening and cleaning of pipes varies according to the type of product that was in the lines. No visual evidence of weeping (oozing or releasing drops of liquid) should exist at openings. An alternative and very effective option for hydrocarbon clean-up is removal of the equipment and piping. Suggested cleaning methods for liquid fuels and oils, and semi-solids are found in Appendix G.

During vessel preparation, an economical way of managing used oil is recycling. It should be noted that additional used oil might be generated during the final preparation of the vessel prior to sinking (e.g., oil for generators). Such used oil and grease should be removed from the vessel before sinking. While the goal is to remove all oil and grease, it may be acceptable to leave old oil and grease in place if it is determined visually to be dried/solidified and therefore is not likely to cause a sheen.

Fuel and Oil Tanks

All fuels and lubricants should be drained from the tanks and the tanks flushed. Merely sealing tanks, whether as the sole means of fuel and oil tank preparation or in combination with partial

tank draining, is insufficient. Over time, the integrity of the sealed tanks will eventually be compromised as marine growth density increases and the ship's underlying structural components decay. The placement of the Liberty ship, Joseph L. Meek, sunk off Escambia County, Florida, in 1976, demonstrated that corrosion of the ship's metal will eventually release residual fuel sealed in tanks into the environment. Although sealing the tanks without removing the contents is not sufficient for managing fuel and oil on a vessel intended to serve as an artificial reef, fuel/lube and fluid system equipment and piping intended to stay on the vessel should be sealed as necessary for the purpose of towing stability once the fuel/oil has been removed. Because these systems need to be opened during vessel preparation for draining and flushing the systems clean, sealing these systems may be necessary to help maintain vessel stability during transit to the designated artificial reef site.

There are several accepted and widely used methods to clean fuel and oil tanks. The appropriate method will be determined by the type of fuel or oil in the tank, the amount of residue in the tank, and the extent of any hard or persistent deposits or residues. In general, lower quality fuels and heavy oils will require more cleaning effort. Similarly, tanks for dirty or water-contaminated oils will require more cleaning effort.

When cleaning tanks, the following factors should be considered: worker access and safety issues, machinery and resources available, and the methods or facilities available to deal with the cleaning residues. It may be necessary to experiment with several cleaning methods to see which best suits the particular circumstance.

Some methods for cleaning tanks are detailed in Appendix G. Regardless of the selected tank cleaning method, the effluent and water must be collected, treated, and disposed of in compliance with applicable regulations. Large volumes will require the services of a pumper truck or barge, while smaller quantities should be collected and stored in drums. Caution should be used during all transfer operations to avoid spills. If transferring large quantities of oil or oil contaminated liquid, a containment boom around the vessel should be used to minimize the extent or spreading of an accidental release.

Structural and Non-structural Tanks

All structural and non-structural tanks are assumed to be contaminated by fuel or oil until proven otherwise. Structural tanks include, but are not limited to: fuel storage/settling/service/day tanks, cargo tanks, oil tanks, structural hydraulic tanks, fresh water tanks, ballast tanks, stabilizer tanks, black and gray water tanks, voids, and cofferdams. At a minimum, liquid fuels and oils in such tanks should be removed.

Tank interiors including deckheads should be cleaned of all fuel and oil. No visible fuel and oil should remain on the tank surfaces (this includes all interior fittings, piping, structural members), or on the water surface when flooded after sinking. No emulsified oil, as determined by visual inspection, should remain. Oil absorbent pads and excess loose oil absorbent material should be removed before sinking.

Gauges and Gauge Lines

Pressure gauges and gauge lines are assumed contaminated with the product that they were intended to measure. Fluid filled gauges should be removed. Pressure gauges and gauge lines

should also be removed to prevent oil seepage from these lines. Lines that remain in place should be flushed, and the lines cleaned.

Special care should be exercised with mercury thermometers and pressure (typically vacuum) measuring devices. These should be removed intact from the vessel. A temperature gauge that does not contain any hazardous material can remain in its position. Other measuring instruments should be removed from the vessel or opened for cleaning, examination, and possible removal.

Combustion Engines

Combustion engines include any reciprocating engine in which fuel is consumed (diesel, gasoline, gases), stirling cycle engines, and gas turbines. The entire fuel/oil system should be drained and flushed. Any items (e.g., oil filters and strainer elements) that can not be flushed should be removed.

Combustion engines and associated manifolds should be thoroughly drained, flushed, and cleaned. Machinery need not be removed if it is completely drained and the sumps flushed and cleaned. Sometimes, engines are removed for reuse or to assure that all oil is removed before reefing. In some cases, it might be less expensive to remove and dispose of the engines than to clean the oil from them. Some methods for cleaning combustion engines are detailed in Appendix E.

Non-combustion Engines, Shafting, Gearing and Stern Seals

Main gear boxes and associated clutches should be drained of all lubricating oils. Internal gear sprayers, lubricating lines, and other components should be removed, or drained. External pedestal and thrust bearings should be drained.

Stern tubes and seals, if of the oil bath type, should be drained of oil. Note that draining the stern tubes and seals may require extraordinary measures to preserve the watertight integrity of the vessel during the clean-up and salvage operation.

Vessels that are equipped with thrusters, Z-drives, or other unconventional propulsion systems will be addressed on a case-by-case basis. The objective is that no oil or fuel remains in the propulsion system.

Steering Gear

Hydraulic pumps and associated piping and fittings should either be removed or drained and flushed clean. Hydraulic telemotor systems should be treated similarly. Grease lines and reservoirs for rudder heads should be removed from the ship, or opened and cleaned. Vessels with combined propulsion and steering systems should be addressed as described in the previous subsection (“Non-combustion Engines, Shafting, Gearing, and Stern Seals”).

Auxiliary Machinery

Auxiliary machinery that has oil as its working fluid should be completely drained and flushed clean. Auxiliary machinery refers to machinery and components that are not an integral part of the main propulsion system of the vessel. The term can include but is not limited to: pumps, motors, compressors, galley equipment, capstans, elevators, and cargo handling machinery.

Many pieces of auxiliary machinery have a lubricating oil system or are in direct contact with oil.

All lubricating oil system components should be stripped from auxiliary machinery, drained and cleaned. Lubricating oil sumps should be drained and cleaned.

Hydraulics

All hydraulic systems should be assumed to have employed a petroleum- or synthetic-based fluid that needs to be cleaned. Hydraulic lines should be removed from the vessel, or opened and blown through with air until clear. Hydraulic fittings (valves and valve blocks of all types, cylinders, pumps, accumulators, filters, coolers) should be removed from the ship or drained clean. Hydraulic sumps should be opened and drained clean.

Grease

All grease reservoirs should be removed from the ship, or opened and cleaned. Grease lines should be removed or blown through until clear and all visible grease accumulations should be removed so that no visible sheen remains. Machinery that employs grease-packed gearboxes (common on deck machinery), as well as grease packed couplings, stuffing boxes, chain sprockets, and worm drives should be opened and cleaned of grease. Grease on chains and sprockets should be removed. Greased cables should be cleaned or removed from the vessel.

Sealed rolling element bearings that contain grease can be left in-situ. Grease in other fittings such as stuffing boxes and glands can be left in situ if the seals are intact and the quantities are small (for example, less than 100 milliliters evenly distributed throughout the component). Any grease on the outside of the sealed bearings should be removed.

Bilge Areas

The bilge area includes all areas that would be subject to contact with oily water, or may be a catch area for spills from cargo holds or storerooms, and interior surfaces which may have been subject to contamination through sprays, spills, or disposal. Bilge areas also include the plating and all surfaces of attached stiffeners and fittings. Bilge areas should be free of visible oils, greases, and sludge. Oil or grease films evident to the touch should be removed. All debris should be removed, particularly any debris contaminated with fuel, oil, or grease. Any cleaning fluids used to clean the bilge should be removed from the vessel. Accumulations of loose oil absorbent material should be limited to those amounts that cannot reasonably be picked up with brooms and vacuums.



Photo courtesy of Laura S. Johnson

Oil absorbent pad in engine room bilge of the ex-USS Oriskany.

Cleaning bilges is frequently complicated by poor access caused by piping, gratings, and equipment. In many cases, it is cheaper and easier to remove the dirty or contaminated items that limit access than to clean the items as well as the bilge. Once clean, bilges are very vulnerable to recontamination. Note the following recontamination issues:

- Piping, valves, and fittings in systems containing fuels, oils, or grease will continue to drip for some time after initial draining. Over a short period of time, these drips can necessitate a major rework cleaning effort. Therefore, drips should be captured whenever possible; drip pans should be emptied frequently.
- Containers used for clean-up are vulnerable to tipping and spilling, especially in conditions -- such as poor lighting -- that are often found in vessels undergoing sinking preparation. Remove containers used for clean-up when they are full.
- Water should not be allowed to enter bilges unless it is part of a planned clean-up effort. Water that otherwise enters the bilge should be handled as oily wastewater.

In general, the approach and methods recommended for cleaning bilges are the same as for cleaning tanks.

Decks and Floor Coverings

Oil and grease films on decks and floor coverings should be cleaned. Floor coverings include ceramic tile, linoleum and linoleum tile, carpet, and any other floor coverings. In compartments subject to fuel and oil spills during the vessel's life (e.g., workshops, compartments with fuel or oil tank overflows or tank covers), the deck covering and underlayment should be examined for oil saturation. Floor coverings or underlayment that has been saturated with fuels, oils, or grease should be removed from the vessel.

Bulkheads and Deckheads

Bulkheads and deckheads should be cleaned of oil and grease films. Where it is evident that a spill or accumulation resulting from leaks has occurred, coverings should be removed to reveal the full extent of the spill or accumulation.

ASBESTOS

Narrative Clean-up Goal: Remove any loose asbestos and asbestos that may become loose during vessel sinking; remove or seal accessible friable asbestos.

What is asbestos?

Asbestos refers to a group of minerals that occur naturally as masses of long silky fibers. There are three main types of asbestos fibers:

- Chrysotile fibers (white asbestos) are fine, silky flexible white fibers. They are pliable and cylindrical, and arranged in bundles. This was the most commonly used asbestos in the United States.
- Amosite fibers (brown asbestos) are straight, brittle fibers that are light grey to pale brown. This was the most commonly used asbestos in thermal system insulation.
- Crocidolite fibers (blue asbestos) are straight blue fibers that are like tiny needles.

There are three other types of asbestos fibers: anthophyllite, tremolite, and actinolite. Unlike most minerals, which turn into dust particles when crushed, asbestos breaks up into fine fibers that may be too small to be seen by the human eye.

Individual asbestos fibers are often mixed with a material that binds them together, forming what is commonly called asbestos-containing material (ACM). There are two kinds of ACM: friable and non-friable.

- **Friable ACM** is any material containing more than 1% asbestos that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure.
- **Non-friable ACM** is any material containing more than 1% asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM is divided into two categories.
 1. **Category I** non-friable ACM includes asbestos-containing resilient floor coverings, packings, and gaskets.
 2. **Category II** non-friable ACM includes all other non-friable ACM that is not included in Category I.

Asbestos is resistant to abrasion and corrosion, inert to acid and alkaline solutions, and stable at high temperatures. It is strong yet flexible, non-combustible, conducts electricity poorly, and is an effective thermal insulator.

What are the potential environmental impacts of asbestos?

Asbestos is a naturally occurring mineral. The environmental impacts caused by asbestos are dependent upon 1) whether asbestos is reduced to fibers or is in a non-friable form; and 2) whether the asbestos is air-borne or water-borne.

Even though adverse impacts from asbestos are largely from inhalation -- which is not expected to be an issue in the marine environment -- vessel preparation should eliminate the possibility of pieces of asbestos breaking free from the vessel during the sinking operation or asbestos materials losing surface integrity after the vessel has been placed as an artificial reef. Loose asbestos pieces can lead to rafting and may be capable of washing ashore. These asbestos pieces could dry up, break apart, and be reintroduced into the atmosphere. Exposure to airborne asbestos can negatively impact human health via inhalation.

