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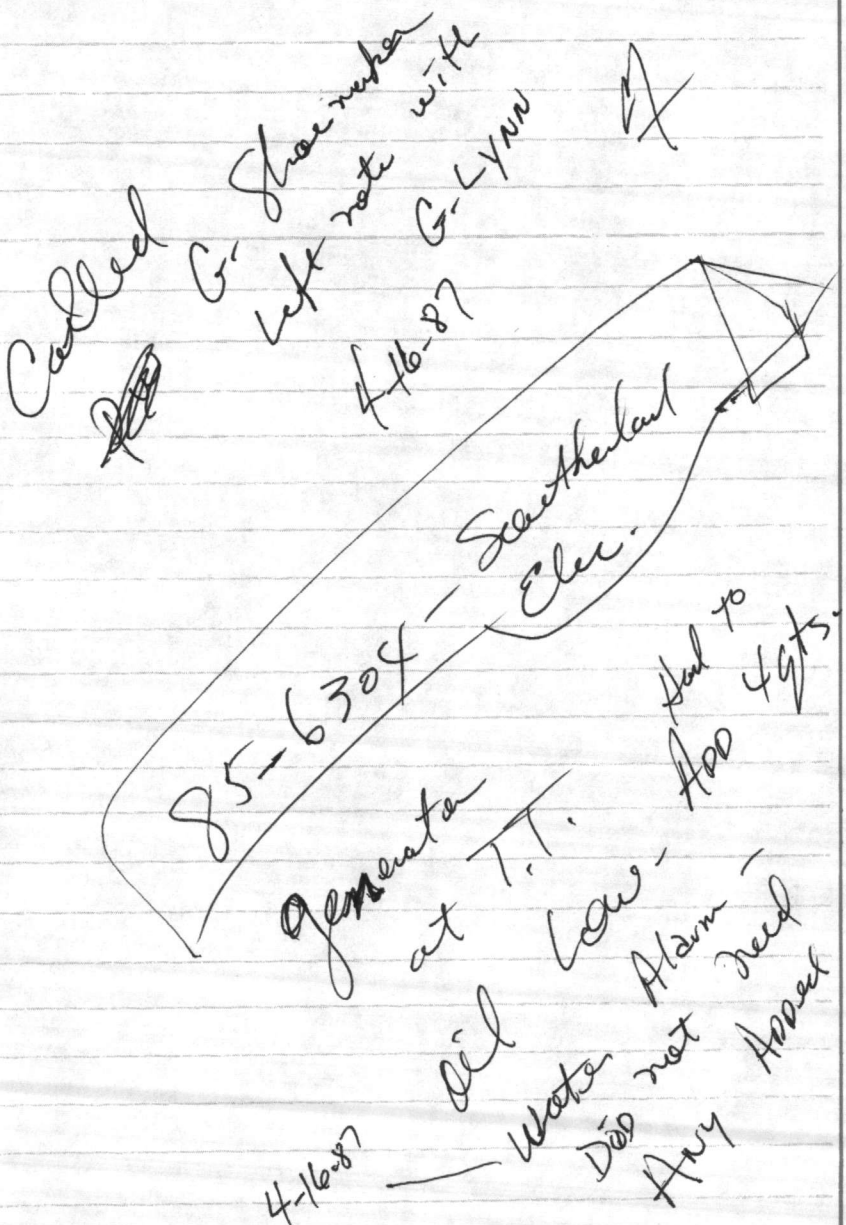

M M

TUBE CLEANING SYSTEMS • VALVES • PUMPS • GASKETS • HONEYWELL

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SERVICING INDUSTRIES SINCE 1954

Page

Wastewater Collection Systems Peer Review Meeting Minutes

Model PWS

VG-5 Need plant description
listing of plant's components, structures, and equipment
w/ dimensions, size, number and/or capacity

VG-10 Discharge limits → Are these state limits
have we always met them. If not when

VG-14 Repair costs over $4000 - Davis Bacon - is Gov. responsibility

~~VG~~-1 P.3.1.1 & 3.1.2 Description of Facilities & System

5-1 P3.2 Wastewater Characteristics

5-2 P3.3.1 Imposed by State of N.C.?

5-2 P3.3.2 Class of Permit (Permit Requirements)

5-3 P3.4.1.1 System boundaries 5' from building?

5-6 P3.4.2.1 Do you have a operations manual (or checklist) for each plant

5-7 P3.4.2.5 Reports - Need full list & when due

5-7 P3.4.2.6 → Does the Utilities Section feed the AIS if so
we need examples of how - otherwise let the PEs do it

5-8 P3.4.2.7 → We don't do pure inspection programs internally
→ Will make it just a PM maintenance program

5-8 P3.4.2.8 → Do we keep monthly record of repairs

Page — Questions of Waco Distribution System - Attachment IX

1. 00005-IX-1 What is valve & building called
2. 00005-IX-1 P 2.3.1 How often do we flush & flow test fire hydrants - Do we?
3. IX-2 P 2.4 Do we have tanks for fire protection water storage
4. IX-2 P 2.8 Do we paint hydrants.
5. IX-3 P 6 Pool season?
6. Do you have listing of system components - pump station pumps etc.
7. IX-C-1 PM listing OK
8. IX-D-1 Any other typical problems

X-1 P2 Do we include storm system - Is it combined

X-1 P2 How much description do we have on system

X-2 P3.2 Do we always want to replace w/ a precast concrete manhole

X-2 P2.5 ~~Item~~ Pump testing responsibility of utilities - not cleaning

Page

UG-2 RB Spell out parameters in B (deliverables) (outputs)

UG-5 PA2b ⇒ post coastal & raw water records requirements such as chlorination, fluoridation, taste, odor

UG-5 Pd Specify end point for pressure

UG-7 Ph Custodial Services (general statement OK?)

UG-7 Pi Reports, what in them, who get them, when

X-1 P2 Do we include storm system - Is it combined

X-1 P2 How much description do we have on system

X-2 P3.2 Do we always want to replace w a precast concrete manhole

X-2 P2.5 ~~From~~ Pump testing responsibly of utilities - not cleaning

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→ Will make it just a PM maintenance program

5-8 P3.4.2.8 → Do we keep monthly record of repairs

1-VI-1 & Cut off at building

2 VI-1 Two Man Rule - by off

3 VI-3 P3.3.4 ⇒ Is this the std use of CL

4 VI-5 P4 Are we going to collect wash samples
If so, how are we going to process them?

5 VI-5 P5 How do we & how often do we calculate std
Who will do this under the contract

6 VI-7 P6.2.3 Agree with procedures listed below

7 VI-9 P6.4 - Assume use oil - what about coal? natural gas burners?

8 VI-16 P8.9 - Eliminate?

9 VI-16 P9 - Inspection process - we have our inspectors & their

10 VI-A-3 Any problems w/ inventory - How do we adjust for coal

11 VI-C-1 ? Do we keep these records; Any others?

12 VI-D-1 Do we keep data like this? If so where? Which tasks
don't apply, which ones need addings

Page — Questions of Mobile Inspectors 8/20 — Worksheet IX

(1) 00005-IX-1 What is valve & building called — CONTROL VALVE

(2) 00005-IX-1 P2.3.1 How often do we flush & flow test fire hydrant — Do we — NO

(3) IX-2 P2.4 Do we have tanks for fire protection water storage — YES

(4) IX-2 P2.8 Do we paint hydrants. (YES MAINT)

(5) IX-3 P6 Pool season?

(6) Do you have listing of system components - pump station pumps etc. — YES

(7) IX-C-1 PM listing OK

(8) IX-D-1 Any other typical problems

UG-2 PB Spell out parameters in B (deliverables) (outputs) DONE

UG-5 PA2b ⇒ post tests & raw water records DONE
requirements such as chlorination, fluoridation, tests, ...

UG-5 Pd Specify end point for pressure PLANT PRESSURE NOT END POINT

UG-7 Ph Custodial Services (general statement OK?)

UG-7 Pi Reports, what in them, who get them, when DONE

Questions on Invisible PWS

Dog

4-7 P9 Contractors Failure To Meet Minimum Efficiency Standard - Do you have such standards? Will this P work? Any changes?

(2) 4-10 P18 Government Furnished Equipment (GFE), ~~What do we~~ - ~~Do we~~ - furnish,
P19 Plant, machinery in the plant, vehicles, tools,

(3) 4-10 P20 Government-Furnished Material (Will you turn over to Contractor your stock of materials after inventory)

(4) 4-11 P21 For furnish utilities (How about coal - when will its responsibility be [illegible]

(5) 4-12 P24 Will the Contractor use your paging system / radios?

(6) 4-13 P25 We will EPS ⇒ & order up OS's - He will run the plant

(7) 4-14 P30 Any reason for secret clearance SH-8?

(8) 4-16 P35 Permits - What is required of the Contractor

(9) 4-17 P43 Do we do any environmental Plan

(10) 4-18 P44 Has Free Certification - do we? YES

(11) 4-18 P49 First 4 wks (how many - 1 each plant?) 1 EACH MANED SHIFT.

(12) 5-1 P1 Types of work → ?

(13) 5-4 P32 Leave in Outages

(14) 5-10 P11 Parts & Materials - Any problems as written

SECTION 00005 TECHNICAL SPECIFICATIONS

UTILITIES SERVICE

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2	General Requirements.....	
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4	Operational Requirements.....	
5	Maintenance Requirements.....	
6	Service Calls.....	
7	Corrective/Preventive Maintenance.....	
8	Indefinite Quantity Work.....	
9	Parts and Materials.....	
10	Workmanship.....	

SECTION 00005 TECHNICAL SPECIFICATIONS UTILITIES SERVICE

1. DEFINITIONS - TECHNICAL

(Additional definitions are in the "Definitions" clause in Section 00004.)

1.1 Additional Material Handling. Time expended for loading materials from storage to truck; unloading materials to work area; moving materials to work area; moving materials from storage to job site; removing debris; and handling of materials during the job that is not included in the craft time standard. The above definition is a summary of the definition of "Additional Material Handling" as used in development of Engineered Performance Standards.

1.2 Craft Hour. A craft hour is an hour of skilled labor required to perform a specific amount of work at the job site. A craft hour does not include time for job preparation, travel, additional material handling, craft delay allowances, inspection, supervision, and similar indirect labor elements.

1.3 Craft Hour Unit Price. A craft hour unit price is the price bid by the Contractor for one craft hour of work. It includes the price elements specified in Section 00001.

1.4 Task Time Standards. The number of craft work hours required by all of the workers of a single craft to accomplish a specific task. Task time standards may be combined to estimate complicated jobs

involving various tasks and many crafts. Task time standards are composed of many operations to complete a specific task.

1.5 Craft Phase. The numbered chronological sequence in which a specific craft performs a job phase.

EXAMPLE:

Job Phase	Craft Phase	Craft	Description
1	1	Carpenter	Fabricate and install frame for new wall
2	2	Electrician	Rough in electrical
3	3	Carpenter	Install sheet rock
4	4	Electrician	Trim out electrical
5	5	Painter	Paint new wall

1.6. Delay Allowances. Time expended for planning the work in the shop and at the job site; personal needs; balancing delay waiting for other craftmen; unavoidable delays; partial day influence; waiting for tools or material that should have been at the job site. The above definition is a summary of the definition of "Delay Allowance" as used in development of Engineered Performance Standards.

1.7 Engineered Performance Standards (EPS). A job estimating system developed for the Department of Defense. EPS is the average time necessary for a qualified craftsman working at a normal pace, following acceptable trade methods, receiving capable supervision, and experiencing normal delays to perform defined amounts of work of a specified quality. EPS manuals are published under the following numbers by each military branch:

Navy:	NAVFAC P 700 Series
Army:	TB 420 Series
Air Force	AFM 85 Series

1.8 Job Phase. The numbered chronological sequence in which work is accomplished regardless of the craft(s) involved (see Craft Phase above).

1.9 Job Preparation. All work and costs associated with receiving and considering a job assignment and instructions; planning equipment and material requirements; obtaining proper tools; laying out tools, material, and equipment; setting up ready to begin work; cleaning and storing tools and equipment; and clean up of job site.

1.10 Pre-Expended Bin Materials and Supplies. The minor materials and supplies normally stored in large quantities and used frequently by skilled craftsmen that are incidental to the job and providing the required quantities of any one material item are such that the total cost of item of that type is $10.00 or less. Examples of pre-expended bin materials and supplies include, but are not limited to,

solder, lead, flux, electrical connectors, electrical tape, fuses, nails, screws, bolts, nuts, washers, spacers, masking tape, sand paper, solvent, cleaners, lubricants, grease, oil, rags mops, glue, epoxy, spackling compound, joint tape, gases, refrigerants, refrigeration fittings, plumbers tape and compound, clips, welding rods, heat sinks, and similar incidental items.

1.11 Productivity Factor. A comparison of contractor work force performance to EPS task time standards. Each bidder's productivity should be reflected in the craft hour unit prices. With an extremely productive work force, the craft hour unit price bid could be less than the actual wages paid to the craft worker. REGARDLESS OF THE EFFECTS OF ANY PRODUCTIVITY FACTOR, THE SUCCESSFUL BIDDER SHALL COMPLY WITH ALL WAGE DETERMINATIONS AND LABOR LAWS.

1.12 TRAVEL TIME. Time expended between shop and the job site; waiting for vehicle; getting in and out of vehicle; loading and carrying a tool box; vehicle travel; unloading, walking from vehicle to job site; opening and closing door; walking up and down stairs; using elevators; and access to secure or controlled areas.

1.13 Work Content Comparison. Work content comparison is a method of comparing a task that is not specifically defined in EPS Task Time Standards to a very similar task that is defined in the EPS Task Time Standards. This definition is a summary of a more detailed definition which appears on page 37 Estimate, Appendix C.

2. GENERAL REQUIREMENTS. The Contractor shall furnish all the supervision, labor, transportation and such materials and equipment as specified in Section 00004 to operate, maintain, and repair the utilities equipment and perform the specialized functions enumerated below.

2.1 The Contractor shall be responsible for the following functional areas:

FUNCTION	ATTACHMENT
Operations, Maintenance, and Repair of Heating Plants and Steam Distribution System	I
Operations, Maintenance, and Repair of Water Plants and Water Distribution System	II
Operations, Maintenance, and Repair of Wastewater Plants and Wastewater Distribution System	III
Operations, Maintenance, and Repair of the Cold Storage Plant	IV

2.2 Description of Work. The work includes the operations, maintenance, and repair of the plants equipment and the maintenance of the distribution lines. This may include, but not be limited to, the following trades and type of work generally described.

2.2.1 Carpentry. Carpentry work may involve the construction of scaffolding for boiler repair.

2.2.2 Painting and Corrosion Control. Painting and corrosion control may include the coating of surfaces such as equipment, structural members, towers, pipes, utility appurtenances, and other such equipment associated with the production of utilities.

2.2.2.1 Coating may occur by brush, roller and/or by mechanical means and may or may not require surface preparation by brushing, with wire brushes.

2.2.3 Masonry. Masonry work involve the maintenance and repair of boilers.

2.2.4 Pipefitting. Pipefitting involves installing, modifying, and repairing new and existing pressurized piping systems and equipment such as steam and condensate distribution lines in steam pits, steam tunnels and high lines.

2.2.5 Plumbing. Plumbing may involve the repair, installation of, or removal of water and wastewater in the utility distribution systems and within the plants. Utility systems shall be limited to the plants and the distribution system. The steam distribution system shall stop at the service pit or control valve for the facility served except for wash racks which shall include the entire steam system. For water and wastewater, the system will extend to 5 feet outside the building or where a service valve exists. The water system also includes pool piping and equipment, sprinkle systems, and wash rack piping; the wastewater system also includes the piping and pumps in the oil/water separators.

2.2.6 Sheet Metal. The sheet-metal work may involve the fabrication, installation and repair of sheet-metal articles and parts for the breaching and casting to boilers.

(104)

2.2.7 Machine Shop. The machine shop work provides the necessary support to produce or repair parts as necessary for overhauling items such as compressors, pumps, motors, and motor-operated gears.

2.2.8 Welding. The welding shop provides the necessary support to the other trades in accomplishment of their work. Welders and welding operators shall be certified in accordance with the American Welding Society for high pressure vessels. Welding will include but not be limited to normal fabrication, cutting, steam and high pressure systems, etc. associated with maintenance work. The following procedures are to be followed for all welding work accomplished by the Contractor.

2.2.8.1 Fire Watch: Welding, burning, and open flame work will be permitted, but only subject to the following conditions:

2.2.8.1.1 The method shall be approved by the OIC.

2.2.8.1.2 The Contractor shall inform the OIC when the process will be performed.

2.2.8.1.3 The Contractor shall provide an adequate fire watch and the required fire extinguishing equipment.

2.2.9 Electrical. The Contractor shall maintain and repair boiler, meter, pumps, and motor controls.

2.2.10 Heating Equipment. Heating equipment work involves operating, diagnosing, and repairing of boiler units rated at 350,000 BTU's per hour or above. No work is performed beyond the boiler stop valve on smaller units when the Contractor is not responsible for the distribution system.

2.2.11 Other Equipment. The Contractor shall provide the necessary labor, equipment and material to install and/or relocate equipment

and/or utilities associated with the equipment (i.e., fans, air compressors, unit heaters, boilers, and non-production equipment).

2.2.12 Handling Asbestos. All construction work involving asbestos materials shall be accomplished in accordance with OPNAVIST 6260.1B and Base regulations. The OIC shall be notified by the Contractor whenever work involving the handling of asbestos is not clearly marked "Asbestos Related Work" on the authorization document. Work will not proceed until the authorization document is amended to state "Asbestos Related Work". The OIC is required to provide the North Carolina Department of Natural Resources and Community Development, Division of Environmental Management, with the "Notice of Demolition and/or Renovation Involving Asbestos Removal", when notice is required. The Contractor shall provide all safety clothing required by regulations for the handling of asbestos.

3. DATA REQUIREMENTS. The Contractor shall be responsible for keeping accurate records and logs, and completing all required reports and forms in an accurate and timely manner. The Contractor shall develop, implement and adhere to work plans and schedules as required herein, and specified in the functional area attachments.

4. OPERATIONAL REQUIREMENTS. The Contractor shall be responsible for meeting all requirements that arise during regular business hours for specified operations of the Base for functional activities discussed in Attachments I through IV. The Contractor shall also be responsible for the operation of utility systems and performing emergency requests that arise after regular hours, weekends, and holidays.

4.1 System Outages. The Contractor shall obtain concurrence from the Officer-in-Charge at least ten (10) working days prior to planned disruption of services. The Contractor shall participate in planning work that may affect installed systems for which the Contractor is responsible. This may include outages by other contractors or government agencies. Participation and assistance in planned outages of this type is a contract requirement.

5. MAINTENANCE REQUIREMENTS. The Contract shall provide management and control of facilities maintenance to ensure availability of

facilities and services when required, at the most economical cost. The steam plants shall receive start-up maintenance between August 1 and 1 November. The Contractor shall respond to Service Calls and Emergency Work, perform Corrective Maintenance, Preventive Maintenance, and other work requests approved by the OIC, and provide various services specified herein. All other work will be approved on an individual basis by the OIC and will be picked up by the Contractor at the Base Maintenance Division office on a daily and quarterly basis.

6. SERVICE CALLS. The work resulting from service calls will be completed in compliance with the level and quality of maintenance standards specified and within the time limits specified for each type of call. Service calls are intended to encompass all work requirements which are brief in scope and would not reasonably require separate job planning, estimating, or scheduling, and are limited to 16 hours each or a total cost of labor and materials of $400. Service calls will not include maintenance and repair of any plant equipment used in the operations of utilities. Any work in this category to plants is included in the fixed-price lump sum work items listed as plant maintenance. Service calls will include the location of lines, the cut-on and cut-off of utility services, and new work to lines and plants. The Contractor shall receive no credit for the service call unless the work is completed.

6.1.1 Emergency Calls. Service calls are classified as emergency calls when the work consists of correcting failures which constitute an immediate danger to personnel or threaten to damage property.

Emergency calls shall be responded to within fifteen (15) minutes during regular working hours and within one (1) hour of receipt of call after regular working hours, weekends, and holidays. The Contractor must respond and arrest the emergency condition before departing the job site. In the event the work required to arrest the emergency exceeds the 16-hour limitation for service work, the work shall be processed to completion and the actual hours and material provided to the OIC at the start of the next working day. This work will be processed as Specific Work. If further labor and material is required to complete the repair once the emergency is arrested, completion shall be in accordance with a routine service call or by approved work order. In no case shall there be less than 93% of the monthly emergency service calls completed within four calendar days and less than 99% of the monthly emergency service calls completed after 30 calendar days.

6.1.2 Urgent Calls. Service calls are classified as urgent calls when the work consists of failures in services which do not immediately endanger personnel or threaten to damage property, but would soon inconvenience and affect the health or well being of personnel or disrupt operational missions. Urgent calls should be completed within four (4) working days after receipt of the call. Urgent calls shall be accomplished only during regular working hours, Monday through Friday.

6.1.3 Routine Calls. Service calls are classified as routine calls when the work does not qualify as an emergency or urgent call. Routine calls will include, but not be limited to, minor repairs to steam, water, and sewer lines. Routine calls must be completed

within ten (10) working days after receipt of the call. Routine calls shall be accomplished only during regular working hours, Monday through Friday. In no case shall there be less than 74% of the combined total monthly urgent and routine service calls completed within four calendar days; less than 84% completed within ten calendar days; and 93% completed within 30 calendar days.

During the performance of routine service calls, every attempt should be made to complete all similar work of a minor nature required in the same location at that time, within the specified maximum limit for a service call.

6.2 Service Call Documentation. Each identified service call requirement is prepared and issued on a separate document and include the following information:

6.2.1 Control number.

6.2.2 Date/time received from requester or detected by contract inspector.

6.2.3 Location of service work requirement.

6.2.4 Priority assigned.

6.2.5 Description of service work requirements.

After the response to and completion of the service work (routine, urgent, and emergency), the following information is to be added to the working copy of the service work document:

6.2.6 Actual work completed, including number of manhours used, materials used, and cost of materials.

6.2.7 Date and time completed.

The Contractor shall submit the completed working copy of the service work document within twenty-four hours after work has been completed. The work document number shall also be listed on the monthly invoice for payment.

6.3 Service Call Historical Data. See appropriate historical data exhibit to Attachments I - IV.

7. CORRECTIVE/PREVENTIVE MAINTENANCE (C/PM). The Contractor shall, within thirty (30) days after award of this contract, submit a typed, detailed C/PM schedule, including checkpoints and frequencies, based on the requirements of Attachment I. The schedule shall be subject to change or revision at any time during the contract as directed by the OIC. If a schedule change is to take place, the Government will notify the Contractor at least five (5) working days prior to the change. The Contractor is expected to adhere strictly to the scheduled C/PM dates to facilitate Government verification inspections. If the Contractor finds it necessary to reschedule C/PM, a formal typed request shall be made to the OIC detailing the reasons for the request at least five (5) working days prior to the originally scheduled C/PM date. No scheduled C/PM dates shall be changed without prior approval of the OIC. All deficiencies not covered under C/PM work item during scheduled C/PM shall be submitted by the Contractor to the OIC for approval or disapproval within ten (10) days after completion of C/PM inspection and prior to performing any work outside that covered by the C/PM work item. If the OIC approves the work identified, a work authorization will be issued for the work.

7.1 Corrective/Preventive Maintenance Records. The Contractor shall be responsible for submitting a C/PM report to the OIC. The C/PM report, using a checklist format, shall reflect periodic maintenance performed, including scheduled and accomplished dates and deficiencies which remain. The

Contractor shall submit the C/PM report on a monthly basis within ten (10) days after the last day of the month.

8. Specific Work. Specific work is maintenance, repair, alteration and installation work of a one time and specific nature involving the work and skills described in clause 2.2 Description of Work, Section 00005 and which is not included in the firm fixed price lump sum portion of the contract. The requirement for specific work may be initiated by either the Contractor or the OIC, but work shall not begin without an approved Delivery Order. Specific work will be limited to a maximum total materials cost of $25,000.00 and 500 craft hours per Delivery Order. For specific work, the Contractor will be paid a negotiated fixed price for each Delivery Order Material and equipment required for the Unit Priced Tasks listed in the Schedule of Indefinite Work-Craft Hour Labor, Material and Equipment will be reimbursed in accordance with the ESTIMATES clause. The estimated amounts for the contract period for reimbursable material and equipments for the contract base period are $_____ and $_____respectively.

8.1 Establishing Final Cost for Specific Work. On receipt or initiation of a proposed work order, the Contractor shall prepare an estimate following the procedures outlined in the "Estimates" clause elsewhere in this Section. The Contractor's estimate will be evaluated to determine if: (1) the scope has been clearly and accurately identified, (2) the EPS Craft Hours (including work content comparison) have been accurately

applied, (3) work which is not covered by EPS has been properly estimated with supporting data presented, (4) equipment and material estimates are reasonable and properly documented, and (5) unit price work has been estimated using the unit prices that were bid. After the estimate has been reviewed and there are no mathematical, typographical, scope or estimating errors, the OIC will approve the estimate. The approved estimate then shall be a fixed price for the work described in the work order.

8.2 Procedures. The OIC will order specific work by issuing to the Contractor a copy of the approved estimate and a Delivery Order for the work covered by the approved estimate in accordance with the "ORDERING OF WORK" clause in Section 00004. The approved estimate is a fixed price for the performance of the work described. Specific work can be either programmed or non-programmed. The Government will provide an Operation Branch which will be responsible for inspecting, receiving, screening, planning, estimating, programming, and generating work requests and requirements into preliminary job orders which shall be accumulated into the development of an Annual Work Plan. The Operation Branch using the available Contractor's or Government's manhour resources, material and equipment budgets, seasonal conditions and the priority of individual job orders will break down the Annual Work Plan into Quarterly Work Programs which shall commit approximately 70 to 80 percent of the Contractor's or Government's specific work resources to the accomplishment of programmed work. The balance of the Contractor's specific work resources shall be reserved for non-

programmed work (emergency work and unknown jobs) that will be developed just prior or during the Quarter. The Contractor shall enter a labor unit price in the "SCHEDULE OF INDEFINITE QUANTITY WORK" Clause, Section 00001, which will provide the labor rate (direct and indirect personnel cost, insurance, taxes, operations, overhead, project and work management, fringe benefits, profits and other associated cost) for all specific work. The Contractor further agrees to provide the total number of targeted manhours required as projected by the Government based upon the Annual Work Plan and the Historical Data which is listed in each functional attachment.

8.2.1 Programmed Work. The Operation's Branch will 120 days prior to a particular quarter provide the Contractor with the Quarterly Work Program of the programmed work (Davis-Bacon requirements) to be accomplished in that quarter. The Quarterly Work Program will consist of individual project descriptions as preliminarily prepared by the Planning and Estimating Section of the Operations Branch. The Contractor upon receipt of the Quarterly Work Program shall have ninety (90) days to provide/complete the detailed estimates for Manpower, materials and equipment which shall be submitted to the Officer in Charge for his approval. Included shall be material and equipment quotes, if applicable. Also a Master Work Schedule shall be compiled by the Contractor allocating Delivery Orders in balance with priority, seasonal conditions, effective distribution of work forces, availability of materials and equipment and other circumstances, such as special dates, Base activities, etc. The Master Work Schedule

shall closely parallel the format of the Quarterly Work Program as targeted by the Operation Branch.

The Contractor's Quarterly Work Schedule shall be compiled and submitted to the Officer in Charge for his review and authorization no later than thirty (30) days prior to the beginning of the quarter. If the Contractor's total cost and work schedule for the Quarterly Master Work Schedule and detailed estimates for planned work is compatible and in line with the cost and the targeted Quarterly Work Program as established by the Government Operations Branch, the Officer in Charge may authorize the Total Quarterly Program. If the total cost exceeds that of the Government Estimate and/or the Schedule of Work is not compatible with the Operations Branch targets for the quarter or the Quarterly Work Program as prepared was not accomplished in accordance with acceptable standards and quality, the Government reserves the right to accomplish the work by Government forces or under a separate contract and the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICE" Clause, Section 00004, shall be applied. For the first Quarterly Work Program, see "CONTINUITY OF SERVICE" Clause, Section 00004.

8.2.2 Non-programmed Work. The Operations Branch will provide the Contractor preliminarily prepared "Delivery Orders" for non-programmed work which represent approximately 20 to 30 percent of the Contractor's Specific Work resources that may develop just prior or during a Quarterly Work Program that will contain

the same basic information as for programmed work except for an "Emergency Delivery Order". This work requires the Contractor to estimate the work in five (5) working days, commence work after fifteen (15) working days after final authorization and complete work sixty (60) working days after final authorization.

When in the prosecution of an "Emergency Service Call" the work reveals or when the Government discovers a requirement for a "Emergency Delivery Order" (a work task effort that requires more than 16 manhours and $400.00 in cost to complete, of a critical nature that requires continuing work effort to continue utility service, to prevent continuing/further loss or damage to Government property, or to eliminate a safety hazard) the Contractor upon receipt of a directive by the OIC or his designated representative shall continue and/or complete that work required to alleviate/correct the deficiency or problem to the degree that an emergency situation ceases to exist, or the OIC or his authorized representative determines that the situation is contained and stops the work. Any remaining work may then be accomplished under the time requirements of a routine non-programmed work order. The directive authorizing the Emergency Delivery Order shall contain only that basic information necessary to address the work to be accomplished. The directive will contain as a minimum the following information:

a. Control number;

b. Scope of Work (What basically is to be done, not detailed);

c. The Facility where the work is to be performed;

d. And, date/signature by the OIC or his designated representative authorizing the work.

This directive will be given to the Contractor or his representative at the field work site.

The Contractor shall maintain records of the actual manhours expended and the material and equipment cost used in the accomplishment of the work. Within thirty-six (36) hours of receipt of the directive, the Contractor shall submit to the OIC for approval this data with the EPS cross-referenced for each line item using the basic Work Estimate form. If a discrepancy exists between the manhour used and the EPS in the accomplishment of the tasks of the Emergency Delivery Order, the Contractor must provide written justification which the OIC must approve if the Contractor is to receive compensation for the additional cost incurred. No more than 5% of the annual specific work requirements will be classified as "Emergency" work.

Upon receipt of written justification from the Contractor, the Officer in Charge at his discretion may waiver or adjust the

time completion requirements if circumstances justify a change from the Quarterly Schedule.

The Contractor shall submit the detailed estimate for non-programmed work to the Officer in Charge for his final authorization. The Officer in Charge, if the Contractor's total cost for the specific work is compatible with the estimate of the Government Planning and Estimating Section, may issue an approved Delivery Order. If the total cost are not compatible with the Government estimate or appear to be unreasonable, the Government reserves the right to accomplish the work by Government forces or under a separate contract.

8.3 Requirements for Scheduling. The Contract upon receipt of the authorized Quarterly Work Program and Individual Delivery Orders shall be responsible for scheduling, commencing and completion of work in accordance with the required response and completion time and in accordance with the Quarterly Master Work Schedule as approved. The Contractor shall submit by the 25th of each month, in addition to the Quarterly Master Work Schedule, a weekly schedule for the prosecution of the authorized Delivery Orders for non-programmed work, projecting the work loads for the balance of the quarter as the backload of work dictates to the Officer in Charge for his approval. The Officer in Charge reserves the right to re-establish priorities, defer work on the schedule and to delete work not required.

The Contractor shall on the 25th of each month make the necessary modifications and/or adjustment to the Quarterly Master Work Schedule as additional work is authorized, work is behind or ahead of schedule, work is deferred, priorities are changed or circumstance warrant. The status of all work shall be kept current and compiled into a daily Status Report that will be submitted by 8:00 a.m. the following work day to the Officer in Charge. The Schedules and daily Status Report on Job Orders shall become a part of the Monthly Management Report. The Contractor shall keep a copy of the accepted/completed Delivery Order for his records, the original with one copy shall be submitted with his monthly billing for payment for Specific Work. The Government will make progress payments monthly for specific work partially completed, based upon the amount of work completed and the material on site as verified by the Government representative. The Officer in Charge may at his discretion retain ten percent of the estimated amount until final completion and acceptance. All materials and work covered by partial payments made shall thereupon become the sole property of the Government and the Contractor has the sole responsibility for the full payment to relieve the Government of any claim for material and work for which payment has been made.

The Contractor shall diligently perform all work at the specified levels, quality and quantities to maintain an acceptable performance rating.

Monthly performance ratings will be issued by the Government Representative to the Contractor for specific work. Unsatisfactory performance will result in action as specified in "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES" Clause, Section 00004.

8.4 Changes Scope of Work in Delivery Orders. If during the course of work the Contractor encounters unforeseen conditions which impact the work and which could not be evaluated during the initial estimating procedures, the Contractor shall not proceed without OIC authorization. The OIC will direct the Contractor to (1) estimate the change of scope for the unforeseen condition only, or (2) prepare a new estimate for the total job as revised. The OIC will, after review and approval of the estimate, (1) issue a delivery order for the change of scope only, or (2) cancel the original delivery order and issue a new delivery order for the total job as revised.

9. Estimates. The Contractor shall notify the OIC and provide preliminary cost estimates for all specific and major maintenance and repair work items. The need for estimates may result from contractor inspections, equipment breakdowns, system malfunctions or from other inspections or requests from the OIC. Preliminary cost estimates will be used for planning and budgeting purposes. Detailed estimates will be prepared when requested in writing by OIC. Each detailed estimate shall be prepared and forwarded to the OIC within 15 calendar days of

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receipt of the request. After approval by the OIC, the detailed estimate will form the basis of payment for the work.

9.1 EPS Manuals. EPS manuals will be made available for examination at the contracts office at which the bids will be received and at Naval Facilities Engineering Command Engineering Field Divisions (see Appendix B for address listings) during the bidding period of this contract. One copy of the EPS manual will be provided to the successful bidder upon award.

9.2 Travel Zone Maps. The Travel Zone map for Marine Corps Base is provided as Appendix A and is to be used in conjunction with historical data to evaluate travel time impact.

