

Section C - Descriptions and Specifications

STATEMENT OF WORK

1. INTRODUCTION:

Naval Surface Warfare Center Philadelphia Division (NSWCPD) Code 421 is designated as the Lifecycle Manager (LCM) and In-Service Engineering Agent (ISEA) for US Navy diesel engines. The LCM and ISEA mission involves maintaining adequate and effective operational readiness, safety and mission effectiveness of US Navy diesel engines and their associated auxiliary systems. Additionally, NSWCPD works collaboratively and synergistically with Military Sealift Command (MSC) and the United States Coast Guard (USCG) to address lifecycle and in-service issues related to MSC and USCG shipboard diesel engine systems. In support of this mission, NSWCPD provides engineered solutions to fleet diesel problems.

Diesel Engine Original Equipment Manufacturers (OEMs) design, construct, install, service, support and provide repair and replacement parts for the engines under their purview. They possess certain unique knowledge, experience and expertise, and access to technical information that is not available elsewhere.

In support of its Diesel Engine LCM and ISEA mission, NSWCPD intends to leverage off the contractor's unique knowledge, experience and expertise, and access to technical information related to the engine lines listed in Appendix 1, for the purpose of improving in-service and lifecycle support initiatives. The contractor will assist NSWCPD in developing, delivering and executing engineered solutions to fleet diesel problems.

2. BACKGROUND INFORMATION:

Virtually all mechanical equipment needs continuing engineering support to solve operational problems. Military systems require a higher level of engineering support than commercial equivalent systems. The military systems normally push the leading edge of technology and are subjected to ever-changing and demanding environments and mission cycles. New problems are continually experienced after approval for operational use. The new problems are a result of greater exposure, changes in mission, changes in system weight or configuration, variations in manufacture or repair, aging of the hardware, maintenance concept changes, critical materials availability, and changing component coating and fuel compounds. (i.e.: Bio-Fuel technologies and similar advances). These changes in engine usage can be dramatic and can have a dramatic impact on safety, readiness, and mission effectiveness. Therefore, a direct contract relationship with diesel engine OEMs is essential to maintain these systems at full operational capability

3. SCOPE:

This Statement of Work (SOW) describes services to be applied via Task Orders (TOs) detailing specific support requirements within the scope of this contract SOW. The overall scope of this SOW is to provide lifecycle, modernization and in-service support for the engine lines listed in Appendix 1 and their related shipboard auxiliary systems. The support required will involve technical, logistics, training, administrative and program management efforts related to diesel engine lifecycle and in-service concerns. The contractor shall provide all services, personnel, facilities, expertise, technical information, special tools, supplies and incidental materials necessary to execute the performance requirements detailed in this SOW.

4. PERFORMANCE REQUIREMENTS:

Within the scope of this contract, the contractor shall provide all labor, supplies, services, materials, expertise, information, special tools, procedures and facilities necessary to support NSWCPD's mission as LCM and ISEA for US Navy Diesel Engines. Major functions the contractor will be expected to perform include:

4.1 Engineering & Technical Services - The contractor shall provide engineered solutions to existing problems. Engineering & technical services expected to be supplied on this contract include:

- technical issue resolution
- engineering investigations
- failure analysis & root cause determination
- product improvements (design, development, testing & evaluation, and deployment),
- new technology development and integration
- technical documentation product development, revision and update
- land-based and shipboard testing and evaluation.
- field technical service support, in conjunction with engineering efforts and taskings

4.2 Logistics Support Services - The contractor shall provide necessary product line expertise and information necessary to support the development, updating and revision of various Navy logistics products, including:

- engine configuration management and associated Allowance Parts Lists (APLs)
- parts and sub-assembly provisioning
- technical manuals
- planned maintenance system (PMS) procedures
- maintenance standards
- drawings
- parts stocking and availability

4.3 Engine Training Services – The contractor shall provide training services in support of customer requirements. Training services include providing seats/space in existing training courses as well as the development of new training curriculum and courses as identified by the customer. Training shall be conducted at the Caterpillar Learning Center in Peoria, IL as well as in fleet concentration areas.