Once a vessel has settled on the ocean floor, asbestos remaining on the vessel (e.g., intact and undisturbed asbestos insulation) will be covered with bacteria over time. This in turn will cause the asbestos fibers to sink and remain contained within the reef matrix, minimizing any potential direct impacts to the marine environment. (See Appendix C)

Where is asbestos found on a ship?

Asbestos on ships may be found in many materials, including, but not limited to:

- Bulkhead and pipe thermal insulation
- Bulkhead fire shields/fireproofing
- Uptake space insulation
- Exhaust duct insulation
- Electrical cable materials
- Brake linings
- Floor tiles and deck underlay
- Overhead and panel sheeting (cement and cellulose based)
- Steam, water, and vent flange gaskets
- Adhesives and adhesive-like glues (e.g., mastics) and fillers
- Sound damping
- Molded plastic products (e.g., switch handles, clutch facings)
- Sealing Putty
- Packing in shafts and valves
- Packing in electrical bulkhead penetrations
- Asbestos arc chutes in circuit breakers
- Pipe hanger inserts
- Weld shop protectors and burn covers, blankets, and any fire-fighting clothing or equipment
- Any other type of thermal insulating material

NOTE: Asbestos-containing material may be found underneath materials that do not contain

asbestos. Thermal system insulation and surfacing material found in vessels and vessel sections constructed after 1980 may be presumed to be free of asbestos-containing material.



Photo courtesy of Laura Casey

Asbestos pipe wrapping on the ex-USS Oriskany.

How should the vessel be prepared; what are the appropriate BMPs for asbestos?

Asbestos can be found throughout ships, from the top of the bridge to the bilge. Identifying the locations and types of asbestos onboard early in the clean-up process is essential for vessel preparation and may involve qualified asbestos inspectors. Once the type and location of asbestos and asbestos-containing materials are identified, a determination should be made whether to remove, encapsulate, or leave the asbestos undisturbed.

The method of demolition is particularly important to the effective management of asbestos on board ships. If the sinking method for the vessel includes the use of explosives, asbestos-containing material that may become disturbed during detonation should be removed from the vessel.

In addition, any asbestos that is moved or disturbed (including during clean-up operations) or can potentially get dislodged as the vessel sinks should be removed from the vessel. Friable asbestos should be sealed as a precautionary measure to prevent releases of asbestos in high concentrations during the sinking event. Intact and undisturbed asbestos insulation need not be removed.

Engine Room and Engine Compartments

Removal or encapsulation of exposed, disturbed and deteriorated asbestos should be considered since it is likely that the asbestos will break free and create debris during sinking. If the asbestos is to be encapsulated, the encapsulation should be strong enough that its integrity will not be impacted by the preparation for sinking as well as the sinking itself.

The primary source of friable asbestos is pipe wrappings around the main boilers and steam fittings. On most vessels the asbestos coating, which is 1 to 3 inches thick, is covered with canvas and is usually painted. If work needs to be done around the piping and the covering, causing the asbestos to be disturbed, the disturbed material should be removed. If the covering is deteriorated and it is likely that the asbestos will break free during sinking, then removal or encapsulation with an epoxy or other non-water soluble and non-toxic sealer should be considered. Certain boilers and piping are covered with a very friable asbestos paste. If such friable asbestos is not covered with canvas and/or paint, the friable asbestos should be sealed or encapsulated with an epoxy or other non-water soluble and non-toxic sealer.

Throughout the engine room there are numerous asbestos gaskets connecting piping and ductwork. If left intact, these gaskets usually will not release asbestos fibers. However, if the ductwork or piping needs to be cut or removed and vessel debris is created as a result, gaskets should be removed or encapsulated if possible.

In some engine rooms asbestos/cellulose sheets are found behind power and electrical panels or in the overhead where electrical service passes.

Undisturbed, this material is not friable. However, once the sheets are exposed to the marine environment, the sheets lose their integrity and can break up and raft. Where possible, these sheets should be removed. Note that asbestos cement sheets may also be used as panels on the vessel. However, these sheets are not water-soluble and therefore should not break apart when exposed to the marine environment. These sheets can stay in place unless cut, drilled or disturbed. Friable asbestos may also be found between bulkheads; this asbestos may remain in place because the asbestos is contained within the bulkheads. If, however, the bulkheads are drilled, cut, or disturbed, the friable asbestos that is now exposed should be encapsulated or removed.



Photo courtesy of Laura S. Johnson
Patched asbestos pipe wrapping on the ex-USS Oriskany.

Ship Interior and Living Spaces

Asbestos was also used in some hatch gaskets mixed with rubber throughout ships, especially in watertight spaces. Under normal circumstances this will only present a problem if grinders or torches are used. In such cases, the gaskets should be removed prior to disturbance.

Asbestos/asphalt floor tile was common from the 1940's to the mid-1970's. This form of asbestos is manufactured with the asbestos encapsulated. If preparation of the vessel requires the tile to be disturbed via grinding, cutting, or burning, those pieces of tile should be removed.

Asbestos sheets both with cement and cellulose may be found especially in the combat information center, the radio room and other spaces where electrical equipment may be found. Cellulose/asbestos panels should be removed but cement panels are safe. As an example, while inspecting an old Navy tug planned for reefing off the coast of Virginia, it was determined that the entire interior of the wheel house was paneled with cellulose/asbestos panels and had to be removed.

Exterior Spaces

There are a few areas on the exterior of ships where asbestos was used. Asbestos may have been mixed with paint and applied as a coating near some vents and hatches. Also, some hatches may have gaskets that contain asbestos. In either case, the material does not need to be removed unless these exterior areas require grinding or cutting.

POLYCHLORINATED BIPHENYLS (PCBs)

Narrative Clean-up Goal: Remove all manufactured products containing greater than or equal to (\geq) 50 parts per million (ppm) of solid PCBs; remove all liquid PCBs regardless of concentration; remove all materials contaminated by PCB spills where the concentration of the original PCB source is \geq 50 ppm.

What are PCBs?

PCBs belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs, which were domestically manufactured from 1929 until their manufacture was banned in 1979, have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications.

What are the potential environmental impacts of PCBs?

PCBs have been demonstrated to cause a variety of adverse health effects. PCBs have been shown to cause cancer in animals and have also been shown to cause a number of serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, endocrine system, and other health effects. Studies in humans provide supportive evidence for potential carcinogenic and non-carcinogenic effects of PCBs. The different health effects of PCBs may be interrelated, as alterations in one system may have significant implications for the other systems of the body. EPA's peer reviewed cancer reassessment concluded that PCBs are probable human carcinogens. In addition, PCBs are persistent and bioaccumulative. PCBs bioaccumulate in fatty or lipid-rich tissues. PCBs have a limited solubility in aqueous solutions and PCBs can leach into a marine or aqueous environment (sediment and water column) where they can be taken up by organisms in the food web. PCBs bioaccumulate in fish and other animals; PCBs also bind to sediments. As a result, people who ingest fish may be exposed to PCBs that have been released into the environment and bioaccumulated in the fish they are ingesting.

There is a risk of human exposure during vessel preparation and after sinking the vessel. During vessel preparation, typical routes of human exposure include inhalation, accidental ingestion, or dermal contact. After sinking, exposure routes may be limited to accidental ingestion or contact with contaminated water and sediments, or ingestion of contaminated fish, shellfish, or crustaceans. (See Appendix C)

Where are PCBs found on a ship?

Although no longer commercially produced in the United States, PCBs are most likely to be present in vessels deployed before the 1979 PCB ban. For such vessels, PCBs may be found in both the solid (waxy) and liquid (oily) forms in equipment and materials onboard ships. The equipment that may contain PCBs in concentrations of ≥ 50 ppm and the manufactured products containing ≥ 50 ppm of solid PCBs, include:

Materials and items that could contain solid PCBs

- Cable insulation
- Rubber and felt gaskets
- Thermal insulation material including fiberglass, felt, foam, and cork
- Voltage regulators, switches, reclosers, bushings, and electromagnets
- Electronic equipment, switchboards, and consoles
- Adhesives and tapes
- Oil-based paint
- Caulking
- Rubber isolation mounts
- Foundation mounts
- Pipe hangers
- Plastics

Materials and items that could contain liquid PCBs

- Oil used in electrical equipment and motors, anchor windlasses, hydraulic systems, and leaks and spills from such items

Materials and items that could contain either liquid or solid PCBs

- Transformers, capacitors, and electronic equipment with capacitors and transformers inside
- Fluorescent light ballasts
- Surface contamination of machinery and other solid surfaces

Items containing PCBs may be found throughout a ship and are not always easily identifiable or readily accessible. PCBs may be found in a variety of shipboard materials, but the location and concentration can vary from item to item and within classes of items. PCB-containing materials also are likely to vary from ship to ship, and even ships in the same class can contain differing types and amounts of PCB-containing materials. While these materials may be found throughout a ship, several areas on ships may have an increased likelihood of containing PCB-bearing materials: areas or rooms subject to high heat or fire situations such as boiler rooms, engine rooms, electrical/radio rooms, weapons storage areas, or areas with hydraulic equipment. Be aware that these pieces of equipment or systems are vulnerable to leaks and spills, which could leave spill residues behind and contaminate porous materials (e.g., carpet, wood, rubber/plastic mats, paint).



Photo courtesy of Laura S. Johnson

Ex-USS Oriskany electronic equipment stripped of capacitors and transformers.

How should the vessel be prepared; what are the appropriate BMPs for PCBs?

PCBs are regulated for disposal under 40 CFR Part 761, and will be discussed in this context. The PCB regulations require manufactured products containing ≥ 50 ppm of solid PCBs (PCB bulk product waste) and materials contaminated by spills of liquids containing PCBs (PCB remediation waste) to be properly disposed. Although the ship itself is being “reused” or “recycled” as an artificial reef, the PCBs must be properly disposed. Disposal requirements for each type of PCB waste are referenced below (also see Appendix B).

Where there is reason to suspect that equipment or manufactured products containing solid PCBs may contain PCBs ≥ 50 ppm, either remove the equipment or component from the vessel, or provide proof that the equipment or component is free of PCBs, unless a PCB bulk product waste disposal approval has been obtained under 40 CFR 761.62(c) (see below).

Under TSCA regulations, a spill of liquids containing PCBs ≥ 50 ppm is considered an illegal disposal of PCBs. Material(s) contaminated by such a spill must be cleaned or removed and disposed of, unless a risk-based disposal approval has been obtained under 40 CFR 761.61(c). Spill residues and materials contaminated by these spills are regulated differently than bulk product waste (see below).

The design and implementation of a representative sampling and analytical plan can help determine the presence or absence of PCBs in materials containing solid PCBs at ≥ 50 ppm or materials containing PCBs as the result of spills. If the data from the sampling and analytical

plan indicates the absence of PCBs, the ship and its components are not subject to the PCB provisions of TSCA.

Liquid Materials Manufactured with PCBs

Remove all liquid-filled electrical equipment suspected of containing PCBs or PCB-contaminated dielectric fluid, regardless of PCB concentration. Materials such as lubricating oils and greases used for winches and cargo-handling machinery, hydraulic fluids, heat transfer fluids, and waste oils should be removed from the vessel in accordance with the guidance in the “Oil and Fuel” section of this document.



Photo courtesy of Laura Casey

Engine room electrical cabling on the ex-USS Oriskany.

Manufactured Products Containing Solid PCBs

Remove all manufactured products containing ≥ 50 ppm of solid PCBs, which includes, but is not limited to, felt gasket and faying material, cables, paints, rubber gaskets, as well as battle lanterns and fluorescent light ballasts.

Thermally removing PCB-containing materials is generally not authorized without prior written approval. Because PCB sampling and analytical procedures can be expensive and time consuming, there may be situations when the cost of sampling and analysis far exceeds the cost for removal and disposal. In some cases, vessel-to-reef projects have shown that removal of all electrical cables and wires suspected of containing PCBs was the most economical course of action.