9.3 Preparation of Estimates. The Contractor shall prepare an independent estimate of the labor, equipment, and material required to complete work ordered under "SPECIFIC MAINTENANCE AND REPAIR WORK" clause of this Section. Any portions of delivery orders that have been bid as unit priced tasks shall be priced using the unit prices bid instead of EPS. EPS does not cover every task that might be accomplished by specific crafts. For tasks not exactly identified in EPS manuals, work content comparison shall be performed prior to a determination that EPS does not apply to a job. Estimates and all supporting information, documentation, and calculations shall be submitted to the OIC. A sample estimate is provided as Appendix C. Forms required are provided as Appendix D.

9.3.1 Labor Estimates. Labor estimates shall be expressed in craft hours. Craft hours shall be taken from the EPS task time standards or the craft spread sheets either directly or by work content comparison. The task time standard or spread sheet used in the estimate shall be identified. Mark-ups, allowances, or add-ons for work time associated with union agreements, craft delay allowances, partial day influences, crew size, job preparation, travel, additional material handling, additional travel, additional stops, additional preparation, overhead, profit supervision, or clerical support shall <u>not</u> be added to the craft hour estimate. Neither the EPS general data nor the EPS nomograph shall be used. The estimate shall include job phasing and craft phasing. For multiple craft jobs, a phasing summary sheet shall be prepared. DD Form 2167 (1 Nov 78) and NAVFAC 11014/22 (10-74) shall be completed as required.

9.3.1.1 Estimating Work Not Covered By EPS. The Contractor shall clearly identify work that cannot be estimated using EPS (including work content comparison). A craft hour estimate for that work shall be prepared using normal estimating procedures. The Contractor shall submit all back up sheets with the estimates based on historical information. See appropriate attachment. Estimates will be for craft hours only and shall not include mark-ups, allowances, or add-ons for work time associated with union agreements, craft delay allowances, partial day influences, crew sizes, job preparation, travel, additional material handling, additional travel, additional

stops, additional preparation overhead, profit, supervision, or clerical support.

9.3.1.2 Total Labor Cost Estimates. The total labor cost estimate will be determined by totaling the craft time for each craft and then multiplying by the appropriate craft hour unit price from the Schedule of Indefinite Quantity. This procedure shall be followed for each craft required to perform the job. The total for all crafts is the total labor cost estimate.

9.3.1.3 Materials Estimates

9.3.1.3.1 General Requirements. Material estimates shall include a detailed bill of materials establishing the size, quality, number of units, and unit prices. The Bill of Materials' line item cost shall reflect direct quotes from established supply firms within the immediate trade area who have the Officer in Charge's approval to submit prices. (Firms which supply shoddy goods, do not stand behind their products, do not keep delivery dates, etc. may be taken from the approved list.)

(a) For individual line items costing less than $400.00 telephone quotes listing the company name, the sales person, the date and all other conditions and pertinent data, such as delivery dates, color, type, kind, etc., from two or more approved reputable suppliers will be sufficient.

(b) For individual line items costing more than $400.00 written quotations must be received from at least three approved reputable suppliers. The material price shall be reduced by all discounts and rebates for core value or salvage value that accrue to the Contractor. Warranted equipment, and component parts other than equipment for parts installed under this contract, shall not be removed, or replaced, or have deficiencies corrected while still under warranty of the manufacturer or the installer, except as noted herein. All defects in workmanship or material, defective parts, or improper installation found by the Contractor shall be reported to the OIC so that necessary action may be taken. The Contractor shall be responsible for knowledge of the equipment and components that are covered by original warranty and the duration of the warranty. The necessary information will be made available within thirty (30) days from date of contract by means of the instruction books and other documents held by the OIC. The Contractor shall provide the OIC with a copy of warranties and manuals on equipment the Contractor installs.

9.3.1.3.3 Parts Availability. The Contractor shall have the capabilities of providing parts so as to provide required emergency service and shall maintain sufficient standard and basic off-the-shelf materials and support all work requirements. Lack of standard materials shall not be an acceptable cause for non-performance. Supplies and materials shall not be included in the material estimate. Contractor

administrative and handling costs for acquiring material should be covered in the bid price for a craft hour.

9.3.1.3.2 Warranty. The Contractor shall provide new or reconditioned parts and components when providing maintenance/repair services for the functional areas contained in Attachments I through IV. All parts, including reconditioned parts, shall carry a sixty (60) day factory or manufacturer warranty. All parts shall equal or exceed the quality of the original part being replaced (defective motors shall be replaced with energy efficient motors) and they shall conform to the general characteristics of the original part and shall be in accordance with the requirements specified in Attachments I through IV. The Contractor shall retain replaced parts for at least ten (10) days following completion of the job and make these parts readily available for inspections by the OIC upon request.

9.3.1.4 Construction and Weight Handling Equipment Estimates. Estimates for construction and weight handling equipment may be added for an individual job if not included in other portions of the contract or not provided by the government. Estimates shall include a detailed price listing stating size, capacities, quality, number of units, and unit prices. Rental equipment shall be based on the lowest price available considering the availability and time constraints of the job. When the equipment to be used is owned by the Contractor, the cost shall be based on the U. S. Corps of Engineers Manual "Construction

Equipment Ownership and Operating Expense Schedule, EP 1110-1-8." Cost for equipment operators, when separate operators are required, shall be estimated on a craft unit hour basis, unless operator cost is included in equipment rental price or operator has been provided by the Government. Any overhead expense associated with equipment usage shall be included in the Contractor's bid for the applicable craft hour unit price.

10. Workmanship. All workmanship shall be in accordance with the best industrial and commercial practice and the maintenance standards specified herein. As each task is completed, all debris, fingerprints, stains, and other unsightly marks shall be removed. During progress of work, debris shall not be allowed to spread unnecessarily into adjacent unaffected areas.

ntract	Description	Bldg/ Area	Utility	Calendar Year Completed	Cost	Calendar Year to be Completed	Est. Cost
-2349	RPL WTR SOFTENER & ASSOC. PIPING	20	WTR PLNT	84	183,910.00		
-2552	RPL FILTERS IN POOLS, SLUDGE COLLECTING MECHANISMS & FILTER CONTROL VALVES	20	WTR PLNT			85	592,360.00
-5866	RPL WTR FILTER DRAIN SYS	20	WTR PLNT	84	106,000.00		
-0179	RPL CONDENSATE LINES, PIT S-11 TO MH159	S-11 THRU MH159	STM DIST	83	490,633.00		
-0180	RPL CONDENSATE LINES	INDUST AREA	STM DIST	83	1,172,128.00		
-0399	RPL WTR WELLS	BASE-WIDE	WTR DIST	84	602,739.00		
-1454	RPRS TO WTR & SWG FACILITIES	TT-35, 683 RR84	WTR & SWG PLNT	84	727,672.00		
-1478	UTILITY IMPROVEMENTS	BASE-WIDE	ALL			85	1,892,432.00
-3036	RPL UNDERGRD STEAM & CONDENSATE LINES	CAMP GEIGER	STM DIST			85	930,000.00
-2161	LIME STORAGE/HANDLING EQUIP	AS-110	WTR PLNT	84	139,687.00		
-2319	CLEAN WTR MAINS	AIR STATION	SWR DIST	84	95,591.00		
-2349	RPL WTR SOFTENERS & ASSOC. PIPING	20	WTR PLNT	84	183,910.00		
-2541	RPL WTR WELLS	WELLS 612 & 626	WTR DIST	84	154,385.00		
-3654	INSTALLATIONS OF SAFETY DEVICES IN BOILER PLANTS	BASE-WIDE & AS	STM PLNT	83	66,800.00		
-3661	RPL STM VALVES, BLDG 1700	1700	STM PLNT	83	75,900.00		
-4551	RPL WTR WELLS	BASE-WIDE	WTR DIST	84	228,471.00		
-4570	STM FLOW & OIL USAGE METERS	A-1,BA106 FC202, M230	STM DIST	84	44,290.00		
-4678	MECH RPRS TO BLDG M625	M625	STM PLNT			85	1,560,000.00
-4619	RPL BOILER & DIGESTOR HEATING COILS, BLDG TT-35	TT-35	SWG PLNT	84	66,666.00		
-5807	RPL OIL BURNERS IN BOILER NO. 38,39,40	M230	STM PLNT	84	37,333.33		
-5809	RPL MECH EQUIP, TANKS, 6, 7, 8	22	SWG PLNT	84	76,396.00		
-5811	RPL BOILER - BLDG 670	670	WTR PLNT	84	17,926.00		
	RPL FLOW METERS & RECORDERS, BLDG RR-85	RR-85	WTR PLNT	84	42,498.00		
-5839	RPL SWG LIFT STATION EQUIP, AS-206, AS-203, AS-426, A-517,AS-606	AS-206 AS-203,AS-426, AS-517, AS-606	SWG DIST	84	95,601.00		
-5842	RPR WTR WELLS, BLDGS 610 & M628	610, M628	WTR DIST	84	37,500.00		

Contract No.	Description	Bldg/ Area	Utility	Calendar Year Completed	Cost	Calendar Year to be Completed	Est. Cost
84-7809	RPL ROTARY DISTRIBUTORS ON TRICKLING FILTERS, SM-331, SBB-205, SRR-93, STC-636, STC-637	SM-331 SBB-205, SRR-93, STC-636, STC-637	SWG DIST	84	128,000.00		
83-5814	RPL WTR LINE	BEACH AREA	WTR DIST	83	53,982.00		
83-5829	RPL BOILER #58	SH 8	STM DIST	83	9,375.00		
81-3554	RPRS TO WTR PLNT EQUIP	MCB & MCAS	WTR PLNT	83	113,688.00		
81-3556	RPL WTR LINE	BEACH AREA	WTR DIST	82	92,485.00		
81-3557	HEATING PLNT EQUIP. RPRS, BLDGS A-1, BA 106, M625, 2615, BB-9	A-1, BA 106 M625, 2615, BB-9	STM DIST	82	60,207.00		
81-3559	RPL STM & CONDENSATE LINES	BASE-WIDE	STM DIST	83	25,680.00		
81-3577	RPR/RETUBE BOILERS 83, 84, 85	G-650	STM PLNT	82	244,696.00		
81-3580	RPL BOILER 30, 77, 86	TT-44, 32 1915	STM PLNT	82	19,763.00		
81-3625	RPL WTR FILTER	RR-85	WTR DIST	82	24,980.00		
81-2629 N62470-	RPL STM & CONDENSATE LINES	MCAS	STM DIST	82	29,000.00		
80-2043	RPL GENERATOR SYSTEM	20	WTR PLNT	82	52,500.00		
80-2053	REBUILD WELL FACILITY	BASE-WIDE	WTR DIST	82	32,322.00		
80-0178	RPL CONDENSATE LINE	RR AREA	STM DIST	83	267,361.00		
80-0333	RPL CONDENSATE LINES	S-11, TO 1700	STM DIST	83	430,541.00		
80-0435	RPL BURNER EYES/CASINGS, BOILER 1-5	1700	STM PLNT	84	424,707.78		
80-0437	RPR OUTER CASINGS, BOILER 16 & 18	AS-4151	STM PLNT	82	96,748.00		
82-2162	ADDITIONAL COMMINUTOR	TC-563	SWG PLNT	83	34,384.00		
82-2304	STORM DRAINAGE IMPROVEMENTS	BERKLEY MANOR	SWG DIST	83	198,252.00		
LE509M	RPL COAL CONVEYING EQUIP	1700	STM PLNT			85	744,000.00
LE510M	RPL STM LINE INSULATION & CONDENSATE SYSTEM	HP	STM DIST			85	1,490,800.00
82-2542	RPL CONDENSATE LINES	CAMP JOHNSON	STM DIST			85	796,000.00
83-3045	BOILER PLNT MODIFICATIONS (MECH)	1700	STM PLNT			85	3,101,000.00
83-5872	RPR CONTROLS & METERS	G-650	STM PLNT			85	123,500.00
83-5874	RPL CONDENSATE SYS	PP AREA	STM DIST			85	167,700.00
83-3044	RPRS OF ELECTROSTATIC PRECIPITATORS	1700	STM PLNT			85	422,900.00
81-1464	RPL BOILER & FUEL STORAGE TANKS	BB9, 2615 RR-15	STM PLNT			85	1,064.000.00

ontract o.	Description	Bldg/ Area	Utility	Calendar Year Completed	Cost	Calendar Year to be Completed	Est. Cost
4-7863	SANDBLAST & PAINT PIPE GALLERIES	20, 670	WTR PLNT			85	28,300.00
4-7865	RPL AMMONIA RECEIVER TANK	1300	COLD STORAGE			85	24,600.00
4-7886	RECARBONATION SYSTEM	20	WTR PLNT			86	75,200.00
4-7891	RPL CONDENSAGE LINES	OLD HOSPITAL	STM DIST			86	157,700.00
4-7893	RPL BOILER #65	BA 106	STM PLNT			86	166,300.00
4-7896	RPL CONDENSATE & STEAM LINES	COURTHOUSE BAY	STM DIST			86	199,300.00
2-4676	RPL ECONOMIZERS, BOILERS, 16, 17, 18	AS-4151	STM PLNT			85	186,000.00
4-7811	INSTALL CUT-OFF VALVES TO FIRE HYDRANTS	TT I & MCB	WTR DIST			85	26,300.00
4-7857	RPL STM GENERATOR	AS-710, 738	STM PLNT			85	55,000.00
4-7854	WTR & SEWER IMPROVEMENTS	MIDWAY PK	WTR & SWR DIST			85	438,000.00
3-5873	MECHANICAL RPRS	1700	STM PLNT			85	154,700.00
3-5876	ANY GENERATORS FOR LIFT STATIONS	BASE-WIDE	SWG DIST			85	140,000.00
2-4645	RPL STEAM VALVE	1700	STM PLNT		1,792.00		
2-2320	MISC RPRS TO FUEL PUMP & SOFTNER SYS	M-230	STM PLNT	84	14,234.00		
3-5868	RPL BURNER EYES/CASTING BOILER	1700	STM PLNT		2,479.00		
2-7829	RPL LIGHTING STEAM METERS	M-625	STM PLNT		22,836.00		
3-5812	RPL FLOW METERS & RECORDERS	RR-5	WTR PLNT	84	42,498.00		
2-2321	RPL PUMP CONTROL CABLE	AS-110	WTR PLNT	84	217,475.00		
3-5840	RPL AUX ENGINES	AS-110	WTR PLNT	84	148,265.00		
2-4691	RPL OVERHEAD STM LINE POLES	CAMP GEIGER	STM DIST	84	37,807.00		

ESIGN CONTRACTS; CONSTRUCTION CONTRACT SEPARATE

ATTACHMENT 1

OPERATION, MAINTENANCE, AND REPAIR OF THE HEATING PLANTS AND STEAM DISTRIBUTION SYSTEM

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ATTACHMENT I

OPERATION, MAINTENANCE, AND REPAIR OF THE HEATING PLANTS AND STEAM DISTRIBUTION SYSTEM

1. General Requirements. The Contractor shall operate, inspect, maintain, and repair, the various heating plants and steam/condensate distribution system for the Base, including annual overhauls on selected boilers. The Contractor shall operate and maintain both the plants and distribution systems in a safe and economical manner. The Contractor shall be responsible for seasonal start-up and securing of these plants and system. Details on the heating plants and distribution systems are presented in Exhibit A. Applicable publications are listed in Exhibit B.

2. Data Requirements. The Contractor shall be responsible for the timely and accurate completion of all records, reports and forms required herein and summarized on Exhibit C, and the submission of the standard operating procedures stated in paragraph 3.1.

3. Operation Requirements of Heating Plants. Operation of the heating plants involves start-up and shutdown of heating equipment and operator maintenance (that maintenance required to operate boilers on a daily basis; e.g., cleaning burners and strainers, checking lube oil levels, etc.), and efficient and economical steam and hot water production to assure its availability at the lowest possible cost to the Government. This activity also includes record-keeping of operations and

conditions; analysis of records to correct non-optimal practices; monitoring warranties; testing operations and capabilities of boiler plants; periodic operation of idle equipment; providing all supplies and materials other than fuel; and cleaning, preservation, lubrication, and adjustment of plant equipment. The Contractor shall be responsible for performing the operation and maintenance of boilers shown in Exhibit A. Boilers shall be placed on line during the heating season or as directed by the OIC. The Contractor shall provide operators twenty four hours each day, seven days a week at the following plants: Bldg. Number 1700, AS4151, G-650, M-625, BB-9, RR-15, and M-230 and 53 small boilers.

3.1 Operation and Maintenance Procedures. The Contractor shall be responsible for maintaining quality control of all boilers and steam distribution systems. He shall prepare and adhere to the written operating and maintenance procedures. These procedures shall incorporate the requirements listed in this specification and shall be prepared in accordance with the following, in the order of precedence: (a) Manufacturer's instructions; (b) Industry standards and National Codes; (c) Procedures outlined in NAVFAC MO-322 and NAVFAC MO-206. As a minimum, the procedures shall include:

3.1.1 Plant operating schedules.

3.1.2 Plant operations.

3.1.3 Plant maintenance.

3.1.4 Summer Overhaul.

3.1.5 Emergency procedures in event of loss of steam.

3.1 6 Safety/accident procedures.

These operating and maintenance procedures shall be submitted to the OIC for approval within thirty (30) days after contract award. The approved procedures shall be instituted immediately upon commencement of contract operations.

3.2 Maintenance of Heating Plants. Preventive Maintenance (PM) of the heating plants is the systematic inspection, detection, and correction of incipient failures before they develop into major defects. PM of boiler heating plants includes regularly scheduled inspections, adjustments, cleaning, preservation, lubrication, parts replacements, and testing of all equipment and devices. Corrective Maintenance (CM) is that maintenance performed to restore the boiler and its auxiliary and associated equipment to an operational status. CM will be performed in an expeditious manner to minimize further damage or deterioration of the heating plant and to minimize equipment down time. Maintenance activity also includes record-keeping of PM and CM performed. Both PM and CM of heating plants are included in the plant maintenance work item for bid purposes.

3.3 Boiler Plant Operations. Sufficient qualified operations personnel shall be available to operate the boilers in accordance with the Contractor's approved written procedures defined in paragraph 3.1 of this Attachment. "Operation," as

used in this specification, shall be interpreted to include the handling of all fuels, lubricating oils, chemicals, auxiliary machinery, boiler water treatment, and attending all boiler fires to maintain steam pressure as required. Failure of the Government to supply fuel, water, or electricity for operations will relieve the Contractor of responsibility for operating only during the time period that the Government is remiss in these supply functions. The Contractor shall be responsible for returning the boiler on-line with operating pressure within thirty (30) minutes of delivery for hot water boilers and within one hour for steam boilers. Specifically, the Contractor shall be responsible for the following boiler plant operations:

3.3.1 Performing daily or more frequent operator checks on all boiler plant machinery and equipment, including, but not limited to, valves; controls; flow meters; gauges; turbines; pumps; fans; internal combustion engines; feed-water regulators; bearings on all running machinery; and water levels.

3.3.2 Ensuring that boiler water levels are maintained at the required levels for safe and efficient operation.

3.3.3 Cleaning burners in boilers in operation frequently, if required.

3.3.4 Maintaining boilers in the maximum efficiency range by observing and controlling condition of fire to carry highest possible CO_2 (with lowest possible stack temperature without).

smoke pollution to the atmosphere, but high enough to limit (formation of H_2SO_4). Flue gases shall be tested on a daily basis. Test results shall be reported weekly to the OIC and are due on the first work day after the weekly reporting period.

3.3.5 Once per day, or more frequently if required, checking to ensure that flame failure controls and low water cutouts are in good working condition.

3.3.6 Replacing record charts at same time each day, refilling and cleaning pens.

3.3.7 At least once each 8-hour shift, checking electrical equipment in operation for cleanliness, excess vibration, and excess noise level. Feeling motor bearings for excess heat. Noting conditions such as vibration, lack of local drainage, and the like.

3.3.8 Once per hour reading and recording working pressures and temperatures of boilers, boiler room equipment, and outside temperatures. The readings will be recorded in the various heating Plant Logs.

3.3.9 Maintaining heating plant logs, noting plant deficiencies or difficulties with equipment experienced hourly during each shift. Heating plant logs shall be made available to the OIC for review as requested.

3.3.10 Blowing down feed-water regulators before putting regulators on line.

3.3.11 Ensuring outside water reservoir level is above minimum.

3.3.12 Inspecting and cleaning burners as required or when sudden drop in oil pressure occurs, being careful not to damage oil passageways and nozzle openings. Inspecting all parts of burners for signs of overheating or burning away of metal. Replacing any damaged or worn parts.

3.3.13 Testing belt tension so that vertical slack does not exceed one-half inch when lightly depressed. When belts are broken, ragged or can no longer be adjusted, a new belt shall be installed. Check new belt during operation. Loose or misaligned pulleys shall be adjusted or replaced as required. Matched belt sets shall be used on units with more than one belt.

3.3.14 In addition to the aforementioned requirements, the following requirements for coal and oil boilers are required of the Contractor as applies to the respective boiler type:

3.3.14.1 Pull precipitator ash every two hours.
3.3.14.2 Pull ash in furnace, chain hoppers, wall hoppers and stacks once per shift.
3.3.14.3 Check rappars and vibrators on precipitators once per shift.
3.3.14.4 Check furnace hourly and punch clinkers as needed.
3.3.14.5 Check coal bunker room once per shift.
3.3.14.6 Check scales feeders and pulverizers hourly for proper operation and make minor repairs and adjustments as needed.
3.3.14.7 Check all boiler inspection doors once per shift for proper closure.
3.3.14.8 Check all boiler dampers once per shift.
3.3.14.9 Check rectifiers and trap iron removal system for proper operation each hour and remove trapped iron as needed.
3.3.14.10 Station personnel by pulverizers on start up to insure proper starting.
3.3.14.11 Replace burned out light bulbs, tubes through out plant as needed for safe and efficient operation.
3.3.14.12 Maintain proper primary air to pulverizers at all times.
3.3.14.13 Start and stop precipitator as required by manufacturer's operational manual.
3.3.14.14 Replace shear pins on coal feeders and drive belts as needed.
3.3.14.15 Rod out ash conveying lines as necessary for pulling ashes.
3.3.14.16 Clean out coal chutes, pulverizers, scales and feeders as needed for continuous operation.
3.3.14.17 Replace burned out or warped coal spreaders on burner as needed for proper flame pattern.
3.3.14.18 Check ash silo, to include trap doors, steam jet, washer, dust bags on vent each day for proper operation and make minor repairs as needed.
3.3.14.19 Unload ashes from silo as needed and keep drains, pits and unloading area clean.
3.3.14.20 Start and stop boilers and their auxiliaries as outlined by manufacturer operational manual - Bring on and off

line as needed to maintain 150 PSI of steam on main distribution header.
3.3.14.21 Check and maintain proper oil level on all boiler auxiliary equipment to include coal and ash conveying systems. Change oil and grease as per manufacturer's procedures.
3.3.14.22 Check bearings on all boiler auxiliaries for proper operation each hour and more often if warranted.
3.3.14.23 Check condensate, makeup and DA storage tanks to ensure proper water level for continuous operation each hour and more often if conditions warrant.
3.3.14.24 Check deareator for proper operation once per hour.
3.3.14.25 Maintain boiler water levels at the required levels for safe and efficient operation.
3.3.14.26 Check blow-down gauge glass and water column and low water cutoff once per shift.
3.3.14.27 Check tri cocks weekly.
3.3.14.28 Blow soot once per shift.
3.3.14.29 Maintain floors free of dirt, debris, oil and clutter.
3.3.14.30 Clean restrooms once per shift.
3.3.14.31 Paint boilers and auxiliary equipment once per year.
3.3.14.32 Mow grass weekly within plant fence and within two foot border outside of fence.
3.3.14.33 Check valves, pumps, etc. for leaks and adjust packing glands to prevent leaks.
3.3.14.34 Maintain pressure by burning oil upon power failure.
3.3.14.35 Unload coal as delivered to the plant.
3.3.14.36 Receive coal cars, visually inspect all cars and pull samples for testing.
3.3.14.37 Move coal cars and prepare same for release to railroad.
3.3.14.38 Replenish plant coal bunker daily.
3.3.14.39 Check drive chains and buckets on coal elevators daily, clean twice a year as a minimum and replace as needed.
3.3.14.40 Check sump pumps in coal pits for proper operation daily.
3.3.14.41 Clean up loose coal around plant exterior as needed.
3.3.14.42 Maintain coal storage pile as prescribed in DFSCM Manual.
3.3.14.43 Clean retractable gun type burners once per shift.
3.3.14.44 Check and clean strainers on oil pumping stations once per week.
3.3.14.45 Remove carbon build-up on furnace walls ~~as needed~~.
3.3.14.46 Maintain proper oil temperature on pumping stations and oil tanks.
3.3.14.47 Maintain and record hourly log on fuel consumption, feedwater used, steam exported, steam used by auxiliary and other readings as required by log sheets.
3.3.14.48 Lift by hand all safety valves once a week.
3.3.14.49 Maintain stand-by boiler each shift with a minimum o 50 PSI.
3.3.14.50 Sound oil tanks prior to receiving #6 fuel oil to insure that tank can hold the load. Check the seal on oil tanker to insure seal has not been broken before unloading. Fuel additive will be added as prescribed. Make visual

inspection of tanker when driver finishes unloading to insure all oil was unloaded. Sign, date and put plant number on oil ticket.
3.3.14.51 Clean permanent type burners every thirty days or as needed.
3.3.14.52 Maintain clean sight glasses at all times.
3.3.14.53 Check electrical equipment, pumps, fans and compressors in operation for cleanliness, excess vibration. and excess noise level, feeling motor bearings for excess heat a minimum of once per hour.
3.3.14.54 Blow down feed-water regulators before putting regulators on line.
3.3.14.55 Check oil/water separators each shift and note condition on log sheet.
3.3.14.56 Sounded all oil tanks weekly and reported results to OIC.

3.4 Operational Emergencies. Operational emergencies, such as ruptured mains, loss of boilers, loss of power, etc., which reduce the boiler pressures to below the specified minimums for a period extending beyond 30 minutes, shall be reported to the OIC within 60 minutes of occurrenee. The Contractor will identify the probable cause of the reduced pressure and the estimated time and materials to restore full pressure and steam rate.

3.5 Planned Service Outages. When maintenance or repair requires a break or reduction in heating services, the Contractor shall give maximum notice to the OIC. Notification by the Contractor shall be at least 24 hours in advance of the planned service outage. Notification shall include the time the outage will occur and an estimate of when normal service is to be resumed.

3.6 Operation of Noncertified Boilers or Unfired Pressure Vessels. The Contractor shall not operate any boilers or unfired pressure vessel that has not been inspected during the

previous twelve (12) months, and which does not have an inspection certification. In addition, the OIC will be notified following repair of a pressure part or after any major modification to boilers, control equipment or auxiliaries. The affected equipment shall not be placed back in operation until written authorization is received from a certified Government boiler inspector. The Contractor shall notify the OIC when the equipment is ready for inspection.

4. Water Testing and Treatment. The Contractor shall provide all supplies and chemicals used in water testing, water treatment and internal treatment of boilers, streamlines, condensate lines, and closed recirculating hot water systems. The Contractor shall be liable for any damage to any boiler, other heating system component, and the sanitary sewer system caused by improper chemical treatment from not being properly cleaned. The Contractor shall be responsible for conducting the proper chemical analysis on water and deposits and select a chemical treatment program to prevent damage and corrosion to the systems. Results of tests and selected cleaning methods will be provided the OIC.

4.1 Steam plants. At Steam Plant locations HP-1700, AS-4151, G-650, M-625, BB-9, RR-15 and PP-2615, the Contractor shall collect and test boiler water samples from each operating boiler, at least once each shift, providing that plant is in operation. At Steam Plant locations FC-202, BA-106, and M-230, the Contractor shall collect and test boiler water samples from

each operating boiler at least once every twenty-four hours, providing that plant is in operation. Boiler water of operating boilers will be maintained within the following limits: Total Alkalinity: 800 maximum Dissolved Oxygen: 0 - 0.8 ppm and Conductivity: 2600 maximum. The Contractor shall ensure that boiler feedwater is maintained at zero hardness and Condensate ph maintained between 7.5 and 8.5. The Contractor shall be responsible for storing emergency stand-by boilers and idle boilers with an acceptable storage method, so that oxygen attack does not occur on watersides. The Contractor shall be responsible for proper storage of the fireside areas of boilers to prevent corrosion and proper operation and maintenance of external equipment, including the deaerators, sodium zeolite softeners, condensate polishers, feedwater pumps, and chemical tank and pump systems.)

The Contractor will be responsible for deposit and corrosion control of the boiler firesides also. Problems such as fouling the fireside and high temperature fireside corrosion must be prevented or controlled, so that no deposition or corrosion occurs to the fireside damaging the surfaces or tubes.

4.2 Closed Recirculating Hot Water Systems. The Contractor will be responsible for determining, furnishing and implementing the proper internal chemical treatment of the closed recirculating hot water systems. The treatment must be one in which corrosion and deposition are controlled resulting in no build-up of deposits within the system.

5. Operations Standards. The Contractor shall be responsible for meeting the present operating standards of the heating plants based on the latest test of efficiency of the boilers as shown in Exhibit D. Combustion efficiency shall be calculated by the testing of combustion of stack gases with the Bacharach Fysite Test of Combustion Efficiency.

6. Maintenance, Repair, and Summer Overhaul. The Contractor shall be responsible for performing the maintenance, repair and summer overhaul of the heating plants, in accordance with the approved written procedures. The plant shall be maintained to the extent necessary to ensure reliability of service, safety of operators, efficient operation of the plant, and prevention of unwarranted equipment deterioration. The Contractor shall perform, during summer shutdown, annual maintenance and routine repairs that do not pose a danger to life or property and that can be economically postponed. The Contractor shall obtain approval from the OIC prior to postponing this work. (See paragraph 3.)

6.1 Repair and Summer Overhaul of Steam Heating Plants. Repair and summer overhaul of the steam heating plants includes the scheduled shutdown of boiler heating equipment for overhaul of major items and repair or replacement of malfunctioning equipment detected during operations, PM, or Government inspections but deferred due to operational requirements. Summer overhaul shall occur starting 15 April and ending by 15 October. Summer overhaul includes the following major items:

6.1.1 Clean burners and overhaul.

6.1.2 Clean and oil coat fire side of tubes and other surfaces.

6.1.3 Clean combustion chamber.

6.1.4 Check and repair refractory.

6.1.5 Overhaul pumps.

6.1.6 Clean entire fan, check, repair, and lubricate fans.

6.1.7 Check, overhaul low water output.

6.1.8 Calibrate controls within tolerance recommended by manufacturer.

6.1.9 Check, clean and repack bearings.

6.1.10 Check all gauges. Repair or replace as required.

6.1.11 Test and adjust safety valves. Repair or replace valves as required.

6.1.12 Clean and repair water feeders.

6.1.13 Charge expansion tanks.

The Contractor shall accomplish proper dry layup of the boilers following completion of summer overhaul.

6.2 Boilers

6.2.1 Daily. Inspect for leaks. When found, leaks shall be stopped at once to prevent their spread and the corrosion which would result. Check for air leaking into the boiler in order to

ensure adequate steam-generating capacity and efficient operation. All external parts of the boilers and their settings shall be cleaned daily. Special attention shall be given to instruments, gauges, glasses, dials, and indicators.

6.2.2 Weekly. Each boiler and its setting shall be inspected weekly to identify items which require correction. Cracks or leaks in the setting shall be repaired immediately.

6.2.3 Annually or when boiler pressure integrity is broken. The OIC shall be notified who will schedule a hydrostatic pressure test and an operational test. Both sides of all metal surfaces shall be kept clean. On the water side, scale or sludge shall be removed. Air hammers and turbines should be used to remove scale only when necessary and in minimum amount. The Contractor shall make maximum effort to prevent scale formation by using proper boiler water treatment. Boiler exterior and auxiliary equipment shall be painted as required. Surfaces shall be repaired by removing all scale, grease, oil, etc. and applying two coats of heat resistant aluminum paint. During the off-season (summer months) each boiler shall be shut down, cleaned, and inspected thoroughly, both internally and externally. The maintenance and repair procedures listed below shall be accomplished.

6.2.3.1 Prior to boiler shutdown, notify the OIC to schedule appropriate Government inspections in accordance with paragraph

6 of this Attachment. The Contractor shall operate the boilers during the inspections as directed by the Government Inspector.

6.2.3.2 Perform hydrostatic pressure testing as directed and witnessed by the Government Inspector.

6.2.3.3 Secure and safeguard blow-off lines, main stop valves, feedwater valves, and other valves leading to or from the boilers in order to safeguard persons inside the boiler during cleaning and inspection.

6.2.3.4 Remove manhole and handhole covers and allow air to circulate through boiler or dry the inner surfaces. Install new manhole gaskets.

6.2.3.5 Clean interior of boiler and remove mud, loose scale, soot, and similar deposits.

6.2.3.6 Examine interior of boiler for corrosion.

6.2.3.7 Check dry pipe to see that perforations are free from deposits. Check all interior fittings and baffles.

6.2.3.8 Examine interior of boiler for grease or oil, particularly in steam space.

6.2.3.9 Remove internals from steam drum for internal wire brushing; open and clean heads, handholes, and turbine tubes. Cleaning may be accomplished by waterwash method using pump of up to 10,000 psi capability.

6.2.3.10 Replace fusible plug if it has been used.

6.2.3.11 Check tube ends for corrosion and leakage. If leaks are found, investigate rerolling or rebeading before planning for replacement.

6.2.3.12 Check exterior for boiler corrosion.

6.2.3.13 Check boiler-feed piping for weakness and examine all supports.

6.2.3.14 Examine water column and feed-water regulator, paying particular attention to drains, high and low water alarms and gauge glass. Check connecting piping between boiler and water column for corrosion, and for stains caused by inadequate support.

6.2.3.15 Check boiler pressure gauge.

6.2.3.16 Check blow-off valves and connection to boiler.

6.2.3.17 Check nonreturn valve for proper condition.

6.2.3.18 Check steam piping and boiler feed-water piping for strains due to settling.

6.2.3.19 Examine exterior of setting for any cracks or openings. Fill cracks with approved material to stop air leakage.

6.2.3.20 Examine connecting points between boiler drums and boiler setting for openings which allow air to enter the setting. Check connecting points between roof and side walls of boiler.