4.4 Program Management Services – The contractor shall provide program management services in support of the efforts included in the scope of this contract. The contractor's Program Manager will be the Government's primary point of contact regarding contract execution matters. Program management duties and tasks will include, but are not limited to: contract management, budgeting, scheduling, planning, executing, prioritizing, progress tracking (task and financial), coordination of Navy Owners Group meetings and task resolution, and planning of tasks, projects and programs. The Program manager shall be well versed in Government contract management and administration, including funding allocation (CLINs and SLINs), invoicing and supporting documentation, and manpower reporting.

4.5 Personnel Qualifications

4.5.1 General

The contractor shall be responsible for the employment of trained and technically qualified personnel to perform the efforts described herein. In addition, the contractor is responsible for organizational and administrative controls necessary to ensure that performance meets or exceeds all contract specification requirements and those set forth in individual delivery orders.

Personnel assigned to or utilized by the contractor in the performance of this contract shall meet the experience, educational or background requirements set forth herein, and shall be fully capable of performing the functions of the respective labor categories in an efficient, reliable and professional manner. The work history of each employee must contain experience directly related to the task and functions he/she intends to perform on this contract. The Government reserves the right, during the term of this contract, to request work histories on any contractor employees for the purposes of verifying compliance with this requirement. If the contracting officer questions the qualifications or competence of any person performing under the contract, the burden shall be on the contractor to confirm that the person in question is qualified as prescribed herein.

When requested, the contractor shall provide resumes and similar work experience to document employee competencies.

The appropriate level of clearance will be required in order to access specific compartments onboard ship in addition to Government facilities.

In the event an individual proposed for performance under the resultant contract is not currently employed by the offeror, the offeror shall include with the proposal a letter of intent signed by that individual which states the individual's intent to accept employment with that offeror within thirty (30) days of contract award.

4.5.2 Electronic Cost Reporting and Financial Tracking (eCRAFT)

Per NSWCHQ direction, implementation of the Electronic Cost Reporting and Financial Tracking (eCRAFT) Enterprise is required at the NAVSEA Warfare centers. eCRAFT is a tool intended to provide the capability to perform post award tracking and monitoring of costs for service contracts. In support of this initiative, the contractor will be required to report labor expenditures using the eCRAFT labor categories included within this statement of work. To assist the contractor in the proper identification of labor categories, the following labor category comparison chart is provided:

<u>eCRAFT Labor Category</u>	<u>Common Job Title</u>
Program/Project Manager	Program Manager
Program/Project Manager	Engine Line Managers
Mechanical Engineer	Mechanical Engineer
Electrical/Electronics Engineer	Electrical/Controls Engineer
Engineer	Analytical Engineer
Engineering Technician (mechanical)	Mechanical Technician
Engineering Technician (electrical)	Electrical/Controls Technician
Machinery Maintenance Mechanic (senior)	Senior Field Service Technician
Machinery Maintenance Mechanic	Field Service Technician
Technical Writer	Technical Writer
Drafter/CAD Operator	Graphics Specialist
Logistician	Logistician
Training Specialist	Training Specialist
Administrative Assistant	Administrative Assistant

4.5.3 Personnel Qualification Requirements:

The following represents the Government's minimum and target education and experience requirements for the personnel labor categories identified. These labor categories are anticipated to be the minimum personnel requirements necessary to effectively support the contract Statement of Work. The target specialized experience included as part of the desired qualifications should have been obtained in the fields of endeavor indicated in the applicable labor categories listed below, and may have been gained concurrently, unless otherwise specified. Although the contractor is not required to submit resumes with their proposal, the contractor must certify that all proposed personnel meet the prescribed minimum requirements.

a) Program Manager I – eCRAFT code MANP1:

- Minimum Education: Bachelor's degree in a technical or project/program management discipline from an accredited college or university. In lieu of education, eight (8) years' experience in program management, engineering and technical oversight of Government contracts, in addition to the target experience required below.
- Minimum Experience: Five (5) years' experience performing Project Management duties including contract management, budgeting, scheduling, planning, estimating, and progress tracking (project and financial) and planning of programs and projects.
- Target Experience: Three (3) years' experience performing Project Management duties in support of Navy and/or Coast Guard programs and projects.

b) Program Manager 1 / CAT 3600/C280 Engine Line Manager – eCRAFT code MANP1:

- Minimum Education: Bachelor of Science degree in Engineering (Mechanical or Electrical preferred) from an accredited college or university. In lieu of education, individual shall have ten (10) years' specialized experience in Caterpillar engine lines, with at least eight (8) years' experience on the CAT 3600/C280 engine line. Specific engine models include: 3606, 3608, 3612, C280-8, C280-12, and C280-16
- Minimum Experience: The Engine Line Managers (ELMs) will be the primary technical points of contact in execution of the contract SOW. The ELMs will be considered experts on the assigned engine lines, and shall have extensive experience in the design, construction, qualification, installation, operation, troubleshooting and maintenance of the engine line.