While the complete removal of all manufactured products containing ≥ 50 ppm of solid PCBs is recommended, EPA recognizes that in some vessels it may not be feasible to identify and remove every such item. If such materials cannot be feasibly identified and/or removed, an application to EPA for a risk-based approval to dispose of the PCB bulk product waste in a marine environment for purposes of creating an artificial reef is required pursuant to 40 CFR 761.62(c). (EPA's decision includes consideration of a risk assessment submitted by the applicant, and a public participation process. Please consult the responsible EPA office for more information.)³

Materials Containing PCBs as a Result of Spills

Remove all materials containing ≥ 50 ppm of PCBs due to PCB spills. In addition, depending on the concentration of the spilled PCBs and the date when the spill occurred, it may be necessary to remove materials currently containing less than 50 ppm of PCBs due to spills.⁴ If it is not known when a spill occurred, you should generally assume that it occurred after July 1, 1979.

During vessel clean-up/preparation, attention should be directed to locations on the ship that are known to house equipment and systems that typically contain PCB liquids. Because such equipment or systems are vulnerable to leaks and spills during the lifetime of the vessel, the areas surrounding the equipment or systems are likely contaminated by liquids containing PCBs.

If there is no information regarding whether a spill occurred and/or the PCB concentration of any spilled liquid, design and implement a representative sampling plan to verify that there are no PCBs present in the areas surrounding the liquid-filled equipment or systems. If the sampling results indicate presence of PCBs as a result of a spill of liquids containing PCBs, remove the spill residue and the materials contaminated by the spill (e.g., remove paint from a contaminated surface such as a metal deck, strip the contaminated area down to bare metal in accordance with 40 CFR 761.79(b)(i)(B)). If spill residues or materials contaminated by PCB spills cannot be feasibly removed, an application to EPA for a risk-based approval to dispose of the PCBs in a marine environment for purposes of creating an artificial reef is required pursuant to 40 CFR 761.61(c). (EPA's decision includes consideration of a risk assessment submitted by the applicant, and a public participation process. Please consult the responsible EPA office for more information (see footnote # 3).)

³ Any vessel owner and/or sponsor should carefully consider the amount of time, resources and financial commitments necessary to address the identification, removal, and disposal of non-liquid PCB-containing materials and materials contaminated by spills of liquids containing PCBs before finally deciding if a vessel is suitable for reefing, and well in advance of commencing clean-up. EPA strongly recommends vessel owners and/or sponsors to begin discussions as soon as possible with the PCB coordinator for the EPA Region in which the vessel is proposed to be sunk. A list of EPA's current PCB coordinators may be found at www.epa.gov/pcb/coordin.html.

⁴ For PCB spills that occurred between April 18, 1978, and July 1, 1979, and where the original source was ≥ 500 ppm PCBs, remove all materials containing any concentration of PCBs. For PCB spills that occurred after July 1, 1979, and where the original source was ≥ 50 ppm PCBs, remove all materials containing any concentration of PCBs. Remove all materials currently containing ≥ 50 ppm PCBs as a result of spills (of any concentration) that occurred prior to April 18, 1978. Consult the PCB regulations at 40 CFR 761.3, 761.50(b)(3) and 761.61.

PAINT

Narrative Clean-up Goal: Remove harmful exterior hull anti-fouling systems that are determined to be active; remove exfoliating (peeling) and exfoliated paint.

What types of paint and anti-fouling systems are used on ships, and where are they found?

Paint and preservative coatings can be found on both interior and exterior surfaces of a ship. Particularly on older ships, paint may be flammable or may contain toxic compounds, such as polychlorinated biphenyls (PCBs), heavy metals (e.g., lead, barium, cadmium, chromium, and zinc), and biocides. Lead compounds, such as red lead tetraoxide (Pb_3O_4) and lead chromate, have been used extensively in marine paint. Other paints containing biocides, such as organotin (including compounds such as tributyl tin), have been used on the hulls of ships to prevent the buildup of marine organisms (e.g., bacteria, protozoa, barnacles, and algae).

Paints

Paint above the water line (topside paint) is not designed to leach because these paints are designed to protect topside surfaces from physical degradation and do not typically contain antifoulant biocides like that of anti-fouling coatings. However, these paints may contain added biocides.

Anti-fouling System

For most types of candidate vessels for reefing, the paint-related contaminants of concern are limited to exterior hull coatings below the water line. These hull coatings consist primarily of anti-fouling (AF) agents (biocides) such as copper, organotin compounds, and zinc.



Photo courtesy of Laura S. Johnson

Exfoliating ceiling paint on the ex-USS Oriskany before being cleaned.

What are the potential environmental impacts of paints?

Scientific investigations by governments and international organizations have shown that certain anti-fouling systems (AFS) used on vessels pose a substantial risk of both acute and chronic toxicity and other adverse impacts to ecologically and economically important non-target marine organisms. Because this document addresses vessels that would be sunk for the creation of artificial reef habitat, the presence of biocides and other anti-fouling systems that inhibit marine growth are antithetical to this purpose. Furthermore, because anti-fouling systems can be reactivated via physical disturbance and/or biological degradation (e.g., scouring during a storm event or burrowing caused by marine organisms) over time, anti-fouling systems that retain potency may become harmful or be reactivated following the sinking. (See Appendix C)

How should the vessel be prepared; what are the appropriate BMPs for paints?

Anti-fouling Underwater Hull Coatings

If there is minimal active biocide remaining on the vessel, no preparation to the underwater hull area is necessary. It can be assumed that biocide activity is minimal if the anti-fouling coating on a candidate vessel is more than twelve years old **and** essentially all the underwater hull area is covered with marine growth.

When assessing the efficacy of the anti-fouling system, existing documentation relating to the anti-fouling properties of the hull coating could provide supporting information when determining if such coatings should be removed. Sources of such supporting information include, but are not limited to, any documentation related to the following: the type and age of the existing AFS, the most recent repainting or dry-dock cycle, and the most recent underwater hull cleaning. When necessary, such information may be supplemented by a physical, underwater hull examination by trained divers or remote operating vehicles. Repair and maintenance records for the vessel should provide the dates when the vessel was last removed from the water for hull maintenance.

If anti-fouling coatings on candidate vessels are at least twelve years old and essentially all the underwater hull area is covered with marine growth, the AF coatings can be left in place without further evaluation, as they are no longer likely to be harmful. If satisfactory evidence relating to underwater hull coating types and coating application dates is not available, and if the AF coating seems to be inhibiting fouling growth according to established AF paint efficacy, further evaluations should be carried out to ascertain the current anti-fouling properties of the coating. If it is determined that the AFS is active, the system should be removed to prevent the release of the AFS's harmful biocides.

Interior and Exterior, Above the Waterline Paints

In some cases, interior and exterior paints onboard vessels may contribute to debris/floatable materials or contain other contaminants of concern. Interior paint and paint above the waterline should be evaluated according to the guidance presented under the "PCB" and "Solids/Debris/Floatables" sections when appropriate. If paint is found to contain PCBs, then the protocols found in the "PCB" section of this document should be followed.

Removal of intact paints generally is not necessary. Topside paint may contain other constituents, such as trace metals or biocides. Unlike underwater hull paint containing high concentrations of biocides designed to leach rapidly, topside paints are designed for long life. They also may contain significantly lower levels of these substances than hull coatings. However, exfoliating paint (paint that is blistering, peeling, and pitting) and exfoliated paint (paint chips and flakes) should be removed.

SOLIDS/DEBRIS/FLOATABLES

Narrative Clean-up Goal: Remove loose debris, including materials or equipment not permanently attached to the vessel, which could be transported into the water column during a sinking event.

What are solids/debris/floatables?

Solids, debris, and floatables are loose materials that could break free from the vessel during transportation and placement as an artificial reef, thereby adversely affecting the ecological or aesthetic value of the marine environment or posing a risk to humans or animals. These materials can consist of vessel debris and clean-up debris. Vessel debris refers to material that was once part of the vessel or was generated during vessel clean-up operations and has been removed or disconnected from its original location on the vessel. Clean-up related debris is material that was not a part of the vessel, but rather was brought on the vessel during preparation operations.

What are the potential environmental impacts of solids, debris, and floatables?

Marine debris consists of solid materials of human origin discarded at sea. Floatable material/debris is any unsecured foreign matter that floats, remains suspended in the water column, or washes up on shore. Floatable materials can travel long distances in the ocean and be deposited far from their source. The degradability of floatable materials and marine debris influences the persistence of these items in the marine environment. Most marine debris does not biodegrade readily. The longer that introduced materials remain in the marine environment, the greater the threat they pose to the environment.



Photo courtesy of Laura S. Johnson

Solids, debris, floatables, and exfoliating paint on a vessel of the MARAD James River Reserve Fleet.

Some potential impacts of solids/debris/floatables to the marine environment include:

- Marine life is endangered by entanglement, ingestion, or both; injury, infection, and death may often occur when marine animals encounter debris of this nature. For example, floating debris may act as an attractant for marine animals that would try to use it as shelter or a food source, thereby potentially causing injury or death and altering behavior and/or distribution of indigenous species;
- Alteration of the ecosystem and its processes may occur throughout the water column as a result of debris introduced into the marine environment. Debris settling on the bottom may change benthic floral and faunal habitat structure, potentially causing a direct deleterious impact on members of the benthic community (i.e., injury or mortality) or indirect impact to other species linked in the benthic food web;
- Recurring clean-up for coastal communities impacted by the debris -- which could be costly; and
- Increasing the risk of spills and other environmental impacts resulting from potential danger to navigation (e.g., hull damage, damage to propellers, and damage to cooling and propulsion systems).

Where are solids/debris/floatables found on ships?

Solids, debris, and floatables can be found anywhere within the vessel as well as on the decks.

How should the vessel be prepared; what are the appropriate BMPs for solids/debris/floatables?

Vessel Debris

All material or equipment that is not an integral part of a permanently attached appurtenance and that could become separated from the vessel during sinking should be removed from the ship prior to sinking. Ship's surfaces (e.g., decks, bulkheads, overheads, and surfaces of appurtenances) should be thoroughly cleaned to remove all dirt, loose scale, trash, exfoliating paint, paint chips, hazardous materials, and other foreign matter (including netting material). Deck drains should be proven clear of debris. Consideration should also be given to the removal of items that could become a floatable over time (e.g., floatable fiberglass insulation, floatable foam).

When assessing vessel debris removal, consideration should be given to the following:

- no vessel debris contaminated with hydrocarbons or hazardous material should remain in the vessel;
- vessel debris that is heavy and/or bulky fitted equipment, and was disconnected or otherwise detached from the structure of the vessel for cleaning or inspection can

remain in its original compartment subject to issues of diver safety. Otherwise, vessel debris should be contained in a sealed compartment or structural tank that is below the waterline of the ship and underneath the largest section of the superstructure;

- vessel debris should not be placed in a compartment or structural tank that will be sealed until both the compartment and the debris have been inspected; and
- vessel debris remaining on the vessel should always be negatively buoyant.

Any vessel debris determined to be acceptable to remain on the vessel for sinking should be cleaned as understood in the context of this guidance.

Clean-up Related Debris

Clean-up debris that was introduced to the vessel solely for cleaning purposes and final preparation of the vessel should always be removed. This would include items such as tools, generators, warning tape, and temporary wooden covers.

Introduced Debris

Foreign material should not be placed on the vessel solely for disposal. However, material needed for the reefing operation (e.g., clean concrete or rock for ballast) or of a commemorative nature (e.g., plaques and markers) is not considered debris for the purposes this document.

OTHER MATERIALS OF ENVIRONMENTAL CONCERN

Narrative Clean-up Goal: Remove other materials that may negatively impact the biological, physical, or chemical characteristics of the marine environment.

What are other materials of environmental concern?

Refer to the list provided below.

What are the potential environmental impacts of other materials of environmental concern?

When placed in the marine environment, materials of environmental concern can have adverse effects on fish, wildlife, shellfish, recreation, or municipal water supplies. Adverse effects on the environment include any of the impacts mentioned in the preceding sections of the document. The magnitude of the impact of these materials on the marine environment will be related to the nature of the material, the level of toxicity, and the ecological resources that could come in contact with “other material of environmental concern.”