6.2.3.21 Investigate any movement of walls which is found. Determine probable future movement and repair as necessary.

6.2.3.22 Ensure all air passageways are open, allowing air to circulate.

6.2.3.23 Check the interior surface of the setting for air leakage around burner. If a bridge wall is used to protect mud drum, check for effectiveness.

6.2.3.24 Remove slag.

6.2.3.25 Inspect for eroded or spalled brickwork and repair as necessary.

6.2.3.26 Check combustion chamber for shifting walls and repair as necessary.

6.2.3.27 Inspect expansion joints. Expansion joints will be completely cleaned and repacked each time the inspection reveals that the expansion joint filler has lost its usefulness.

6.2.3.28 Check steel structure for excessive strain. Check floor plates for raising floor and tension on floor bolts. Replace all broken bolts. When floor plates are worn smooth, deformities should be built up by arc welding, or nonslip surfacing should be applied.

6.2.3.29 Inspect all baffles to ensure full travel of flue gases. Plug any holes found. Examine the area directly above horizontal baffles for accumulation of soot and fly ash.

6.2.3.30 Check all soot blowers for warping or misalignment. Be sure nozzles are located properly to eliminate impingement on the tubes.

6.2.3.31 Clean all tube surfaces and remove all fly ash and soot.

6.2.3.32 Check control system for proper operation, following manufacturer's recommendation.

6.2.3.33 Watch movement of uptake damper as it is moved throughout its range. Be sure it has not slipped on its shaft. Lubricate bearings.

6.2.3.34 Check burners for plugged up, worn, or dented areas.

6.3 Regulators and Valves

6.3.1 Quarterly maintain valves and cocks in good working order. Operate or exercise stop and stop check valves which have not been used. Check for leaks, and lubricate exposed threads and gearing. Loosen and lift packing follower. Lubricate packing with a few drops of graphite-bearing oil, or cover with graphite-bearing grease.

6.3.2 Annually. Overhaul all valve types, i.e., safety, feed-water, stop, blow-off and shut-off cocks, repair valves, stems and seats or replace with new parts. Open and inspect the entire operating mechanism of all feed-water regulators and make necessary reorders and adjustments. Repair or replace parts as necessary. Open, inspect, and repair blow-off valves. Repair leaking valves as soon as practicable. Keep insulation dry. Inspect the pipe and fittings between blow-off valves and boiler and repair as necessary. Inspect the discharge piping leading from the valves to ensure that excessively rigid mounting will not interfere with normal expansion and contraction. Dismantle reducing valves, temperature, and pressure control mechanisms. Clean parts carefully and examine for signs of wear, corrosion, and pitting. Examine the valve step and internal parts for

Electrical controls shall be cleaned and adjusted, and badly pitted or faulty components shall be replaced.

6.4 Burners and Related Hardware

6.4.1 Clean strainers on fuel oil pumps, as necessary.

6.4.2 Monthly. Perform a water test on all oil supply tanks. Remove all condensate and water.

6.4.3 Annually. Dismantle burners and check carefully for growth or burning away. Inspect all oil and steam-control valves for wear. Disassemble and clean or adjust nozzle assemblies and electrodes. Inspect all hose or flexible connections and check pump and heater, traps on steam line, and all jackshafts. Lubricate bearings, check all linkages for slack or binding which might affect operation when direction of adjustment is changed, and repair or replace defective components as required. Point up all cracks and renew all missing or damaged insulation inside the fire box in the vicinity of the burner.

6.5 Natural Gas Burners and Related Equipment. The Contractor shall be responsible for the maintenance, preventive maintenance, and repair to the natural gas ignition burners, gas valves, gas safety valves, controls and boiler operating controls.

6.6 Pumps

6.6.1 Weekly. Start each pump on stand-by. Operate long enough to purge all lines completely and to insure that the pump works properly. This requirement applies to all pumps which are not operated constantly or automatically. If the standby electric feed-water pump has not been operated during the previous week, run for one (1) hour while steam feed-water pump is secured. Check that grease cups are full. Grease steam feed-water pump with high temperature grease.

6.6.2 Monthly. Check the insulation of the steam supply line and keep insulation in good condition. Check drain in the steam line; keep it in operation. Keep interior and exterior of steam line clean. Change bearing oil and clean reserviors. Make visual inspection of governor parts and bearings. Clean as necessary. Check governor linkage and overspeed linkage for lost motion. Check coupling for looseness, wear, and alignment.

6.6.3 Annually. Dismantle speed-regulating governor and its linkage and check for lost motion and work parts. Clean, lubricate, and reassemble. Remove and clean steam strainers. Dismantle overspeed trip governor, check for ease of operation; clean; lubricate; and reassemble. Clean and examine governor valve, bushing, and valve stem. Replace badly worn parts as required. Replace valve stem packing. Check turbine thrust bearings for end play. Lift casing and inspect moving and stationary blades. Clean out accumulated dirt and scale. Check

carbon packing rings; replace as necessary. Check turbine bearings. Reassemble and check operation of the unit. Check connecting piping for strains transmitted to turbine. Dismantle, inspect, overhaul, and check operation of each feedwater pump, regardless of type of service. Clean or replace pump strainers. Clean, repair, or replace shaft, impeller, bearings, and other components as required. Lift casing and inspect moving and stationary blades. Clean out accumulated dirt and scale. Check carbon packing rings, replace as necessary, and repack. Check turbine bearings; reassemble and check operation of the unit. Check connecting piping for strains transmitted to the pump.

6.7 Electrical Equipment

6.7.1 As Necessary. Repair any heating plant electrical controls or switchgear which are not functioning properly.

6.7.2 Monthly. Check electrical motors for rigidity of mounting and proper alignment. Check switches and starters. Examine power lines for broken insulation. Check motors for overheating and excessive sparking. Blow dust out of windings. Check bearings for overheating. Examine covering provided as protection against dirt or moisture. Insure that the cover is adequate and does not interfere with ventilation of motor. Repair, adjust, or replace any malfunctioning equipment or components found.

6.8 Miscellaneous Components

6.8.1 Weekly. The high and low water alarms for the water column shall be tested. Replace valve stem packing. Clean out accumulated dirt and scale. Check connecting piping for strains. Inspect and check operation of each feedwater pump, regardless of type of service. Clean or replace pump strainers. Clean, repair, or replace shaft, impeller, bearings, and other components as required. Check connecting piping for strains transmitted to the pump.

6.8.2 Annually. All recorders shall be disassembled, cleaned, and recalibrated, repaired or replaced. On all forced-draft and induced-draft fans, clean fans and paint fan housing surfaces as needed. Check bearings, liners, and impellers; repair or replace as required. Check shaft alignment. Apply approved corrosion protection. Check operation after overhaul fans. Vibration may indicate the need for balancing the rotor. Inspect foundations, caps, linings, supports, etc. on chimneys and stacks for cracks, deteriorated paint, corrosion, damage from gases, etc. Check spark arrester screens, lightning rod cables, terminals, and ground connections if present. Clean, repair, or replace components as required. Make other checks and adjustments recommended by manufacturer. Check all pressure lines for leaks. Check mechanism of the indicator and recorder as directed to removing the unit for return to the factory for repair. Remove, clean, and hydrostatically test tube nest of heat exchanger. Repair leaks. Plug defective tubes. Reinstall

using new bolts and gaskets. A Government inspector will witness final installation and operational test. The water column shall be dismantled, and all parts (valves, alarm linkages, floats, chains and alarms) inspected. All damaged, pitted or worn parts shall be replaced to ensure proper functioning. Drain, flush, and remove all settlement from the expansion tank. Remove and clean sight glasses. Reinstall using new rubber grommets. On all combustion controls, blow out furnace draft lines connecting diaphragms to furnace. Check oil level and pressure in the pumping unit. Clean all strainers in the system. Check packing in power-cylinder stuffing box and repack if necessary. Check jackshafts for slippage. Lubricate bearings of jackshaft and lever system. Check rods and cables for possible points of binding or sagging. Drain all oil from pump system. Flush oil system and blow out all air and oil system piping. Dismantle and clean pilot valves. Check diaphragms, replace if required. Clean all strainers. Repack power cylinder stuffing box. Refill oil system with clean oil to proper lever. Check all linkages for slack or binding which might affect operation when direction of adjustment is changed. On the flash tank, check traps for operating condition. Clean if required. Note water level and, if equipped with sight glass, note its condition. Clean interior. Examine interior and exterior for corrosion. Provide protective coating or take other preventive measures, as required. Examine all valves, traps, sight glasses, and other parts of the assembly. Clean the interior of the condensate and deseration tanks. Eye and respiratory protection shall be provided for tank cleaners.

Examine tank for evidence of corrosion. If it is corroded, determine protective measures and apply them. Check paint inside and out. Repaint where necessary. Proper ventilation or nose masks shall be provided for tank painters. Check operation and condition of overflow, vents, valves, valve seats, and other parts of the assembly. Check float controls for leaks and accumulated of scale; repair and clean as required. Check float-lever system for wear at joints and general condition; repair or replace parts as required. Repack stuffing box, dismantle valve, and examine valve seats and guides; note evidence of wire-drawing and repair as necessary. On all draft gauges, shut off or disconnect the draft gauge. Blow out the connecting lines with air. Check zero reading and adjust to zero if necessary. Check all moving parts, including the diaphragm, and replace or repair parts as needed. On all feed-water heaters, clean the heating surfaces. Check the condition of gaskets and clean the tank. Overhaul auxiliary valves, controls, traps, and drains. Calibrate gauges.

7. Inspection/Certification

7.1 Operational Inspection. Prior to starting of the boiler at the beginning of the heating season, the Contractor shall perform an operational test of the safety valves, low water, flame out, etc. The Contractor shall schedule the work with the OIC so that the operational checks can be witnessed by a Certified Government Boiler Inspector. (See paragraph 3.)

7.2 Calibration of Pressure Gauges. The Contractor shall calibrate all pressure and temperature gauges annually and attach a self-adhesive seal on each gauge certifying that it has been calibrated. The date of calibration and the initials of the person performing the calibration shall be noted on the sticker. The gauges shall be calibrated over the full range of the manufacturer's published data. The gauges shall be calibrated against a standard dead weight tester or a calibrated master gauge. In addition to the normal annual calibration, the Contractor shall at all times recalibrate any gauge which is suspected of being in error. All tests shall be in accordance with the applicable provisions of the American Society of Mechanical Engineers (ASME).

7.3 Safety Valves. The Government will inspect all boiler safety valves annually or as required.

8. Maintenance for Steam Distribution System. The Contractor shall make repairs, replacements, and alterations to the steam distribution system. This work shall be scheduled for corrective/preventative maintenance (C/PM) if within the scope of the C/PM as stated in paragraph 8.1 and if work can be delayed until C/PM is performed. If work is outside the scope of the C/PM and/or cannot be delayed until the C/PM, work shall be performed by service call or work order.

8.1 Corrective/Preventive Maintenance. The Contractor shall perform quarterly scheduled C/PM for all the components of the steam distribution system as listed in Exhibit A. The C/PM shall include inspection, cleaning, adjustment, lubrication, and other corrective action in accordance with established guidelines contained in applicable manufacturers' manuals, NAVDOCX MO-209, and shall include all items on the Mechanical C/PM Checklist for Steam Distribution Lines shown in Exhibit C except for that work which requires closing of the main supply line or is outside the scope of the definition of a service call.

8.1.1 C/PM Reporting. The Contractor shall report the results of defects not corrected to the OIC in a typewritten report no later than ten (10) days following the C/PM. The Contractor shall also submit for approval by the OIC thirty (30) days in advance of the beginning of the quarter a schedule showing the date when facilities (pits and lines) listed in Exhibit A shall receive C/PM.

8.2 Scope. When repairs are made involving the integrity of the system, the Contractor shall, after all repairs are complete, pressurize the system and check for leaks. If the repair is made to a buried section of the system, the pressure test shall be accomplished prior to covering the repair area.

The Contractor shall repair or replace any and all component parts in the Steam Distribution Systems for the Base, including but not limited to the following:

8.2.1 Maintenance of Expansion Joints. The gun-pack type expansion joints shall be packed by adding semi-plastic plugs of heat-resistant long-fiber asbestos combined with an inert filler and impregnated with a high grade mineral oil. The packing plugs shall be inserted through packing cylinders and forced directly into stuffing box by tightening down plunger. After sufficient plugs are inserted into joint, the plunger shall be turned down so the treads are not exposed. The number of packing cylinders on each joint depends on the size. After joint is packed, it shall be lubricated through lubrication fittings using a high superheat mineral oil. This type of expansion joint shall be packed under full steam pressure. Servicing of each expansion joint shall conform strictly no manufacturer's specifications. Insulation covers removed by Contractor to service expansion joints shall be replaced and secured properly. Covers that are damaged by Contractor shall be replaced. Tools as recommended by manufacturer of joint shall be used. In the case of defective lubrication fittings and/or ram body assemblies, the Contractor shall provide and install the necessary replacement parts.

8.2.1 Replacement of Expansion Joints. Replacement of expansion joints shall consist of removing insulation anchoring or main, and installing the new expansion joint including a 2-foot section of pipe. Replacement shall be in kind, and shall meet or exceed the specification of the original part.

8.2.2 Pipe Hangers and Supports, Expansion Loops, Guy Wires, Anchor Rods, Screw Anchors, Turnbuckles, Fastenings, and Anchors. As approved by the OIC, the contractor shall repair or replace pipe hangers and supports, expansion loops, guy wires, anchor rods, screw anchors, turnbuckles, fastenings, and anchors.

8.2.3 Valves. The Contractor shall replace, repair, and make necessary corrections to worn-out, damaged, and leaky stems, disks, seals, and gaskets. If a valve requires disassembly for repair, the Contractor shall, while the valve is disassembled, clean the bonnet, lubricate the stem, and inspect the valve for signs of worn or damaged packing and broken, bent, corroded, or missing parts. After the valve is restored, apply system pressure and insure that all joints are sealed. Check for seat, body, and packing leaks and make tight all leaks. Check valve for proper operation and correct any defects. All valves on boiler and high pressure steam lines within plants shall be steel and rated 300 psi or above. All valves in contact with chemicals shall be stainless steel.

8.2.4 Traps and Y-Type Strainers. The Contractor shall repair or replace all defective parts of traps and Y-type strainers such as strainers, gaskets, bellows, valves, valve seats, hooks, buckets, linkages, and/or strainer orifices. If repair requires disassembly, clean, inspect, and test the trap or straining in the same manner as valves. The Contractor shall test traps and strainers to determine correct operation, without breaking insulation, but using one or more of the following methods as

discussed in MO-209, paragraph 6.6.4.9: glove-test, pyrometer-test, pyrometric crayon-test, or ear-test.

8.2.5 Insulation. The Contractor shall repair or replace damaged pipe insulation as a part of the C/PM. When repairing or replacing insulation, the Contractor shall inform his personnel of the possible hazards of asbestos and shall comply with the requirements set forth in Base Orders. In addition, the Contractor shall comply with the latest revisions of the Federal Specification HH-I-523C Class 2 (underground insulation) and Federal Specification HH-I-551X (aboveground insulation) or HH-I-5588(3) for protection of health and property. All replacement pipe insulation shall be calcium silicate; minimum insulation thickness shall be as follows:

Pipe Size (inches)	Insulation Thickness (inches)
2 and under	1.5
2.5 through 5	2.0
6 through 10	2.5

8.2.6 Conduit. The Contractor shall repair and replace damaged coatings and coverings and tighten or repair defective or loose connections to metallic conduits.

8.2.7 Manholes. The Contractor shall repair and make necessary corrections to supports, guides, and ladders in manholes. While performing work in manholes, contractor personnel shall be alert

to defects in other systems. Any observed defects shall be reported to the OIC in writing.

8.2.8 Structural Support. The Contractor shall repair or replace structural supports as authorized by the OIC.

EXHIBIT A

INVENTORY OF BOILERS

BOILER DATA

BLDG. NO	BOILER NO	BHP	BTU's PER HR	TYPE	STEAM or HOT WATER	MAKE	FUEL	TYPE OR BURNER	MANNED/ UNMANNED
HP-1700	1	3000	114,500,000	W/T	Steam	Riley	Coal/Oil	Steam atomizing pulverizer	M
HP-1700	2	3000	114,500,000	W/T	Steam	Riley	Coal/Oil	Steam atomizing pulverizer	M
HP-1700	3	3000	114,500,000	W/T	Steam	Riley	Coal/Oil	Steam atomizing pulverizer	M
HP-1700	4	3000	114,500,000	W/T	Steam	Riley	Coal/Oil	Steam atomizing pulverizer	M
HP-1700	5	2901	100,100,000	W/T	Steam	Trane-Murray	No.6	Steam atomizing	M
730	6	15	502,080	W/T	Hot Water	International	No.2	Spray Nozzle	U
730	7	15	502,080	W/T	Hot Water	International	No.2	Spray Nozzle	U
PP-1943	8	15	502,080	F/T	Hot Water	National	No.2	Spray Nozzle	U
PP-2615	9	400	16,738,000	F/T	Steam	Cleaver Brooks	No.6	Air & Steam atomizing	M
PP-2615	10	200	12,292,000	W/T	Steam	Erie City	No.6	Rotary Cup	M
HP-825	12	140	4,686,080	F/T	Hot Water	Kewanee	No.2	Rotary Cup	U
HP-825	13	140	4,686,080	F/T	Hot Water	Kewanee	No.2	Rotary Cup	U
HP-33	16	18	602,496	C/I	Hot Water	National	No.2	Spray Nozzle	U
LCH-4014	17	50	1,673,600	F/T	Steam	Kewanee	No.2	Spray Nozzle	U
LCH-4014	18	50	1,673,600	F/T	Steam	Kewanee	No.2	Spray Nozzle	U
LCH-4022	19	10	334,720	F/T	Hot Water	Fitzgibbons	No.2	Spray Nozzle	U
LCH-4025	20	15	502,080	F/T	Hot Water	Kewanee	No.2	Spray Nozzle	U
LCH-4003	21	70	2,343,040	F/T	Steam	Power Master	No.2	Dry Storage	U
HP-45	22	25	836,800	F/T	Hot Water	Cliff	No.2	Spray Nozzle	U
HP-803	23	30	1,167,900	F/T	Steam	Kewanee	LP Gas	Gas Nozzle (Dry Storage)	U
TT-47	24	25	836,800	F/T	Steam	Eclipse	LP Gas	Gas Nozzle (Dry Storage)	U
TT-48	25	22	1,000,000	F/T	Hot Water	Fitzgibbons	No.2	Spray Nozzle	U
TT-48	26	22	1,000,000	F/T	Hot Water	National	No.2	Spray Nozzle	U
TT-48	27	22	1,000,000	F/T	Hot Water	National	No.2	Spray Nozzle	U
TT-48	28	22	1,000,000	F/T	Hot Water	National	No.2	Spray Nozzle	U
TT-44	30	10	334,720	C/I	Hot Water	Kewanee	No.2	Spray Nozzle	U
TT-2455	31	15	502,080	F/T	Hot Water	Spence	No.2	Spray Nozzle	U
M-625	33	310	19,751,600	W/T	Steam	Keeler	No.6	Steam atomizing	M
M-230	38	200	9,250,000	F/T	Steam	York Shipley	No.2	Air atomizing	U
M-230	39	200	9,250,000	F/T	Steam	York Shipley	No.2	Air atomizing	U
M-230	40	200	9,250,000	F/T	Steam	York Shipley	No.2	Air atomizing	U
TC-601 (OLD TRAILER PK)	43	12	401,664	C/I	Hot Water	National	No.2	Spray Nozzle	U
CGA-1	45	15	502,000	F/T	Hot Water	Kewanee	No.2	Spray Nozzle	U
RR-15	46	200	12,292,000	W/T	Steam	Erie City	No.6	Rotary Cup	M
RR-15	47	200	12,292,000	W/T	Steam	Erie City	No.6	Rotary Cup	M
A-1	50	92	3,080,000	F/T	Steam	Burnham	No.2	Spray Nozzle	U
BB-48	51	25	836,800	F/T	Hot Water	Fitzgibbons	No.2	Spray Nozzle	U

BOILER DATA

BLDG. NO.	BOILER NO.	BHP	BTU's PER HR	TYPE	STEAM or HOT WATER	MAKE	FUEL	TYPE OR BURNER	MANNED/ UNMANNED
BB-49	52	26	870,272	F/T	Hot Water	Fitzgibbons	No.2	Spray Nozzle	U
BB-9	53	434	19,530,000	W/T	Steam	Nebraska	No.6	Steam atomizing	M
BB-9	54	350	12,075,000	F/T	Steam	Nebraska	No.6	Air atomizing and steam	M
BB-9	55	200	12,292,000	W/T	Steam	Erie City	No.6	Rotary Cup	M
SH-8	58	12	401,664	F/T	Hot Water	Federal Boiler	No.2	Spray Nozzle	U
HP-738	59	10	334,720	C/I	Hot Water	International	No.2	Spray Nozzle	U
TC-1500	60	21	702,912	F/T	Hot Water	Fitzgibbons	No.2	Spray Nozzle	U
USO	61	22	1,050,000	C/I	Steam	National Radiator	No.2	Spray Nozzle	U
FC-202	62	200	9,250,000	F/T	Steam	Ames	No.2	Air atomizing	U
FC-202	63	200	9,250,000	F/T	Steam	Ames	No.2	Air atomizing	U
BA-106	64	100	3,347,500	F/T	Steam	Superior	No.2	Air atomizing	U
BA-106	65	170	7,784,640	F/T	Steam	Mund Corp.	No.2	Spray Nozzle	U
TT-2457	66	30	624,000	F/T	Steam	Spencer	No.2	Spray Nozzle	U
M-625	73	210	23,125,000	W/T	Steam	Keeler	No.6	Steam atomizing	M
M-625	74	210	23,125,000	W/T	Steam	Keeler	No.6	Steam atomizing	M
HP-40	75	120	4,070,000	C/I	Hot Water	H.B.Smith	No.2	Spray Nozzle	U
HP-40	76	120	4,070,000	C/I	Hot Water	H.B.Smith	No.2	Spray Nozzle	U
PP-1915	77	21	736,000	C/I	Hot Water	Kewanee	No.2	Spray Nozzle	U
TT-60	78	80	2,717,400	C/I	Hot Water	H.B.Smith	No.2	Spray Nozzle	U
TT-60	79	80	2,717,400	C/I	Hot Water	H.B.Smith	No.2	Spray Nozzle	U
PP-5400	80	75	2,492,200	C/I	Hot Water	H.B.Smith	No.2	Spray Nozzle	U
PP-5400	81	75	2,492,200	C/I	Hot Water	H.B.Smith	No.2	Spray Nozzle	U
G-567	82	18	600,000	F/T	Hot Water	Iron Fireman	No.2	Spray Nozzle	U
G-650	83	1160	52,750,000	W/T	Steam	Eng.Combustion	No.6	Steam atomizing	M
G-650	84	1160	52,750,000	W/T	Steam	Eng.Combustion	No.6	Steam atomizing	M
G-650	85	770	26,100,000	W/T	Steam	Keeler	No.6	Steam atomizing	M
HP-32	86	36	1,200,000	F/T	Hot Water	Kewanee	No.2	Spray Nozzle	U
TT-2475	87	19	312,000	F/T	Hot Water	Spencer	No.2	Spray Nozzle	U
670	88	15	502,079	F/T	Hot Water	Spencer	No.2	Spray Nozzle	U
G-480	89	11	391,300	C/I	Hot Water	American Standard	No.2	Spray Nozzle	U
PARA LOFT	90	34.2	1,145,000	F/T	Hot Water	Burnham	No.2	Spray Nozzle	U

MARINE CORPS AIR STATION

BLDG. NO	BOILER NO.	BHP	BTU's PER HR	TYPE	STEAM or HOT WATER	MAKE	FUEL	TYPE OR BURNER	MANNED/ UNMANNED
MCAS-710	3	36	1,790,000	F/T	Steam	National Steel	No.2	Spray Nozzle	U
MCAS-704	5	38	1,610,000	F/T	Hot Water	National Steel	No.2	Spray Nozzle	U
MCAS-702	6	26	1,080,000	F/T	Hot Water	Kewanee	No.2	Spray Nozzle	U
MCAS-3502	8	13.9	468,000	F/T	Steam	American Standard	No.2	Spray Nozzle	U
MCAS-3504	9	9.6	324,000	F/T	Hot Water	Kewanee	No.2	Spray Nozzle	U
MCAS-705	11	200	6,694,400	F/T	Steam	Crane	No.2	Spray Nozzle	U
MCAS-2800	12	13.9	351,000	F/T	Hot Water	Fitzgibbons	No.2	Spray Nozzle	U
MCAS-820	13	5	252,000	F/T	Hot Water	National	No.2	Spray Nozzle	U
MCAS-843	14	6	324,000	F/T	Hot Water	Spencer	No.2	Spray Nozzle	U
MCAS-3525	15	17.5	584,500	C/I	Steam	American Standard	No.2	Spray Nozzle	U
MCAS-4151	16	1162	53,000,954	W/T	Steam	Trane Murray Co.	No.6	Steam atomizing	M
MCAS-4151	17	1162	53,000,954	W/T	Steam	Trane Murray Co.	No.6	Steam atomizing	M
MCAS-4151	18	1162	53,000,954	T/T	Steam	Trane Murray Co.	No.6	Steam atomizing	M

EXHIBIT B

APPLICABLE PUBLICATIONS

When replacing component parts in the heating plant and steam distribution system, the Contractor shall ensure that all procured equipment is in accordance with the following applicable publications.

1. Valves

MIL SPEC VIL-V-13612D	Valves, Relief, Pressure, and Temperature (for Hot Water Supply Systems)
MIL SPEC MIL-V-16733C	Valves, Pressure Regulating, Steam
MIL SPEC MIL-V-13146B	Valves, Pressure Regulating, Water
MIL SPEC MIL-V-18406B	Valve, Blow-Off, Boiler
MIL-SPEC MIL-V-18433B	Valves, Temperature-regulating (Thermostatically Controlled)
MIL SPEC MIL-V-18434B	Valves, Gate, Globe and Angle, Steel
MIL SPEC MIL-V-18436C	Valves, Check: Bronze, Cast-iron, and Steel Body
MIL SPEC MIL-V-18436C (2)	Valves, Check: Bronze, Cast-iron, and Steel Body
MIL SPEC MIL-V-18499C	Valves, Air Venting, Steam
MIL SPEC MIL-V-18634A	Valves, Safety, Relief, and Safety-Relief

2. Pumps

MIL SPEC MIL-P-16077A	Pumps, Centrifugal, Water-Circulating, Electric-Motor-Driven
MIL SPEC MIL-P-17552C (2)	Pumps, Centrifugal, Water, Horizontal, General Service, and Pump, Centrifugal, Water, Horizontal, Boiler Feed, Electric-Motor or Steam-Turbine-Driven
MIL SPEC MIL-P-17597B (2)	Pump and Heater, Fuel Oil

MIL SPEC MIL-P-17608B	Pump, Rotary, Power-Driven, Viscous, Liquid
MIL SPEC MIL-P-17749C	Pumping Units, Condensate, Heating, and Pumping Units, Vacuum, Heating

3. Guages

FED SPEC GG-G-76D	Guages, Pressure and Vacuum, Dial-Indicating
MIL SPEC MIL-G-17713B	Guages, Liquid-Level Measuring, Tank

4. Fans

MIL SPEC MIL-F-18523B	Fan, Centrifugal, Draft-Forced and Induced

5. Thermometers

FED SPEC GG-T-321C	Thermometers, Self-Indicating, Liquid-in-Glass, For Machinery and Piping Systems.

6. Strainers

MIL SPEC MIL-S-16293F	Strainers, Sediment, Pipeline, Water, Air, Gas, Oil, or Steam

7. Expansion Tanks

MIL SPEC MIL-T-18560B	Tanks, Expansion, Hot Water Heating System

8. Boilers

MIL SPEC MIL-B-17452C	Boilers, Steam and Hot Water, High and Low Pressure, Firetube Package Type

9. Burners

MIL SPEC MIL-B-18796D	Burners, Single, Oil, Gas, and Gas Oil Combination (400,000 BTU/HR and Over Input Capacity)

10. Fuel Tanks

UL-58-76	Steel Underground Tanks for Flammable and Combustible Liquids
UL-142-78	Steel Aboveground Tanks for Flammable and Combustible Liquids

11. Bolting Materials

ASTM A-193	Alloy Steel Bolting Materials for High Temperature Service

12. Heat Resistant Paint

FED SPEC TT-P-28E	Pain, Aluminum, Heat Resisting (1200F)

13. Anti-Seize Compound

MIL-SPEC MIL-A-907D	Anti-Seize Compound, High Temperature

14. Industry/National Codes

National Fire Protection Association Code

American Society of Mechanical Engineers Boiler and Pressure Vessel Code

National Electrical Code

National Plumbing Code

15. Navy Publications

NAVFAC MO-205	Central Heating and Steam Electric Generating Plants
NAVFAC MO-322	Inspection of Utility Systems and Public Works Systems

16. U. S. Department of Interior, Bureau of Mines

Handbooks

No. 3	Questions and Answers on Boiler-Feed-Water Conditioning
No. 5	Boiler-Water-Treatment Manual for Federal Plant Operators

Instruction Form

BWS 7	Instructions for Bureau of Mines Boiler Water Test Kit for Sodium Sulfite.
BWS 9A	Instructions of Bureau of Mines Test Kit for Tannin by Boiler Water Color
BWS 14	Instructions for Determining Chloride Concentration in Water by Use of Bureau of Mines Chemical Reagents
BWS 15	Instructions for Bureau of Mines Boiler Water Test Kit for Phosphate
BWS 16	Instructions for Bureau of Mines Boiler Water Test Kit for Causticity

BWS 18	Instructions for Bureau of Mines Test Kit for Condensate pH
BWS 20	Instructions for Test Kit for pH of Boiler Water by Indicator Paper
BWS 21	Instructions for Determining Dissolved Solids in Boiler Water by Electrical Conductivity, for Control of Boiler Blow-down.
BWS 22	Instructions for Use of Bureau of Mines Return Line Corrosion Tester

17. Steam Pipes

ASTM A53-78	Pipe, Steel, Black and Hot-Dipped Zinc-coated Welded & Seamless Steel pipe
ASTM A107-79b	Seamless Carbon Steel Pipe for High-Temperature Service
FED SPEC TT-P-641F(1)	Primer Coating, Zinc Dust-Zinc Oxide (for Galvanized Surfaces)
MIL SPEC MIL-P-26915A	Primer Coating, Zinc Dust Pigmented, for Steel Surfaces
FED SPEC	Primer Paint, Zinc-Chromate, Alkyd Type

18. Fittings and End Connections

ANSI B16.11-73	Forged Steel Fittings, Socket-Welded and Threaded
ANSI B16,9-78	Factory-made Wrought Steel Buttwelding Fittings

19. Welding

ANSI B31.1-77	Power Piping

20. Flanges and Unions

ANSI B16.5-77	Steel Pipe Flanges, Flanged Valves and Fittings
FED SPEC WW-U-531	Unions, Pipe, Steel or Malleable Iron, Threaded Connection, 150 and 250 pound

21. Gaskets, Bolds, and Nuts

ANSI B16, 21-72	Nonmetallic Gaskets for Pipe Flanges
ASTM A193-78	Alloy Steel and Stainless Steel Bolting Materials
ASTM A194-77A	Carbon and Alloy Steel Nuts for Bolts for High-Temperature Service

22. Valves

FED SPEC W.V-51F	Valves, Angle, Check and Globe, Bronze (125, 150 and 200 pound) Threaded End, Flanged End and Soldered End
FED SPEC WW-V-54D (GSA/FSS)	Valves, Gate, Bronze 125, 150 and 200 pounds; Threaded Ends, Flanged Ends and Soldered Ends and Bronzed Ends
FED SPEC WW-V-58B	Valves, Cast-iron Gate, Screwed and Flanged
MIL SPEC MIL-V-18434B	Valves, Gate, Globe and Angle; Steel
MIL SPEC MIL-V-18436C &Am 2	Valves, Check: Bronze, Cast-iron and Steel Body
MIL SPEC MIL-V-18436C & Am 1	Valve, Safety, Relief and Safety Relief
MIL SPEC MIL-V-18826B	Valves, Globe and Angle, Cast-iron
MIL SPEC MIL-V-18827A	Valves, Gate; Bronze, 300 pound
MIL SPEC MIL-V-16733C	Valves, Pressure Regulating, Steam

23. Pipe Hangers and Supports

MSS SP-58-75	Pipe Hangers and Supports - Materials, Design and Manufacture
MSS SP-69-76	Pipe Hangers and Supports - Selection and Application

24. Traps, Strainers and Guages

MIL SPEC MIL-S-16293F	Strainers, Sediment, Pipeline, Water, Air, Gas Oil or Steam
FED SPEC WW-T-696C(1)	Traps, Steam and Air
FED SPEC GG-G-76D	Gauges, Pressure and Vacuum, Dial Indicating

25. Expansion Joints

MIL SPEC MIL-E-17814C	Expansion Joints, Pipe, Guided, Slip-Tube

26. Guy Wires, Anchor Rods, Screw Anchors, Turnbuckles, and Fastenings

ASTM A475-78	Zinc-Coated Steel Wire, Strand
MIL SPEC MIL-A-3777A	Anchor, Guy and Rods, Anchor
FED SPEC FF-T-791B	Turnbuckles
FED SPEC FF-B-571A & Am 1	Bolts, Nuts, Studs, and Tap-Rivet

27. Insulation

FED SPEC HH-I-523C	Insulation Blocks and Pipe Covering, Thermal (Calcium Silicate)
FED SPEC HH-I-551E	Insulation Block and Boards, Thermal (Cellular Glass)
FED SPEC HH-I-558B(3)	Insulation Blocks, Boards, Blankets, Felts, Sleeving (Pipe and Tube Covering), and Pipe Fitting Covering Thermal (Mineral Fiber, Industrial Type)

28. Conduits

FED SPEC WW-C-566C	Conduit, Steel Flexible

Additional guidance for component part procurement is found in Type Specification TS-P28 (latest revision), Piping System for Heat Distribution, and NAVDOCKS MO-209, Maintenance of Steam, Hot Water, and Compressed Air Distribution Systems. If the Contractor cannot determine or is unsure of the appropriate military, Federal, or commercial specification applicable to the component being purchased, procurement instructions shall be requested from the OIC. The Government shall reject and withhold payment for component parts which do not conform to the appropriate procurement specifications.