- Target Experience: Engine line-specific field service experience and Navy shipboard CAT 3600/C280 engine series operating and maintenance experience.

c) Program Manager 1 / CAT 3500, D398, & D399 Engine Line Manager – eCRAFT code MANP1:

- Minimum Education: Individual should possess a Bachelor of Science degree in Engineering (Mechanical or Electrical preferred) from an accredited college or university. In lieu of education, individual shall have ten (10) years' specialized experience in Caterpillar engine lines, with at least eight (8) years' experience on the CAT 3500 and D398/399 engine lines. Specific engine models include: 3508, 3512, 3516, D398, and D399
- Minimum Experience: The Engine Line Managers (ELMs) will be the primary technical points of contact in execution of the contract SOW. The ELMs will be considered experts on the assigned engine lines, and shall have extensive experience in the design, construction, qualification, installation, operation, troubleshooting and maintenance of the engine line.
- Target Experience: Engine line-specific field service experience and Navy shipboard CAT 3500 series operating and maintenance experience.

d) Program Manager 1 / CAT 3100-3300 / C4.4-C32 Engine Line Manager – eCRAFT code MANP1:

- Minimum Education: Individual should possess a Bachelor of Science degree in Engineering (Mechanical or Electrical preferred) from an accredited college or university. In lieu of education, individual shall have ten (10) years' specialized experience in Caterpillar engine lines, with at least five (5) years' experience on the CAT 3100-3300 engine lines. Specific engine models include: 3126, 3126B, C4.4, C18, C32, and 3306.
- Minimum Experience: The Engine Line Managers (ELMs) will be the primary technical points of contact in execution of the contract SOW. The ELMs will be considered experts on the assigned engine line, and shall have extensive experience in the design, construction, qualification, installation, operation, troubleshooting and maintenance of the engine line.
- Target Experience: Engine line-specific field service experience and Navy shipboard CAT 3100-3300 engine series operating and maintenance experience.

e) Program Manager 1 / CAT 3400 Engine Line Manager– eCRAFT code MANP1

- Target Education: Bachelor of Science degree in Engineering (Mechanical or Electrical preferred) from an accredited college or university. In lieu of education, individual shall have ten (10) years' specialized experience in Caterpillar engine lines, with at least five (5) years' experience on the CAT 3400 engine line.
- Minimum Experience: The Engine Line Managers (ELMs) will be the primary technical points of contact in execution of the contract SOW. The ELMs will be considered experts on the assigned engine line, and shall have extensive experience in the design, construction, qualification, installation, operation, troubleshooting and maintenance of the engine line.
- Target Experience: Engine line-specific field service experience and Navy shipboard CAT 3400 operating and maintenance experience.

f) Mechanical Engineer - eCRAFT code EM3

- Minimum Education: Bachelor of Science degree in Mechanical Engineering from an accredited college or university.
- Minimum Experience: Individual shall have seven (7) years technical experience in engineering analysis, design, installation, operation, maintenance, troubleshooting, repair and testing of mechanical systems. This experience shall include five (5) years of leading mechanical engineering efforts involving the application of engineering disciplines in the technical field directly related to shipboard diesel engines and associated auxiliary support systems.

g) Electrical / Controls Engineer - eCRAFT code EE3

- Minimum Education: Bachelor of Science degree in Electrical Engineering or related engineering discipline from an accredited college or university.
- Minimum Experience: Seven (7) years technical experience in engineering analysis, design, installation, operation, maintenance, troubleshooting, repair and testing of electrical, electronic and control systems. This experience shall include five (5) years of leading electrical engineering efforts involving the application of engineering disciplines in the technical field directly related to shipboard diesel engine electrical and control systems, and associated auxiliary support systems.

h) Engineer - eCRAFT code E3

- Minimum Education: Bachelor of Science degree in Mechanical Engineering or a related engineering discipline from an accredited college or university.
- Minimum Experience: Seven (7) years technical experience in engineering analysis, design, development and modeling of mechanical and electrical systems. This experience shall include five (5) years' experience of leading engineering analysis efforts involving the application of engineering disciplines in the technical field directly related to shipboard diesel engines, their related electrical and control systems, and associated auxiliary support systems.