Where are other materials of environmental concern found on ships?

Other materials of environmental concern can be found anywhere within the vessel as well as on the decks.

How should the vessel be prepared; what are the appropriate BMPs for other materials of environmental concern?

Shipboard equipment or materials with constituents that can leach into the water column (e.g., petroleum products, batteries, and/or mercury-containing switches) should be removed from the vessel prior to sinking. Fluorescent light tubes and ballasts should be removed. Waste water resulting from clean-up processes, including but not limited to, decontamination, contaminated rain water, and water from rinsing of tanks and lines, should be properly collected and disposed.

Antifreeze and Coolants

Antifreeze and coolant mediums, other than untreated sea water, should be drained and removed from the vessel, and the equipment should be flushed.

Batteries

All batteries should be removed from the vessel. This includes batteries that are part of fitted equipment.

Fire Extinguishing Systems

Fire extinguishing systems should be fully decommissioned. Except for fire-fighting systems that employ untreated seawater or fresh water, all fire-fighting compounds should be removed from the ship. Storage containers, if left in situ, should be cleaned, flushed, and re-closed for transit. Any lines that have been charged with any fire-fighting product other than untreated seawater or fresh water should be treated in the same manner as fuel lines and oil piping.

Refrigerants and Halons

All refrigerants and halons should be removed from the vessel.

Mercury

Ship system components using mercury (e.g., some gyroscopes, vacuum measurement gauges, some laboratory equipment, some light switches, some older radar displays) should be removed from the vessel. All portable thermometers and other measuring equipment employing mercury should be removed intact from the vessel. Any other extant mercury or items containing mercury should be removed from the vessel. Even minute quantities of mercury may be of concern and should be removed. Note that there is a health hazard associated with airborne mercury.



Photo courtesy of Laura Casey

Mercury removed from smoke detector onboard the ex-USS Oriskany.

Lead

Lead ballast bars, shielding and fittings should be removed from the vessel if the reef site is located in fresh or brackish water.

Black and Gray Water

Remove black water (sewerage) and gray water (waste water from sinks, showers, galleys, dishwashers) from the vessel; flush the lines.

Radioactive Materials

Ex-warships, research vessels, and a few other types of vessels may have used equipment containing low-level radioactive material. Residual radioactivity and any source of non-naturally occurring radioactive materials such as luminescent devices should be removed (except where it may safely be left on the ship in accordance with the references below). The Navy is more familiar with addressing this material generally aboard vessels, and as such, the Navy has guidance and established procedures regarding the removal and disposal of radioactive materials. For this reason, it is recommended that the procedures for removal and disposal of radioactive materials follow that provided in DLA INST 4145.8, "Material Management for Radioactive Items in the DoD" and implementing instructions. Another reference that may be useful is the American National Standard Institute's standard N13.12-1999, "Surface and Volumetric Radioactivity Standards for Clearance." This document contains tables of surface contamination criteria developed to allow users of radioactive material to demonstrate that the material or equipment can be safely released with no further regulatory control.

Invasive Species

Assess the presence of invasive species that could be transported to and survive at the artificial reef location on the hull of the ship or from other locations on or in the vessel such as ballast and bilge tanks. If a viable invasive species is found that may be expected to survive at the artificial reef site, that species should be removed or eliminated; the vessel should be clean of all such living organisms.

Considerations for Other In-water Uses of Obsolete Vessels



Photo courtesy of Florida Fish and Wildlife Conservation Commission
Diver exploring the ex-USS Spiegel Grove artificial reef.

DIVING OPPORTUNITIES

The narrative goals set out under the section “Guidance for Preparing Vessels to Create Artificial Reef Habitat” also should be achieved while preparing a vessel for diver opportunities. For example, if preparation for diver use calls for the removal of wall paneling that will in turn expose any materials of concern that were identified in the aforementioned section, the respective narrative goals should be addressed (e.g., if asbestos is exposed once the panel is removed, the objectives of the asbestos narrative goal should be met).

Additional vessel preparation to support the in-water use of recreational diving may include:

- Removal of sharp and protruding objects along the divers' access path which could snag on divers' equipment or otherwise pose a danger to the divers.
- Removal of doors and access hatches and widening of openings to allow safe access for divers.
- Widening of corridors by removal of some wall paneling and provision of large openings in the exterior of the ship to allow light to penetrate and help ensure safe diver access.
- Sealing entrances into restrictive compartments such as the boiler rooms and engine rooms to help ensure diver safety.

When preparing the vessel for diver opportunities, careful consideration also should be given to vessel stability (for transport and sinking operations) as well as vessel integrity (for the life of the vessel once placed at the reef site).

Appendix A

Federal Statutes Related to the Transfer of Obsolete MARAD and Navy Vessels for Use as Artificial Reefs

National Defense Authorization Act for Fiscal Year 2004

The National Defense Authorization Act for Fiscal Year 2004 (PL 108-136) included two provisions relating to the use of vessels as artificial reefs. One such provision, § 3516 (PL 108-136, Div. C, Title XXXV, § 3516, Nov. 24, 2003, 117 Stat. 1795), amended the Bob Stump National Defense Authorization Act for Fiscal Year 2003 (PL 107-314, Div. C, Title XXXV, § 3504(b), Dec. 2, 2002, 116 Stat. 2754; 16 U.S.C. 1220 note) to read in pertinent part as follows:

Title XXXV – Maritime Administration

Subtitle A – Maritime Administration Reauthorization

Section 3516. AUTHORITY TO CONVEY OBSOLETE VESSELS TO UNITED STATES, TERRITORIES, AND FOREIGN COUNTRIES FOR REEFING

(b) Environmental Best Management Practices for Preparing Vessels for Use as Artificial Reefs.—

(1) Not later than March 31, 2004, the Secretary of Transportation, acting through the Maritime Administration, and the Administrator of the Environmental Protection Agency shall jointly develop guidance recommending environmental best management practices to be used in the preparation of vessels for use as artificial reefs.

(2) The guidance recommending environmental best management practices under paragraph (1) shall be developed in consultation with the heads of other federal agencies, and State agencies, having an interest in the use of vessels as artificial reefs.

(3) The environmental best management practices under paragraph (1) shall --

(A) include recommended practices for the preparation of vessels for use as artificial reefs to ensure that vessels so prepared will be environmentally sound in their use as artificial reefs;

(B) promote consistent use of such practices nationwide;

(C) provide a basis for estimating the costs associated with the preparation of vessels for use as artificial reefs; and

(D) include mechanisms to enhance the utility of the Artificial Reefing Program of the Maritime Administration as an option for the disposal of obsolete vessels.

(4) The environmental best management practices developed under paragraph (1) shall serve as national guidance for federal agencies for the preparation of vessels for use as artificial reefs.

(5) Not later than March 31, 2004, the Secretary of Transportation, acting through the Maritime Administration, and the Administrator of the Environmental Protection Agency shall jointly establish an application process for governments of States, commonwealths, and United States territories and possessions, and foreign governments, for the preparation of vessels for use as artificial reefs, including documentation and certification requirements for that application process.

(6) The Secretary of Transportation shall submit to Congress a report on the environmental best management practices developed under paragraph (1) through the existing ship disposal reporting requirements in section 3502 of Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (as enacted into law by Public Law 106-398; 1654A-492) [Pub.L. 106-398, Div. C, Title XXXV, § 3502, Oct. 30, 2000, 114 Stat. 1654A-492, which is not classified to the Code]. The report shall describe such practices, and may include such other matters as the Secretary considers appropriate.

The second such provision, § 1013 (PL 108-136, Div. A, Title X, § 1013, Nov. 24, 2003, 117 Stat. 1590), amended Title 10 of the United States Code by adding § 7306b. New § 7306b(a) authorizes the Secretary of the Navy to transfer vessels stricken from the Naval Vessel Register for use as an artificial reef. New § 7306b(c) requires the Secretary of the Navy to ensure that the preparation of a vessel transferred pursuant to 10 U.S.C. § 7306b(a) for use as an artificial reef is conducted in accordance with the environmental best management practices developed pursuant to 16 U.S.C. § 1220 note and applicable environmental laws. The complete text of Section 1013 of the National Defense Authorization Act for Fiscal Year 2004 is as follows:

Title X – General Provisions

Subtitle B – Naval Vessels and Shipyards

**Section 1013. TRANSFER OF VESSELS STRICKEN FROM THE
NAVAL VESSEL REGISTER FOR USE AS ARTIFICIAL REEFS.**

(a) AUTHORITY TO MAKE TRANSFER- Chapter 633 of title 10, United States Code, is amended by inserting after section 7306a the following new section:

Sec. 7306b. Vessels stricken from Naval Vessel Register: transfer by gift or otherwise for use as artificial reefs

(a) AUTHORITY TO MAKE TRANSFER- The Secretary of the Navy may transfer, by gift or otherwise, any vessel stricken from the Naval Vessel Register to any State, Commonwealth, or possession of the United States, or any municipal corporation or political subdivision thereof, for use as provided in subsection (b).

(b) VESSEL TO BE USED AS ARTIFICIAL REEF- An agreement for the transfer of a vessel under subsection (a) shall require that--

(1) the recipient use, site, construct, monitor, and manage the vessel only as an artificial reef in accordance with the requirements of the National

Fishing Enhancement Act of 1984 (33 U.S.C. 2101 et seq.), except that the recipient may use the artificial reef to enhance diving opportunities if that use does not have an adverse effect on fishery resources (as that term is defined in section 2(14) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1802(14)); and

`(2) the recipient obtain, and bear all responsibility for complying with, applicable federal, State, interstate, and local permits for using, siting, constructing, monitoring, and managing the vessel as an artificial reef.

`(c) PREPARATION OF VESSEL FOR USE AS ARTIFICIAL REEF- The Secretary shall ensure that the preparation of a vessel transferred under subsection (a) for use as an artificial reef is conducted in accordance with--

`(1) the environmental best management practices developed pursuant to section 3504(b) of the Bob Stump National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314; 16 U.S.C. 1220 note); and

`(2) any applicable environmental laws.

`(d) COST SHARING- The Secretary may share with the recipient of a vessel transferred under subsection (a) any costs associated with transferring the vessel under that subsection, including costs of the preparation of the vessel under subsection (c).

`(e) NO LIMITATION ON NUMBER OF VESSELS TRANSFERABLE TO PARTICULAR RECIPIENT- A State, Commonwealth, or possession of the United States, or any municipal corporation or political subdivision thereof, may be the recipient of more than one vessel transferred under subsection (a).

`(f) ADDITIONAL TERMS AND CONDITIONS- The Secretary may require such additional terms and conditions in connection with a transfer authorized by subsection (a) as the Secretary considers appropriate.

`(g) CONSTRUCTION- Nothing in this section shall be construed to establish a preference for the use as artificial reefs of vessels stricken from the Naval Vessel Register in lieu of other authorized uses of such vessels, including the domestic scrapping of such vessels, or other disposals of such vessels, under this chapter or other applicable authority.'

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by inserting after the item relating to section 7306a the following new item:

`7306b. Vessels stricken from Naval Vessel Register: transfer by gift or otherwise for use as artificial reefs.'

Transfer of Obsolete Vessels by the Department of Transportation

Public Law 92-402 (16 U.S.C. 1220, et. seq.) authorizes the U.S. Maritime Administration (MARAD), under the Department of Transportation, to transfer obsolete ships to any state for use as an artificial reef. In addition, MARAD's authority was amended by Public Law 107-314 section 3504, as amended by Public Law 108-136, to allow MARAD to provide financial assistance to states for environmental preparation, towing, and/or sinking and also allows MARAD to transfer obsolete vessels to U.S. territories and foreign countries for use as artificial reefs.