EXHIBIT C

RECORDS AND REPORTS

REPORT/RECORD	FREQUENCY	REMARKS
1. Heating Plant Logs	Daily	Hourly record to include fuel availability and consumption to be made available to OIC as requested.
2. Flue Gas Test Report	Daily	Report of percent of CO_2 in flue gases and flue gas temperature. Submit to OIC weekly. No specified format.
3. Fuel Consumption Report	Weekly	Report of fuel availability. Submit to OIC weekly.
4. Boiler Water Test and Treatment Record	Monthly	Daily record. Submit to OIC monthly.
5. Corrective/Preventative Maintenance Schedule and Checklists	Quarterly	Schedule of inspection maintenance and repair of all distribution system components. C/PM checklists shall be completely quarterly for each component with uncorrected deficiencies noted. Checklists will be submitted to the OIC the day following the inspection.
6. Utilities Inspection and Service Record	As Required	Log all major repairs to major items of plant equipment. To be made available to the OIC as requested.

EXHIBIT D

Historical Data

The following information is based on historical data evaluated from 1 July 1983, through 30 June 1984, and is provided solely for the Contractor's information. This data, by itself, is not considered to be sufficiently accurate for bidding purposes.

Documents on file show that a total of 288 service calls were performed during this period on the Steam Distribution System.

Work orders and service calls were for various problems and are shown by shop and quarter as follows:

Type	Work Center	Quarter	No. of Tickets	Manhours
01	31 (Emergency Shop)	4th FY83	5	20.7
01	31 (Emergency Shop)	1st FY84	15	55.2
01	32 (Emergency Shop-AS)	1st FY84	4	5.2
01	34 (Emergency-SM)	1st FY84	1	.5
01	31 (Emergency Shop)	2nd FY84	14	28.7
01	32 (Emergency Shop-AS)	2nd FY84	2	5.0
01	34 (Emergency-SM)	2nd FY84	2	5.5
01	37 (Emergency-BB)	2nd FY84	1	2.0
01	62 (Pipefitting)	2nd FY84	2	6.0
01	31 (Emergency Shop)	3rd FY84	8	15.0
01	62 (Pipefitting)	3rd FY84	1	8.0
01	62A (Inside Pipe-fitting)	3rd FY84	2	19.0
01	62B (Outside Pipe-fitting)	3rd FY84	2	19.0
			59	189.0
02	32 (Emergency Shop-AS)	4th FY83	8	35.7
02	35 (Emergency Shop-PP)	4th FY84	1	.5
02	36 (Emergency Shop-FC)	4th FY84	6	24.0
02	37 (Emergency Shop-BB)	4th FY84	7	15.2
02	44 (Masonry Shop)	4th FY84	1	5.0
02	61 (Inside Plumbing)	4th FY84	1	4.0
02	61B (Outside Plumbing)	4th FY84	1	1.0
02	62 (Pipefitting)	4th FY84	13	69.5
02	62A (Inside Pipe-fitting)	4th FY84	7	31.0
02	62B (Outide Pipe-fitting)	4th FY84	9	72.0
02	34 (Emergency Shop-SM)	1st FY84	5	8.5
02	36 (Emergency Shop-FC)	1st FY84	7	22.5
02	37 (Emergency Shop-BB)	1st FY84	6	14.5
02	51 (Electrical Shop)	1st FY84	6	15.0
02	62 (Pipefitting)	1st FY84	14	63.0
02	62A (Inside Pipe-fitting)	1st FY84	2	20.0
02	62B (Outside Pipe fitting)	1st FY84	14	91.0
02	63 (Sheetmetal Shop)	1st FY84	2	3.7
02	71 (Groundskeeping)	1st FY84	2	4.0
02	32 (Emergency Shop-AS)	2nd FY84	9	19.7
02	34 (Emergency Shop-SM)	2nd FY84	5	7.5
02	36 (Emergency Shop-FC)	2nd FY84	11	12.5
02	37 (Emergency Shop-BB)	2nd FY84	4	6.0
02	61A (Inside Plumbing)	2nd FY84	1	8.0
02	61B (Outside Plumbing)	2nd FY84	1	2.0
02	62 (Pipefitting)	2nd FY84	9	59.0
02	62A (Inside Pipe-fitting)	2nd FY84	5	31.0

Type	Work Center	Quarter	No. of Tickets	Manhours
02	62B (Outside Pipe-fitting)	2nd FY84	3	32.0
02	63 (Sheetmetal Shop)	2nd FY84	2	10.0
02	32 (Emergency Shop-AS)	3rd FY84	4	6.5
02	36 (Emergency Shop-FC)	3rd FY84	5	7.0
02	37 (Emergency Shop-BB)	3rd FY84	3	12.2
02	51 (Electrical Shop)	3rd FY84	1	2.0
02	61A (Inside Plumbing)	3rd FY84	5	29.5
02	62 (Pipefitting)	3rd FY84	10	84.0
02	62A (Inside Pipe-fitting)	3rd FY84	3	36.0
02	62B (Outside Pipe-fitting)	3rd FY84	35	249.5
02	63 (Sheetmetal Shop)	3rd FY84	1	5.0
			229	1119.5

Materials Cost

Type - 01 Emergency Service Work

4th Qtr FY83	$0
1st Qtr FY84	$0
2nd Qtr FY84	$0
3rd Qtr FY84	$0

Type - 02 Urgent and Routine Service Work

4th Qtr FY83	$55.20
1st Qtr FY84	$192.57
2nd Qtr FY84	$69.32
3rd Qtr FY84	$370.98

Source: Fund Administrators Expense Reports

Another major area of repairs was to the boilers, which work consisted of, but was not necessarily limited to, replacing or repairing:

- Drain valves
- Water supply lines
- Regulators
- Stack fans
- Fuel oil supply systems
- Meters and pressure switches
- Water preheaters
- Gas valves
- Water columns
- Air compressors

Other operations pertaining to boilers were:

- Lighting and monitoring boilers
- Pumping underground fuel tanks
- Water samples
- Chemical treatment

Additional areas of work were, but were not necessarily limited to, the following:

- Leaks in steam pipes
- Gas leak from heaters
- Correcting thermostat wiring
- Removing old steam lines and replacing
- Disconnecting existing heaters and relocating
- Installing new thermostats
- Repairing humidifiers
- Repairing pumps
- Adjusting dampers
- Painting housings
- Installing new ductwork

Major improvements made and to be made to heating and steam distribution systems shown on the Work Contracted Listing.

Following is a summary of the total number of manhours by various trade skills required to perform the necessary one-time work orders during the study period of one year. This summary is intended to assist the Contractor in evaluating the variety of work skills required to complete the different one-time work orders submitted.

WORK SKILL CENTER	ONE-TIME PROJECT SCA	DAVIS B.	TOTAL

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A typical chemical usage, covering a one-year period follows:

Chemical	Amount
Dispersant	78,000 pounds @ 9.09 #/gal
Neutralizing amines	30,000 pounds @ 7.82 #/gal
Neutralizing - filming amine	33,100 pounds @ 8.27 #/gal
Oxygen Scavenger - Sulfite	1500 pounds
Deposit Inhibitor	15,000 pounds
Oxygen Scavenger - Catalyzed Hydrazine	5400 pounds @ 8.18 #/gal

ATTACHMENT 1

EXHIBIT D

HISTORICAL DATA - MONTHLY STEAM PLANT PERFORMANCE

MONTHLY TOTALS

Bldg.	Month	Total Coal (lbs)	Total Oil (gals)	Total Steam (lbs)	Make-up of Gals. of Water
1700	October 83	5,117,200	45,890	62,586,625	6,472,800
	November	6,497,300	64,018	78,122,880	7,932,200
	December	9,752,800	10,875	102,275,825	10,378,900
	January 84	11,091,844	54,518	126,367,223	11,585,100
	February	9,429,700	21,748	103,909,804	9,243,800
	March	9,189,068	19,724	99,837,475	8,198,100
	April	7,281,900	15,710	79,949,405	7,238,700
	May	5,025,933	51,368	59,876,399	5,845,100
	June	4,893,400	15,670	54,159,470	6,808,400
	July	5,122,166	11,251	55,083,725	5,978,000
	Aug	5,230,799	9,285	56,373,891	6,117,200
	Sep	4,846,430	41,799	56,644,808	5,845,600
AS-4151	October 83		97,186	11,446,740	949,800
	November		156,544	18,575,020	1,115,400
	December		241,932	28,226,955	1,483,600
	January 84		299,071	34,980,210	2,031,000
	February		223,729	25,694,460	1,418,700
	March		201,427	22,849,075	1,054,700
	April		132,807	15,085,920	846,500
	May		80,487	9,369,810	810,600
	June		76,489	8,990,170	808,200
	July		75,191	8,789,827	874,900
	Aug		78,290	9,184,199	910,600
	Sep		84,227	9,692,000	1,057,800
G-650	October 83		88,918	10,225,570	1,179,970
	November		135,538	15,560,370	907,100
	December		173,975	20,032,450	657,400
	January 84		209,468	24,065,500	156,600
	February		178,930	20,631,860	789,200
	March		182,701	21,006,120	807,200
	April		136,045	15,619,829	776,800
	May		93,806	10,779,620	641,445
	June		75,499	8,682,385	584,200
	July		76,289	8,773,235	631,300
	Aug		72,424	8,328,760	530,900
	Sep		76,787	8,830,505	414,200

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MONTHLY TOTALS

Bldg.	Month	Total Coal (lbs)	Total Oil (gals)	Total Steam (lbs)	Make-up of Gals. of Water
RR-15	October 83		23,787	2,623,495	183,500
	November		34,342	3,768,375	282,700
	December		40,069	4,388,085	211,500
	January 84		46,877	5,146,570	277,100
	February		39,777	4,374,642	319,935
	March		41,764	4,594,700	316,700
	April		31,724	3,489,600	249,200
	May		25,345	2,787,950	167,500
	June		22,277	2,450,470	202,800
	July		20,494	2,254,434	171,900
	Aug		20,517	2,256,870	201,381
	Sep		21,870	2,405,700	170,900
M-625	October 83		60,794	6,566,220	480,200
	November		107,681	11,896,540	562,700
	December		145,303	15,679,210	943,100
	January 84		172,075	18,623,640	1,115,600
	February		134,240	14,948,608	965,600
	March		133,715	14,641,880	880,600
	April		88,790	9,572,400	556,400
	May		50,476	5,481,150	570,700
	June		43,911	4,828,010	474,100
	July		44,085	4,849,350	426,500
	Aug		42,113	4,632,430	302,100
	Sep		44,169	4,868,748	290,200
BB-9	October 83		24,537	2,708,455	236,700
	November		38,876	4,275,150	297,700
	December		60,678	6,481,860	476,700
	January 84		75,642	8,420,620	607,200
	February		59,205	6,512,550	496,400
	March		68,325	7,515,780	527,900
	April		43,699	4,806,890	416,300
	May		28,974	3,185,450	335,300
	June		24,509	2,695,990	250,800
	July		28,391	3,123,010	188,700
	Aug		26,313	2,894,430	154,084
	Sep		29,790	3,276,900	235,100

MONTHLY TOTALS

Bldg.	Month	Total Coal (lbs)	Total Oil (gals)	Total Steam (lbs)	Make-up of Gals. of Water
PP2615	October 83		20,953	2,306,040	321,900
	November		36,760	4,023,936	319,700
	December		39,259	4,312,906	412,553
	January 84		40,520	4,454,613	463,600
	February		32,967	3,626,370	438,900
	March		34,191	3,741,430	384,900
	April		28,123	3,093,630	317,000
	May		15,237	1,676,070	243,200
	June		17,669	1,942,490	207,800

MAXIMUM DEMAND FOR EACH MONTH

Bldg.	Month	Date for Maximum Demand	Daily Coal (lbs)	Daily Oil (gals)	Daily Steam (lbs)	Make-up of Gals. of Water	Temperature Max	Min	Avg	Max Demand of Steam Per Hour	Hour Occurred
1700	October 83	14 Oct	152,400	935	1,934,525	214,900	76	60	68.4	121,800	0600
	November	26 Nov	264,800	162	2,822,830	291,700	59	39	48.75	224,000	1800
	December	27 Dec	420,000		4,506,600	406,000	38	18	30.08	212,800	0800
	January 84	12 Jan	442,600		4,865,000	422,400	38	24	30.29	231,000	0700
	February	8 Feb	406,800		4,685,800	386,900	41	24	31	254,800	1100
	March	9 Mar	357,600	1,795	4,147,425	290,400	55	31	39.12	200,455	0800
	April	10 Apr	261,600	1,537	3,694,365	332,000	53	42	47.29	176,400	1400
	May	2 May	203,400		2,237,200	230,300	81	62	71.5	113,400	0700
	June	19 Jun	146,800	152	1,777,910	205,300	102	76	84.33	138,600	1400
AS-4151	October 83	5 Oct		3,113	373,560	35,800	87	70	76.5	35,800	1400
	November	30 Nov		6,887	813,150	40,300	60	34	45.5	39,600	0800
	December	11 Dec		6,731	774,065	49,000	67	38	56.4	73,600	0300
	January 84	11 Jan		9,518	1,094,570	63,200	64	31	37.2	58,650	1800
	February	9 Feb		9,839	1,180,680	68,200	65	24	41.5	57,600	0800
	March	1 Mar		9,318	1,084,950	36,600	46	30	36.7	53,100	0500
	April	11 Apr		6,136	649,350	33,200	68	40	53.1	37,800	0700
	May	9 May		2,655	305,325	25,800	72	52	61	35,100	1500
	June	11 Jun		2,635	316,200	24,900				29,250	1500
G-650	October 83	31 Oct		4,086	469,890	50,300	70	48	58.3	22,655	0500
	November	17 Nov		5,246	603,290	22,400	58	36	46.8	29,900	1000
	December	28 Dec		6,156	758,710	54,600	70	35	53.3	40,145	0800
	January 84	22 Jan		7,932	906,230	35,600	40	15	26.9	42,895	1100
	February	6 Feb		7,272	836,280	31,200	46	32	36.5	43,010	1700
	March	7 Mar		6,608	759,920	23,400	51	37	43.4	37,835	0600
	April	4 Apr		4,936	567,640	29,000	71	57	64.2	43,470	1600
	May	31 May		3,403	391,345	23,700	69	53	60	20,470	0800
	June	7 Jun		2,527	290,605	21,000				18,000	2000

MAXIMUM DEMAND FOR EACH MONTH

Bldg.	Month	Date for Maximum Demand	Daily Coal (lbs)	Daily Oil (gals)	Daily Steam (lbs)	Make-up of Gals. of Water	Temperature Max	Min	Avg	Max Demand of Steam Per Hour	Hour Occurred
RR-15	October 83	14 Oct		737	81,070	4,500	74	60	68.3	9,000	1700
	November	13 Nov		1,629	179,190	14,000	49	34	41.2	11,330	0900
	December	20 Dec		1,537	169,070	8,100	46	31	36.7	10,560	0700
	January 84	2 Jan		1,461	160,710	7,300	54	29	37.4	14,960	2100
	February	29 Feb		1,766	194,260	13,000	46	33	39.5	10,890	0600
	March	1 Mar		1,686	185,460	13,600	46	30	36.7	10,120	1200
	April	29 Apr		727	79,970	5,300	80	60	67.3	9,680	1200
	May	21 May		894	98,340	6,400	87	63	75	8,580	1600
	June	11 Jun		728	80,080	4,900				6,050	0200
M-625	October 83	30 Oct		3,201	342,800	23,100	65	49	55.5	26,801	0200
	November	19 Nov		4,103	459,600	19,600	72	36	54.5	25,400	0600
	December	26 Dec		7,097	743,200	84,500	32	10	20.1	40,200	1600
	January	22 Jan		6,858	733,600	46,800	40	15	26.9	35,000	1600
	February	8 Feb		5,876	634,000	31,000	42	23	31.3	39,400	2400
	March	9 Mar		5,292	578,600	35,600	52	30	39.9	27,900	2400
	April	10 Apr		4,511	502,000	14,300	53	44	48	27,600	2200
	May	31 May		1,791	197,010	20,000	69	53	60	22,600	1200
	June	1 Jun		1,625	178,750	18,100				19,800	1200
BB-9	October	6 Oct		660	72,600	8,800	82	64	73.3	6,195	1200
	November	25 Nov		1,464	161,040	9,500	68	38	50.8	11,110	0800
	December	26 Dec		2,524	277,640	21,600	32	10	20.1	22,310	2300
	January 84	7 Jan		2,363	259,930	19,300	51	30	40	24,750	1600
	February	2 Feb		2,614	287,540	19,400	55	25	39.8	21,200	2000
	March	27 Mar		1,777	195,470	14,600	65	42	55.1	19,750	1600
	April	24 Apr		1,623	178,530	15,000	63	49	57.4	19,150	0800
	May	7 May		882	97,020	11,500	85	68	74	28,025	1600
	June	4 Jun		668	73,480	8,700				17,475	1500

MAXIMUM DEMAND FOR EACH MONTH

Bldg.	Month	Date for Maximum Demand	Daily Coal (lbs)	Daily Oil (gals)	Daily Steam (lbs)	Make-up of Gals. of Water	Temperature Max	Min	Avg	Max Demand of Steam Per Hour	Hour Occurred
PP2615	October 83	7 Oct		691	76,010	10,800	79	60	67.7	10,770	0600
	November	29 Nov		2,148	236,322	7,200	66	43	54.8	12,564	0600
	December	31 Dec		1,848	203,280	16,000	33	19	25.6	12,618	2400
	January 84	9 Jan		869	95,590	12,200	61	31	46.2	16,128	0300
	February	14 Feb		732	80,520	12,200	68	55	62	12,906	0800
	March	11 Mar		1,186	130,460	14,700	62	31	46.2	14,300	0300
	April	16 Apr		907	99,770	9,600	72	57	63.4	12,600	0600
	May	7 May		494	54,340	6,500	85	68	74	5,616	0700
	June	6 Jun		677	73,370	10,100				10,215	0900

HISTORICAL DATA - MONTHLY STEAM PLAN PERFORMANCE

Bldg.	Month	Total Coal	Total Oil	Total Steam	Make Up Of Water
1700	July	5,122,166	11,251	55,083,725	5,978,000
	August	5,230,799	9,285	56,373,891	6,117,200
	September	4,846,430	41,799	56,644,808	5,845,600
AS4151	July		75,191	8,789,827	874,900
	August		78,290	9,184,199	910,600
	September		84,227	9,692,000	1,057,800
G650	July		76,289	8,773,235	631,300
	August		72,424	8,328,760	530,900
	September		76,787	8,830,505	414,200
RR15	July		20,494	2,254,434	171,900
	August		20,517	2,256,870	201,381
	September		21,870	2,405,700	170,900
M625	July		44,085	4,849,350	426,400
	August		42,113	4,632,430	302,100
	September		44,169	4,868,748	290,200
BB9	July		28,391	3,123,010	188,700
	August		26,313	2,894,430	154,084
	September		29,790	3,276,900	235,100

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After the initial treatment of each closed hot water system, water samples must be collected and tested for adequate residuals of chemicals to ensure proper treatment. Water samples must be collected once every month from all systems for testing, to assure the maintenance of the adequate residuals of chemicals for proper treatment.

The systems are listed in Annex _____.

Bldg. No.	Boiler No.	Boiler Horsepower
730	6	15
730	7	15
PP-1943	8	15
HP-825	12	140
HP-825	13	140
HP-33	16	18
LCH-4022	19	10
LCH-4025	20	15
HP-45	22	25
TT-48	25	22
TT-48	26	22
TT-48	27	22
TT-48	28	22
TT-43	29	5
TT-2455	31	15
D-24	32	10
TC-601	43	12
TC-200	44	12
CGA-1	45	15
BB-48	51	25
BB-49	52	26
SH-8	58	12
HP-738	59	10
TT-44	30	10

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EXHIBIT E

PM CHECKLIST FOR STEAM DISTRIBUTION LINES

JON _____

Bldg. No. _____
or Pit No. _____
Area _____
FROM: _____
TO: _____

TASK	No. of Units	SIZE ½	¾	1	1½	1½	2	2½	3	4	8	10	MATERIALS USED & COMMENTS
VALVE, SCREWED													
☐ Check													
☐ Tighten Pckg Nut													
☐ Renew Packing													
☐ Repair													
☐ Replace													
VALVE, FLANGED													
☐ Check													
☐ Tighten Pckg Nut													
☐ Renew Packing													
☐ Repair													
☐ Replace													
GASKET													
☐ Rpl Flange Gasket													
☐ Rpl Ring Gasket													
☐ Rpl Bonnet Gasket													
VALVE, CHECK													
☐ Check													
☐ Replace													
TRAP ASSEMBLY													
☐ Check Trap													
☐ Repair Trap													
☐ Replace Trap													
EXPANSION JOINT													
☐ Check													
☐ Renew Packing													
☐ Lubricate													
☐ Repair													
☐ Replace													
SUMP PUMP-STEAM/WATER													
☐ Rebuild Pump													
☐ Replace Pump													
☐ Clean Sump Pit													
REPLACE PIPEFITTING													
☐ Elbow													
☐ Tee													
☐ Union													
☐ Nipple													
☐ Reducer													
PIPING STEAM													
☐ Repair													
☐ Replace													
☐ Check													
☐ Turn Off/Blowdown													
☐ Reload Line													
PIPING CONDENSATE RTN													
☐ Repair													
☐ Replace													
☐ Check													
☐ Drain/Blowdown													
☐ Reload Line													
PIPE INSULATION													
☐ Repair													
☐ Replace													
☐ Install Metal Cvr													
☐ Waterproof													
☐ Install Insulation													
☐ Remove Extg Insul													

POLICE
- ☐ Remove Foreign Objects
- ☐ Interior & Work Area Cleaned/Unobstructed

- ☐ The Above Work Has Been Completed
- ☐ Other

Work Performed By (Signature)	Date:	Supervisor's Signature

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ATTACHMENT I

EXHIBIT F

GOVERNMENT FURNISHED EQUIPMENT

HEATING PLANTS

NSN	ITEM NAME	UNIT	ON HAND	UNIT PRICE
322001C000016	BAND SAW	EA	1	$600.00
341301C000010	DRILL	EA	3	350.00
341S00C000003	MACH GRINDER B	EA	2	182.00
4910002689778	GRINDER	EA	5	268.72
341901C000015	PIPE THREADER	EA	1	400.00
343201C000001	WELDING MACH	EA	2	405.00
345101C000002	WELDER	EA	2	185.00
375001C000006	MOWER RIDING	EA	1	900.00
375001C006000	LAWN MOWER	EA	5	514.29
395001C000005	ELEC HOIST	EA	1	760.00
4120009054225	AIR CONDITION	EA	1	196.00
4120009054238	AIR CONDITIONER	EA	2	336.82
424001C000001	RESPIRATOR	EA	1	375.00
432001C000007	PUMP PORT	EA	1	250.00
582001C006004	PE66RASAG	EA	1	705.00
582001C006021	RG56TAS55	EA	6	800.00
742001C000006	CALCULATOR E	EA	1	550.00
742001C008042	CANNON 1014CP	EA	1	129.47
743001C000002	TYPE ED3 OCR	EA	1	279.00
743001C000013	IBM SELECT II	EA	1	740.00
375001C000011	CUTTER WEED	EA	1	229.00
791001C001272	ASBESTOR VACUUM MDL	EA	1	977.55
368501C001367	OVEN MECHANICAL CON	EA	1	545.00
6625990010027	CALIBRATOR DIGITAL	EA	2	950.00
4110008790005	REFRIGERATOR	EA	8	263.45
513000C000124	HAMMER ELE COM	EA	1	210.00
3950008898745	HOIST, CHAIN	EA	3	179.97
3920001837425	TRUCK HAND PLA	EA	2	62.00
3920006409189	WHEELBARROW P	EA	4	35.31
395001C000004	CHAIN HOIST	EA	1	250.00
513001C004606	WRENCH IMPACT	EA	2	249.55
5120001881182	VICE, BENCH P	EA	6	99.00
5120990102314	FLANGE SPREADER	EA	1	990.00
5120990010057	TORQUE WRENCH	EA	1	71.00
5130001906434	GRINDER PNEUMA	EA	1	122.57
5130005407146	DRILL ELECTRIC	EA	9	42.00
544001C000001	LADDER	EA	3	282.00
662501C000007	TEST SET	EA	1	533.00
583001C001365	PAPER MODEL	EA	1	241.00
531601C000001	NEEDLE SCALER	EA	3	250.00
662500C000088	METER VOLT-OHM	EA	2	52.24
6625990101177	VOLTMETER DC	EA	1	125.00
6625990100002	TESTER TUBE	EA	1	90.00
662500C000099	AMPROBE ROT SCALE V	EA	1	106.25

NSN	ITEM NAME	UNIT	ON HAND	UNIT PRICE
662501C000020	CONDUCT METER	EA	3	262.00
665000C000001	GLASSES FIELD	EA	1	139.00
6670002405833	SCALE CAP 1000	EA	1	86.68
668000C000014	TACHOMETER	EA	1	35.00
668501C000005	PYRO METER	EA	4	219.00
668501C000002	TEST GAUGE	EA	2	255.00
7110001941611	CHAIR DRAFTING	EA	1	50.58
710501C002257	CHAIR STACK	EA	3	28.20
7110002626648	BOOKCASE SECTION	EA	8	13.70
711000C000146	SECTION S&D R	EA	1	470.00
7110001516485	STAND OFF MACH	EA	2	79.82
7110002626673	BOOKCASE BASE	EA	2	5.50
7110002626681	BOOKCASE TOP	EA	2	3.35
711000C000391	CHAIR STR W/A	EA	4	49.39
711000C000392	CHAIR OFF WO/A	EA	1	36.69
711000C000393	ROTARY W/ARMS	EA	5	63.46
711000C000394	ROTARY WO/ARMS	EA	2	61.82
711000C000396	DESK TYPIST	EA	3	277.00
711000C000398	DESK DP	EA	6	205.00
7110002604920	CABINET FILE	EA	9	224.00
7125007646141	CAB STOR TAN	EA	2	155.76
712501C000009	LOCK D/TIER	EA	15	28.55
7195002755824	RACK 6 HANGER	EA	5	43.50
743001C000114	FORMS HOLDER	EA	1	123.00
7910007205541	CLEANER VAC	EA	3	123.00
7910006808296	FLOOR POLIS	EA	2	185.44
4240990102864	RESPIRATOR SURVIVAL	EA	2	170.00
5120990100003	SOCKET SET	SE	1	100.00
4110002558760	DISPR W/O 80T	EA	7	240.00
4140008519319	FAN WALL	EA	1	54.00
4140008335068	FAN PEDESTAL	EA	21	132.00
7125002698476	LOCKER DBL	EA	8	88.58
7125006802764	LOCKER WALL ST	EA	36	122.73
6625000049536	TAM # H2333	EA	2	97.78

NSN	ITEM NAME	DATE INST	SERIAL NO.	COST
47300000000000	ROLLER TUBE	0679	EC-02	1522.00
7910010541951	SOOT A MATIC	0580	6244	2277.00
6625000000000	CALIB DIGIT	0580	227468	1049.00
6625000000000	CALIB DIGIT	0580	227467	1049.00
662500C994920	CALIBRATORPN	0780	AD 16276	1236.00
341900C990024	MACHPIPETHR	0881	384326	2317.00
6625000000000	OSCILLOSCOPE	0581	B044661	1925.00
6685000000000	CALIBRATORPN	0981	AF03011	1490.00
6630000000000	ANALYZER GAS	0981	8121G182	1130.00
6630000000000	ANALYZER 942	0384	4317	2156.00
4940000000000	WASHER COLD	0384	NONE	1633.00

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APPENDIX I

ASBESTOS HANDLING

APPENDIX ___

Property On-Hand as of 11 Oct 1984

Minor Property

NSN	ITEM NAME	#ON HAND	UNIT PRICE
OUTSIDE PLUMBING SHOP			
7110000C000393	ROTARY W/ARMS	1	63.46
7110000C000398	DESK DP	1	205.00
7110002604929	CABINET FILE	1	224.00
4140008335068	FAN PEDESTAL	1	132.00
7125002698476	LOCKER DBL	8	88.58
3950008898745	HOIST, CHAIN	1	179.97
363001C000001	SAW MASONRY	1	864.00
389501C004645	LATHE FIELD	1	484.50
4210001348954	SAW CUTTING RESCVE	1	416.66
432001C000007	PUMP PORT	3	250.00
OUTSIDE PIPEFITTING SHOP			
4140008335068	FAN PEDESTAL	1	132.00
7125002698476	LOCKER DBL	11	88.58
5130010000023	SAW CIRC PORT	1	90.00
513001C000031	SANDER PORT	1	316.00
4910002689778	GRINDER	1	268.72
341901C000015	PIPE THREADER	1	400.00
4120009054238	AIR CONDITIONER	1	336.82

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Plant Account Class III Property

NSN	ITEM NAME	DATE INSTALLED	COST
343135530362	WELDER ARC	1276	$2,168
446000000000	AIR FILTER SYS	0784	2,599
791000000000	VACUUM CLEAN	0784	2,260
611500000000	GEN SET 6KVA	0784	1,968
432000000000	PUMP SUMP	0784	1,448
432000000000	PUMP SUMP	0482	1,163
432000000000	PUMP SUMP	0482	1,163
343900000000	WELDER ARC	0782	2,995
432000000000	PUMP SUMP	0982	1,450
432000000000	PUMP SUMP	0982	1,450
341956130000	PVC SHAVEMCH	0683	1,127
395000000000	WORK BOOM	0983	11,200
343111203066	WELDER TRMTD	0967	1,611

TT-P-1923B	emulsion base
FED SPEC WW-P-421D	Pipe, cast-gray and ductile-iron, pressure (for water and other liquids)
MIL SPEC MIL-C-1343C1(3)	Coating compound, bituminous, solvent, coal tar base
SPEC PS10.01-64T	Coal Tar Coating System No. 10.01

3.4 Pipes.

ANSI A21.6-75	Cast-Iron pipe centrifugally cast in metal molds for water or other liquids
ANSI A21.8-73	Cast-Iron pipe centrifugally cast in sand-lined molds for water or other liquids
ASTM A53-76(A)	Welded and Seamless Steel Pipe
ASTM A120-76(A)	Black and Hot Dipped Zinc-Coated
AWWA C110-77	Gray-Iron and Ductile-Iron Fittings, 3 inch - 48 inch
AWWA C506	Backflow Prevention Devices
AWWA C600-77	Installation of Gray and Ductile Cast-Iron Water Mains and Appurtenances
AWWA C601-68	Disinfecting Water Mains

3.5 Fire Hydrants.

AWWA C502-75	Fire Hydrants
AWWA C503-75	Wet-Barrel Fire Hydrants

3.6 Diesel Engines.

DEMA	Standard Practices for Diesel and Gas Engines
FED SPEC VV-F-800B	Fuel Oil, Diesel
FED SPEC W-B-1[illegible](2A	Battery, Storage

FED SPEC 7-7-3510(3) Filter and Filter Elements, Fluid Pressure, Lubricating Oil, Bypass and Full Flow

3.7 Electric Motors.

NEMA MG1-77 Motors and Generators

NEMA ICS-70 Control Standards for Industrial Controls and Systems

3.8 Associated Hardware.

ANSI A21.11-72 Rubber gasket joints

ASTM B61-76 Steam or valve bronze castings

ASTM B62-76 Composition bronze or ounce metal castings

MSS SP-58-75 Pipe Hangers and Supports - Materials, Design and Manufacture

MSS SP-69-76 Pipe Hangers and Supports - Selection and Application

If the Contractor cannot determine or is unsure of the appropriate military, Federal, or commercial specification applicable to the component being purchased, procurement instructions shall be requested from the OIC. The Government shall reject and withhold payment for component parts which do not conform to the appropriate procurement specifications.

4. LUBRICATING OILS, GREASES AND PETROLATUMS

Product	Military Specification Number	Symbol	Appendix AAA Grade	Temperature Limits Above
Lubricating oil, general purpose	MIL-L-17331A	2075	10W	-10 F.
Do	do	2100	10 W-75	0 F.
Do	do	2135	20-75	0 F.
Do	do	2190	30	35 F.
Do	do	2250	40	35 F.
Do	do	3030	20 W	0 F.
Do	do	3055	30-30	5 F.
Do	do	3090	40-90	15 F.
Do	do	3150	140	23 F.
Lubricating oil, compounded	MIL-L-15019D	5065	50	35 F.

Do	do	6135	140	60 F.
Do	do	3190	30	35 F.
Lubricating oil, mineral, Cylinder	MIL-L-15012A	3190	140	Above 60 F.
Lubricating oil, internal-combustion engines, subzero.	MIL-L-10295A	0S3	—	-65 to 0 F.
Lubricating oil, instrument jewel-bearing, nonspreading low temperature.	MIL-L-3918	OOJ	—	Above -40 F.
Lubricants; chain, exposed Gear.	VV-L-751A	GE-113	—	All.
Grease, automotive.	MIL-G-10924A	GAA	—	-65 TO 125 F.
Grease, ball and roller bearing.	MIL-G-10709	33	—	125 TO 200 F.
Grease, graphite.	VV-G-671C	GG-1	—	125 max.
Lubricating oil, internal combustion, preservative.	MIL-L-21260	PE-1	—	
Lubricating oil, preservative, sodium.	MIL-L-3150	PL-NED	—	
Corrosion preventive, petroleum, hot application.	MIL-C-11796A	CL-3	—	
Corrosion preventive, compound, solvent cutback, cold application.	MIL-C-161733	CT-1	—	

Bearings:

Ball, all temperatures to 200 F.	33.
Ball, low-pitch line speed.	
Operating temperature below 32 F.	2073.
Operating temperature 32 to 150 F.	2150, 2130, 2063.
Ball, medium-pitch line speed	
Operating temperature below 32 F.	2073.
Operating temperature 32 to 150 F.	2133, 2050
Ball, high-pitch line speed	
Operating temperature below 32 F.	2110, 2030.
Ring-oiled, small, miscellaneous	2110.
Kingsbury thrust bearing	2190TEP.
Thrust (other than Kingsbury, subject to water).	
Thrust (Other than Kingsbury, not subject to water).	2133, 2150
Drones guide	GAA.
Countershaft	GG 1.
Differential (enclosed	3130, 3100, 3133.
Eccentric	3063.