i) Engineering Technician, Mechanical – eCRAFT code 30086

- Minimum Education: High School diploma or GED equivalent.
- Target Education: Bachelor's or Associate's Degree in a related engineering or technical discipline from an accredited college or university, or demonstrated curriculum work towards a Bachelor's or Associate's degree in a related engineering or technical discipline.
- Minimum Experience: Seven (7) years technical experience in the operation, maintenance, troubleshooting, repair and testing of mechanical systems. This experience shall include five (5) years' experience related to Caterpillar diesel engines and associated auxiliary support systems.

j) Engineering Technician, Electrical – eCRAFT code 30086

- Minimum Education: High School diploma or GED equivalent.
- Target Education: Bachelor's or Associate's Degree in a related engineering or technical discipline from an accredited college or university, or demonstrated curriculum work towards a Bachelor's or Associate's degree in a related engineering or technical discipline.
- Minimum Experience: Individual shall have seven (7) years technical experience in the operation, maintenance, troubleshooting, repair and testing of electrical, electronic and control systems. This experience shall include five (5) years' experience related to Caterpillar diesel engine electrical, electronic and control systems, and associated auxiliary support systems.

k) Machinery Maintenance Mechanic, senior – eCRAFT code 23530

- Minimum Education: High School diploma or GED equivalent. Additionally, individual shall have factory Senior Field Service certification on Caterpillar diesel engines.
- Minimum Experience: Ten (10) years technical experience in maintenance, troubleshooting and repair of shipboard diesel engines and related auxiliary support systems, to include five (5) years' experience related to Caterpillar diesel engines and associated auxiliary support systems.

l) Machinery Maintenance Mechanic – eCRAFT code 23530

- Minimum Education: High School diploma or GED equivalent. Additionally, individual shall have factory Field Service certification on Caterpillar diesel engines.
- Minimum Experience: Five (5) years technical experience in maintenance, troubleshooting and repair of shipboard diesel engines and related auxiliary support systems, to include three (3) years' experience related to Caterpillar diesel engines and associated auxiliary support systems.

m) Technical Writer – eCRAFT code 30463

- Minimum Education: Bachelor's degree English, Journalism, Engineering or a related discipline from an accredited college or university.
- Minimum Experience: Five (5) years of experience in the planning, preparation and development of varied types of technical and logistics support documentation for shipboard systems and equipment. Experience shall include information search and interpretation of technical data in the preparation of technical documentation.

n) Drafter / CAD Operator – eCRAFT code 30062

- Target Education: Associate's degree in Graphic Design, Fine Arts or a related discipline from an accredited college or university. In lieu of an Associate's degree, individual shall have technical training in Graphics Design or a related field equivalent to a two-year Associate's degree

- Minimum Experience: Three (3) years' experience in computer-based graphics design in a technical environment, to include one (1) year specialized experience developing graphics products for technical and logistics support documentation (technical manuals, maintenance standards, technical procedures, equipment drawings, etc.)

o) Logistician – eCRAFT code LGT2

- Minimum Education: Individual shall possess a High School diploma or GED equivalent.
- Minimum Experience: Seven (7) years' experience in the development, updating and use of Integrated Logistics Support (ILS) products for military systems and equipment.

p) Training Specialist - eCRAFT code ST1

- Minimum Education: Bachelor's degree in Education, Psychology or related training discipline from an accredited college or university. In lieu of education, individual shall have minimum eight (8) years' experience in planning, organizing and directing a wide range of training activities, including those for internal employees and external customers.
- Minimum Experience: Five (5) years' experience in the development of training programs for internal employees as well as external customers. The Training Specialist shall be experienced in the identification and assessment of training needs, and the planning, implementation and execution of training activities designed to address those needs. Demonstrated experience in the development of curriculum, teaching materials, lesson plans, learning aids, and assessment methods is also required. Target experience includes personnel with field service experience on the associated engine lines.

q) Administrative Assistant – eCRAFT code 01020

- Minimum Education: High School diploma or GED equivalent.
- Minimum Experience: Five (5) years' experience in a technical office environment, and shall be fully fluent in all Microsoft Office suite products as well as Adobe Acrobat Pro software.