Title XXVI – Conservation

§ 1220. State applications for obsolete ships for use as offshore reefs

(a) Conservation of marine life

Any State may apply to the Secretary of Transportation (hereafter referred to in this chapter as the "Secretary") for obsolete ships which, but for the operation of this chapter, would be designated by the Secretary for scrapping if the State intends to sink such ships for use as an offshore artificial reef for the conservation of marine life.

(b) Manner and form of applications; minimum requirements

A State shall apply for obsolete ships under this chapter in such manner and form as the Secretary shall prescribe, but such application shall include at least (1) the location at which the State proposes to sink the ships, (2) a certificate from the Administrator, Environmental Protection Agency, that the proposed use of the particular vessel or vessels requested by the State will be compatible with water quality standards and other appropriate environmental protection requirements, and (3) statements and estimates with respect to the conservation goals which are sought to be achieved by use of the ships.

(c) Copies to federal officers for official comments and views

Before taking any action with respect to an application submitted under this chapter, the Secretary shall provide copies of the application to the Secretary of the Interior, the Secretary of Defense, and any other appropriate federal officer, and shall consider comments and views of such officers with respect to the application.

§ 1220a. Transfer of title; terms and conditions

If, after consideration of such comments and views as are received pursuant to section 1220(c) of this title, the Secretary finds that the use of obsolete ships proposed by a State will not violate any federal law, contribute to degradation of the marine environment, create undue interference with commercial fishing or navigation, and is not frivolous, he may transfer without consideration to the State all right, title, and

interest of the United States in and to any obsolete ships which are available for transfer under this chapter if--

- (1) the State gives to the Secretary such assurances as he deems necessary that such ships will be utilized and maintained only for the purposes stated in the application and, when sunk, will be charted and marked as a hazard to navigation;
- (2) the State agrees to secure any licenses or permits which may be required under the provisions of any other applicable federal law;
- (3) the State agrees to such other terms and conditions as the Secretary shall require in order to protect the marine environment and other interests of the United States; and
- (4) the transfer would be at no cost to the Government (except for any financial assistance provided under section 1220(c)(1) of this title) with the State taking delivery of such obsolete ships and titles in an "as-is-- where-is" condition at such place and time designated as may be determined by the Secretary of Transportation.

§ 1220b. Obsolete ships available; number; equitable administration

A State may apply for more than one obsolete ship under this chapter. The Secretary shall, however, taking into account the number of obsolete ships which may be or become available for transfer under this chapter, administer this chapter in an equitable manner with respect to the various States.

§ 1220c. Denial of applications; finality of decision

A decision by the Secretary denying any application for a obsolete ship under this chapter is final.

§ 1220c-1. Financial assistance to State to prepare transferred ship

(a) Assistance authorized

The Secretary, subject to the availability of appropriations, may provide, to any State to which an obsolete ship is transferred under this chapter, financial assistance to prepare the ship for use as an artificial reef, including for--

- (1) environmental remediation;
- (2) towing; and
- (3) sinking.

(b) Amount of assistance

The Secretary shall determine the amount of assistance under this section with respect to an obsolete ship based on—

- (1) the total amount available for providing assistance under this section;
- (2) the benefit achieved by providing assistance for that ship; and
- (3) the cost effectiveness of disposing of the ship by transfer under this chapter and provision of assistance under this section, compared to other disposal options for that ship.

(c) Terms and conditions

The Secretary--

(1) shall require a State seeking assistance under this section to provide cost data and other information determined by the Secretary to be necessary to justify and document the assistance; and

(2) may require a State receiving such assistance to comply with terms and conditions necessary to protect the environment and the interests of the United States.

§ 1220d. "Obsolete ship" defined

For purposes of sections 1220, 1220a, 1220b, and 1220c of this title, the term "obsolete ship" means any vessel owned by the Department of Transportation that has been determined to be of insufficient value for commercial or national defense purposes to warrant its maintenance and preservation in the national defense reserve fleet and has been designated as an artificial reef candidate.

Appendix B

Federal Environmental Laws Relevant for Consideration in the Preparation of a Vessel for Use as an Artificial Reef

This Appendix identifies selected federal statutes relevant for consideration in preparation of a vessel for use as an artificial reef. For these statutes, the Appendix explains their potential relevance and briefly summarizes the relevant provisions. The first set of statutes briefly summarized are environmental laws administered by EPA which may be relevant to the removal of material from vessels or the disposal of such removed material. In addition, although this document focuses on environmental best management practices for vessel preparation, for the reader's convenience the Appendix also briefly summarizes federal statutes establishing permit requirements for the actual placement of the vessel as an artificial reef. Finally, the Appendix briefly describes a number of other significant federal environmental statutes that may affect issuance of such permits or the actual conduct of placement activities.

The information in this Appendix is intended only for the convenience of the reader in order to provide a useful starting point for identifying the principal environmental statutes of interest. The Appendix is not intended to be an exhaustive list of every conceivably relevant statute, nor do the brief summaries in this list alter or replace any requirements, regulations, or applicable guidance under those statutes that are summarized. Readers also should be aware that in 2000, EPA published tips for regulatory compliance for ship scrapping, and that document contains additional guidance that may be useful in preparation of a vessel for use as an artificial reef. See www.epa.gov/oecaerth/resources/publications/civil/federal/shipscrapguide.pdf.

State and local laws also may apply to vessel preparation or placement for use as an artificial reef, and interested readers should consult with appropriate State and local authorities to identify such further requirements.

EPA-Administered Federal Environmental Laws Relevant to Vessel Preparation

- The Clean Air Act (CAA), 42 U.S.C. §§ 7401, et seq., generally addresses the emission of air pollutants. Among other things, it directs EPA to establish minimum national standards for air quality, and assigns primary responsibility to the states to assure compliance with the standards through State Implementation Plans (SIPs). State-specific SIPs may impose requirements that are more prescriptive, more stringent, or more specific than the minimum national standards. Among national standards relevant for vessel preparation, EPA has established a National Emissions Standards for Hazardous Air Pollutants (NESHAP) for asbestos at 40 CFR Part 61 Subpart M. The asbestos NESHAP is intended to minimize the release of asbestos fibers during demolition and renovation activities, which would include asbestos removal when preparing a vessel for use as an artificial reef. EPA has delegated authority to inspect and enforce the asbestos NESHAP to most states, which, as noted, may have requirements that are more stringent than federal requirements. Other NESHAPs also may be relevant to removal of other materials on vessels, and may be found at 40 CFR Parts 61 and 63. In addition, Title VI of the Act directs EPA to establish requirements for the control of substances that contribute to stratospheric ozone depletion, which include substances such as halons used

in fire suppression systems and certain refrigerants, that the best management practices in this guidance recommend be removed from a vessel in preparation for its use as an artificial reef. The recovered ozone-depleting refrigerants and halons should be delivered to an EPA-approved refrigerant and/or halon reclaimer for proper handling. Regulations addressing recycling and reuse of such removed refrigerants and halons, including chlorofluorocarbons and hydrofluorocarbons (sometimes referred to under the trade name Freon), appear at 40 CFR Part 82.

- The Clean Water Act (CWA), 33 U.S.C. §§ 1251, et seq., generally regulates the addition of pollutants from a point source to waters of the United States. The definition of point source includes a “vessel or other floating craft.” CWA requirements are implemented, among other things, through permits under either section 402 (the National Pollutant Discharge Elimination System (NPDES) permitting program) or section 404 (the permitting program for dredged and fill material). Pollutants generated in the preparation of a vessel for use as an artificial reef that are discharged to waters of the U.S., including via contaminated storm water, require NPDES permit authorization. The NPDES permitting program is primarily administered by states, with EPA oversight. In addition to the CWA’s NPDES permitting program, section 311 establishes a program for the prevention and abatement of, and remedial response to, oil and hazardous substance spills. See 40 CFR Parts 110, 112, 116, and 117. Section 311 imposes requirements for reporting the release of oil and hazardous substances, which might be relevant to the preparation of a vessel for use as an artificial reef should preparation result in such a release. Section 311 is jointly administered by EPA and the U.S. Coast Guard, depending on the location of the source. (For discussion of CWA section 404 permitting and the placement of vessels as artificial reefs, refer to the section of this Appendix describing federal laws that establish permitting requirements for placement of artificial reefs).
- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601, et seq., better known as the "Superfund Act," addresses cleanup of hazardous substances. CERCLA and its implementation documents empower EPA and other agencies to identify and prioritize sites for cleanup, and to order or carry out environmental remediation. Subject to limited defenses, CERCLA imposes strict liability for environmental cleanup on persons connected to facilities from which there are releases into the environment. CERCLA also mandates reporting to the National Response Center of hazardous substance releases. In conjunction with CWA section 311, CERCLA provides for federal preparation of the National Contingency Plan for responding to a hazardous substances release. As noted regarding CWA section 311, CERCLA is relevant to the preparation of a vessel for use as an artificial reef in its release reporting requirements, particularly for oil and hazardous substances. CERCLA is administered by federal agencies, not states.
- The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. §§ 136, et seq., generally regulates the registration, labeling, distribution, sale, and use of pesticides. EPA regulates anti-foulant paints, including those containing organotins, copper, and other pesticidal compounds under FIFRA. EPA has relied on FIFRA and the Organotin Anti-fouling Paint Control Act of 1988 (33 U.S.C. §§ 2401, et seq.) for authority to impose requirements, such as certification and training for applicators and label

requirements dealing with tributyl tin (TBT) application and disposal. TBT anti-fouling paint label requirements include provisions directing that all paint chips, spent abrasives, and any other waste products from paint removal be disposed of in a sanitary landfill. 53 Fed. Reg. 39022, 39038, col. 3 (October 4, 1988). In addition, use of any pesticide in the preparation of a vessel for use as an artificial reef must comply with label requirements. For the most part, FIFRA is administered by EPA, though some states have primary enforcement responsibility for FIFRA use violations.

- The Marine Protection, Research and Sanctuaries Act (MPRSA), 33 U.S.C. §§ 1401, et seq., prohibits, unless authorized by an MPRSA permit, (1) transportation of material from the United States for the purpose of ocean dumping; (2) transportation of material from anywhere for the purpose of ocean dumping by federal agencies or U.S. flagged vessels; and (3) dumping of material transported from outside the United States into the territorial sea of the United States. If any materials removed from vessels being prepared for use as an artificial reef were subsequently proposed for ocean dumping, a permit under the MPRSA would be necessary. Denial of such a permit request, however, would be highly likely because land-based alternatives (the consideration of which are required for MPRSA permit issuance) typically would be available. In addition, it would seem improbable that such a proposal could satisfy the other applicable environmental criteria of the MPRSA and implementing regulations. The MPRSA is administered by EPA and the U.S. Army Corps of Engineers, not states.⁵
- The Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901, controls the management of hazardous wastes “from cradle to grave.” If, in the preparation of a vessel for use as an artificial reef, a waste is generated that is specifically listed as hazardous or exhibits any hazardous characteristics, e.g. toxicity, and the waste is not excluded or exempt from the RCRA Subtitle C regulations, then this waste would be considered hazardous waste and subject to all applicable RCRA regulations. See 40 CFR Parts 260 and 261. Depending upon the volume of hazardous wastes that are generated and the length of time the hazardous wastes are accumulated, RCRA regulations provide conditional exemptions from some of the regulatory requirements. In most states, EPA has authorized the State to administer some or all of RCRA requirements under state law in lieu of federal law and, depending on the state, state law may include requirements that are more stringent or prescriptive than federal law. Hazardous waste and used oil must be managed according to RCRA regulations.
- The Toxic Substance Control Act (TSCA), 15 U.S.C. §§ 2601, et seq., bans the manufacture, processing, use, and distribution in commerce of polychlorinated biphenyls (PCBs) and directs EPA to set regulations for the disposal of PCBs. TSCA requirements generally determine the degree of necessary PCB removal from vessels being prepared for use as an artificial reef. Although TSCA imposes requirements for toxic substances other than PCBs, TSCA’s PCB requirements are uniquely relevant to preparation of a

⁵ The MPRSA definition of “dumping” excludes the construction of fixed structures or artificial islands, as well as deposits of materials for the purpose of developing or maintaining fisheries resources, when otherwise regulated by federal or state law (or occurring pursuant to authorized federal or state programs). Because the placement of a vessel to create an artificial reef in waters subject to jurisdiction of the United States is regulated under other federal laws, the actual placement of vessels for use as an artificial reef is not subject to regulation under the MPRSA.

vessel for use as an artificial reef because of the likely presence of PCBs on many obsolete vessels. More specific guidance on the applicability of TSCA's PCB requirements to vessels being prepared for use as an artificial reef is provided in the section of the environmental best management practices addressing PCBs, and readers should refer to that section for further information.