Guide	9250.
Oilite bronze bushings	9250.
Pillow block	G11.
Underwater-babbitted	G11, CS 1.
Universal joint, slip splines	22.
Chain Drives.	
Roller	3020, G11, CS 1.
Roller (enclosed)	Winter, 2075; Summer, 2065.
Roller (semienclosed)	Winter, 3020; Summer, 6135.
Couplings	6135.
Drive jaw clutch	9500.
Gear case or gear head	Low temperature, 3020, High temperature, 5190.
Gears.	
Herringbone	Winter, 2075; Summer, 2065.
Helical	Dp. Winter, 3020; Summer, 2135.
Open	5190.
Planetary	Winter, 2075; 2110; Summer, 2135.
Worm and pump transmission	Winter, 3020; Summer, 6135.
Instruments	CCD.
Motors	See manufacturer's instructions
Packing, Sludge Pumps	6065, 6135.
Pumps	See manufacturer's instructions.
Seal packings	G11.
Shafting.	
Large	2190, 2135.
Small	2110, 2135, 3020.
Sheet piles	22.
Sheeve	CS 1, G11.
Solenoid oilers	2065.
Valve stems	G11.

EXHIBIT C

PREVENTIVE MAINTENANCE

WATER DISTRIBUTION SYSTEMS

PREVENTIVE MAINTENANCE AND PERIODIC INSPECTIONS

	DESCRIPTION	FREQUENCY
	PIPING	
1.	Inspect for leakage.	Annually
2.	Blank.	
3.	Blank.	
	VALVES, GATE	
4.	Inspect for damaged operating nuts, bent stem. Lubricate stem threads; replace packing; operate through complete cycle.	Semi-annually
5.	Paint.	Annually
	VALVES, CHECK	
6.	Inspect for damage and leakage.	Semi-annually
7.	Paint.	Annually
	BACKFLOW PREVENTERS	
8.	Inspection program (continuous). a. Reporting.	a. Quarterly
9.	Blank.	
10.	Blank.	
11.	Blank.	
	FIRE HYDRANTS	

12.	Paint and color-code/identify.	Annually
	NOTE: Functional testing shall be performed by the Government.	
	STORAGE FACILITY	
13.	Inspect foundation for settlement, cracks, and spalling.	Semi-annually
14.	Inspect walls for seepage, cracks, and leakage.	Semi-annually
15.	Inspect expansion joints for leakage.	Quarterly
16.	Inspect roof for condition; check hatches and screens.	Quarterly
17.	Paint.	Annually
	PUMPS	
18.	Lubricate all bearings, glands, bolts, and universal joint couplings.	Bi-weekly
19.	Tighten glands if leaking.	Quarterly
20.	Overhaul and test all parts.	Annually
21.	Paint.	Annually
	GASOLINE ENGINE	
22.	Inspect prior to starting to ensure that all systems are full, belts and accessories are operable and free of debris.	Bi-weekly
23.	Remove all air cleaner/breather caps; inspect and clean as necessary.	Semi-annually
24.	Clean terminal posts of batteries; check fluid level and securement of mountings.	Bi-weekly
25.	Check for leakage at fuel injection system.	Monthly
26.	Drain fuel filter.	Bi-weekly
27.	Remove fuel filter element; clean.	Monthly
28.	Check wiring, commutators, brushes of generator.	Monthly
29.	Flush radiator coolant.	Semi-annually

30.	Check operations, bearings, and fan blades.	Monthly
31.	Paint.	Annually

ELECTRIC MOTORS

32.	Compressed air shall be used to remove all dirt, dust, paint chips and any other foreign material which may interfere with ventilation or hinder moving parts.	Quarterly
33.	All mountings, including foundation bolts, covers, cover-holding bolts, shall be inspected and tightened.	Quarterly
34.	Inspect and tighten all connections between poles, between stator leads and line cables, and between field leads into the pole winding and the collectors.	Quarterly
35.	Stator windings shall be inspected for moisture by using a megger to measure the insulation resistance. If moisture is excessive, dry by circulating electric current in the windings, or by hot-air circulation.	Annually

WATER PLANTS AND SYSTEMS (FUNCTION S-Z2Z)

SECTION 00004 SPECIAL PARAGRAPHS

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WATER PLANTS AND SYSTEMS

SECTION 00004 SPECIAL PARAGRAPHS

!**********
NOTICE TO SPECIFICATION WRITER: Unique functional terms should be added to the following list of definitions.
**********!

1. DEFINITIONS. As used throughout this contract, the following terms shall have the meaning set forth below:

a. Contractor - The term Contractor as used herein refers to both the prime Contractor and any subcontractors. The Contractor will be responsible for insuring that his subcontractors comply with the provisions of this contract.

b. Contractor Representative - A foreman, superintendent, or manager assigned in accordance with the "SUPERINTENDENCE BY CONTRACTOR" Clause, Section 00004.

c. Government Representative - Person(s) designated by the OIC to be his authorized representative.

d. Officer in Charge (OIC) - The Officer designated by the Contracting Officer to administer the contract. As used herein, Officer in Charge (OIC) and Officer in Charge of Construction (OICC) are synonymous. Throughout this contract, the term OIC will be used to refer to the Officer designated to administer the contract. See the "Definitions" Clause, Section 00003.

e. Quality Assurance (QA) - A method used by the Government, to provide some measure of control over the quality of purchased goods and/or services received.

f. Quality Control (QC) - A method used by the Contractor, to control quality of goods and/or services provided.

g. Quality Assurance Evaluator (QAE) - The QAE is that Government employee responsible for the monitoring of the Contractor's performance.

h. Regular Hours - The Government's regular hours are from (starting hour) to (ending hour), Mondays through Fridays, except (a) Federal Holidays and (b) other days specifically designated by the OIC.

i. Where "as shown", "as required", "as detailed" or words of similar import are used, it shall be understood that reference is made to the drawings accompanying this specification unless stated otherwise.

j. Where "as directed", "as required", "as permitted", "approval", "acceptance" or words of similar import are used, it shall be understood that direction, requirement, permission, approval or acceptance of the OIC is intended unless stated otherwise.

k. Task Verification Document (TVD) - A Task Verification Document is a form designed and prepared by the Contractor for his use in planning and scheduling items of work in the contract. The Contractor shall use the TVD to provide verification and accountability of accomplished Lump Sum Work to the OIC. The OIC will utilize the TVD in the inspection program of the QA Plans and to establish accountability and verification of accomplishment of work in the Lump Sum Portion of the contract. The format of all TVD's will be approved for use by the OIC.

l. Engineered Performance Standards (EPS). EPS is a Department of Defense method for establishing the estimated manhour requirements to perform various types of maintenance, repair, construction and housekeeping tasks.

!**********
NOTE TO SPECIFICATION WRITER: The following clause is only required when there are indefinite quantity work items. Appendix _____ should be used to specify work order forms, time requirements for work accomplishment, and minimum and maximum work order quantities. The contract serves as the ordering document for those services furnished under the fixed-price lump sum portion of this contract. Indefinite quantity work however, is not recommended for Water Plants and Systems Services in which case the following paragraphs 2 and 3 should not be used.
**********!

2. ORDERING OF WORK. Services to be furnished under the indefinite quantities portion of the contract shall be ordered by the OIC or, when specifically delegated, the Government Representative.

a. Work orders will take the form of (i) Department of Defense form DD Form 1155 (1 Feb 75) and (ii) forms identified in Appendix _____.

b. Work orders, other than DD Form 1155, will be issued to the Contractor in triplicate. The Original to be submitted by the Contractor with the invoice for payment, one copy to be submitted within 24 hours of completion of work, and one copy retained by the Contractor. DD Form 1155 will be processed as described on the form.

c. The contractor is required to respond to, and complete work ordered in the time(s) specified in Appendix _____ unless otherwise specified in other parts of this contract.

!**********
NOTICE TO SPECIFICATION WRITER: Sub-paragraphs should be added to the following paragraph, as necessary, to provide specific information on invoice data requirements. Appendix _____ should be used to specify invoice format and submittal requirements.
**********!

3. INVOICING INSTRUCTIONS. Contractor's invoices shall be submited in (# of copies) at (frequency) intervals for services performed, to the OIC. The original of each invoice shall have attached to it a copy of the work order document(s) and a summary of the charges in a format similar to the Schedule of Deductions. Upon verification of work actually performed and receipt of required Contractor submittals as identified in Appendix _____ invoices will be processed for payment. Payment will be based on:

* * * *

(b) may, at its option, afford the Contractor the opportunity to re-perform the unsatisfactory work within 6 hours in the case of daily services, or 24 hours in the case of all other services, of the notice to the Contractor of such unsatisfactory performance, at no additional cost to the Government; or

(c) may, at its option, perform the work by Government personnel or other means.

b. Should the Government elect options a.(1)(a), a.(1)(b), a.(2)(a), or a.(2)(b) above, the Government will also deduct, as liquidated damages, to compensate the Government for administrative costs and other expenses resulting from the nonperformance or unsatisfactory performance, an additional 10% of the rate set forth in the Schedule of Deductions for such work.

c. Should the Government elect options a.(1)(c) or a.(2)(c) above, the Government will effect the deduction described in a.(1)(a) or a.(2)(a) above, and will deduct an additional 20% of the rate set forth in the Schedule of Deductions for such work. This 20% is as liquidated damages to compensate the Government for administrative costs and other expenses incurred by the Government to obtain satisfactory completin of the services.

d. Said deductions by the Government for monies otherwise due the contractor shall represent agreed liquidated damages assessed by the Government for nonperformance or unsatisfactory performance.

e. Repeated instances of nonperformance or unsatisfactory performance will be grounds for termination of the contract for default in accordance with the "DEFAULT" Clause, Section 00003.

4(2). CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES

a. If there is a failure in the system due to lack of adequate staffing, the Government may assign other persons to perform the work, and deductions shall be made from the month's invoice as follows:

(1) When a Government employee is assigned to perform the work required, the Government will deduct from the amount due the Contractor the entire cost to the Government (wages, retirement contribution, and fringe benefits) of the Government employee who actually performed the work, PLUS, as agreed liquidated damages, an additional deduction of 20% of such cost, for administrative or other expenses resulting from the nonperformance of the work. If the replacement person is obtained by the Government under another contract, the deduction will equal the cost to the Government under that contract, plus 20% as described above.

(2) If no replacement is furnished by the Government and the work is not performed, to preclude the contractor from being paid for not performing, the Government will deduct from the amount invoiced by the contractor an amount equal to the cost to the Government of having a Government employee perform the work. This cost shall be computed in accordance with the Federal Wage Board rate schedule described in (c) below at the appropriate grade level, PLUS an additonal 10% of that cost as agreed liquidated damages for administrative or other expenses incurred by the Government as a result of the nonperformance of the work.

b. However, the Government reserves the following rights:

(1) The rights described in the "Default" clause of the General Provisions of this contract, and all other remedies for default as may be provided by law.

(2) To hold the contractor liable for property losses sustained by the Government as a direct, consequentive result of a failure to furnish the required personnel.

c. Computations of the costs of Government employees performance of work not performed by the contractor shall be in accordance with "Statement of Wage and Fringe Benefit Rates Applicable to Federal Wage Board (Blue Collar) Employees."

d. The parties to this contract hereby agree that the Contractor as a result of his contractual obligation to supervise the personnel furnished and oversee the quality of their performance shall be conclusively presumed to have actual knowledge of work not performed, and that therefore a written notice shall not be a prerequisite for withholding payment or assessing liquidated damages for nonperformed invoices.

5. PRE-PERFORMANCE CONFERENCE. Prior to commencing work, the Contractor shall meet in conference with the OIC, or his designated representative, at a time specified, to discuss and develop mutual understandings relative to scheduling and administration of work.

6. GOVERNMENT QUALITY ASSURANCE. In accordance with the "INSPECTION OF SERVICES" Clause, Section 00003, each phase of the services rendered under this contract is subject to Government inspection during both the Contractor's operations and after completion of the tasks. The Government's Quality Assurance Program is not a substitute for Quality Control by the Contractor. All findings of incomplete or defective performance will be administered in accordance with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES" Clause, Section 00004. All costs associated with rework are the responsibility of the Contractor. When the Contractor's overall performance is unsatisfactory a Contract Discrepancy Report will be issued by the OIC or his designated representative. The Contractor shall reply in writing, giving the reason(s) for unsatisfactory performance and identify the corrective action(s) to be taken to prevent recurrence.

7. CONTRACTOR QUALITY CONTROL. In accordance with the INSPECTION OF SERVICES" Clause, Section 00003, the Contractor shall establish and maintain a complete Quality Control Program that is acceptable to the OIC, to assure that the requirements of the contract are provided as specified.

a. A general description of the Contractor's Quality Control Program shall be available for Government review during the preaward survey. Within 10 days after award, (number of) copies of the Quality Control Program shall be provided to the OIC and as changes are made thereafter. The program shall include the following:

(1) A quality control inspection system covering all services included in the contract. It must specify areas to be inspected on either a scheduled or unscheduled basis and how inspections are to be conducted.

(2) A method for identifying deficiencies in the quality of services performed and taking corrective action before the level of performance becomes unsatisfactory.

b. A file of all Quality control Inspections, inspection results, and any corrective action required, shall be maintained by the Contractor through the term of this contract. This file shall be the property of the Government and be made available to the OIC during regular hours. The file shall be turned over to the OIC within (number_of) days after completion/termination of the contract.

8. PERFORMANCE EVALUATION MEETINGS. Meetings will be held as often as necessary at the discretion of the OIC. A mutual effort will be made to resolve all problems identified. The written minutes of these meetings, prepared by the Government, shall be signed by the Contractor's Representative and the Government's Representative. Should the Contractor not concur with the minutes, the Contractor will state, in writing, to the OIC any areas of disagreement.

9. ORDER OF PRECEDENCE. In the event of an inconsistency between the provisions of this solicitation, the inconsistency shall be resolved by giving precedence in the following order: (a) the Schedule (excluding the Specifications); (b) Terms and Conditions of the solicitation, if any; (c) General Provisions; (d) other provisions of the contract, when attached or incorporated by reference; and (e) the Specifications.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine what facilities will be provided to the Contractor and select clause 10(1) or 10(2) as appropriate. If Clause 10(1) is selected, the writer must state what facility support services, if any, are to be provided by the Contractor. Appendix _____ is used to list all facilities provided to the Contractor.
**********!

10(1). FACILITIES PROVIDED FOR CONTRACTOR'S USE. The Government shall furnish or make available to the contractor, the facilities described in Appendix _____. The contractor shall assume responsibility and accountability of such facilities provided for their use and shall take adequate precautions to prevent fire hazards, odors and vermin. At the completion of the contract, all facilities shall be returned to the Government in the same condition as received, except for reasonable wear and tear. The contractor shall be held responsible for the cost of any repairs caused by negligence or abuse on his part, or on the part of his employees.

10(2). FACILITIES NOT PROVIDED FOR CONTRACTOR'S USE. The Government will not provide office space and operational facilities to the Contractor. The contractor is responsible, at his expense, to secure and maintain the necessary office space and other facilities required for the performance of this contract.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine what equipment and material will be provided to the contractor and select or modify Clauses 11 or 12 as appropriate. An Appendix listing provided equipment and equipment maintenance requirements must be included with this specification or the following paragraphs modified. If equipment is located at other than job site, specify location and responsibility for transportation.
**********!

11. EQUIPMENT PROVIDED FOR CONTRACTOR'S USE. The Government will provide the Contractor the use of existing and available Government-owned equipment in the performance of the contract.

a. Such Government-furnished equipment is listed in Appendix _____. The Contractor shall be responsible for the periodic servicing, maintenance and repairs of the equipment listed at no cost to the Government. Such servicing, mainteanance and repairs shall be made in accordance with guidelines specified in Appendix _____. Upon completion or termination of the contract, all Government-owned equipment shall be returned to the Government in the same condition as received, except for normal wear and tear. The Contractor shall be responsible for the cost of any repairs caused by negligence or abuse by the Contractor or his employees.

b. The Contractor and the Government Representative shall conduct a joint inventory before commencing work under this contract to determine the exact number and serviceability of Government-furnished equipment. The contractor shall then certify the findings of this inventory and shall assume accounting responsibility and, subsequently, report inventory discrepancies to the Government Representative. Government furnished equipment shall not be removed from the military base unless approved by the OIC.

12. MATERIAL PROVIDED FOR CONTRACTOR'S USE. The Government shall furnish at no expense to the Contractor the material listed in Appendix _____. The Contractor shall be held accountable for all materials supplied. All material unused at the end of the contract shall be returned to the Government.

!**********
NOTICE TO SPECIFICATION WRITER. The following is a DAR clause and is required when the Government provides facilities, equipment, and or material for Contractor's use. The clause shown here is the "Short Form" version and is applicable when (i) the Government is to furnish to the contractor Government property having an acquisition cost of $50,000 or less, or (ii) property is furnished to a contractor for use on a Government installation and contract administration is retained by the purchasing office. If Government personnel maintain property records, if this specification is for overseas contracts, or if (i) or (ii) do not apply, see DAR 7-104.24.
**********!

13. GOVERNMENT-FURNISHED PROPERTY. Facilities, equipment, and material provided for the contractor's use is defined in this contract as Government-furnished property. As such the following provisions apply:

(a) The Government shall deliver to the Contractor, for use only in connection with this contract, the property described in the schedule or specifications (hereinafter referred to as "Government-furnished property"), at the times and locations stated therein. If the Government-furnished property, suitable for its intended use, is not so delivered to the Contractor, the OIC shall, upon timely written request made by the Contractor, and if the facts warrant such action, equitably adjust any affected provision of this contract pursuant to the procedures of the "Changes" clause hereof.

(b) Title to Government-furnished property shall remain in the Government. The Contractor shall maintain adequate property control records of Government-furnished property in accordance with sound industrial practice.

(c) Unless otherwise provided in this contract the Contractor, upon delivery to him of any Government-furnished property, assumes the risk of, and shall be responsible for, any loss thereof or damage thereto except for reasonable wear and tear, and except to the extent that such property is consumed in the performance of this contract.

(d) The Contractor shall, upon completion of this contract, prepare for shipment, deliver f.o.b. origin, or dispose of all Government-furnished property not consumed in the performance of this contract or not theretofore delivered to the Government, as may be directed or authorized by the OIC. The net proceeds of any such disposal shall be credited to the contract price or paid in such other manner as the OIC may direct.

!**********!

NOTE TO SPECIFICATION WRITER: In general the selection of specific brands or types of material/supplies to be consumed during the execution of work should be left to the Contractor's discretion. Material/supplies used should meet some minimum industrial standard. It may be desirable to specify the quality of material/supplies that are provided when use by activity personnel. If so, modify the following clause as required and use Appendix _____ to identify specific material/supplies. Quality standards should address "type of" rather than "brand of".

!**********!

14. MATERIAL PROVIDED BY THE CONTRACTOR. The Contractor shall provide all materials and supplies necessary to perform the work specified in the contract, and not otherwise furnished by the Government. Materials and supplies identified in Appendix ___ shall conform to referenced Federal Specifications. Materials and supplies not specifically identified shall be acceptable industrial grade and quality.

The Contractor shall maintain a stockpile of parts for normal maintenance. Where material can be obtained more economically through the Government Supply System the Contractor may order such materials through said system.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine if utilities will be provided to the Contractor and select clause 15(1) or 15(2) as appropriate. 15(2) is recommended.
**********!

15(1). AVAILABILITY OF UTILITIES. The Government will furnish (insert names of specific utilities to be provided) at existing outlets as may be required for the work to be performed under the contract at no cost to the Contractor. Information concerning the location of existing outlets may be secured from the OIC. The Conractor shall provide and maitain, at his expense, the necessary service lines from existing Government outlets to the site of work.

15(2). AVAILABILITY OF UTILITIES. The Contractor shall be required to pay for utilities consumed.

a. The Contractor shall, at his expense, install meters as directed by the OIC to measure consumption of utilities provided by the Government.

b. The rate for reimbursement to the Government of metered utilities will be:

!**********
NOTE TO SPECIFICATION WRITER: List the rates of reimbursement.
**********!

c. In the event that the Government is unable to provide the required types of utilities, the Contractor shall, at his expense, arrange for the required utilities.

16. ACCESS TO BUILDINGS. It shall be the Contractor's responsibility, through the OIC, to obtain access to buildings and arrange for the buildings to be opened and closed.

a. Keys may be issued to the contractor, however, it shall be the contractor's responsibility that adequate arrangements are made for security of the building(s) at the end of each work day.

b. The Contractor shall be responsible for the cost of replacing any keys that are furnished to and lost by his employees. If the OIC decides that a lock must be replaced because of the loss of a key by the Contractor's employee(s), the Contractor shall pay the cost of that replacement. Similarly, the Contractor shall pay the cost of changing a combination if the OIC has reasonable cause to assume that the combination has been compromised.

17. PASSES AND BADGES. All Contractor employees shall obtain the required employee and vehicle passes. The Contractor will, prior to the start of the contract, submit to the OIC an estimate of the number of personnel expected to be utilized at any one time on the contract. The Government will issue (number of) badges without charge. The Contractor shall reimburse the Government (dollar amount) for each badge in excess of (number of). Each employee shall wear the Government issued badge over the front of the outer

clothing. When an employee leaves the Contractor's service, the employee's pass and badge shall be returned within (number_of) days. Passes and badges issued to Contractor employees shall not negate the requirement for employee identification required in the "IDENTIFICATION OF CONTRACTOR EMPLOYEES" Clause, Section 00004 of this Section.

!**********
NOTE TO SPECIFICATION WRITER: Specification writer should add any special or unique station regulations, or security requirements to Clauses 18 and 19 respectively. The Specification Writer should also mention any parking fees which the Contractor may have to pay before passes will be issued for his employees personal vehicles. In addition, vehicles which must be used by a contractor in the performance of his contractual functions, as opposed to vehicles used by his employees for commuting, should not be required to pay station parking fees.
**********!

18. STATION_REGULATIONS. The Contractor and his employees shall become acquainted with and obey all Government regulations as posted, or as requested by the OIC.

19. SECURITY_REQUIREMENTS. The Contractor shall comply with all Station Security Requirements. Upon request, the Contractor shall submit the name and address of each employee hired for work on this contract and shall cause to be filled out questionnaires and other forms as may be required for security. If access to Classified Material is involved a DD-254 form must be included in the I.F.B.

!**********
NOTE TO SPECIFICATION WRITER: The following clause should be included, and modified as required, if Contractor employees have access to privileged information (e.g. directories, mailing lists, classified information, etc.) otherwise the clause should be deleted.
**********!

20. DISCLOSURE_OF_INFORMATION.

a. Neither the Contractor nor any of its employees will disclose or cause to be disseminated any information concerning the operations of the activity which could result in or increase the likelihood of the possibility of a breach of the activity's security or interrupt the continuity of its operations.

b. Disclosure of information relating to the services hereunder to any person not entitled to receive it, or failure to safeguard any classified information that may come to the Contractor or any person under his control in connection with work under this contract, may subject the Contractor, his agents or employees to criminal liability under Title 18, Sections 793 and 798 of the United states Code.

c. All inquiries, comments or complaints arising from any matter observed, experienced, or learned of as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information will be directed to the activity Commander.

EXHIBIT B

TECHNICAL REFERENCES

1. FEDERAL/STATE REGULATIONS AND MANUALS

1.1	NAVFAC - 322	Inspection and Maintenance of Public Utilities
1.2	NAVDOCKS MO - 210	Manual for Water Supply Systems
1.3	NAVFACINST 11330.1AA	Safe Drinking Water at Navy Shore Activities
1.4	LANTDIVINST 11300.4A	Operating Records of Naval Sanitary/Environmental Facilities
1.5	LANTDIVINST 11330.3A	Cross-Connection and Backflow Prevention Program for Navy Potable Water Systems

2. INDUSTRIAL REFERENCES

2.1 Manufacturers operating and maintenance bulletins, parts lists, recommended spare parts and drawings for all equipment.

2.2 Applicable Occupational Safety and Health Administration Standards.

2.3 National Electric Code.

2.4 American Waterworks Association Manual No. M10.

2.5 American Waterworks Association Standard C601-68.

3. APPLICABLE PUBLICATIONS. When replacing component parts in the Water Distribution System, the Contractor shall use parts produced in accordance with the following publications, as applicable:

3.1 Valves.

FED-SPEC WW-V-51Z	Valves, Bronze; Angle, Check and Globe (125, 150 and 200 Pound); Threaded, Flanged and Soldered
FED SPEC	Valves, Gate, Bronze (125, 150, and 200 Pound);

WW-V-54D	Threaded, Flanged, and Soldered
FED SPEC WW-V-533	Valves, Cast-Iron, Gate, 125 and 250. Screwed and Flanged
FED SPEC WW-V-1967(1)	Valves, Butterfly (Threaded ends) Brass or Bronze
FED SPEC MIL-V-13463B	Valves, Gate, Globe, and Angle, Steel
MIL SPEC MIL-V-18436C	Valves, Check Bronze, Cast-Iron and Steel Body
MIL SPEC MIL-V-1967	Valve, Butterfly (Threaded Ends and Solder)
MSS SP-67-76	Butterfly Valves
MSS SP-70-76	Cast-Iron Gate Valve
MSS SP-72-70	General Purpose Ball Valves
MSS SP-78-77	Cast-Iron Plug Valves
MSS SP-80-76	Bronze Gate, Globe, Angle, and Check
UL-262-76	Gate Valves for Fire Protection Service
UL-312-73	Check Valves for Fire Protection Service

3.2 Pumps.

MIL SPEC MIL-P-17639C(1)	Pumps, Centrifugal, Water
MIL SPEC MIL-P-18077(1)	Pumps, Centrifugal, Water, Electric-Motor-Driven

3.3 Paints.

FED SPEC TT-E-489(1)	Enamel, Alkyd, Gloss (for exterior and interior surfaces)
FED SPEC TT-P-86C	Paint, lead-free base, ready-mixed
FED SPEC TT-P-88C	Paint, Stencil, Flat
FED SPEC	Paint, traffic and airfield marking, water

INVENTORY

OF

WATER DISTRIBUTION

(ATTACHMENT)

BUILDING		ITEM
L-3	2 -	15,000 PSI FAIRBANKS - MORRIS PUMPS
	1 -	DAYTON PUMP - 230 VOLTS
	1 -	WAUKESKA - 913010 - GAS ENGINE PUMP
L	1 -	GOULD WATER CIRCULATING PUMP - TYPE TSF-BE W/75 H.P.
48	1 -	8" WELKMAN WATER PUMP
	2 -	BELL & GOSSETT PUMPS - 1/2 H.P. MOTOR
70	1 -	BELL & GOSSETT CIRCULATING PUMP - 1/2 H.P. MOTOR
70	1 -	PUMP - 1/2 H.P. MOTOR
	1 -	PUMP - 1/4 H.P. MOTOR

J. Johnson

SECTION 00005

ATTACHMENT IX

MAINTENANCE OF WATER DISTRIBUTION SYSTEMS

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ATTACHMENT IX

MAINTENANCE OF WATER DISTRIBUTION SYSTEMS

1. GENERAL REQUIREMENTS. The Contractor shall provide all the managerial, administrative, supervisory, direct and overhead personnel as necessary to accomplish the operation, maintenance and repair of the Water Distribution System at Naval Ordnance Station, Louisville. It shall be the responsibility of the Contractor to provide equipment, repair parts, material, supplies and tools except as supplied herein as Government furnished to perform the function. The systems are described in Exhibit A.

2. DISTRIBUTION SYSTEM MAINTENANCE. The Contractor shall accomplish the necessary work to maintain the water distribution system in a fully operational condition. The system includes all storage tanks and reserviors, booster stations, water mains, service lines, hydrants, valves and meters as shown in Exhibit A. Malfunctions in the system shall be traced to their cause and corrected by the Contractor. Repairs shall be made as required and shall include, but not be limited to, storage tanks and reservoirs, booster stations, water mains, service lines, hydrants, valves and meters.

2.1. Piping. The Contractor shall repair or replace sections of pipe as needed to maintain the integrity of the potable water distribution piping. Leaky pipes shall be repaired by using a split sleeve or by replacing the complete section of pipe depending on the severity of the damage. Maintaining pipe integrity shall also include cleaning the pipe interior when reduced flow and water supply warrant. If annual flow tests indicate flow problems, additional testing for verification shall be conducted prior to interior cleaning. Loss of head and pressure tests shall be conducted as described in AWWA M-8. When a potable water main has been opened, for any reason, the Contractor shall disinfect the affected section in accordance with United States Navy Safety Precautions Manual, OPNAV 34P1.

2.2. Valves. The Contractor shall be responsible for functional testing and/or repairs to the distribution system valves in the potable water system. Exhibit A lists the sizes and quantities of the valves. The valve components generally consist of a nonrising stem, inside screw, gate, body, and bonnet and are equipped with a 2-inch square operating nut. Functional testing shall be performed to ensure complete operability of valves. Repairs include valve stem packing, lubrication, replacement of broken, stripped stem or stem nut, painting, and any other work necessary to return valves to correct operational condition.

2.3. Fire Hydrants and Dead Ends. The Contractor shall be responsible for the repair and the replacement of missing or damaged parts of the potable water fire hydrants. Additionally, the Contractor shall replace damaged hydrants.

2.3.1. Leakage and Flow Test. The Contractor shall flush and flow test fire hydrants and dead ends twice a year (Spring and Fall). The annual leakage and flow tests will be performed by the Government (Fire Protection Division). The Contractor shall accompany the Government during these tests.

2.3.2. Fire Hydrant Repair. The Contractor shall make all repairs that result from leakage and flow tests. The Contractor is also responsible for ensuring the operability of operating nuts, nozzle threads, and chains, repacking gland nuts, caulking nozzle and barrel connections and lead, replacing nozzle cap gaskets, replacing cracked barrels, reopening drain valves, and painting.

2.4. Storage Facilities. The Contractor shall be responsible for the maintenance and repair of all potable water storage facilities including water tank for fire protection water storage.

2.5. Pumps. The Contractor is responsible for maintaining all pumps in operable condition and performing all repairs. Repairs include, but are not limited to, repair or replacement of antifriction and sleeve bearings, shaft sleeves and alignment, correction of cavitation on the impeller, and any other repairs as directed by the OIC.

2.6. Driving Equipment. Driving equipment of the water distribution system consists of one gasoline engine and two electric motors. The Contractor shall be responsible for repairing the gasoline engine to include: replacing drive pulleys, hubs, coils and wiring, clutches, head gaskets, fuel system, carburetor, generators, manifold and heat controls, starters, universals, valves/rocker arms, and cooling systems. The Contractor shall also be responsible for electric motors, repairing or replacing electrical connections, winding and insulation, rotors, commutators and brushes, antifriction and sleeve bearings, control equipment, circuit breakers, and relays. The Contractor shall perform any other repairs or replacements as directed by the OIC.

2.7. Pumping Station. The Contractor's responsibilies for repair of the pumping station shall include items associated with the water distribution system. The Contractor shall be responsible for repairing or replacing control valves, gland nuts, pump controls (manual and electric), pressure controls, and any other work designated by the OIC.

2.8. Painting and Color Coding. All painted components shall be maintained by the Contractor in proper condition. Buried pipe and fittings shall be preserved by applying a coal tar base coating, conforming to MIL-C-18480(A), to a total minimum dry film thickness of 40 mils. Fire hydrants shall be painted with one coat of red paint (TT-P-86G), and two finish coats of chrome yellow enamel alkyd paint (TT-E-489F). All control valves shall be plainly marked indicating the section or portion controlled. Potable water valve box cover shall be painted white (TT-E-489F). Left hand valves shall be prominently labeled and valve number stenciled adjacent to roadway box covers using yellow traffic marking paints (TT-P-1952B); numerals and letters shall be 3 inches in size. Valve numbers shall be provided by the OIC and shall conform to station subsurface drawings. All hydrants and valves shall have a two (2) inch diameter aluminum or brass tag securely mounted or attached and shall be prominently stenciled with the hydrant or valve number; left hand hydrants or valves shall have the letters "LH" stenciled on their tags.

2.9. Water Control Valves. Water Control Valves shall be exercised annually and records kept.

2.10. Sprinkler System. The Contractor shall make all necessary repairs to the sprinkler system serving the buildings shown in Exhibit A. The Contractor shall maintain adequate testing and inspection records as required to submit a monthly testing and inspection report to the OIC. The report shall be submitted within five (5) working days after the previous monthly reporting period.

2.11. Emergency Repair. Emergency repair work shall be performed as required. The disinfection of existing mains after repairing or cutting into shall be performed in accordance with AWWA Standard C601-68.

2.12. Safety Equipment. Safety Equipment shall be maintained in a fully operational condition.

3. PREVENTIVE MAINTENANCE (PM). The Contractor shall develop and implement a Preventive Maintenance (PM) Program for all of the components of the Water Distribution System. The program shall be developed in accordance with NAVDOCKS MO-210 and manufacturers recommendations. In the event of an inconsistency between any recommendations, regulations or suggested preventive maintenance schedule, the most stringent will apply. At a minimum the preventive maintenance program will include all the requirements delineated in Exhibit C. In addition to the requirements listed in Exhibit C, the preventive maintenance program shall include inspection, cleaning, adjustment, lubrication and other minor corrections.

3.1. PM Reports. When the PM Table requires inspection, the Contractor shall report the results of such inspections and any identified defects to the OIC within ten days following the inspection. The inspection report shall identify problems discovered and include an estimate of man-hours and materials to correct the problem.

4. OPERATING MANUALS, DIRECTIVES AND CATALOGS. The equipment operating manuals, directives and suppliers catalogs presently maintained by the Government will be turned over to the Contractor prior to beginning work. A joint inventory of manuals and directives will be taken. Suppliers catalogs will not be inventoried; however, the Contractor shall maintain a current catalog file for equipment maintained under this contract. A joint inventory of Equipment Operating Manuals will be taken at the expiration/termination of the contract and the Contractor will replace any manuals or directives that are lost.