5. DELIVERABLES:

5.1 General

All products, documentation, data files and masters for products/reports etc. developed to support this task order are the property of the Government and shall be turned over to NSWCPD upon request or at the completion of the order. Deliverables shall be developed and submitted in accordance with the Contract Data Requirements Lists (CDRLs) and the specific requirements of each Delivery Order. Both electronic and hard copy deliverables may be required. Work products shall be submitted in media (e.g., DOC, XLS, PDF, etc.) as mutually agreed upon prior to submission. Unless otherwise specified, deliverable products may be in contractor format.

5.2 Deliverable Acceptance Criteria

Final inspection and acceptance of all work, reports, and other deliverables will be performed by the Government Subject Matter Expert (SME) at the place of delivery. General quality measures, as set forth below, will be applied to each work product delivered under this statement of work.

- 5.2.1 Accuracy - Deliverables shall be accurate in presentation, technical content, and adherence to accepted elements of style.
- 5.2.2 Clarity – Deliverables shall be clear and concise. Any/all diagrams/text shall be easy to understand and be relevant to the supporting narrative.
- 5.2.3 Consistency to Requirements - All deliverables must satisfy the general requirements of this statement of work as well as the specific requirements of each delivery order.
- 5.2.4 The contractor shall maintain Quality System Procedures that meet the requirements of ASQ/ANSI/ISO 9001:2015.
- 5.2.5 File Editing - All electronic text and diagrammatic files shall be editable by the Government unless otherwise agreed.
- 5.2.6 Timeliness - Deliverables shall be submitted on or before the due date specified by the Government.
- 5.2.7 The contractor shall provide the following deliverables during the execution of this contract. The specific requirements for each deliverable are provided in applicable Contract Data Requirements Lists (CDRLs).
- 5.2.8 Contracting Officer's Management Reports (CDRL A001) – shall be developed in accordance with the requirements of Data Item Description (DID) DI-MGMT-81864
- 5.2.9 Travel/Trip Reports (CDRL A002) – shall be developed in accordance with the requirements of Data Item Description (DID) DI-MISC-81943

5.2.10 Technical Reports (CDRL A003) – shall be developed in accordance with the requirements of Data Item Description (DID) DI-MISC-80508B

6. TRAVEL AND PLACE OF PERFORMANCE:

The majority of work shall be performed at the Contractor's site(s) and at Government facilities in the vicinity of the Contractor's site(s). Additionally, the Contractor will be required to attend meetings and perform visits in the performance of the various tasks assigned under this contract. Such visits will be to Navy activities, ships, industrial areas, and the facilities of other contractors, corporations and businesses associated with each particular task. Ships visits may be accomplished during industrial repair availabilities and may require isolated underway periods. Travel locations include, but are not limited to, Philadelphia, PA, Norfolk VA, Mayport, FL, San Diego, CA, Pearl Harbor, HI, Bahrain, Sasebo and Yokosuka, Japan, and various Naval facilities and ship new construction yard facilities. The contractor shall make their own travel arrangements and process their own clearance data/messages required for admission to appropriate facilities. Travel shall be in accordance with the Joint Travel Regulations (JTR).

Location	Number of Individuals	Number of Days	Number of Trips
Philadelphia, PA	4	5	20
Norfolk, VA	2	5	3
Norfolk, VA	2	45	2
Mayport, FL	2	5	5
San Diego, CA	2	5	3
San Diego, CA	2	45	2
Pearl Harbor, HI	2	10	5
Bahrain	2	15	1
Yokosuka, Japan	2	15	2
Sasebo, Japan	2	15	2

Table 1

7. PERIOD OF PERFORMANCE:

See Section F.

8. SECURITY REQUIREMENTS:

Due to the sensitive nature of the work to be accomplished under this contract, each contractor employee supporting this contract shall be determined to be of good character, trustworthy, reliable, and likely to act with integrity and responsibility in the performance of their duties executing the requirements of this contract. To ensure this, each contractor employee shall have a National Agency Check with Inquiries (NACI) conducted, with favorable results.

Additionally, each contractor employee shall have been deemed eligible for obtaining a security clearance, should the need arise during the execution of this contract.

9. SCHEDULE / TASKING:

Specific tasking will be provided via individual Task Orders.