Federal Environmental Laws Establishing Permit Requirements for Placement of Vessels as Artificial Reefs

- Section 404 of the CWA, 33 U.S.C. § 1344, establishes a permitting program for the discharge of dredged or fill material to waters of the United States. Placement of a vessel in waters of the United States as an artificial reef would constitute a discharge of fill material, and therefore would require a CWA section 404 permit. 33 CFR 323.2(e) & (f). For CWA purposes, "waters of the United States" include most inland waters as well as the waters of the territorial sea, which, under the CWA, is measured from the baseline (i.e., the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters) in a seaward direction a distance of three miles. Section 404 permitting is primarily administered by the U.S. Army Corps of Engineers (Corps), using environmental guidelines set out in EPA regulations appearing at 40 CFR Part 230. Among other things, except as provided by 40 CFR 230.5(b) and 230.7(b)(1) (relating to activities covered by an applicable general permit), these guidelines require consideration of practicable alternatives to the proposed discharge, and in the case of proposed discharges to special aquatic sites, presume that all practicable alternatives not involving a discharge into a special aquatic site have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise. 40 CFR 230.5(c); 230.10(a). Special aquatic sites are identified at 40 CFR Part 230 Subpart E and include, among other things, marine sanctuaries and coral reefs. In addition to evaluation for compliance with these guidelines, section 404 permits are also subject to the Corps' public interest review under 33 CFR 320.4. Corps regulations relevant to the CWA section 404 permitting program appear at 33 CFR Parts 320, 323, 325, 328, and 331. Though EPA has authorized two States to administer the section 404 permitting program for certain waters in those States, these State programs probably would not be relevant to the placement of a vessel for use as an artificial reef because states may not assume section 404 permitting authority for discharges of fill material to waters supporting commercial navigation, waters subject to the ebb and flow of the tide, or waters of the territorial seas, where a former vessel/artificial reef would likely be sited.
- Section 10 of the Rivers and Harbors Act of 1899 (RHA), 33 U.S.C. §§ 403, requires a permit from the Corps for, among other things, the construction of any structure (including artificial reefs) in or over any "navigable water of the United States" as that term is defined at 33 CFR Part 329.⁶ Structures or work outside the limits of "navigable waters of the United States" also require a section 10 permit if the structure or work

⁶ In cases where the waters in which the vessel is being placed for use as an artificial reef are subject to both RHA section 10 and CWA section 404 permitting (e.g., the 3 mile territorial sea), Corps practice is to issue a single consolidated permit satisfying the requirements of both these statutes.

affects the course, location, or condition of the waterbody in such a manner as to impact on navigational capacity. Under section 4(e) of the Outer Continental Shelf Lands Act, 43 U.S.C. § 1333(e), RHA section 10 permit requirements also apply to the creation of structures on the Outer Continental Shelf of the United States, including artificial reefs. 33 CFR 322.3(b). Issuance of permits under RHA section 10 involves a public interest review by the Corps in accordance with 33 CFR 320.4. To help safeguard navigational and other marine uses, Corps permits for artificial reefs have required that permittees notify the National Oceanic & Atmospheric Administration (NOAA) prior to, and upon completion of, the reefing activity, including a drawing certifying the location and configuration of the completed activity. 33 CFR Part 325, Appendix A, special condition B.5. Corps regulations relevant to the RHA section 10 permitting program appear at 33 CFR Parts 320, 322, 325, 329, and 331.

Other Significant Federal Environmental Statutes That May Affect Issuance of Permits or Licenses for Artificial Reefs or the Conduct of Placement Activities.

- The Liberty Ship Act, 16 U.S.C. §§ 1220, et seq., authorizes states to apply to the Secretary of the Department of Transportation (DOT) for the use of DOT-owned obsolete vessels, including obsolete vessels of the Maritime Administration, as an artificial reef for the conservation of marine life. The Liberty Ship Act requires that the state application to DOT include a certification from EPA that the proposed use of the vessel will be compatible with “applicable water quality standards and other appropriate environmental protection requirements.” 16 U.S.C. § 1220 (b). The ability to meet such standards and requirements will be affected by what materials are onboard the vessel.
- The National Fishing Enhancement Act of 1984 (NFEA), 33 U.S.C. §§ 2101, et seq., applies to all artificial reefs in waters of the United States or on the Outer Continental Shelf for the purpose of enhancing fishery resources. Section 204 of NFEA obligates NOAA to issue a national artificial reef plan that addresses issues such as siting and design criteria. Additionally, NFEA section 205 establishes further requirements to be applied by the Corps in the exercise of its previously described permitting authority for placement of artificial reefs under RHA section 10 or CWA section 404. Such requirements are reflected in the previously identified Corps permitting regulations for artificial reefs (e.g., 33 CFR 320.3(o), 322.5(b), and 325.1(d)(8)).
- The Coastal Zone Management Act (CZMA), 16 U.S.C. 1451, et seq., establishes a federal/state partnership to provide for the comprehensive management of coastal resources. Under CZMA section 307(c)(3), applicants for a required federal license or permit to conduct an activity affecting the coastal zone of a state with an approved coastal management program need to provide the federal permitting agency and the relevant state with a certification that the proposed activity complies with the enforceable policies of the state’s approved program and will be conducted in a manner that is consistent with the program. Under CZMA section 307(c)(1), a federal agency activity that affects the coastal zone must be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of an approved coastal management program. Relevant implementing regulations established by NOAA (which is responsible for federal administration of the CZMA) appear at 15 CFR Part 930,

Subpart C (consistency for federal agency activities) and Subpart D (consistency for activities requiring a federal license or permit). NOAA's CZMA regulations were recently amended. 71 Fed. Reg. 788 (Jan. 5, 2006). The regulations provide that in the case of federal agency applications for federal licenses or permits, as well certain general permits proposed by a federal agency, review will be conducted under the Subpart C regulations. See 15 CFR 930.31(d) & 930.52. Corps regulations implementing the CZMA for its RHA section 10 and CWA section 404 permit programs appear at 33 CFR 320.3(b), 320.4(h), and 325.2(b)(2).

- The National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321, et seq., requires that federal agencies include in their decision-making processes appropriate and careful consideration of the environmental effects of, and alternatives to, their actions. NEPA section 102(2)(C) includes a requirement for preparation of an environmental impact statements (EIS) for “major federal actions significantly affecting the quality of the human environment.” For proposed federal actions where the environmental effects are unclear, the agency often prepares an environmental assessment, which is a brief and concise document containing sufficient evidence and analysis for the agency to determine whether to prepare an EIS or to issue a finding of no significant impact. 40 CFR 1501.4(b), 1508.9(a)(1), 1508.13. Council on Environmental Quality regulations implementing NEPA appear at 40 CFR Parts 1500 – 1518. Corps regulations implementing NEPA for its RHA section 10 and CWA section 404 permit programs appear at 33 CFR 320.3(d) and Part 325, Appendix B.
- Under Clean Air Act section 309, 42 U.S.C. § 7609, EPA reviews and comments on the environmental impacts of several types of actions of other federal agencies, including all actions subject to the requirement under the National Environmental Policy Act to prepare an Environmental Impact Statement. EPA comments in writing and make those comments available to the public. If EPA determines that the action is unsatisfactory from the standpoint of public health or welfare or environmental quality, EPA refers the matter to the Council on Environmental Quality.
- The Endangered Species Act (ESA), 16 U.S.C. §§ 1531, et seq., addresses the conservation of federally-listed threatened and endangered species and the ecosystems on which those species depend. ESA section 7 requires that federal agencies, in consultation with the National Marine Fisheries Service and/or the U.S. Fish and Wildlife Service⁷, ensure that any action authorized, funded, or carried out by the agency (including issuance of federal permits) is not likely to jeopardize the continued existence of listed species or result in the adverse modification of their designated critical habitat. Whenever such an agency action may affect a listed species or critical habitat, the interagency consultation requirement is triggered, and the ESA section 7 procedural requirements at 50 CFR Part 402 apply. In addition, ESA section 9 generally prohibits anyone from taking listed animal species without authorization. “Take” is defined in ESA section 3(19) to include harming and killing. Authorization to take is generally granted through the section 7 consultation process, in exchange for measures to minimize

⁷ The National Marine Fisheries Service is now referred to as NOAA Fisheries, and is generally responsible for marine species under the ESA. The U.S. Fish and Wildlife Service is generally responsible for terrestrial and freshwater species.

the take. Detailed information regarding ESA compliance can be found online at <http://www.nmfs.noaa.gov/pr/species/esa.htm> and <http://www.fws.gov/endangered/wildlife.html>. EPA's CWA section 404(b)(1) guidelines also address ESA issues in the context of CWA section 404 permitting and appear at 40 CFR 230.30. Corps regulations implementing the ESA for its RHA section 10 and CWA section 404 permit programs appear at 33 CFR 320.3(i) and 325.2(b)(5).

- The Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661, et seq., provides that whenever the waters or channel of a waterbody are proposed or authorized to be modified by a public or private agency under federal permit or license, the agency first shall consult with the USFWS and the head of the state agency responsible for wildlife resources. The purpose of this consultation is to promote conservation of wildlife resources by preventing loss of and damage to such resources and to provide for the development and improvement of wildlife resources in connection with the agency action. Although the recommendations of the Secretary of the Interior and state officials are not binding, the federal agency must give them full consideration. In addition, EPA's CWA section 404(b)(1) guidelines address wildlife issues in the context of section 404 permitting and appear at 40 CFR Part 230, Subpart D. Corps regulations implementing the Fish and Wildlife Coordination Act for its RHA section 10 and CWA section 404 permit programs appear at 33 CFR 320.3(e) and 320.4(c).
- Title III of the National Marine Sanctuaries Act (NMSA), 16 U.S.C. §§ 1431, et seq., authorizes the Secretary of Commerce to designate and manage national marine sanctuaries. Under NMSA section 304(d), federal agency actions (including private activities authorized by federal permits) that are likely to destroy, cause the loss of, or injure sanctuary resources are subject to consultation with the Secretary of Commerce. If the Secretary finds that a federal action is likely to have this effect, the Secretary must recommend feasible alternatives to protect resources, and if the agency does not follow those alternatives it must provide a written statement explaining why. The marine sanctuary program is administered by NOAA, which has promulgated implementing regulations at 15 CFR Part 922. Part 922 specifically identifies all designated marine sanctuaries and their boundaries, as well as applicable regulations and restrictions governing their use. EPA's CWA section 404(b)(1) guidelines also address marine sanctuaries in the context of section 404 permitting and appear at 40 CFR 230.40. Corps regulations implementing these NMSA provisions for its RHA section 10 and CWA section 404 permit programs appear at 33 CFR 320.3(c) and 320.4(i).
- The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), 16 U.S.C. §§ 1801, et seq., is the principal federal law addressing the conservation and management of fisheries resources. Among other things, Magnuson-Stevens Act section 305(b)(1) provides that fisheries management plans developed under the Magnuson-Stevens Act must identify essential fish habitat (EFH). Magnuson-Stevens Act section 3(10) defines EFH as "...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Under section 305(b)(2), federal agencies are directed to consult with the Secretary of Commerce with respect to any action to be authorized, funded, or undertaken that may adversely affect any identified EFH. If the Secretary determines the action would adversely affect such EFH, the

Secretary is to recommend measures that could be taken by the agency to conserve the EFH. The agency must respond to such recommendations in writing, including a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on the EFH. Under Magnuson-Stevens Act section 305(b)(4), if the agency's response is inconsistent with the Secretary's recommendations, the agency must explain why. The locations of EFH identified under the Act can be found online at http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/fish_manage_c.htm. NOAA regulations implementing the EFH provisions of the Act appear at 50 CFR Part 600, Subparts J and K.