5. TECHNICAL REFERENCES. See Exhibit B.

6. SWIMMING POOLS. The normal operating season is from Memorial Day through Labor Day or as directed by the OIC. During the Off Season, the Contractor shall take all necessary precautions required to protect the pools and all support equipment. The Contractor shall return the pools to full operation at the beginning of the normal operating season in full compliance with all operating requirements.

ATTACHMENT IX
EXHIBIT A
SECTION 00005

INVENTORY
OF
WATER DISTRIBUTION SYSTEM

NAVAL ORDNANCE STATION — LOUISVILLE, KENTUCKY

BUILDING	PIPING			MECHANICAL VALVES			REGULATING VALVES		
	LESS THAN 1"	1"-6"	OVER 6"	LESS THAN 1"	1"-6"	OVER 6"	LESS THAN 1"	1"-6"	PRESSURE RELEASE
	L.F.	L.F.	L.F.	EACH	EACH	EACH	EACH	EACH	EACH
A	374	3,986		14	68			20	
B	268	3,986		15	55			23	
C	333	2,063		14	55			19	
D		17,066			72			13	
E		4,210			84				
F	105	3,064		12	62			23	
G	87	3,628		6	89			15	
H	252	3,800			13				
L	1,619	32,310	458	23	132	10		13	
V		16,630			12			13	
U	335	3,526		66	42				
Z		1,292			8				
G-1	10								
G-2	10								
GROUNDS		14,040	14,160		23	2		129	17

(1"

INVENTORY OF WATER DISTRIBUTION SYSTEM

NAVAL ORDNANCE STATION — LOUISVILLE, KENTUCKY

BUILDING	PIPING			MECHANICAL VALVES			REGULATING VALVES		
	LESS THAN 1"	1"-6"	OVER 6"	LESS THAN 1"	1"-6"	OVER 6"	LESS THAN 1"	1"-6"	PRESSURE RELEASE
	L.F.	L.F.	L.F.	EACH	EACH	EACH	EACH	EACH	EACH
L-2		140							
L-3		30				8			
L-4	20	30							
0		1,203			15				
RESIDENTAL AREA	1,097	797		5	4		1		
U	50			2					
19					1				
48	84	360		15	6				
51	25			1					
63	30			1					
67	30			1					
69	25			1					
70	25	25		6	1		1		2
71	24	24		1	4		1		

00005 IX-A-2

Specification No. 05-22 Rev

INVENTORY
OF
WATER DISTRIBUTION SYSTEM

NAVAL ORDNANCE STATION — LOUISVILLE, KENTUCKY

BUILDING	PIPING			MECHANICAL VALVES			REGULATING VALVES		
	LESS THAN 1"	1"-6"	OVER 6"	LESS THAN 1"	1"-6"	OVER 6"	LESS THAN 1"	1"-6"	PRESSURE RELEASE
	L.F.	L.F.	L.F.	EACH	EACH	EACH	EACH	EACH	EACH
75	32	93		5	2				
84	40			1					
TOTALS	4,875	111,703	14,618	189	898	20	3	268	19

INVENTORY OF WATER DISTRIBUTION SYSTEM

NAVAL ORDNANCE STATION — LOUISVILLE, KENTUCKY

BUILDING	FIRE HYDRANTS EACH	PUMP EACH	METER EACH	ELECTRICAL PANEL EACH	FIRE SPRINKLER HEADS EACH	EXPANSION TANKS EACH	WATER COOLER EACH	GAUGE EACH	EMERGENCY WATER FOUNTAIN EACH
A				4	66		5		
B				4	37		6	4	
C		4		4	118		6		
D				4	993		14		
E		4		1	71		3	4	
F				4	49		9	6	
G				3	65		8		1
H					104		2		
L		1			2,547		18	14	
V					1,642		2		
W					315		5		
Z					180		1	2	
G-1							1		
G-2							1		
GROUNDS	28		2						
L-2					10				

NAVAL ORDNANCE STATION

INVENTORY
OF
WATER DISTRIBUTION SYSTEM

LOUISVILLE, KENTUCKY

BUILDING	FIRE HYDRANTS	PUMP	METER	ELECTRICAL PANEL	FIRE SPRINKLER HEADS	EXPANSION TANKS	WATER COOLER	GAUGE	EMERGENCY WATER FOUNTAIN
	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
L-3		4		2					
L-4							1		
L-5							1		
O	1	2			36	1		3	
U							2		1
48		3			57		6	2	
51							1		
63							1		
67							1		
69							1		
70		1				2	1		
71		2				2	4		
77		1							
84									1
TOTAL	29	22	2	26	6,370	5	92	35	3

Specification No. 05-82-4994

00005-EK-A-5

ATTACHMENT EK

SECTION 00005

EXHIBIT D
ATTACHMENT 9

MAINTENANCE AND REPAIR OF WATER SYSTEM

Historical Data

The following information is based on historical data evaluated from 1 October 1981, through 30 September 1982, and is provided solely for the Contractor's information. This data, by itself, is not considered to be sufficiently accurate for bidding purposes.

Documents on file show that a total of 61 service calls and 12 work orders were performed during this period on the Water System. Of these 12 work orders, 11 were one-time work projects and 1 was recurring type work.

Service calls were made to correct problems with the water distribution system. Most of these calls were related to broken pipes due to pipe freezing conditions and leaking sprinkler systems. The frozen-pipe conditions were during extremely cold weather, making prompt response difficult due to large numbers of calls being received within short time periods. This type of problem can be expected every winter during cold spells.

Sprinkler systems create a continuing problem on a year-round basis. Frozen and broken sprinkler lines are a problem in winter particularly, but head leaks and bad clapper valves can occur anytime. Service calls during the past year were made for the following typical reasons:

No water flowing
Frozen lines
Broken pipes
Leaky pipes
Relocation of water lines
Broken water mains
Repacking of valves
Sectional valve knocked down
Low water pressure
Storage tank overflow
Repair of fire hydrants
Loss of pressure in sprinkler systems

Most of the work orders were written for work such as, inspection of fire hydrants, sprinkler systems and sectional valves; removing and replacing water pipes; replacing and relocating sprinkler lines; repairing broken water mains; and installation of new water and sprinkler lines.

There were no major improvements to the water distribution system in the one-year study period.

Following is a summary of the total number of man hours by various trade skill required to perform the necessary one-time work orders during the study period of one year. This summary is

intended to assist the Contractor in evaluating the variety of work skills required to complete the different one-time work orders submitted.

WORK SKILL	CODE	ONE-TIME PROJECT		TOTAL
		SCA	DAVIS B.	
Carpenter	11C		41	41
Painter	11P		5	5
Laborer	11G	32		32
Pipefitter	12P	128	333	461
Rigger	12R		64	64
Welder	12W		48	48
Electrician	14E		11	11
Electrician	21E		19	19
Operator	22E	45		45
Totals		204	521	726

DOCUMENTED SERVICE CALLS
Attachment 9

WORK CODE	NUMBER OF CALLS
11C	1
12M	3
12P	46
12R	1
12W	3
21E	2
21P	11
22E	1

Total Number of Calls: 61

NOTE: More than one skill may have been involved in any one service call.

d. Deviations from or violations of any of the provisions of this paragraph will in addition to all other criminal and civil remedies provided by law subject the Contractor to immediate termination for default and/or the individuals involved to a withdrawal of the Government's acceptance and approval of employment.

!**********
NOTE TO SPECIFICATION WRITER: Review each directive for contract applicability.
**********!

21. DIRECTIVES. All applicable Department of Defense (DOD), Secretary of the Navy (SECNAV), Chief of Naval Operations (OPNAV), and other directives, instructions, and regulations are listed in Appendix _____.

22. SAFETY REQUIREMENTS. All work shall be conducted in a safe manner and shall comply with the requirements described in Appendix H of this contract.

a. Prior to the commencement of work, the Contractor shall meet in conference with the OIC to discuss and develop mutual understandings relative to administration of the Safety Program.

b. If the Contractor fails or refuses to promptly comply with safety requirments, the OIC may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop order shall be made the subject of claim for extension of time or for excess costs or damages to the Contractor.

23. ACCIDENT REPORTING. The Contractor shall maintain an accurate record of and shall report to the OIC in the manner and on the forms prescribed by the OIC, exposure data and all accidents resulting in death, trauma, or occupational disease. All accidents must be reported to the OIC within 24 hours of their occurrence.

24. DAMAGE REPORTS. In all instances where Government property an/or equipment are damaged by contractor's employees, a full report of the fact and extent of such damage shall be submitted to the OIC within 24 hours of occurrence.

25. SUPERINTENDENCE BY CONTRACTOR. The contractor shall provide competent supervision to provide the performance requirements of this contract.

26. CONTRACTOR EMPLOYEES. The Contractor shall furnish sufficient personnel to perform all work specified within the contract.

a. The Contractor's employees will conduct themselves in a proper and efficient manner at all times.

b. The Contractor expressly agrees to remove from the site any individual whose continued employment is deemed by the OIC to be contrary to the public interest or inconsistent with the best interest of National Security.

c. No employee or representative of the Contractor will be admitted to the work site unless he furnishes satisfactory proof that he is a citizen of the United States, or, if an alien, that his residence within the United States is legal.

27. IDENTIFICATION OF CONTRACTOR EMPLOYEES. All Contractor employees shall be identified by a distinctive name plate, emblem, or patch attached in a prominent place to an outer garment. Employee identification shall not be substituted for station required passes or badges.

28. IDENTIFICATION OF CONTRACTOR VEHICLES. Each Contractor provided vehicle shall show the Contractor's name so that it is clearly visible and shall at all times, display a valid state license plate and safety inspection sticker.

29. PERMITS. The Contractor shall, without additional expense to the Government, obtain all appointments, licenses, and permits required for the prosecution of the work and for complying with all applicable federal, state, and local laws. Evidence of such permits and licenses shall be provided to the OIC before work commences.

30. DAMAGE OR LOSS OF CONTRACTOR'S SUPPLIES AND CONTRACTOR'S EMPLOYEES PROPERTY. The Contractor is responsible for taking that action necessary to protect his supplies, materials, and equipment and the personal property of his employees from loss, damage or theft.

31. WARRANTY OF SERVICES. All maintenance work performed by the Contractor shall be covered by a one-year warranty against defects in material and workmanship. Any recurrence of maintenance problems due to defects in such material or workmanship within this timeframe will be repaired or replaced by the Contractor at no additional cost to the Government. Damage to Government and private property by such defect will be repaired or replaced at no additional cost to the Government. This clause supercedes the "WARRANTY OF SERVICES" Clause, Section 00003, for all maintenance work provided under the contract. The "WARRANTY OF SERVICES" Clause, Section 00003, shall apply to all other services provided under the contract.

32. WORK SCHEDULE. The Contractor shall arrange his work so as not to cause interference with normal occurence of Government business. All work schedules shall be submitted to and be approved by the OIC. Immediately after receipt of notice of award, the Contractor shall submit to the OIC a schedule of planned performance of work for the contract period. The schedule shall indicate the day or days of the week that weekly or more frequent items will be accomplished at the locations indicated and the week of the month in which lesser than weekly frequencies will be accomplished. Whenever periodic services have been scheduled on the date a holiday occurs, then such services will be performed on the following working day. In no event shall the Contractor change the approved work schedule without the prior written consent of the OIC.

33. RESERVED.

34. RESERVED.

!**********
NOTE TO SPECIFICATION WRITER: Any special paragraphs added to this section should be included here and the SCHEDULE OF DEDUCTIONS clause renumbered.
**********!

35. SCHEDULE OF DEDUCTIONS. The low bidder shall within 15 days after bid opening and prior to award, complete the Schedule of Deductions for approval of the Officer in Charge. The total of the Schedule of Deductions must equal the amount entered for bid item 1 in the "ITEMS OF BID" Clause, Section 00001. Prices shown in the Schedule of Deductions will be utilized in conjunction with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004 in making payment deductions for nonperformance or unsatisfactory performance. Unbalancing in the Schedule of Deductions submitted shall be cause for withholding approval and requiring resubmission of a balanced schedule, and may be cause for rejection of the bid. Upon award, the approved Schedule of Deductions shall be a part of the contract. DO NOT SUBMIT SCHEDULE OF DEDUCTIONS WITH BID. Schedule of Deductions for Option Years shall be submitted within 15 days after notice of intent to exercise the option.

In the event the contractor fails to perform required services, payment deductions shall be made in conjuction with the "CONSEQUENCES OF CONTRACTOR's FAILURE TO PERFORM" Clause of Section 4. The amount of each deduction shall be determined by the Government and shall not exceed amounts derived through application of the formulae established in this Schedule of Deductions. Measurable parameters of contract output and acceptable performance levels are listed in TABLE 1. A percentage of total contract price is assigned to each measurable output in proportion to the relative effort required to accomplish that output.

TABLE 1

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL (# OF UNITS)	% OF TOTAL CONTRACT PRICE
1. QUANTITY	GALLONS/WEEK	(1)	[*] %
2. QUALITY			[**] %
a. INORGANIC CHEMICALS			(a%)
Arsenic	mg/l	0.05	
Barium	mg/l	1.0	
Cadmium	mg/l	0.010	
Chromium	mg/l	0.05	
Lead	mg/l	0.05	
Mercury	mg/l	0.002	
Nitrate (as N)	mg/l	10.0	
Selenium	mg/l	0.01	
Silver	mg/l	0.05	
b. ORGANIC CHEMICALS			(b%)
Endrin	mg/l	0.0002	
Lindane	mg/l	0.0004	
Methaxychlor	mg/l	0.10	
Toxaphene	mg/l	0.005	
2, 4-D	mg/l	0.10	
Sivex	mg/l	0.01	
TTHM	mg/l	0.10	

(1) Quantity contracted for varies in accordance with activity requirements.

TABLE 1

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL (# OF UNITS)	% OF TOTAL CONTRACT PRICE
1. QUANTITY	GALLONS/WEEK	(1)	[*] %
2. QUALITY			[**] %
a. INORGANIC CHEMICALS			(a%)
Arsenic	mg/l	0.05	
Barium	mg/l	1.0	
Cadmium	mg/l	0.010	
Chromium	mg/l	0.05	
Lead	mg/l	0.05	
Mercury	mg/l	0.002	
Nitrate (as N)	mg/l	10.0	
Selenium	mg/l	0.01	
Silver	mg/l	0.05	
b. ORGANIC CHEMICALS			(b%)
Endrin	mg/l	0.0002	
Lindane	mg/l	0.0004	
Methaxychlor	mg/l	0.10	
Toxaphene	mg/l	0.005	
2, 4-D	mg/l	0.10	
Sivex	mg/l	0.01	
TTHM	mg/l	0.10	

(1) Quantity contracted for varies in accordance with activity requirements.

TABLE 1 (Ctd.)

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL	% OF TOTAL CONTRACT PRICE
c. TURBIDITY	NTU	1.0	(c%)
d. MICROBIOLOGICAL	MPN/100 ml coliform	2.0	(d%)
e. RADIOACTIVITY			(e%)
Rd 226 + Rd 228	p Ci/l	5.0	
Gross Alpha	p Ci/l	15.0	
B/photon	mrem/yr	4.0	
f. CHLORINE RESIDUAL			(f%)
Sample point (a)	mg/l	0.2	
Sample point (b)	mg/l	0.2	
Sample point (c)	mg/l	0.2	
Sample point (d)	mg/l	0.2	
Sample point (etc.)	mg/l	0.2	
g. FLUORIDATION	mg/l	1.4-2.4*	(g%)
h. HARDNESS	mg/l as CaCO3	180	(h%)

* Depending on maximum average daily temperature.

TABLE 1 (Ctd.)

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL	% OF TOTAL CONTRACT PRICE
3. TREATMENT PLANT OPERATING RECORD NAVFAC 11340/2 (REV 7-81)	Complete As Required	Daily, Weekly, Monthly & Annual Entries	[***]%
4. MINIMUM WATER PRESSURE AT SPECIFIED SYSTEM ENDPOINTS*			[****]%
a. Point 1	psi or ft. head		
b. Point 2	psi or ft. head		
c. Point 3	psi or ft. head		
etc.	etc.		
5. WATER SUPPLY & DISTRIBUTION OPERATING RECORD NAVFAC 11330/6 (1-76)	Complete as required	Daily	[*****]%

* Includes hydrastatic measurements at reservoirs to insure minimum storage for fire protection, etc.

TABLE 1 (Ctd.)

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL	% OF TOTAL CONTRACT PRICE
6. MAINTENANCE *	Observed Defects (ODR)	Varies	[******]%
7. MAINTENANCE RECORDS	Report Entry	Entry For Each Item Maintained	[*******]%
8. CUSTODIAL SERVICES	Observed Defects (ODR)	Varies	[********]%
9. WATER QUALITY ANALYSIS			[*********]%
a. Timeliness			(a%)
b. Completeness			(b%)
c. Accuracy			(c%)

* Includes discretionary preventive, mandatory preventive, and corrective maintenance. Only mandatory preventive maintenance will be monitored by the government. Contractor will perform discretionary preventive and corrective maintenance at contractors' expense as needed to maintain outputs 1, 2, and 4. See section 5, clause _____.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #1 - QUANTITY OF WATER

a. Shortage = Contract Quantity - Quantity Produced = Shortage (Gal/Wk)*

b. Maximum Deduction = $\frac{\text{(SHORTAGE)}}{\text{(Contract Quantity)}}$ X [*]% of total contract price

c. AQL = * *

* Can be applied also on daily or monthly basis if desired.
** To be determined by the activity.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #2 WATER QUALITY

a. Any one or more inorganic chemicals measured in concentrations greater than performance levels indicated in Table 1, Item 2.a

maximum daily deduction = ((a %) of [**]% of Total contract price/365.

b. Any one or more organic chemicals measured in concentrations greater than performance levels indicated in Table 1, Item 2.b

maximum daily deduction = ((b%) of [**]% of total contract price/365.

c. For turbidity measurements greater than 1.0 NTU

maximum daily deduction = ((c%) of [**]% of total contract price/365.

d. For microbiological measurements greater than performance levels indicated in Table 1, Item 2.d.

maximum daily deduction = ((d%) of [**]% of total contract price/365.

e. For any radioactivity measurement greater than performance levels in table 1, item 2.e

maximum daily deduction = ((e%) of [**]% of total contract price/365.

f. For chlorine residual measrements greater than 3.0 mg/l or less than 1.0 mg/l *

maximum daily deduction = ((f%) of [**]% of total contract price/365.

g. For fluoride concentration measurements less than _____ mg/l

maximum daily deduction = ((g%) of [**]% of total contract price/365.

h. For hardness measurements greater than 180 mg/l as $CaCO_3$

maximum daily deduction = ((h%) of [**]% of total contract price/365.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #3 - TREATMENT PLANT OPERATING RECORD
(NAVFAC 11340/2 (Rev 7-81) or equivalent)

- Deduction for missing daily entries = [***]% of total price X (A)*
- Deduction for missing weekly entries = [***]% of total price X (B)*
- Deduction for missing monthly entries = [***]% of total price X (C)*
- Deduction for missing annual entry = [***]% of total price X (D)*

* Percentage of total effort required for given frequency entries. (i.e. daily entries require 50% of total effort) A + B + C + D = 100%

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #4 WATER PRESSURE

For any endpoint* at which less than performance level pressure is measured, any given day or part thereof:

$$\text{maximum daily deduction} = \frac{[****]\% \text{ of total price}}{\# \text{ endpoints} \times 365}$$

* Endpoints could be service taps which could be spot checked at random - it would be preferable; however, to have continuous recorders at key system junctions (i.e., booster pumps, clearwells, pressure regulators).

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #5 - WATER SUPPLY & DISTRIBUTION OPERATING RECORD
(NAVFAC 11330/6 (1-76) or equivalent)

- Deduction for missing daily* entry = $\frac{[*****]\% \text{ of total price}}{365}$

* All entries daily unless otherwise specified by OIC.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #6 - MAINTENANCE

- Observed Defect Rate * (ODR) = $\frac{\text{\# U's}}{(\text{\# U's} + \text{S's})}$

Where U = Unsatisfactory rating
S = Satisfactory rating
U + S = Total # of evaluations made (i.e. pieces of equipment inspected) per inspection period.

Deduction = $\frac{[* * * * * *1\ \%\ \text{of total price}}{\text{\# of inspections per contract period}}$ X ODR

* Only the equipment listed in appendix D and designated as subject to mandatory scheduled preventive maintenance can be considered for deductions under output #6, MAINTENANCE.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #7 - MAINTENANCE RECORDS*

Deduction = monthly lump sum for unsatisfactory record maintenance

$$= \frac{[*******1\% \text{ of total price}}{12}$$

* Records to be maintained on all mandatory and discretionary preventive maintenance and corrective maintenance.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #8 - CUSTODIAL SERVICES

- Observed Defect Rate* (ODR) = $\frac{\text{\# U's}}{(\text{\# U's} + \text{\# S's})}$

Where U = Unsatisfactory ratings
S = Satisfactory ratings
U + S = Total # of evaluations made (i.e., clean floors) per inspection period.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #9 - WATER QUALITY SAMPLING, ANALYSIS, AND REPORTS

- Timeliness deduction for analysis not submitted to OIC within____days following 1st day of month = (a%) of [*********]% of total contract price

- Completeness deduction for any one or more required analyses missing = (b%) of [**********]% of total contract price.

- Accuracy deduction for discrepancies greater than ± 20% between contractor analysis and independent government analysis = (c%) of [*********]% of total contract price.

END, SCHEDULE OF DEDUCTIONS

AND SECTION 00004

WATER PLANTS AND SYSTEMS

SECTION 00001 BIDDING INFORMATION

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WATER PLANTS AND SYSTEMS (WP&S)
(FUNCTION S-727)
SECTION 00001 BIDDING INFORMATION

1. GENERAL INTENTION. It is the declared and acknowledged intention and meaning to obtain, by means of a (_Specify Contract Type_) contract, the operations, maintenance and repairs of the water treatment plant and distribution system in accordance with the standards contained herein.

2. GENERAL DESCRIPTION. The Contractor shall furnish all labor, materials, equipment, transportation, facilities, utilities, supervision, and management, unless otherwise specified herein, required for the operation and maintenance of the water supply treatment and distribution system which consists of:

a._ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
b._ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
c._ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

3. LOCATION. The work shall be located at the (insert name of activity). The exact location(s) will be indicated by the Officer in Charge (OIC)

!**!
* NOTE TO SPECIFICATION WRITER: Select clause 4(1), 4(2), or 4(3) as *
* required depending on the number of option years desired (see P-68 *
* 9-103). In blank, insert one of the following: *
* a. Contract start date and hour *
* b. Statement to read: "_____days after date of *
* notice of award" *
!**!

4. 4(1). TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 is to be deleted in its entirety.

4(2) TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The Government has the option to extend the contract for an additional (or second) year in accordance with the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 of this contract.

4(3). TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The Government has the option to extend the contract for an additional (or second) year and an option to extend for a further (or third) year in accordance with the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 of this contract.

5. DISCOUNT LIMITATIONS. Prompt payment discounts shall not be considered in the evaluation of offers. However, any discount offered will form a part of the award, and will be taken by the payment center if payment is made within the discount period specified by the offeror. As an alternative to indicating

a discount in conjunction with the offer, offerors may prefer to offer discounts on individual invoices. This clause modifies the "Discounts" clause of Section 00002 "Instruction to Bidders" (12-81) of this solicitation.

6. DRAWINGS ACCOMPANYING SPECIFICATION. (Provide drawing(s), schematic(s) identification, or specifically state "NONE". Use NAVFAC numbers as appropriate). See Section 00005, Appendix A.

7. EXAMINATION OF PREMISES. Bidders are expected to satisfy themselves as to the general and local conditions that may affect the cost of the performance of the work to the extent that such information is reasonably obtainable. It is considered impracticable to determine, without inspection, the exact nature of the work and site conditions under which the work is to be performed. Arrangements to visit the site are scheduled as follows: !(Indicate hours and days the site of work will be available to potential bidders. Indicate contact point for scheduling visits to job site.)!

!**********
NOTE TO THE SPECIFICATION WRITER: Determination as to Total Set-Aside for Small Business concerns will be made in accordance with the provisions of DAR 1-706.5 and NAVFAC P-68 section 4.219. The contract file shall be documented, in writing, to support the determination.
**********!

8. NOTICE OF TOTAL SMALL BUSINESS SET ASIDE:

a. Restriction. Offers under this procurement are solicited from small business concerns only and this procurement is to be awarded only to one or more small business concerns. This action is based on a determination by the OIC, alone or in conjunction with a representative of the Small Business Administration that it is in the interest of maintaining or mobilizing the Nation's full productive capacity, in the interest of war or national defense programs, or in the interest of assuring that a fair proportion of Government procurement is placed with small business concerns. Offers received from firms which are not small business concerns shall be considered non-responsive and shall be rejected.

b. Definition: A "small business concern" is a concern, including its affiliates, which is independently owned and operated, it is not dominant in the field of operation in which it is offering on Government contracts, and can further qualify under the criteria set forth in regulations of the Small Business Administration (Code of Federal Regulations, Title 13, Section 121.3-8). In addition to meeting these criteria, a manufacturer or a regular dealer submitting offers in his own name must agree to furnish in the performance of the contract end items manufactured or produced by small business concerns: Provided that this additional requirement does not apply in connection with construction or service contracts.

9. DEFINITION OF SMALL BUSINESS. For this procurement, a small business concern is a concern that is certified as a small business concern by the Small Business Administration and, in the (insert name of industry see DAR 1.701.1) service industries, the average annual receipts of the concern and its affiliates for the preceding three fiscal years must not exceed (see DAR 1.701.1).

10. MINIMUM WAGE RATES AND OTHER LABOR STANDARDS.

a. The minimum wages required to be paid for work under this specification (SELECT ONE OF THE FOLLOWING) "are attached" (identified by decision no. and date)", "have been requested from the Department of Labor and will be issued by amendment upon receipt".

b. Fair Labor Standards Act: (FLSA - May 1974). Notwithstanding any other provision of this contract, mimimum wage payment shall be as specified by P.L. 93-259 or the Service Contract Act Wage Determination, if any, whichever is greater.

11. SERVICE CONTRACT ACT - SUPPLEMENTAL INFORMATION AND REQUIREMENTS. Bidders are advised that this procurement is subject to the requirements of the Service Contract Act, as amended by P.L. 92-473 9 October 1972, and attention is invited to the obligations of the contractor under Section 4.C of the amended Service Contract Act. Any questions regarding the extent of these obligations should be addressed to the Department of Labor.

a. The Contractor agrees to provide to the OIC, upon request, a copy of any collective bargaining agreement applicable to employees performing on this contract.

b. Section 2(a)(5) of the Service Contract Act of 1965, as amended, requires that every contract (and bid specification therefore) subject to the Act contain a statement of the rates that would be paid by the Federal Agency to the various classes of service employees if 5 U.S.C. 5341 were applicable to them. The required statement follows and is for information only:

1. FRINGE BENEFITS (All classifications):

(a) Health and insurance - contribution of 5.1% of basic hourly rate
(b) Retirement - contribution of 7% of basic hourly rate
(c) Nine (9) paid holidays: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.
(d) Paid annual leave (vacation): Two (2) hours of annual leave each week for an employee with less than three (3) years of service; three (3) hours of annual leave each week for an employee with three (3) but less than fifteen (15) years of service; four (4) hours of annual leave each week for an employee with fifteen (15) or more years of service.

(2) BASIC HOURLY RATE BY CLASSIFICATION:
(Insert appropriate data.)

CLASSIFICATION	BASIC HOURLY RATE
_____	_____
_____	_____
_____	_____

12. NOTICE OF CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM. Offerors are advised that this contract includes a provision delineating the consequences of Contractor's failure to perform the services, as specified. See "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004.

13. PRECEPT TO BIDDERS.. Invitation, Bid and Award, NAVFAC 4330/24/(12/73) and Section 00002, Instructions to Bidders, shall be observed in the preparation of bids. Bidders shall affix their name and return address in the upper left corner of the envelope.

14. TELEGRAPHIC MODIFICATIONS OR WITHDRAWAL OF BIDS. In accordance with the "LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWAL OF BIDS" Clause, Section 00002 telegraphic modifications or withdrawal of bids may be made. Telegraphic modifications or withdrawal of bids should be identified as follows:

> "Telegraphic modification of bid of (Insert title and contract number), Specification No. (Insert specification number) and forwarded immediately to the office to which the written bids were submitted.

15. REFERENCE TO AMENDMENT. Each bidder shall refer in his bid to all amendments to this solicitation in accordance with the "ACKNOWLEDGEMENT OF AMENDMENTS TO SOLICITATIONS" Clause, Section 00002 of this contract: failure to do so may constitute an informality in the bid and be cause for rejection of the bid.

16. AVAILABILITY OF SPECIFICATIONS, STANDARDS AND DESCRIPTIONS (1977 Jun)

Specifications, standards and descriptions cited in this solicitation are available as indicated below:

(a) Unclassified Federal, Military and Other Specifications and Standards (Excluding Commercial), and Data Item Descriptions. Submit request on DD Form 1425 (Specifications and Standards Requisition) to:

Commanding Officer
U. S. Naval Publications and Forms Center
5802 Tabor Avenue
Philadelphia, Pa. 19120

The Acquisition Management Systems and Data Requirements Control List, DoD Directive 5000.19-L, Volume II, may be ordered on the DD Form 1425. The Department of Defense Index of Specifications and Standards (DODISS) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington D.D. 20402. When requesting a specification or standard, the request shall indicate the title, number, date and any applicable amendment thereto by number and date. When requesting a data item description, the request shall cite the applicable data item number set forth in the solicitaion. When DD Form 1425 is not available, the request may be submitted in letter form, giving the same information as listed above, and the solicitation or contract number involved. Such request may also be to the activity by telex number 334295, Western Union No. 710-570-1535, or Telephone Number (Area Code 215-697-3321) in case of urgency.

(b) Commercial Specifications, Standards and Descriptions. These specification standards and descriptions are not available from Government sources. They may be obtained from the publisher.

(c) SINGLE COPIES OF FEDERAL SPECIFICATIONS AND STANDARDS are available as specified in paragraph (a) above and in addition are available from the General Services Administration. Request should be addressed to the nearest Capital Regional Director of Business Affairs. The three West Coast offices are as follows:

Regional Director of Public Services
General Services Adminstration
525 Market Street
San Francisco, CA 94105
Telephone Number (415-556-2114)

Business Service Center
General Services Administration
300 N. Los Angeles Street, Rm. 1004
Los Angeles, CA 90012
Telephone Number (213-688-3210)

Business Service Center
General Services Administration
440 Federal Building
915 Second Avenue
Seattle, WA 98174
Telephone Number (206-442-3336)

(d) AVAILABILITY FOR EXAMINATION OF SPECIFICATIONS, STANDARDS, PLANS, DRAWINGS, DATA ITEM DESCRIPTIONS, AND OTHER PERTINENT DOCUMENTS.

The Specifications, Standards, Plans, Drawings, Descriptions and other pertinent documents cited in ths solicitation may be examined at the following location:

_____
_____
_____

!**********
NOTICE TO SPECIFICATION WRITER: The dollar amount of insurance coverage shown below is for illustrative purposes only. Minimum insurance requirements depend on specific functional considerations. A Contract Specialist should be consulted to determine appropriate insurance coverage.
**********!

17. INSURANCE. Within fifteen days after the award of this contract, the Contractor shall furnish the OIC a certificate of insurance as evidence of the existence of the following insurance coverage in amounts not less than the amounts specified below in accordance with the "INSURANCE" Clause, Section 00003.

	COVERAGE		
	PER PERSON	PER ACCIDENT	PROPERTY
Comprehensive General Liability	$300,000	$1,000,000	$100,000
Automobile Liability	$300,000	$1,000,000	$100,000
Workman's Compensation	AS REQUIRED BY STATE LAW		
(Other as required by State Law)			

The Certificate of Insurance shall further provide for thirty day's written notice to the OIC by the Insurance company prior to cancellation or material change in policy coverage. Other requiremnts and information are contained in the aforementioned "Insurance Clause".

!**********
NOTE TO SPECIFICATION WRITER: Item of Bid is to be inserted as Clause 17 of Section 00001 in accordance with P-68, section 4-201.1. The item of bid inserted here is to be exactly duplicated on the face of NAVFAC 4330/24(12-73) Invitation, Bid, and Award Maintenance Service Contract. Clause 18 has been written to reflect a fixed-price lump sum specification. This approach has been taken since the contractor will be made responsible for all repairs under $4,000. If a higher limit is used, Davis-Bacon considerations will be applicable which may require use of a combination Lump Sum Indefinite Quantity contract. For inclusion of other contract types, the contract specialist should be consulted. Clause 18 is also written to require Pre-Priced Options for solicitation under the Commercial Activities Program. If Pre-Priced Options are not required, delete all references and "Schedule of Indefinite Quantity Work" for First and Second Year Option periods.
**********!

18. ITEMS OF BID. Bids shall be submitted in duplicate on NAVFAC 4330/24(12/73) upon the following item:

Bid Item 1. Price for the performance of work for the Base Year in accordance with the specification.

Total price for bid item 1..... $_____

Bid Item 2. Price for the performance of work for the First Option Year in accordance with the specification.

Total price for bid item 2..... $_____

Bid Item 3. Price for performance of work the Second Option Year in accordance with the specification.

Total price for bid item 3..... $_____

EVALUATION OF BIDS. The low bidder for purposes of Cost Comparison (see "Notice of Cost Comparison" clause, Section 00001) shall be the conforming responsible bidder offering the low aggregate sum of the total bid prices for Bid Item 1, 2, and 3. Pending the result of the Cost Comparison, Bid Item 1 only will be awarded. The bidder shall not include in the bid price any contingency or allowance for wage adjustments due to a revised wage rate determination. Notwithstanding the provisions of the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003, concerning extension of the ontract at the same price, the ontract will be extended at the prices contained in the Items of Bid for the option years.

!**********
NOTE TO SPECIFICATION WRITER: Clause 19 has been written for a Fixed-Price lump sum contract. If another contract type is used, consult the contract specialist for assistance.
**********!