10. OVERTIME:

The contractor's use of overtime may be necessary to accomplish objectives contained in the contract and delivery orders due to schedule restrictions and constraints, and as a result of specific customer and sponsor requirements. The use of overtime is typically dictated by the need to perform urgent tasks, particularly in conjunction with shipboard in-service engineering, life cycle management and engineering support services and activities. Judicious use of overtime will contribute to limiting downtime of ships and ships' equipment, thereby ensuring that essential schedules are met and minimizing impact on the ability of ships to perform their respective missions. The COR will monitor the contractor's performance to minimize the need for overtime and associated costs, and to ensure overtime is prudently utilized to comply with essential delivery or performance requirements.

11. CONTRACTOR PERSONNEL IDENTIFICATION:

In the performance of this contract, contractor employees shall identify themselves as contractor personnel by introducing themselves or being introduced as contractor personnel and by displaying distinguishing badges or other visible identification for meetings with Government personnel. Contractor personnel shall appropriately identify themselves as contractor employees in telephone conversations and formal and informal written correspondence.

12. CONTRACTING OFFICER'S REPRESENTATIVE (COR):

The COR for this delivery order will be Mr. Stephen Kovacs, NSWCPD Code 421, Philadelphia, PA. He can be contacted at stephen.n.kovacs@navy.mil or 215-897-1144.

Appendix 1 - Listing of Caterpillar Products installed on US Navy, Military Sealift Command,
US Coast Guard, and US Army Corps of Engineers Ships

<u>US Navy</u>		
USN DDG 1000	2 X	C18 EDG
	1 X	C18 EDG
LCC-19	1 X	3516B SSDG
	2 X	3516B EDG
SSN Virginia Class Sub	1 X	3512B EDG
USN LPD-17 Class	5 X	3608 SSDG
INLS	2 X	C18 Propulsion
	1 X	C18 Bow Thruster
	2 X	C4.4 SSDG
USN NSW RIB	2 X	3126 Propulsion
USN CAC	1 X	3126B Propulsion
USN TWR	2 X	3512 Propulsion
USN TWR	2 X	C32 Propulsion
USN "Cyclone" PC	2 X	3306 SSDG
<u>Military Sealift Command</u>		
T-AGM 25	4 X	12M32C MDG
	1 X	C32 EDG
LCC-20	3 X	3516B SSDG
SBX Platform	6 X	3612 DEP
USN ARS	4 X	D399 Propulsion
	3 X	D398 SSDG
T-AGOS	4 X	3512 Propulsion
	3 X	3412/3406 SSDG
Sealift T-AKE	1 X	3516B HD EDG
Sealift AOE	5 X	3608 SSDG
Sealift (New Construction) T-AKR	5 X	3608 SSDG
	1 X	3516 EDG
Sealift (Conversion) T-AKR	4 X	3608 SSDG
	1 X	3516 EDG
Sealift AE	2 X	D398 EDG
Sealift T-AG	3 X	3516 Propulsion
	2 X	3412 SSDG
Sealift T-ACS	2 X	3606 SSDG
Sealift T-AFS	6 X	3512 SSDG
<u>US Coast Guard</u>		
USCG "Island Class" WPB	2 X	3516 Propulsion
	2 X	3304T SSDG
USCG National Security Cutter	3 X	3512B Series II SSDG
USCG Great Lakes Ice Breaker	3 X	3612 Propulsion
	1 X	3412C EDG
USCG "Juniper Class" WLB	2 X	3608 Propulsion
	2 X	3508 SSDG
	1 X	3406C EDG
USCG "Keeper Class" WLM	2 X	3508 Propulsion

	3 X	3406 SS/EDG
USCG "Point Class" WPB	2 X	3412 Propulsion
USCG "Bear Class" WMEC	3 X	D398 SSDG
USCG "Ouachita Class" WLR	2 X	D353 Propulsion
USCG "Eagle Class" WIX-327	1 X	D399 Propulsion
USCG "Kankakee Class" WLR	2 X	3412 Propulsion
USCG WYTL	1 X	3412 Propulsion
USCG "Reliance Class" WMEC	2 X	3406 SSDG
<u>US Army Corp of Engineers</u>		
Dredge Essayons	4 X	C280 Prop
	2 X	C280 Pump
	2 X	3512B SSDG
	1 X	C18 EDG
Dredge Wheeler	2 X	C280 -16 Propulsion
	2 X	C280-12 Dredge
	3 X	3516 SSDG