- The Marine Mammal Protection Act of 1972 (MMPA), 16 U.S.C. §§ 1361, 1362, 1371-1384 note, 1386-1389, 1401-1407, 1411-1417, 1421-1421h, is the principal federal legislation addressing marine mammal species protection and conservation. MMPA section 102 prohibits, with certain exceptions, the take of marine mammals in United States waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States. Marine mammals subject to the MMPA are defined in MMPA section 3(6) to include both species that are morphologically adapted to the marine environment (e.g., sea otters, manatees, seals, walrus, dolphins, whales) or which primarily inhabit the marine environment (e.g., polar bears). MMPA section 3(13) provides that "take" means to harass, hunt, capture, or kill, or to attempt to do so. Depending on the species of marine mammal involved, MMPA section 3(12) divides MMPA implementation responsibility between the Department of the Interior (USFWS) and the Department of Commerce (NOAA). Under this division of responsibility NOAA manages the majority of marine mammals, including whales, dolphins, porpoises, seals, and sea lions, while the USFWS manages five species: polar bears, walrus, sea otters, manatees, and dugongs. Relevant implementing regulations appear at 50 C.F.R Part 216 (NOAA) and 50 CFR Part 18 (USFWS). Corps regulations implementing the MMPA for its RHA section 10 and CWA section 404 permit programs appear at 33 CFR 320.3(k).
- Section 401 of the Clean Water Act (33 U.S.C. 1341) requires that any applicant for a federal license or permit (e.g., an EPA-issued NPDES permits or a Corps-issued section 404 permit) to conduct an activity that may result in a discharge into waters of the United States shall provide the permitting agency a certification from the state in which the discharge originates certifying that the license or permit complies with CWA requirements, including applicable state water quality standards. No federal license or permit subject to CWA section 401 may be issued unless the state either grants or waives certification. As a result, CWA section 401 provides states with the ability to preclude the issuance of federal permits or licenses subject to section 401 by denying certification, as well as the ability to indirectly impose conditions upon such federal permits or licenses by placing limitations or conditions on its section 401 certification. EPA regulations implementing CWA section 401 appear at 40 CFR Part 121. Corps regulations implementing the CWA section 401 its RHA section 10 and CWA section 404 permit programs appear at 33 CFR 320.3(a), 320.4(d), and 325.2(b)(1).

Appendix C

*Information related to materials found on scuttled vessels that may have potentially hazardous effects on the marine environment**

*The text provided in this appendix is an excerpt from the 2005 “Policy Statement of the National Marine Sanctuary Program: Artificial Reef Permitting Guidelines.”

Scuttled Vessels

The scuttling of vessels requires particular attention in this policy because of their size and potential toxicological effects on the environment. As discussed above, sunken ships potentially attract divers away from natural reefs and thus may be beneficial to natural reefs in National Marine Sanctuaries. However, there is a wide array of concerns that must be addressed before intentionally sinking a ship.

The removal of petroleum products, hazardous materials, paint cans, batteries, plastics, oil, and fuel is specified on the U.S. Coast Guard’s Ocean Disposal/Artificial Reef Inspection form. Additionally, under the Toxic Substances Control Act (TSCA), the EPA has the authority to gather information on and regulate chemical substances and mixtures imminently hazardous or presenting unreasonable risk of injury to public health or the environment. Despite these controls, some materials of concern may still remain on items used as artificial reef material. Such materials include: asbestos, polychlorinated biphenols (PCBs), iron, lead paint, and antifouling paint. The National Marine Sanctuaries Program (NMSP) should consider the risks associated with materials remaining on vessels to be used as artificial reefs. The NMSP will consult with appropriate agencies (i.e., U.S. EPA, MARAD) to determine the best management practices to use in evaluating materials for pollution potential).

Asbestos is the name given to six naturally occurring minerals that are used as insulators and fire retardants. Several studies have investigated the effects of asbestos on fish (Batterman and Cook 1981, Belanger *et al.* 1990, Belanger *et al.* 1986, Woodhead *et al.* 1983). The findings indicate that asbestos concentrations on the order of 10^6 to 10^8 fibers/L may cause epidermal lesions, epithelial hypertrophy, kidney damage, decreased orientation and swimming ability, degradation of the lateral line, reduced growth, and increased mortality in fish. Undisturbed, non-friable (not easily crumbled) asbestos has been found to be relatively harmless (Garcia and Salzwedel 1995, Montoya *et al.* 1985).

PCBs may still exist in water-tight gaskets, cable insulation, paint, transformers, capacitors, and other components of decommissioned Navy vessels (Martore *et al.* 1996, Eisler and Belisle 1996). These chemicals have been implicated in: reduced primary productivity in phytoplankton; reduced hatchability of contaminated fish and bird eggs; reproductive failure in seals; altered steroid levels and subsequent reproductive impairment in fish and sea stars; reduced fertilization efficiency in sea urchins; and reduced plasma retinal and thyroid hormone levels potentially leading to increased susceptibility to microbial infections, reproductive disorders and other pathological alternation in seals and other marine mammals (Adams and Slaughter-Williams 1988, Brouwer *et al.* 1989, Clark 1992, den Besten *et al.* 1991).

Antifouling paints typically containing tributyltin (TBT) and copper (Cu) are often used to paint vessel hulls to inhibit the growth of organisms below the water line. An IMO convention to

control the use of harmful anti-fouling systems on ships was adopted on October 5, 2001. The convention will prohibit the use of harmful organotins, including TBT, in anti-fouling paints used on ships and establish a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems. TBT has been found to be toxic to non-target, non-fouling organisms at low levels (approximately 7.5-10.5 ng TBT/L). One of its most marked effects has been the induction of shell thickening and growth anomalies in oysters and imposex in the dogwhelk *Nucella lapillus* potentially leading to sterility (Gibbs *et al.* 1998).⁸ The discovery of the highly toxic nature of TBT-based paints has led many countries to ban the use of these paints for non-aluminum hulled vessels less than 25 meters in length. Copper, though an effective antifoulant, has not been shown to cause extensive effects on non-target organisms at relatively low levels. When present in high concentrations, however, copper can be toxic to aquatic life (Sorrenson 1991). In a study conducted when a cargo ship collided with part of the Great Barrier Reef and remained grounded for 12 days, sediment containing 8.0 mg kg super(-1) TBT, 72 mg kg super(-1) Cu and 92 mg kg super(-1) Zn was found to significantly inhibit larval settlement and metamorphosis (Negri *et al.* 2002). At this level of contamination, larvae survived but contracted to a spherical shape and swimming and searching behavior ceased. At higher contamination levels, 100% mortality was recorded. These results indicate that the contamination of sediment by anti-fouling paint has the potential to significantly reduce coral recruitment in the immediate vicinity of the site and that this contamination may threaten the recovery of the resident coral community unless the paint is removed.

Iron, an essential element like copper, can be contributed to the environment from steel hulls of sunken vessels. As an essential element, iron levels will tend to be closely regulated by organisms, and thus, it is unlikely that any pollution-derived effects will be observed except in severe and localized cases (Thompson 1990). Corals living in seawater with high iron concentrations have been shown to incorporate the iron into their skeletons (Brown *et al.* 1991). Studies on phytoplankton and macroalgae indicate that in areas where plant nutrients such as nitrate and phosphate are abundant the availability of iron is actually a limiting factor in growth and biomass (Coale *et al.* 1996, Frost 1996, Matsunaga *et al.* 1994, Takeda 1998, Wells *et al.* 1995). Hence the concern of unnatural iron inputs from artificial reefs seems to center not on the occurrence of adverse toxicological effects in marine organisms, but rather on the alteration of the composition of natural assemblages of algae and species which compete with algae.

Lead paint has been used on the interiors of some vessels. Lead has no biological function and, therefore, exhibits accumulation trends in organisms (Thompson 1990). Corals have been shown to incorporate lead into their skeletons (Dodge and Gilbert 1984). Unicellular algae and sea urchins appear to be the most sensitive marine organisms (Berhard 1980). Growth inhibition has been observed in the algae species *Thalassiosira pseudonana* and *Porphyridium marinum* exposed to lead as well as in sea urchins.

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Appendix D

Developing Workplans for Vessel Preparation Prior to Reefing

Determining the type and location of the potential sources of contamination from a vessel intended for use as an artificial reef should be conducted as part of a workplan for vessel clean up and preparation. The purpose of such a workplan is to assure that materials of concern potentially contributing to pollution of the marine environment are addressed prior to reefing. The development of a workplan also can allow for more effective clean-up efforts during vessel preparation by considering activities such as recycling and reuse operations and possibly diver safety preparations. Any such salvage operations should occur in a manner that will minimize debris and contamination with oils or other products that have to be cleaned up at a later date. This activity may allow for improved access for subsequent clean-up efforts.

Information which may be useful in the preparation of a workplan could include:

- Asbestos documentation for the vessel;
- PCB documentation for the vessel;
- Documentation that naval vessels have been previously demilitarized and certified to be radiologically decontaminated;
- Documentation that refrigerants and halons have been removed from shipboard systems;
- Information on hazardous materials onboard the vessel;
- Information on exterior hull paint which could include paint type and date of last application;
- General drawings of machinery, compartments, and tank layouts;
- Description of vessel dimensions including size, weight, and superstructure materials;
- Tank soundings describing the volume and contents of fuel oil tanks prior to preparation for reefing;
- List of items with beneficial reuse potential to be salvaged prior to sinking;
- Assessment of applicable laws and regulations, including permit requirements; and
- Reef site surveys and proposed site preparation.

An assessment of the above mentioned information could then direct the actions needed for preparation of the reef project workplan. Some general workplan preparation actions include:

- Assess vessel drawings and dimensions;
- Identify which items will remain on the vessel;
- Identify items to be salvaged prior to sinking;
- Estimate economic viability of the reef project (including permit costs and timeframes);
- Determine if the vessel is a good candidate (i.e., does the workplan fall within reasonable time and financial commitments);
- Coordinate with all regulatory agencies, local, regional, State and federal, as well as stakeholders, during all project phases;
- Apply for and receive the appropriate permits for the project;

- Remove hazardous materials and clean vessel;
- Inspect vessel to clear all findings (that the workplan for removal of materials as well as the vessel clean-up is met);
- Conduct vessel stability analysis;
- Develop strategy for vessel sinking;
- Notify NOAA to update nautical charts once the ship has settled on the ocean floor;
and
- Deploy relevant aids to navigation and mooring/marker buoys at the site.

Appendix E

General Principles for a Vessel Clean-up Operation

In order to prepare a vessel intended to create an artificial reef, a workplan should be developed to direct cleaning operations – as described in Appendix D. Salvage operations should take place first, being careful to minimize debris and contamination with oils or other products that will need cleaning sometime during the vessel preparation. Other vessel clean-up preparations to be considered include:

- Re-use/recycle/dispose of all or some vessel components – besides ferrous scrap materials, there may be high-value components onboard the vessel, such as non-ferrous metals (e.g., copper, aluminum, nickel), and re-useable equipment such as generators, machines, pumps, and cranes;
- Generally, clean-up operations should begin at the highest part of the compartment or tank and proceed downwards to the bilge;
- Deal with the large concentrations of oil and hazardous products early in the operation;
- Keep compartments clean and make concerted efforts to avoid spillage during salvage and clean-up operations; and
- Consider removing, instead of cleaning, heavily contaminated machinery and piping. Removal may be quicker and less expensive. Removal may also allow for less overall effort in clean-up as access to the contaminated machinery and piping is improved and ongoing contamination from drips and seepage is minimized.