19. CONTRACT TYPE. This is a "fixed-price lump sum" contract awarded on a lump sum basis. Perforamance of work is not subject to price adjustment unless work is accomplished pursuant to the "CHANGES" Clause, Section 00003. Past historical data for this work is indicated in Appendix "B".

20. PRE-AWARD SURVEY. The Government may make a pre-award survey of the low conforming bidder to determine whether such bidder is qualified and capable to perform the contract. The pre-award survey will involve examination of the bidder's financial and technical status and its understanding of the contract requirements.

The following are examples of the type of information that, upon request, the bidder shall be prepared to provide in writing to the pre-award survey team. Requested information shall be forwarded within three days of such a request:

(a) Identification of the Contractor's personnel and management to be used on this contract.

(b) The Contractor's technical and management plans for performing the required services.

(c) Description of Contractor's facilities and equipment.

(d) Summary of the Contractor's experience in performing work of the type required by this specification.

(e) Current financial statements and data.

(f) Other work presently under contract.

(g) Prior contracts for similar work, and the names and addresses of individuals with the organization issuing the contract who may be contacted for information concerning the contractor's performance.

The failure to provide requested information, or a determination, after review of the information, of the bidder's non-responsibility, may result in bid rejection.

!**********
NOTICE TO THE SPECIFICATION WRITER: See NAVFC P-68 Sections 4-204.1; 4-204.3; 4-204.5. Bid Guarantee will be required in all contracts where the EFD has authorized the use of payment and performance bonds. Justification for any such requirements must be fully documented and maintained in the official contract files. If Payment and Performance Bonds are not approved for use, Clause 20 and 21 are to be eliminated and subsequent clauses renumbered.
**********!

21. NOTICE OF BID GUARANTEE. A bid guarantee is required by this invitation for bids. Failure to furnish a bid guarantee in the proper form and amount by the time set for opening of bids, may be cause for rejection of the bid.

a. A bid guarantee shall be in the form of a firm commitment, such as a bid bond, postal money order, certified check, cashier's check, irrevocable letter of credit or in accordance with Treasury Department regulations certain bonds or notes of the United States. Bid guarantees, other than bid bonds, will be returned (a) to unsuccessful bidders as soon as practicable after the opening of bids, and/or (b) to the successful bidder upon execution of such further contractual documents and bonds as may be required by the bids as accepted.

b. If the successful bidder, upon acceptance of his bid by the Government within the period specified therein for acceptance (sixty days if no period is specified) fails to execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the bid as accepted within the time specified (ten days if no period is specified) after receipt of the forms by him, his contract may be terminated for default. In such event he shall be liable for any cost of procuring the work which exceeds the amount of his bid, and the bid guaranted shall be available toward offsetting such difference.

22. NOTICE OF PAYMENT AND PERFORMANCE BOND REQUIREMENTS. Within 10 days after the prescribed forms are presented to him for signature, the bidder to whom the award is made shall enter into a written contract on the form prescribed by the specification and shall furnish two bonds each with satisfactory security; namely, a performance bond (Standard Form 25) and a payment bond (DD Form 1673). The performance bond shall be in a penal sum equal to 100 percent of the contract price. The payment bond shall be equal to 50 percent of the contract price, except that it shall be 40 percent of the contract price if that price is more than $1,000,000 and not more than $5,000,000, and in the fixed sum of $2,500,000 if the contract price is more than $5,000,000. The bond of any surety company holding a certificate of authority from the Secretary of Treasury as an acceptable surety on Federal bonds will be accepted. Individual sureties will be acceptable if each such surety deposits with the OIC cash, bonds, or notes of the United States, or certified check drawn to the order of the Treasurer of the United State, or such other security as the OIC may deem necessary for the required amount of

the guaranty, under the agreement that the collateral so deposited shall remain in the possession and control of the Treasurer of the Unted States for at least one year after the completion of the contract. The contract time for purposes of fixing the completion date, default, and liquidated damages shall begin to run five days from the mailing of acceptance, regardless of when the formal contract and bonds are executed.

!**********
NOTE TO SPECIFICATION WRITER: If this contract is to be awarded using the Firm Bid/Offer Procedure required by OMB Circular A-76, Commercial/Industrial Program, then the following two clauses are required. See DAR 4-1200.4 for further information.
**********!

23. RIGHT OF FIRST REFUSAL FOR EMPLOYMENT OPENINGS (May 1980).
Consistent with Government post employment conflict of interest standards, the contractor shall give Government employees, displaced as a result of the conversion to contract performance, the right of first refusal for employment openings on the contract in positions for which they are qualified.

24. NOTICE OF COST COMPARISON (ADVERTISED) (MAY 1980).

a. Bidders are notified that this solicitation is a part of a cost comparison to determine whether accomplishing the specified work in-house or by contract is more economical.

b. The Government's in-house cost estimate shall be based on the statement of work set forth in this solicitation and shall be submitted to the Contracting Officer in a sealed envelope no later than the time set for bid opening. At the time of the bid opening, the bids and the sealed Government in-house estimate will be opened and the results announced. This announcement is based upon an inital comparison of the cost of in-house performance with the cost of contracting out as indicated on the cost comparison form. The abstract of bids, the completed cost comparison form and detailed supporting data relative to the in-house cost estimate shall be made available to interested parties for review.

c. A period of (insert number of working days, see DAR 4-1200) working days will be provided for public review by interested parties of the cost comparison data. No final determination regarding the question of in-house or contractor performance will be made during this review period. Interested parties may file written requests, based on specific objections, for review of the cost comparison results with the Contracting Officer during this period. This review shall ony be used to resolve questions covering the calculation of the cost comparison, and shall not apply to decisions regarding selection of one bidder in preference to another. Decisions with regard to such requests are final.

d. After evaluation of bids, and resolution of requests for review, if any, the Contracting Officer shall announce the results of the cost comparison and either award a contract or cancel the solicitation. The completed cost comparison analysis shall be made available to interested parties.

e. In accordance with provisions of the "LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWAL OF BIDS" Clause, Section 00002 a late modification which displaces the otherwise low in-house cost estimate shall not be considered. An otherwise low in-house cost estimate is considered a successful bid and cannot be displaced by a late modification within subparagraph (d) of that clause.

!**********!
NOTE TO SPECIFICATION WRITER: Add the following clause 24(1) or 24(2) if applicable. See NAVFAC P-68 Section 9-202.
!**********!

25(1). AVAILABILITY OF FUNDS. Funds are not presently available for this procurement. The Government's obligation hereunder is contingent upon the availability of appropriate funds from which payment for the contract purposes can be made. No legal liability on the part of the Government for payment of any money shall rise unless and until funds are made available to the OIC for this procurement and notice of such availability to be confirmed in writing by the OIC, is given to the Contractor.

25(2). AVAILABILITY OF FUNDS FOR NEXT FISCAL YEAR. Funds are not presently available for performance under this contract beyond (insert date). The Government's obligation for performance of this contract beyond this date is contigent upon the availability of appropriated funds from which payment for the contract purposes can be made. No legal liability on the part of the Government for payment of any money for performance under this contract beyond (insert date) shall arise unless and until funds are made available to the OIC for such performance and notice of such availability, to be confirmed in writing by the OIC, is given to the Contractor.

!**********!
NOTE TO SPECIFICATION WRITER: Add the following clause if applicable see NAVFAC P-68, Section 4-306.
!**********!

26. PRE-BID CONFERENCE. A pre-bid conference will be held at (insert location) on (insert date) and (insert time). The purpose of the conference is to provide bidders an opportunity to attend a briefing on work to be contracted out and to submit written questions concerning the requirements of this IFB.

END OF SECTION 00001

B. Technical Specification. The Technical Specification (Section 00005) is a performance specification. That is, the specification tells the Contractor what the desired service outputs are, but not how to perform the work. The technical section specifies the requirements for each task. Any additional activity requirements should also be specified based upon performance, including a statement of desired results. The below discussions are included for assistance in completing activity facility descriptions referenced in Section 00005, Para. 3.1., and should be modified to meet individual activity situations.

(1) Wastewater Collection and Pumping Systems - general descriptions and component listings: The collection system should be described to identify the different types of systems on the activity, e.g., the domestic sewage system, the industrial system, the ship's wastewater system, or any combination thereof. The subject system's description should include pipe material and size, the number linear feet of each pipe size, the number and types of pumping stations, and locations of the systems. The pumping station descriptions should also include number, type, and capacity of the pumps in each pump station and other related equipment as considered appropriate, e.g., barscreen, comminutor, controls, type of electrical switching, emergency power, ventilation, etc.

(2) Wastewater treatment facilities - general descriptions and component listings: The wastewater treatment plant should be described as to the type of plant and the disposal point of the effluent. The following are typical examples:

The wastewater treatment plant is a high-rate trickling filter plant with outfall to the Mississippi River.

The wastewater treatment plant is an activated sludge plant with outfall to the Atlantic Ocean.

The wastewater treatment plant is an aerated lagoon system followed by land application effluent disposal.

After the plant description, a listing of the plant's components, structures, and equipment should be provided. Dimensions, size, number, and/or capacity of the components, structures, and equipment should also be provided as appropriate. The following provides a fairly comprehensive, but not all inclusive, list of various wastewater treatment plant components, structures, and equipment:

PRETREATMENT

Screening

Influent Channel

Racks

Bar Screens - Manually or Mechanically Cleaned

Hydrasieve Screens

Shredding and Grinding

Barminutor

Comminutor

Macerator

Grit Removal

Grit Channel - Manual or Chain and Flight Grit Collector

Aerated Grit Chamber

Pista Grit Chamber

Cyclone Grit Chamber

Cyclone Grit Separators

Grit Classifier

Grit Washer

Screw Conveyor

Grit Pump

Grit Storage - Hopper or Bin

PRIMARY TREATMENT

Rectangular Primary Clarifier

Chain and Sludge Scraper Collector

Travelling Bridge Collector

Circular Primary Clarifier

Scum Skimmer and Sludge Blade and Scraper Collector

Sludge Rake Blade with Riser Suction Pipe Collector

Lamella Gravity Settler

Combined Sedimentation - Digestion Units

Imhoff Tank

Surge Tank

Pumps - Wastewater and Sludge

(d) Chlorine residual
(e) Turbidity tests (Nephelometric method)
(f) Maximum contaminant levels for the Safe Drinking Water Act
(g) Reporting and record keeping procedures.

(4) Instructions for shipment of potable water samples for radionucleide analysis.

2.3 Manufacturer's or designer's O&M manuals, bulletins, etc.

!**********
NOTE TO SPECIFICATION WRITER - Some systems, or parts thereof, may have manufacturer's or designer's O&M specs. These should be provided in addition, or better yet, in lieu of 2.2.1 & 2.2.2
**********!

3. Performance Requirements -The Contractor shall operate, monitor, maintain and keep records on a Government-Furnished (GF) potable water treatment plant and appurtenant water supply storage/distribution system. Appendix A contains as-built drawings, and E, equipment lists of all GF facilities and equipment. Operational procedures and maintenance schedules shall be established by the Contractor generally in accordance with GF advisory specifications except where mandatory specific procedures or schedules are established by incorporation in this specification.

3.1 Performance Evaluation - The OIC will evaluate the Contractor's performance on the basis of measurable indicators and minimum standards established by this specification for each major work function to be performed by the Contractor. Performance evaluation procedures and standards are discussed in Section 4, Schedule of Deductions.

4. Major Work Functions - The Contractor shall perform the five major work functions described in paragraphs 4.1 through 4.5.

4.1 Water Treatment - The Contractor shall operate the GF treatment plant located at (Name of Activity) generally in accordance with Reference 2. The Contractor shall produce _____ gallons per day (GPD) of potable water meeting the minimum water quality standards described in Clause _____ , Section 4, of this specification. The Contractor shall maintain treated water free of taste and/or odor. Flow gauging methods and sample collection points for performance measurement are described in Appendix C to this specification. The Contractor shall furnish a level - certified water treatment plant operator who shall act as the person responsible for plant operation and who shall be available for consultation with the COR or with pertinent regulatory agencies as needed. Plant operation records including the following data are in Appendix B to this specification for 19_____ through 19_____.

- Water Quantity Logs
- Influent Water Quality Logs
- Effluent Water Quality Logs
- Manpower Utilization Summaries

WATER PLANTS AND SYSTEMS

SECTION 00005
Technical Specifications

1. General Requirements. The Contractor shall provide labor and material requirements as described in this specification for the operation and maintenance of a water treatment plant and appurtenant water supply storage/distribution system. The Contractor shall operate and maintain the system so as to provide an adequate water supply 24 hours a day, seven days a week, 365 days per year over the entire contract period.

2. References

2.1 Government Regulations

2.1.1 National Interim Primary Safe Drinking Water Regulations. (NIPSDWR)

2.1.2 State Regulations

2.2 NAVFAC Regulations and Manuals

2.2.1 Maintenance and Operation of Water Supply Systems -NAVDOCKS MO-210, June 1964

2.2.2 Maintenance and Operation of Water Supply System at (Name of Activity)

!**********
NOTE TO SPECIFICATION WRITER - Some systems, not all, have A-E prepared O&M Manuals specific to that system - if system does not have appropriate Manual, one should be prepared prior to contracting out M&O.
**********!

2.2.3. NAVFACINST 11330.14A - Safe Drinking Water at Navy Shore Activities - with enclosures:

(1) Ship-to-shore potable water connections
(2) Disinfection procedures for potable water mains, storage tanks and wells
(3) Standard operation procedure: Monitoring for the Safe Drinking Water Act

(a) Definitions
(b) Frequency of sampling
(c) Summary of national primary and secondary monitoring regulations for drinking water

WATER PLANTS AND SYSTEMS
SECTION 00005

TECHNICAL SPECIFICATION

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The permit indicates the reporting procedures for the monitoring results. Usually the permit requires the results to be forwarded to the regulatory agencies on a quarterly basis. The Contractor should also be required to complete NAVFAC Form 11340/1(Rev. 7-81) and submit it monthly to the QAE.

The specification will generally require the Contractor to comply with all requirements and procedures of the permit. The specification may also place operation and management requirements and responsibilities upon the Contractor which may be similar to the permit requirements. The Specification Writer shall ensure there is no conflict between the permit and the specification, except that the specification can have stricter requirements than the permit to meet the activity's requirements of having cost effective and environmentally acceptable operation and maintenance of the wastewater treatment plant.

ATTENTION: Care should be taken in cases where the activity has experienced repeated problems in meeting regulatory permit requirements for plant operations due to design/equipment deficiencies or improper/excessive plant loadings (not to be confused with poor operational practices and operator errors). In such cases, the Contractor cannot be required to meet permit restraints when the activity has not been able to meet the same regulatory restraints in the past. Therefore, when a plant exhibits a history of such poor perfomance, the Specification Writer and Quality Assurance Evaluator should recognize that such instances of non-compliance are not necessarily indicative of poor Contractor performance and the usual actions of payment deductions and discrepancy reporting may not be appropriate.

C. Potential Problem Areas. It is recognized that an all-inclusive work specification package cannot be offered to each individual activity through a general performance work statement such as this. It is the intent, therefore, to provide a general model with guidelines directed to the Specification Writer and to rely on the Specification Writer to prepare a specific document individualized to meet his activity demands. This very nature of specification development plus the subject matter involved allow the below listed potential problem areas to develop, thus necessitating special examination by the Specification Writer.

(1) Inclusion of Unique Activity Functions. Those functions or services which are highly individualistic or unique to an activity should be denoted within the specification and not omitted for the Contractor to discover after contract award. Such omissions could cause low bid submittals and possibly the necessity for contract change orders. For example, if effluent land application is specified as a Contractor responsibility, then all associated major supportive functions such as pump/well maintenance, ground water monitoring, and supportive laboratory analyses should also be specified, if within contract scope.

The following provides a typical example for effluent quality requirements of an industrial wastewater treatment plant:

Parameter	Discharge Limits			
	Kg/day (lbs/day)		Other Units	
	Daily Ave.	Daily Max.	Daily Ave.	Daily Max.
Chemical Oxygen Day	N/A	946 (2,085)	N/A	125 mg/l
Oil and Grease	N/A	113 (250)	N/A	15 mg/l
Cyanide	N/A	0.15 (0.33)	N/A	0.02 mg/l
Phenol	N/A	1.51 (3.34)	N/A	0.20 mg/l
Chromium (Total)	N/A	0.38 (0.83)	N/A	0.05 mg/l
Copper	N/A	3.78 (8.34)	N/A	0.50 mg/l
Cadmium	N/A	0.38 (0.83)	N/A	0.05 mg/l
Zinc	N/A	7.6 (16.7)	N/A	1.0 mg/l
Iron	N/A	2.27 (5.00)	N/A	0.30 mg/l
Detergents	N/A	3.78 (8.34)	N/A	0.50 mg/l
Nickel	N/A	1.51 (3.34)	N/A	0.20 mg/l
Lead	N/A	0.38 (0.83)	N/A	0.05 mg/l
Total Kjedahl Nitrogen	N/A	22.7 (50.0)	N/A	3.0 mg/l
Total Phosphorous	N/A	22.7 (50.0)	N/A	3.0 mg/l

Depending on the type of plant, its components, and the receiving water, there may be greater or fewer parameters and they may be more or less stringent.

The permit(s) prescribes the monitoring requirements (measurement frequency, sample type, and sampling point) for each parameter. These requirements will be the minimum monitoring requirements. The specification writer will also have to review the plant's operation and maintenance manual to specify the monitoring requirements prescribed in the manual to ensure adequate operation of the plant. Additionally, the monitoring requirements on NAVFAC Form 11340/1 (Rev. 7-81), Wastewater Treatment Plant Operating Record, which apply to the plant shall be included in the specification.

SECONDARY TREATMENT

Trickling Filters and Packed Towers - Rotary Distributor or Fixed Nozzle

Media - Rock, Plactic, or Redwood Lath

Activated Sludge - Conventional, Step Aeration, Extended Aeration, Complete Mix, or Contact Stabilization

Aeration Tanks - Mechanical or Diffused Aeration

Oxidation Ditch - Surface Type Aerator, e.g., Brush Rotor

Activated Biofilter Process - Redwood Racks

Aeration Tank - Surface Type Aerator

Rotating Biological Contactors

Lagoons/Ponds - Aerobic, Anaerobic, or Facultative

Secondary Clarifier - Rectangular or Circular

Pumps - Wastewater and Sludge

DISINFECTION

Chlorination - Chlorine Contact Chamber

Ozonation - Ozone Contact Basin

Ultraviolet Light

FLOW MEASUREMENT

Propeller Meter

Magnetic Flow Meter

Venturi Tube

Positive Displacement Diaphragm Meter

Weirs

Flumes

Kennison or Parabolic Nozzle

Rotameter

Float Type Met

Dipper Meter

Ultrasonic Meter

Bubble Type Meter

SLUDGE HANDLING

Thermal Treatment

Gravity Thickeners

Flotation Thickening

Anaerobic Digestion

Aerobic Digestion

Centrifuge

Vacuum Filtration

Pressure Filtration

Drying Bed

Drying Lagoons

Incineration

OTHER TREATMENT PROCESSES

Filtration

Microscreening

Activated Carbon Adsorption

Ammonia Stripping

Chemical Feeding and Conditioning

Rapid Mixing and Flocculation

Recarbonation

Land Treatment of Wastewater and Sludge

EMERGENCY AND AUXILIARY POWER

Generators

Motor Driver Equipment - Diesel, Gas, etc.

(3) Wastewater Characteristics - general description: For each type of wastewater treatment plant, the raw wastewater characteristics should be described. This information is recorded on the Wastewater Treatment Plant Operating Record, NAVFAC Form 11340/1. Also, some of the raw wastewater charateristics are reported as required by the NPDES permit. The NPDES permit data and the Operating Record data should be reviewed and a range of the raw wastewater characteristics should be defined. The following provides a typical composition of a raw domestic wastewater:

Constituent	Concentration (mg/1 unless specified) Weak	Medium	Strong
Biochemical Oxygen Demand, 5 day at 20 degrees C	110	220	400
Chemical Oxygen Demand	250	500	1,000
Total Dissolved Solids	250	500	850
Suspended Solids	100	220	350
Settleable Solids (mg/1)	5	10	20

(4) NPDES permitted subject areas - general description: The Environmental Protection Agency issues a NPDES permit to authorize the discharge of treated and sometimes untreated wastewater to a receiving water. In some states, a state permit may replace or may be in addition to the NPDES permit. A copy of these permits should be obtained from the Utilities Supervisor or Environmental Coordinator of the activity.

Some NPDES permits have other discharge requirements (usually identified under Part III) not relating to the wastewater collection system or treatment plant. These other discharge requirements should be excluded from the specifications.

The permit normally specifies the following:

a. which facilities are authorized to discharge,

b. the receiving waters,

c. the effective and expiration dates,

d. the effluent limitations and monitoring requirements,

e. a schedule of compliance,

f. monitoring and reporting requirements,

g. management requirements,

h. responsibilities,

i. and, sometimes, other requirements. These requirements should not be included in the specification as discussed in the previous paragraph.

After reviewing the permit(s), the appropriate requirements should be summarized in the specification. The following provides a typical example for effluent quality requirements of a wastewater treatment plant:

Parameter	Discharge Limits			
	Kg/day (lbs/day)		Other Units	
	Monthly Ave.	Weekly Ave.	Monthly Ave.	Weekly Ave.
Flow, cubic meters/day (MGD)	7,570 (2.00)			
Biochemical Oxygen Demand, 5 day at 20 degrees C (BOD-5)	227(500)	340(750)	30 mg/l	45 mg/l
Suspended Solids (SS)	227(500)	340(750)	30 mg/l	45 mg/l
Fecal Coliform Bacteria, Geometric Mean			200/100 ml	400/100 ml
Dissolved Oxygen			5.0 mg/l	

pH shall not be less than 6.0 nor more than 9.0 standard units. There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent shall not cause a visible sheen on the receiving water.

The monthly average effluent BOD-5 and SS concentrations shall not exceed 10 percent of the respective monthly average influent concentrations.

Chlorine residual shall be maintained at 0.5 mg/l continuous.

WASTEWATER COLLECTION SYSTEMS & TREATMENT FACILITIES

SECTION 00005 TECHNICAL SPECIFICATIONS

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WASTEWATER COLLECTION SYSTEMS & TREATMENT FACILITIES

SECTION 00005 TECHNICAL SPECIFICATIONS

1. General Requirements. The Contractor shall furnish all personnel, supervision, managament, materials, tools, transportation, supplies, equipment and repair/replacement parts except as specified herein as Government-furnished for the operation, inspection, maintenance, and repair of the !(specify activity name)! wastewater collection systems, pumping stations, and wastewater treatment facilities.

2. Applicable Publications and References. The publications and references included as Appendix G form a part of this specification to the extent indicated within the referencing paragraphs of this specification. Such referenced documents, or their subparts, are designated as either mandatory or advisory. Those publications and documents not directly referenced within this specification shall also form a part of this specification with the same designated mandatory and advisory action codings. The Contractor shall follow and abide by all references designated as mandatory. Those designated as advisory are provided for information and guidance purposes only and their usage is not obligatory. Navy publications shall be furnished at the start of contract; any supplements or amendments to mandatory Navy publications may be issued throughout the life of the contract and shall be considered effective immediately upon Contractor receipt. It is the Contractor's responsibility to insure that all mandatory references are current. In the event of conflict between the contents of this specification and applicable federal, state, or local requirements, the Contractor shall abide by those federal, state, or local requirements.

3. Scope of Work.

3.1. Description of Facilities.

3.1.1. Wastewater Collection and Pumping Systems. The wastewater collection and pumping systems serve the areas listed below and consist of the following elements. ! (SPECIFY SYSTEM SERVICE AREAS AND DESCRIPTIONS. SEE USERS GUIDE PARARAGRAPH II,B,1 FOR ASSISTANCE).!

3.1.2. Wastewater Treatment Facilities. The wastewater treatment facilities consist of the following elements. !(SPECIFY FACILITIES DESCRIPTIONS. SEE USERS GUIDE PARAGRAPH II,B,2 FOR ASSISTANCE).!

3.2. Wastewater Characteristics. The wastewater characteristics subject to the treatment requirements of this specification are variable. However, for general purposes of this specification, the characteristics listed below may be expected. !(SPECIFY WASTEWATER CHARACTERISTICS. SEE USERS GUIDE PARAGRAPH II,B,3 FOR DIRECTIONS).!

3.3. Areas of Responsibility. The Contractor shall be responsible for the satisfaction of all applicable regulatory agency requirements, including those for effluent quality. In the event that a regulatory agency assesses a monetary fine against the Government for violations caused by Contractor negligence, the Contractor shall reimburse the Government for the amount of that fine. Also within the scope of Contractor responsibility are personnel qualifications, avoidance of nuisance conditions and complaints, and performance of all necessary and required wastewater collection, pumping, and treatment operational, maintenance, and repair functions, including acceptable disposal of screenings, grit, sludge, waste oil, and other waste materials.

3.3.1. NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES). The Contractor shall be responsible for compliance with all requirements of the NPDES permit, as imposed by the Environmental Protection Agency (or as imposed by the state or local government if so authorized by EPA). The NPDES permit restrictions on effluent quality for treated wastewater are summarized below. !(SPECIFY PERMIT RESTRICTIONS. SEE USERS GUIDE PARAGRAPH II,B,4 FOR DIRECTIONS).!

3.3.2. Properly Qualified Personnel. The Contractor shall provide properly qualified personnel to operate the wastewater treatment facilities. Individuals providing general supervision or who are in responsible charge of plant operations for any period of time shall possess a class !(SPECIFY PROPER CLASSIFICATION)! or higher operator certification issued by !(SPECIFY APPROPRIATE AUTHORITY).! All certifications shall be maintained up to date and valid at all times. Certification records shall be maintained on file and readily available for OIC review upon request.

3.3.3. Medical Directives. The Contractor shall comply with the instructions of the cognizant Navy Medical Department with respect to avoidance of conditions which create a nuisance or which may be hazardous to the health of military or civilian personnel.

3.3.4. State and Local Regulations. The Contractor shall comply with all regulations of state and local regulatory agencies with respect to wastewater effluent quality which are not in conflict with the NPDES permit administered by the Environmental Protection Agency. !(IF THE STATE HAS NPDES PRIMACY OR IMPOSES SEPARATE RESTRICTIONS ON EFFLUENT QUALITY MORE STRINGENT THAN DOES NPDES, SO NOTE AND SPECIFY RESTRICTIONS AS IN PARA. 3.3.1. ALSO MAKE CHANGES TO PARAGRAPH 3.3.1 AS NECESSARY)!.

3.3.5. Accomodation of Guests. The Contractor shall assist and cooperate as needed in routine facility inspections and studies, and shall provide for the general accommodation of all guests of the OIC at the treatment facilities. Such guests may include representatives of other Navy Commands, local and state environmental agencies, and the Environmental Protection Agency. An activity representative will normally be appointed by the OIC to act as a liason in the case of such visits.

3.4. Services Provided.

3.4.1. Waste Collection and Pumping Systems. The Contractor shall be required to provide the following specific services relating to the wastewater collection and pumping systems.

3.4.1.1. General Services. The waste collection and pumping system operations shall be conducted in order to provide continuous, cost effective, and efficient conveyance of all activity-generated wastewater to the !(SPECIFY TREATMENT FACILITY NAME)! wastewater treatment facility. Flow shall be maintained so as to prevent the cause of nuisance odors and to prevent interruptions of service. Operations shall be in accordance with applicable health and regulatory agency standards at all times. Systems shall be maintained to minimize unsatisfactory service conditions including flooding conditions, pump station failures, pipe blockages, and excessive infiltration and inflow conditions. Facilities shall be maintained clean and orderly with generated waste materials (such as waste oils, grit screenings, and other waste solids) to be routinely collected, as necessary, and removed to an appropriate disposal site. The location of the disposal site shall be subject to OIC approval. All transportation and disposal practices shall be in accordance with all applicable environmental regulations. (Note: For purposes of this specification, specific system boundaries for buildings shall begin five feet from the building plumbing connection.)

3.4.1.2. Temporary and Emergency Services. Temporary and emergency collection services may be necessary to accomplish certain repairs, maintenance efforts, and new service connections. Such temporary and emergency services shall be coordinated with the OIC and shall be accomplished using methods to avoid service interruptions, where possible, or to minimize system downtime where such interruptions of service are unavoidable. The OIC shall be notified of scheduled temporary service conditions at the time of job scheduling and shall be notified of emergency situations as soon as possible, with notification time not to exceed one hour after Contractor identification of the emergency. For purposes of this specification, an emergency situation is defined as any condition that requires immediate action to eliminate life or serious injury hazards to personnel, prevent loss or damage to Government property or restore essential services.

3.4.1.3. Control Inspection Program. A control inspection program shall be established and implemented by the Contractor in order to identify and project system deficiencies and to determine the physical condition of system components. Inspections shall be accomplished annually and inspectors shall possess at least a craftsman rating in their respective trades. The OIC reserves the right to have representatives present during Contractor inspections, or to make separate inspections in order to determine the accuracy and completeness of the Contractor's control inspections. Attention is invited to NAVFAC MO-322, Volume 1, Chapter 3 (Inspection of Shore Facilities, "Control Inspection

Procedures") for program formulation guidance. Strict adherence to this chapter is not required; however, a completed control inspection plan shall be submitted to the OIC for approval within 30 calendar days after the contract award date. Yearly deficiency listings and condition reports, based upon inspection findings, shall also be submitted annually to the OIC to support the Navy's Annual Inspection Summary report. In order to maintain continuity, the formats of these submittals shall conform to those as described in Chapter 7 ("Annual Inspection Summary") of the above named document. These deficiency listings and condition reports shall be submitted no later than !(SPECIFY DATE)! of each year. Records and files documenting the control inspection program shall be maintained accurately, up to date, and available for OIC review during all normal working hours.

3.4.1.4. Preventative Maintenance/Inspection (PMI) Program. A preventative maintenance/inspection program shall be implemented by the Contractor in order to help prevent and correct deficiencies with designated dynamic equipment items, thus minimizing breakdowns and service interruptions, extending component service life, and maximizing operating efficiency. PMI shall include inspections and services of lubrication, minor adjustment, and minor repair of components. Attention is invited to NAVFAC MO-322, Volume 1, Chapter 4 ("Preventative Maintenance Inspection Procedures") for program formulation guidance. Strict adherence to this document is not required; however, a completed PMI plan shall be submitted to the OIC for approval within 30 calendar days after the contract award date and shall be approved prior to use. The PMI program is to be established based upon manufacturers' recommendations, handbooks, operating/service manuals, Contractor expertise, and general engineering judgments. The submitted plan shall include components to be inspected and maintained, inspection and maintenance techniques, inspection and maintenance frequencies, and reporting methodology. The Contractor shall update schedules as necessary to reflect any changes in equipment inventory. Once established, the PMI program shall be executed as scheduled with documentation maintained accurately and up to date at all times. Inspectors shall possess at least a craftsman rating in their respective trades. Logs, records, check-lists, and any other documentation maintained by the Contractor shall be available during all normal working hours for OIC review and shall be the property of the government.

3.4.1.5. Service/Trouble Call Desk. A service call desk with response services shall be provided by the Contractor to receive personal and telephone notifications of problems with system operations and requests for maintenance and repair efforts. This desk shall be manned during all normal working hours and an emergency service off-base telephone number shall be provided for emergency response during all other hours, day or night. A service desk log shall be maintained by the Contractor and each service request call shall be recorded with appropriate response actions and times denoted. Each service call log recording shall include a brief description of the reported problem and time of call reception. The log shall be made available for OIC review upon request during all normal working hours. Service call response actions may include both maintenance and repair efforts and will be classified as emergency, urgent, or routine.

3.4.1.5.1. Emergency Calls. Response to an emergency call (emergency as defined in Paragraph 3.4.1.2. of this specification) shall be immediate and corrective actions shall begin, when necessary, within one hour of receipt of problem notification during any time, day or night. Work shall be accomplished without interruption until completion or until the emergency situation is arrested and work can be completed at a later date in a routine manner.

3.4.1.5.2. Urgent Calls. Urgent services, for purposes of this specification, include those services which do not immediately endanger personnel or threaten damage to property, but would soon inconvience and affect the health or well-being of personnel or disrupt essential services. Urgent services shall be accomplished during Government normal working hours, or on a second or split shifts when within the capability of Contractor personnel. Urgent services shall be completed or arrested within two working days or as directed by the OIC.

3.4.1.5.3. Routine Calls. Routine services, for the purpose of this specification, include all services not qualified as emergency or urgent. Routine services shall be completed within a reasonable time frame as directed by the OIC and normally within five working days. Some judgment on the part of the Contractor and cooperation on the part of the customer will be required for this classification of service calls.

3.4.1.6. Repairs. Repairs to the wastewater collection and pumping systems shall be performed by the Contractor as required to maintain proper and efficient system operations as described in Paragraph 3.4.1. Repairs shall be made in accordance with manufacturers' specifications and guidelines, where applicable, and shall be of such quality to prevent any malfunction reoccurences due to poor workmanship or other Contractor inadequacies. The Contractor shall be responsible for the acquisition and purchase of all necessary replacement parts, as described in Section 00004 of this specification. Quality of such replacement parts shall be as good or better than the existing parts. Repair efforts shall be coordinated, initiated, and completed as specified in Paragraphs 3.4.1.2. and 3.4.1.5, and shall always be accomplished with proper regard to loss of life and property. All repair efforts shall be documented with purchase records and component history files shall be maintained accurately and up to date at all times. All logs, records, and documentation shall be made available for OIC review upon request during all normal working hours. Monthly, the Contractor shall submit a complete and accurate listing to the OIC itemizing the past month's repair efforts and corresponding associated costs. This submittal shall be due on!(SPECIFY DATE).!

3.4.2. Waste Treatment Facilities. The Contractor shall be required to provide the following specific services relating to wastewater treatment facilities.