Appendix F

Recommended Checklist for Documenting Vessel Clean-up Using this Guidance^{9, 10}

- I. Specify particular material of concern
- II. Describe narrative clean-up goal for that material of concern
- III. Conduct surveys and assessments to determine current conditions/amounts of material of concern and document and describe:
 - ✓ Survey design and assessment methodologies
 - ✓ Who conducted survey/assessment
 - ✓ When survey/assessment was conducted
 - ✓ Results of survey/assessment
- IV. Discuss how the narrative clean-up goal for the given material of concern was achieved (vessel preparation/clean-up initiated specifically for vessel-to-reef project)
 - ✓ Who carried out the work?
 - ✓ When was the work completed?
 - ✓ What cleaning method was used? What preparation was done to address this material of concern? How was the narrative clean-up goal achieved?
 - ✓ For some materials, the narrative clean-up goal is the removal of all of that given material (e.g., oil and fuel, solids/debris/floatables, antifreeze and coolants, fire extinguishing systems, batteries, refrigerants and halons, mercury, black and gray water, invasive species). For these materials of concern, has the removal of all the specified material been verified? How much of the material was removed and what was done with it after removal?
 - ✓ For some materials of concern, the narrative goal allows for some materials to remain on the vessel if prepared properly (e.g., asbestos, paint, lead ballast bars, radioactive materials, negatively buoyant vessel debris). For these materials of

⁹ This template would be used for each material of concern as presented in the BMPs (e.g., oil and fuel; asbestos; PCBs; paint; solids/debris/floatables; and batteries, antifreeze, coolants, mercury, radioactive materials and other materials of environmental concern).

¹⁰ This checklist is not a regulatory requirement, nor is it a requirement to submit this information to any particular governmental or quasi-governmental agency, State or Federal. However, this checklist outlines the type of information that might be useful to show that the goals in this guidance document have been met.

concern, how much of the specified material was removed and how much remains on the vessel (e.g., approximately how many lead ballast bars, approximately how much surface area is still covered with paint, how many rooms/compartments still contain friable or nonfriable asbestos-containing material)?

-Was the material prepared with the intention of leaving it on board?

-Is the material encapsulated (friable asbestos) or covered with growth (active anti-fouling paint)? Enclosed in a room (negatively buoyant vessel debris)?

✓ How has the completed work been verified?

V. Identify who prepared this document

✓ Name(s) and title(s)

✓ Contact information

Appendix G

Suggested Cleaning Methods for Oils, Fuels and Semi-solids (Greases)

Tanks

Methods for cleaning tanks include but are not limited to:

- Mechanical Cleaning: Mechanical cleaning involves mechanical removal of sludge and remaining fluids and wiping down all surfaces with oil absorbent material. Although manpower intensive, this cleaning method limits the spread of contamination and does not require large volumes of fluids that are expensive to dispose.
- Steam or Hot Water Cleaning: This method is quite effective, although it requires special equipment and generates large volumes of oily water. If this method is considered, a plan should be developed so that oily water generated during this cleaning method is dealt with in accordance with all applicable regulations. Surfactants or soaps are not recommended, as they tend to emulsify any oil present and make the oily water exceptionally difficult to treat. This would likely create higher disposal costs. In tanks where deckheads and sides are reasonably free of contamination, pressure washing can cause significant contamination of these otherwise clean surfaces through splashing, misting, and carry-over.
- Solvent Washing: Solvent washing may be an option where there are especially difficult residuals or deposits that need removal. Note that the use of solvents will require special handling and disposal of all liquid product generated as wastes.

In rare cases, especially where low-grade fuels have been stored, it may be necessary to resort to advanced tank cleaning methods such as ultrasonic or special solvents. It may also be advantageous to use a combination of several different methods, depending on the nature and location of the contamination. In general, mechanical cleaning would be the first method to try, followed by steam/hot water washing, then solvent washing in extremely difficult situations. Whatever method is selected, the effluent and water should be collected and treated. Large volumes will require the services of a pumper truck or barge, while smaller quantities should be collected and stored in drums and removed from the vessel. Caution should be used during all transfer operations to avoid spills. If transferring large quantities of oil or oil contaminated liquid, a boom around the vessel should be used to minimize the extent or spreading of a release.

Fuel and Oil Pipe Fittings, Piping with Manifolds, and Filling Points

Filling points: All filling stations or deck fittings that were used for receiving fuels or oils should be opened and cleaned. Access to the filling stations and deck fittings is necessary to ensure that they are completely drained and free of such fuels or oils. This will typically require access from the bottom and the top.

Fuel and Oil Piping Including Manifolds: Fuel and oil piping (including non-segregated ballast systems) should be drained of all fuel and oil. The cleaning and opening of pipes varies according to the type of fuel or oil that was contained in the lines. In general, the more viscous the fuel or oil, the more opening of pipes and cleaning activity will be required. For very viscous products (e.g., No. 6 fuel oil or Bunker C fuel as described in the “Oil and Fuel” section of this document), all piping and fittings should be fully opened for visual inspection.

Vertical piping runs should have all valves completely opened and any blanking flanges or spectacle plates removed for cleaning. Horizontal piping runs should be opened at low spots. Once draining of piping systems is completed, no visual evidence of weeping should exist at openings.

Fuel and Oil Piping Fittings: Fittings consist of valves, site glasses, coolers, siphon breakers, and filters. A visual examination of internals, or a cut through the lowest point of the fitting may be useful. Where fittings are of complex construction or have more than one oil-tight compartment (as in coolers), then access to all sub-compartments or components may be necessary. No visual evidence of weeping should exist at openings.

Unless the piping is clearly identified as being part of a non-hydrocarbon system or there is clear evidence to indicate that the system was not part of a hydrocarbon containing system (e.g., seawater piping to coolers, fresh water piping to domestic spaces), it should be assumed that the piping contained fuel or oil. Fittings should be cleaned, or removed from the vessel.

Bilge Compartments and Piping

All piping that runs through the bilge areas of machinery spaces should be assumed to be contaminated by fuel, oil, or greases until proven otherwise. Piping in bilge spaces should follow the clean-up suggestions as presented in the subsection above entitled “Fuel and Oil Piping Including Manifolds.”

Combustion Engines

Structure: Remove access panels, explosion doors, handhold doors, maintenance panels, gear covers, bearing covers/retaining plates, as necessary to remove oil. Visible oil should be removed from all internal components. The surrounding and support structure should be made accessible for inspection, especially the area under the engine. At least one main bearing should be opened to determine if the design allows oil to be trapped, thereby indicating whether all bearings should be opened and cleaned.

Fuel System: All fuel system components should be cleaned or removed from the engine. These include injectors, carburetors, supply,

distribution and return lines, filters, pumps, relief valves, pressure regulating mechanisms, governors, and heat exchangers. Removal of these items will prevent fuel seepage from their connections. If these items are to be sunk with the vessel, they should be opened, cleaned, and prepared for inspection.

Lubricating
Oil System:

Lubricating oil sumps should be drained and opened for cleaning and visual inspection. This may require that additional access openings be made. All lubricating oil piping, both internal and external to the engine, should either be removed or drained. Lubricating oil system components should either be cleaned or removed from the vessel. Internal oil gallery plugs should be removed. Pedestal and thrust bearings should be drained. Engine driven oil pumps should be pulled or cleaned. Engine oil filling and dirty oil drainage arrangements should be removed or cleaned.

Other Systems:

Other components and systems susceptible to contamination with fuels, oils, or greases (e.g., superchargers, turbochargers, air filters) should be examined visually and cleaned if they are present.

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U.S. Environmental Protection Agency



U.S. Maritime Administration

EPA842-B-06-002
May 2006



U.S. AIR FORCE

Metson Marine
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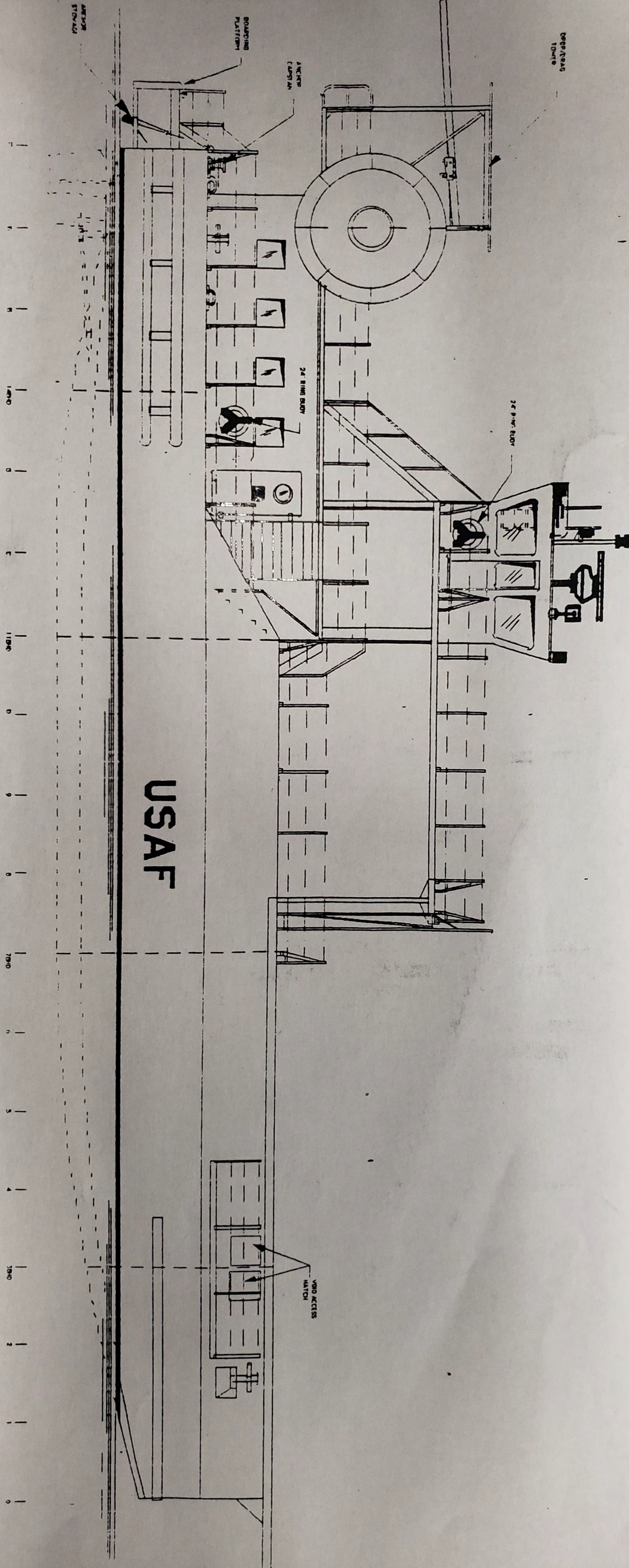
PL-94-9301
USAF BIG DAWG

SPECIFICATIONS FOR WORK TO BE ACCOMPLISHED

SHIP CHARACTERISTICS

VESSEL SHIPBUILDER	SWIFT SHIPS INC. MORGAN CITY, LOUISIANA
LENGTH OVERALL	93 FEET 0 INCHES
MAX. BEAM AT DESIGN WATERLINE	26.79 FEET
EXTREME BEAM INCLUDING APPENDAGES	32 FEET 0 INCHES
DRAFT (MAX. NAVIGABLE) (FWD.)	3 FEET 0 INCHES
DRAFT (MAX. NAVIGABLE) (AFT.)	5 FEET 0 INCHES
LIGHT DISPLACEMENT	157 TONS
DESIGN DISPLACEMENT	314,720 LBS
HEIGHT OF MAST ABOVE DESIGN WATERLINE	42 FEET 0 INCHES
FUEL CAPACITY	1600 GALLONS
OIL CAPACITY	30 GALLONS
POTABLE WATER CAPACITY	500 GALLONS

21 May 2009
Date Prepared



OUTBOARD PROFILE



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PL 9301



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WARNING
Controlled Area
It is prohibited to enter this area without
permission of the Installation Commander
or the appropriate authority.
While on the installation of personnel and
the property under their control are subject
to search.