3.4.2.1. General Waste Treatment Operations. Wastewater treatment facility operations shall be conducted in order to provide continuous, cost effective, and efficient treatment of all wastewater delivered to the facility. Such operations shall include general operation of plant equipment, valves and piping, sampling and lab analyses, waste and effluent disposal, and other related services. All operations shall be accomplished in accordance with the treatment facility operations manual where applicable. !(NOTE TO SPECIFICATION WRITER: NOT ALL PLANTS HAVE SUCH AN OPERATIONS MANUAL AND THEREFORE PREVIOUS SENTENCE SHOULD BE INCLUDED OR DELETED ACCORDINGLY).! Treatment facility conditions shall be maintained clean and orderly at all times and adherence to applicable health and safety standards shall be maintained. Operations shall be accomplished with proper regard to equipment and components to insure operating efficiency and longevity of service life. Facility operations and effluent discharge practices shall comply with all applicable federal, state, and local regulatory standards, including the NPDES permit requirements. The preparation of all related correspondences and operating reports are also Contractor responsibilities, as discussed in Paragraphs 3.4.2.4. and 3.4.2.5. of this specification.

3.4.2.2. Waste Disposal. Waste disposal services shall be provided by the Contractor at a frequency sufficient to maintain clean and orderly collection sites with no overflow of waste material. Wastes (including sludges, grit, screenings, and other waste solids) shall be routinely collected and transported to a properly classified disposal site, with location subject to OIC approval. The Contractor shall provide all necessary laboratory services and maintain records of such laboratory analyses on file, also subject to OIC review. Wastes deemed hazardous shall be transported and disposed of accordingly. All waste disposal practices shall be accomplished in accordance with all applicable environmental regulations. All records, receipts, manifests, and log entries shall be subject to OIC review during all normal working hours and shall be the property of the government.

3.4.2.3. Sampling and Laboratory Analyses. Sampling and laboratory analytical services shall be provided by the Contractor as necessary to support OIC and regulatory agency operating requirements. Such sampling and testing procedures shall be accomplished in accordance with applicable operating permit conditions and as directed by the OIC. Unless otherwise directed, all sampling and laboratory analyses shall be accomplished as described in the latest edition of Standard Methods for the Examination of Water and Wastewater, American Public Health Association, or in accordance with other regulatory agency approved methods. The Contractor is responsible for such analytical services as listed in Appendix I of this specification at the frequency indicated. A complete set of laboratory records shall be kept for all laboratory tests to include: date and time of sampling, type of sample, name of sample, location of sample, test performed, and test results. In addition, results of such laboratory analyses shall be assembled into reports to conform with the procedures and requirements of the NPDES permit (or other state and local permits if applicable) and shall be delivered to

the OIC for signature and submittal to the EPA (or state and local agency). Copies of all testing records and associated correspondences shall be maintained on file subject to OIC review. The OIC reserves the right to collect wastewater samples and have tests performed to verify the Contractor's performance of work.

3.4.2.4. Notice of Violations. Notice of violations of any of the NPDES permitted parameters, of any lift station bypassing and of any discharges of any other type in violation of the NPDES permit shall be prepared by the Contractor and submitted to the OIC within 24 hours of the Contractor's identification of the noncompliance. The notice of violation shall be prepared in a manner suitable for OIC signature and submittal to the EPA. This notice shall include a description of the discharge, the cause of noncompliance, and the period of noncompliance including exact dates and times (or if not corrected, the anticipated time the noncompliance is expected to continue and steps being taken to reduce, eliminate, and prevent the reoccurence of the noncomplying discharge). Direct submittals of Contractor supplied notices of violation shall be the responsibility of the OIC. (Note: Any similar notice requirements of state and local agencies shall also be the responsibility of the Contractor and accomplished in a similar manner).

3.4.2.5. Operating Reports. In addition to the above required correspondences, the Contractor shall also prepare and submit to the OIC all required operating reports containing routine control analyses and flow readings as described in the NPDES permit and in NAVFACINST 5450.19, Enclosure 2, Part II (included in Appendix G). These reports shall be prepared and submitted to the OIC monthly to arrive by the fifth !(OR SPECIFY OTHER APPROPRIATE DATE)! of the month following the reporting period.

3.4.2.6. Control Inspection Program. A control inspection program shall be established and implemented by the Contractor in order to indentify and project system deficiencies and to determine the physical condition of system components. Inspections shall be accomplished annually and inspectors shall possess at least a craftsman rating in their respective trades. The OIC reserves the right to have representatives present during Contractor inspections, or to make separate inspections in order to determine the accuracy and completeness of the Contractor's control inspections. Attention is invited to NAVFAC MO-322, Volume 1, Chapter 3 (Inspection of Shore Facilities, "Control Inspection Procedures") for program formulation guidance. Strict adherence to this chapter is not required; however, a completed control inspection plan shall be submitted to the OIC for approval within 30 calendar days after the contract award date. Yearly deficiency listings and condition reports, based upon inspection findings, shall also be submitted annually to the OIC to support the Navy's Annual Inspection Summary report. In order to maintain continuity, the formats of these submittals shall conform to those as described in Chapter 7 ("Annual Inspection Summary") of the above named document. These deficiency listings and condition reports shall be submitted no later than !(SPECIFY DATE)! of each year. Records and files documenting the control inspection program shall be maintained accurately, up to date, and available for OIC review during all normal working hours.

3.4.2.7. Preventative Maintenance/Inspection (PMI) Program. A preventative maintenance/inspection program shall be implemented by the Contractor in order to help prevent and correct deficiencies with designated dynamic equipment items, thus minimizing breakdowns and service interruptions, extending component service life, and maximizing operating efficiency. PMI shall include inspections and services of lubrication, minor adjustment, and minor repair of components. Attention is invited to NAVFAC MO-322, Volume 1, Chapter 4 ("Preventative Maintenance Inspection Procedures") for program formulation guidance. Strict adherence to this document is not required; however, a completed PMI plan shall be submitted to the OIC for approval within 30 calendar days after the contract award date and shall be approved prior to use. The PMI program is to be established based upon manufacturers' recommendations, handbooks, operating/service manuals, Contractor expertise, and general engineering judgments. The submitted plan shall include components to be inspected and maintained, inspection and maintenance techniques, inspection and maintenance frequencies, and reporting methodology. The Contractor shall update schedules as necessary to reflect any changes in equipment inventory. Once established, the PMI program shall be executed as scheduled with documentation maintained accurately and up to date at all times. Inspectors shall possess at least a craftsman rating in their respective trades. Logs, records, check-lists, and any other documentation maintained by the Contractor shall be available during all normal working hours for OIC review and shall be the property of the government.

3.4.2.8. Repairs. Repairs to the wastewater treatment facility shall be performed by the Contractor as required to maintain proper and efficient waste treatment operations as described in Paragraph 3.4.2.1 Repairs shall be made in accordance with manufacturers' specifications and guidelines, where applicable, and shall be of such quality as to prevent any malfunction reoccurence due to poor workmanship or other Contractor inadequacies. The Contractor shall be responsible for the acquisition and purchase of all necessary replacement parts, as described in Section 00004 of this Specification. Quality of such replacement parts shall be as good or better than the existing parts. Repair efforts shall be coordinated, initiated, and completed so as not to violate any effluent discharge restrictions and shall always be accomplished with proper regard to loss of life and property. All repair efforts shall be documented with purchase records and component history files shall be maintained accurately and up to date at all times. All logs, records, and documentation shall be made available for OIC review upon request during all normal working hours. Monthly, the Contractor shall submit a complete and accurate listing to the OIC itemizing the past month's repair efforts and corresponding associated costs. This submittal shall be due on!(SPECIFY DATE).!

!**********
NOTE TO SPECIFICATION WRITER: The Government should retain the right to determine how major repairs are to be accomplished and in addition it is desirable to "cap" the work for which the Contractor will be held responsible. The using activity must determine at what point it wants to exercise control due to Davis-Bacon implications, $4000.00 is used below as the cut-off value for Contractor responsibility. Special paragraphs must be added if the value exceeds $4000.00. See User's Guide Paragraph III, D. for discussion and direction on determining this value.
**********!

4. WORK CLASSIFICATION. Individual repair/placement projects with an estimated sum of labor and materials costs exceeding $4000 are not covered by this contract. The Contractor shall be responsible for all repair/replacement costs less than this amount. The OIC shall retain the right to determine how repairs with a labor and materials cost greater than $4000 are to be accomplished, such as through change orders, separate contracts, or by Government forces. If an individual repair item exeeds $4000, the Contractor shall provide the OIC a detailed cost estimate pressed in accordance with the "Estimates" clause of Section 00005.

5. ESTIMATES. All estimates shall be based on Navy Engineered Performance Standards (EPS P-700 Series). In areas where EPS standards do not exist, other industry standards as approved by the OIC shall be used. Material costs shall be based on the lowest price of at least two quotations. Any material handling charge will be indicated separately.

END OF SECTION 00005

Wastewater Collection Systems & Treatment Facilities

SECTION 00004 SPECIAL PARAGRAPHS

!**********!
NOTE TO SPECIFICATION WRITER: Unique functional terms should be added to the following list of definitions.
**********!

1. DEFINITIONS. As used throughout this contract, the following terms shall have the meaning set forth below:

a. Contractor - The term Contractor as used herein refers to both the prime Contractor and any subcontractors. The Contractor will be responsible for insuring that his subcontractors comply with the provisions of this contract.

b. Contractor Representative - A foreman, superintendent, or manager assigned in accordance with the "SUPERINTENDENCE BY CONTRACTOR" Clause, Section 00004.

c. Government Representative - Person(s) designated by the OIC to be his authorized representative.

d. Officer in Charge (OIC) - The Officer designated by the Contracting Officer to administer the contract. As used herein, Officer in Charge (OIC) and Officer in Charge of Construction (OICC) are synonymous. Throughout this contract, the term OIC will be used to refer to the Officer designated to administer the contract. See the "Definitions" Clause, Section 00003.

e. Quality Assurance (QA) - A method used by the Government, to provide some measure of control over the quality of purchased goods and/or services received.

f. Quality Control (QC) - A method used by the Contractor, to control quality of goods and/or services provided.

g. Regular Hours - The Government's regular hours are from _(starting hour)_ to _(ending hour)_, Mondays through Fridays, except (a) Federal Holidays and (b) other days specifically designated by the OIC.

h. Where "as shown", "as required", "as detailed" or words of similar import are used, it shall be understood that reference is made to the drawings accompanying this specification unless stated otherwise.

i. Where "as directed", "as required", "as permitted", "approval", "acceptance" or words of similar import are used, it shall be understood that direction, requirement, permission, approval or acceptance of the OIC is intended unless stated otherwise.

j. Task Verification Document (TVD) - A Task Verification Document is a form designed and prepared by the Contractor for his use in planning and scheduling items of work in the Lump Sum Portion of the contract. The Contractor shall use the TVD to provide verification and accountability of accomplished Lump Sum Work to the OIC. The OIC will utilize the TVD in the inspection program of the QA Plans and to establish accountability and verification of accomplishment of work in the Lump Sum Portion of the contract. The format of all TVD's will be approved for use by the OIC.

k. Engineered Performance Standards (EPS) - EPS is a Department of Defense method for establishing the estimated manhour requirements to perform various types of maintenance, repair, construction and housekeeping tasks.

!**********
NOTE TO SPECIFICATION WRITER: The following clause is required when there are indefinite quantity work items. Appendix A should be used to specify work order forms, time requirements for work accomplishment, and minimum and maximum work order quantities. The contract serves as the ordering document for those services furnished under the fixed-price lump sum portion of this contract. Specification of indefinite quantity work is not recommended for wastewater services, in which case the following paragraph 2 should not be used.
**********!

2. ORDERING OF WORK. Services to be furnished under the indefinite quantities portion of the contract shall be ordered by the OIC or, when specifically delegated, the Government Representative.

a. Work orders will take the form of (i) Department of Defense form DD Form 1155 (1 Feb 75) and (ii) forms identified in Appendix A.

b. Work orders, other than DD Form 1155, will be issued to the Contractor in triplicate. The original to be submitted by the Contractor with the invoice for payment, one copy to be submitted within 24 hours of completion of work, and one copy retained by the Contractor. DD Form 1155 will be processed as described on the form.

c. The Contractor is required to respond to, and complete work ordered in the time(s) specified in Appendix A unless otherwise specified in other parts of this contract.

!**********
NOTICE TO SPECIFICATION WRITER: Sub-paragraphs should be added to the following paragraph, as necessary, to provide specific information on invoice data requirements. Appendix B should be used to specify invoice format and submittal requirements.
**********!

3. INVOICING INSTRUCTIONS. Contractor's invoices shall be submitted in !(# of copies)! at !(frequency)! intervals for services performed, to the OIC. The original of each invoice shall have attached to it a copy of

the work order document(s) and a summary of the charges in a format similar to the Schedule of Deductions. Upon verification of work actually performed and receipt of required Contractor submittals as identified in Appendix B, invoices will be processed for payment. Payment will be based on:

!**********
NOTICE TO SPECIFICATION WRITER: Choose one or more of the following as appropriate. Consult EFD Code 02 for cases of multiple contract types.
**********!

a. a monthly charge for the fixed-price lump sum portion of the work.

b. the percentages of the fixed-price lump sum portion of the work which has been verified as completed, and

c. the actual quantities of work performed which are authorized by work orders.

!**********
NOTICE TO SPECIFICATON WRITER: Select appropriate clause. Clause 4.1 is to be used where there are unit prices established. For watchstanding or other services not having unit prices, use clause 4.2. See NAVFAC P-68 Section 9-302.
**********!

4. CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES

4.1. Service Requirements

a. The Government will give the Contractor written notice of deficiencies by copies of the Inspector's Daily Reports or otherwise, (i) prior to charging liquidated damages, and (ii) whenever unsatisfactory services are performed. The parties hereto agree that the Contractor shall be conclusively presumed to have actual knowledge of work not performed, and that therefore such written notice shall not be a prerequisite for withholding payment for unperformed services. Therefore:

(1) In the case of non-performed work, the Government:

(a) shall deduct from Contractor's invoice all billings associated with such non-performed work at the rates set out in the "Schedule Of Deductions" Clause, Section 00004 or the "Items of Bid" Clause, Section 00001, whichever is applicable, required by other provisions of this contract, unless the contractor is afforded an opportunity to perform pursuant to (b) below and satisfactorily completes the work;

(b) may, at its option, afford the Contractor an opportunity to perform the non-performed work within 3 hours of the Contractor's being advised that he will be afforded the opportunity, in the case of daily services; or 24 hours in the case of all other services; or

(c) may, at its option, perform the services by Government personnel or other means.

(2) In the case of unsatisfactory work, the Government:

(a) shall deduct from the Contractor's invoice all billings associated with such unsatisfactory work at the rates set out in the "Schedule of Deductions" Clause, Section 00004 or the "Items of Bid" Clause, Section 00001, whichever is applicable, unless the contractor is afforded an opportunity to perform pursuant to (b) below and satisfactorily completes the work;

(b) may, at its option, afford the Contractor the opportunity to re-perform the unsatisfactory work within 6 hours in the case of daily services, or 24 hours in the case of all other services, of the notice to the Contractor of such unsatisfactory performance, at no additional cost to the Government; or

(c) may, at its option, perform the work by Government personnel or other means.

b. Should the Government elect options a.(1)(a), a.(1)(b), a.(2)(a), or a.(2)(b) above, the Government will also deduct, as liquidated damages, to compensate the Government for administrative costs and other expenses resulting from the nonperformance or unsatisfactory peformance, an additional 10% of the rate set forth in the "Schedule Of Deductions" Clause, Section 00004 or the "Items of Bid" Clause, Section 00001, whichever is applicable, for such work.

c. Should the Government elect options a.(1)(c) or a.(2)(c) above, the Government will effect the deduction described in a.(1)(a) or a.(2)(a) above, and will deduct an additional 20% of the rate set forth in the "Schedule Of Deductions" Clause, Section 00004 or "Items of Bid" Clause, Section 00001, whichever is applicable, for such work. This 20% is as liquidated damages to compensate the Government for administrative costs and other expenses incured by the Government to obtain satisfactory completion of the services.

d. Said deductions by the Government for monies otherwise due the Contractor shall represent agreed liquidated damages assessed by the Government for nonperformance or unsatisfactory performance.

e. Repeated instances of nonperformance or unsatisfactory performance will be grounds for termination of the contract for default in accordance with the "DEFAULT" Clause, Section 00003.

4.2. Personnel Requirements.

a. In the event that the Contractor fails to provide a properly qualified supervisor, plant operator, or repair/maintenance technician at any time during any shift or special detail in which such a supervisor, plant operator, or repair/maintenance technician is required as set out

in the Work Requirements of these specifications, the Government may assign other persons to perform such work, and deductions shall be made from the month's invoice as follows:

(1) When a Government employee is assigned to perform the work required, the Government will deduct from the amount due the Contractor the entire cost to the Government (wages, retirement contribution, and fringe benefits) of the Government employee who actually performed the work, PLUS, as agreed liquidated damages, an additional deduction of 20% of such cost, for administrative or other expenses resulting from the nonperformance of the work. If the replacement person is obtained by the Government under another contract, the deduction will equal the cost to the Government under that contract, plus 20% as described above.

(2) If no replacement is furnished by the Government and the work is not performed, to preclude the Contractor from being paid for not performing, the Government will deduct from the amount invoiced by the Contractor an amount equal to the cost to the Government of having a Government employee perform the work. This cost shall be computed in accordance with the Federal Wage Board rate schedule described in (c) below at the appropriate grade level, PLUS an additional 10% of that cost as agreed liquidated damages for administrative or other expenses incurred by the Government as a result of the nonperformance of the work.

b. However, the Government reserves the following rights:

(1) The rights described in the "Default" clause of the General Provisions of this contract, and all other remedies for default as may be provided by law.

(2) To hold the Contractor liable for property losses sustained by the Government as a direct, consequentive result of a failure to furnish the required personnel.

c. Computations of the costs of Government employees performance of work not performed by the Contractor shall be in accordance with "Statement of Wage and Fringe Benefit Rates Applicable to Federal Wage Board (Blue Collar) Employees".

d. The parties to this contract hereto agree that the Contractor as a result of his contractual obligation to supervise the personnel furnished and oversee the quality of their performance shall be conclusively presumed to have actual knowledge of work not performed, and that therefore a written notice shall not be a prerequisite for withholding payment or assessing liquidated damages for nonperformed invoices.

5. PRE-PERFORMANCE CONFERENCE. Prior to commencing work, the Contractor shall meet in conference with the OIC, or his designated representative, at a time specified, to discuss and develop mutual understandings relative to scheduling and administration of work.

6. GOVERNMENT QUALITY ASSURANCE. In accordance with the "INSPECTION OF SERVICES" Clause, Section 00003, each phase of the services rendered under this contract is subject to Government inspection during both the Contractor's operations and after completion of the tasks. The Government's Quality Assurance Program is not a substitute for Quality Control by the Contractor. All findings of incomplete or defective performance will be administered in accordance with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES" Clause, Section 00004. All costs associated with rework are the responsibility of the Contractor. When Contractor's overall performance is unsatisfactory a Contract Discrepancy Report will be issued by the OIC or his designated representative. The Contractor shall reply in writing, giving the reason(s) for unsatisfactory performance and identify the corrective action(s) to be taken to prevent recurrence.

7. CONTRACTOR QUALITY CONTROL. In accordance with the "INSPECTION OF SERVICES" Clause, Section 00003, the Contractor shall establish and maintain a complete Quality Control Program that is acceptable to the OIC, to assure that the requirements of the contract are provided as specified.

a. A general description of the Contractor's Quality Control Program shall be available for Government review during the preaward survey. Within 10 days after award, !(number of)! copies of the Quality Control Program shall be provided to the OIC and as changes are made thereafter. The program shall include the following:

(1) A quality control inspection system covering all services included in the contract. It must specify areas to be inspected on either a scheduled or unscheduled basis and how inspections are to be conducted.

(2) The name(s) of the individual(s) tasked to perform the quality control inspections, their qualifications, and the extent of their authority.

(3) A method for identifying deficiencies in the quality of services performed and taking corrective action before the level of performance becomes unsatisfactory.

b. A file of all Quality Control Inspections, inspection results, and any corrective action required, shall be maintained by the Contractor through the term of this contract. This file shall be the property of the Government and be made available to the OIC during regular hours. The file shall be turned over to the OIC within !(number of)! days after completion/termination of the contract.

8. PERFORMANCE EVALUATION MEETINGS. The Contractor's Representative shall meet with the Government's Representative !(insert frequency - suggest weekly)! during the first !(Insert number of months - 2 or 3 is recommended)! month(s) of the contract. Meetings will be as often as necessary at the discretion of the OIC, but not less than !(insert frequency - suggest monthly)! thereafter. A mutual effort will be made

to resolve all problems identified. The written minutes of these meetings, prepared by the Government, shall be signed by the Contractor's Representative and the Government's Representative. Should the Contractor not concur with the minutes, the Contractor will state, in writing, to the OIC any areas of disagreement.

9. ORDER OF PRECEDENCE. In the event of an inconsistency between the provisions of this solicitation, the inconsistency shall be resolved by giving precedence in the following order: (a) the Schedule (excluding the Specifications); (b) Terms and Conditions of the solicitation, if any; (c) General Provisions; (d) other provisions of the contract, when attached or incorporated by reference; and (e) the Specifications.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine what facilities will be provided to the Contractor and select clause 10(1) or 10(2) as appropriate. If Clause 10(1) is selected (as will be the normal case), the writer must state what facility support services, if any, are to be provided by Contractor i.e. custodial and janitorial services. Appendix C is used to list all facilities provided to the Contractor.
**********!

10(1). FACILITIES PROVIDED FOR CONTRACTOR'S USE. The Government shall furnish or make available to the Contractor, the facilities described in Appendix C. The Contractor shall assume responsibility and accountability of such facilties provided for their use and shall take adequate precautions to prevent fire hazards, odors and vermin. At the completion of the contract, all facilities shall be returned to the Government in the same condition as received, except for reasonable wear and tear. The Contractor shall be held responsible for the cost of any repairs caused by negligence or abuse on his part, or on the part of his employees.

10(2). FACILITIES PROVIDED FOR CONTRACTOR'S USE The Government will not provide office space and operational facilities to the Contractor. The Contractor is responsible, at his expense, to secure and maintain the necessary office space and other facilities required for the performance of this contract.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine what equipment and material will be provided to the Contractor and select or modify Clauses 11 or 12 as appropriate. An Appendix listing provided equipment and equipment maintenance requirements must be included with this specification or the following paragraphs modified. If equipment is located at other than job site, specify location and responsibility for transportation.
**********!

11(1). EQUIPMENT PROVIDED FOR CONTRACTOR'S USE. The Government will not provide the Contractor the use of existing and available Government-owned equipment in the performance of the contract.

11(2). EQUIPMENT PROVIDED FOR CONTRACTOR'S USE. The Government will provide the Contractor the use of existing and available Government-owned equipment in the performance of the contract.

a. Such Government-furnished equipment is listed in Appendix D. The Contractor shall be responsible for the periodic servicing, maintenance, and repairs of the equipment listed at no cost to the Government. Upon completion or termination of the contract, all Government-owned equipment shall be returned to the Government in the same condition as received, except for normal wear and tear. The Contractor shall be responsible for the cost of any repairs caused by negligence or abuse by the Contractor or his employees.

b. The Contractor and the Government Representative shall conduct a joint inventory before commencing work under this contract to determine the exact number and serviceability of Government-furnished equipment. The Contractor shall then certify the findings of this inventory and shall assume accounting responsibility and, subsequently, report inventory discrepancies to the Government Representative. Government furnished equipment shall not be removed from the military base unless approved by the OIC.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine if existing maintenance material will be turned over to the Contractor.
**********!

12(1). MATERIAL PROVIDED FOR CONTRACTOR'S USE. The Government will not provide the Contractor any material under the terms of this contract.

12(2). MATERIAL PROVIDED FOR CONTRACTOR'S USE. The Government shall furnish at no expense to the Contractor the material listed in Appendix E. The Contractor shall be held accountable for all materials supplied. All material unused at the end of the contract shall be returned to the Government.

!**********
NOTICE TO SPECIFICATION WRITER. The following is a DAR clause and is required when the Government provides facilities, equipment, and/or material for Contractor's use. The clause shown here is the "Short Form" version and is applicable when (i) the Government is to furnish to the Contractor Government property having an acquisition cost of $50,000 or less, or (ii) property is furnished to a contractor for use on a Government installation and contract administration is retained by the purchasing office. If Government personnel maintain property records, if this specification is for overseas contracts, or if (i) or (ii) do not apply, see DAR 7-104.24.
**********!

13. GOVERNMENT-FURNISHED PROPERTY. Facilities, equipment, and material provided for the Contractor's use is defined in this contract as Government-furnished property. As such the following provisions apply:

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(a) The Government shall deliver to the Contractor, for use only in connection with this contract, the property described in the schedule or specifications (hereinafter referred to as "Government-furnished property"), at the times and locations stated therein. If the Government-furnished property, suitable for its intended use, is not so delivered to the Contractor, the OIC shall, upon timely written request made by the Contractor, and if the facts warrant such action, equitably adjust any affected provision of this contract pursuant to the procedures of the "Changes" clause hereof.

(b) Title to Government-furnished property shall remain in the Government. The Contractor shall maintain adequate property control records of Government-furnished property in accordance with sound industrial practice.

(c) Unless otherwise provided in this contract the Contractor, upon delivery to him of any Government-furnished property, assumes the risk of, and shall be responsible for, any loss thereof or damage thereto except for reasonable wear and tear, and except to the extent that such property is consumed in the performance of this contract.

(d) The Contractor shall, upon completion of this contract, prepare for shipment, deliver f.o.b. origin, or dispose of all Government-furnished property not consumed in the performance of this contract or not theretofore delivered to the Government, as may be directed or authorized by the OIC. The net proceeds of any such disposal shall be credited to the contract price or paid in such other manner as the OIC may direct.

!**********
NOTE TO SPECIFICATION WRITER: In general the selection of specific brands or types of material/supplies to be consumed during the execution of work should be left to the Contractor's discretion. Material/supplies used should meet some minimum industrial standard. It may be desirable to specify the quality of material/supplies that are provided when used by activity personnel. If so, modify the following clause as required and use appendix F to identify specific material/supplies. Quality standards should address "type of" rather then "brand of".
**********!

14. MATERIAL PROVIDED BY THE CONTRACTOR. The Contractor shall provide all materials and supplies necessary to perform the work as specified in the contract. Appendix F provides a partial list of material requirements. Materials and supplies provided shall be of acceptable industrial grade and quality. The Contractor shall maintain a stockpile of maintenance parts for normal maintenance, where such materials and suppies can be obtained more economically through the Government supply system, then the Contractor may order such materials and supplies through the Government supply system.

!**********!
NOTE TO SPECIFICATION WRITER.....The Specification Writer must determine if utilities will be provided to the Contractor and select clause 15(1) or 15(2) as appropriate. Clause 15(2) is suggested where feasible.
!**********!

15(1). AVAILABILITY OF UTILITIES. The Government will furnish such potable water and elective current at existing outlets as may be required for the work to be performed under the contract at no cost to the Contractor. Information concerning the location of existing outlets may be secured from the OIC. The Contractor shall provide and maintain, at his expense, the necessary service lines from existing Government outlets to the site of work.

15(2). AVAILABILITY OF UTILITIES. The Contractor shall be required to pay for utilities consumed.

a. The Contractor shall, at his expense, install meters as directed by the OIC to measure consumption of utilities provided by the Government.

b. The rate for reimbursement to the Government of metered utilities will be:

!**********!
NOTE TO SPECIFICATION WRITER.....List the rates of reimbursement.
!**********!

c. In the event that the Government is unable to provide the required types of utilities, the Contractor shall, at his expense, arrange for the required utilities.

16. ACCESS TO BUILDINGS. It shall be the Contractor's responsibility, through the OIC, to obtain access to buildings and arrange for the buildings to be opened and closed.

a. Keys may be issued to the Contractor; however, it shall be the Contractor's responsibility to see that adequate arrangements are made for security of the building(s) at the end of each work day.

b. The Contractor shall be responsible for the cost of replacing any keys that are furnished to and lost by his employees. If the OIC decides that a lock must be replaced because of the loss of a key by the Contractor's employee(s), the Contractor shall pay the cost of that replacement. Similarly, the Contractor shall pay the cost of changing a combination if the OIC has reasonable cause to assume that the combination has been compromised.

17. PASSES AND BADGES. All Contractor employees shall obtain the required employee and vehicle passes. The Contractor will, prior to the start of the contract, submit to the OIC an estimate of the number of personnel expected to be utilized at any one time on the contract. The Government will issue !(number_of)! badges without charge. The Contractor shall reimburse the Government !(dollar_amount)! for each badge in excess of !(number_of)!. Each employee shall wear the

Government issued badge over the front of the outer clothing. When an employee leaves the Contractor's service, the employee's pass and badge shall be returned within !(number of)! days. Passes and badges issued to Contractor employees shall not negate the requirement for employee identification required in the "IDENTIFICATION OF CONTRACTOR EMPLOYEES" Clause, Section 00004. of this Section.

!**********!

NOTE TO SPECIFICATION WRITER: The Specification Writer should add any special or unique station regulations, or security requirements to Clauses 18 and 19 respectively . The Specification Writer should also mention any parking fees which the Contractor may have to pay before passes will be issued for his employees personal vehicles. In addition, vehicles which must be used by a contractor in the performance of his contractual functions, as opposed to vehicles used by his employees for commuting, should not be required to pay station parking fees.

!**********!

18. STATION REGULATIONS. The Contractor and his employees shall become acquainted with and obey all Government regulations as posted, or as requested by the OIC.

19. SECURITY REQUIREMENTS. The Contractor shall comply with all Station Security Requirements. Upon request, the Contractor shall submit the name and address of each employee hired for work on this contract and shall cause to be filled out questionnaires and other forms as may be required for security.

!**********!

NOTE TO SPECIFICATION WRITER....The following clause should be included, and modified as required, if Contractor employees have access to privileged information (e.g. directories, mailing lists, classified information, etc.) otherwise the clause should be deleted.

!**********!

20. DISCLOSURE OF INFORMATION.

a. Neither the Contractor nor any of its employees will disclose or cause to be disseminated any information concerning the operations of the activity which could result in or increase the likelihood of the possibility of a breach of the activity's security or interrupt the continuity of its operations.

b. Disclosure of information relating to the services hereunder to any person not entitled to receive it, or failure to safeguard any classified information that may come to the Contractor or any person under his control in connection with work under this contract, may subject the Contractor, his agents or employees to criminal liability under Title 18, Sections 793 and 798 of the United States Code.

c. All inquiries, comments or complaints arising from any matter observed, experienced, or learned of as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information will be directed to the activity Commander.

d. Deviations from or violations of any of the provisions of this paragraph will in addition to all other criminal and civil remedies provided by law subject the Contractor to immediate termination for default and/or the individuals involved to a withdrawal of the Government's acceptance and approval of employment.

!**********
NOTE TO SPECIFICATION WRITER: Review each directive for contract applicability.
**********!

21. DIRECTIVES. All applicable Department of Defense (DOD), Secretary of the Navy (SECNAV), Chief of Naval Operations (OPNAV), and other directives, instructions, and regulations are listed in Appendix G.

22. SAFETY REQUIREMENTS. All work shall be conducted in a safe manner and shall comply with the requirements described in Appendix H of this contract.

a. Prior to the commencement of work, the Contractor shall meet in conference with the OIC to discuss and develop mutual understandings relative to administration of the Safety Program.

b. If the Contractor fails or refuses to promptly comply with safety requirements, the OIC may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop order shall be made the subject of claim for extension of time or for excess costs or damages to the Contractor.

23. ACCIDENT REPORTING. The Contractor shall maintain an accurate record of and shall report to the OIC in the manner and on the forms prescribed by the OIC, exposure data and all accidents resulting in death, trauma, or occupational disease. All accidents must be reported to the OIC within 24 hours of their occurrence.

24. DAMAGE REPORTS. In all instances where Government property and/or equipment are damaged by Contractor's employees, a full report of the fact and extent of such damage shall be submitted to the OIC within 24 hours of occurrence.

25. SUPERINTENDENCE BY CONTRACTOR. The Contractor shall give his personal superintendence to the work or have a competent foreman or superintendent, satisfactory to the OIC, on the work at all times during progress, with authority to act for him.

26. CONTRACTOR EMPLOYEES. The Contractor shall furnish sufficient personnel to perform all work specified within the contract.

a. The Contractor's employees will conduct themselves in a proper and efficient manner at all times.

b. The Contractor expressly agrees to remove from the site any individual whose continued employment is deemed by the OIC to be contrary to the public interest or inconsistent with the best interests of National Security.

c. No employee or representative of the Contractor will be admitted to the work site unless he furnishes satisfactory proof that he is a citizen of the United States, or, if an alien, his residence within the United States is legal.

27. DRUG ABUSE BY CONTRACT EMPLOYEES. The Secretary of the Navy has determined that the illegal possession and use of drugs and paraphernalia by civilian and contract employees in the military setting contributes directly to military drug abuse and undermines Command efforts to eliminate drug abuse among military personnel. The policy of the Department of the Navy (including the Marine Corps) is to deter and detect drug offenses by civilian and contract employees on military installations. Measures to be taken to identify drug offenses on military installations, and to prevent introduction of illegal drugs and paraphernalia include routine, random inspections of vehicles on entry or exit, with drug detection dog teams, when available, and random inspection of personal possessions on enty or exit. Where there is probable cause to believe that a civilian or contract employee on board a Naval or Marine Corps installation has been engaged in use, possession or trafficking of drugs, that employee may be restricted or detained for the period necessary until he can be removed from the installation or can be turned over to local law enforcement authorities having jurisdiction, as appropriate. When illegal drugs are discovered in the course of an inspection or search of a vehicle operated by a civilian or contract employee, the employee and vehicle may be detained for a resonable period of time necessary to turn the employee and the vehicle over to appropriate civil law enforcement officials, and action may be taken to suspend, revoke or deny installation driving privileges. Implicit with the acceptance of this contract is the contractor's agreement to comply with all federal statutes, laws and regulations, including those regulations issued by the Commander of the military installation.

28. IDENTIFICATION OF CONTRACTOR EMPLOYEES. All Contractor employees shall be identified by a distinctive name plate, emblem, or patch attached in a prominent place to an outer garment. Employee identification shall not be substituted for station required passes or badges.

29. IDENTIFICATION OF CONTRACTOR VEHICLES. Each Contractor provided vehicle shall show the Contractor's name so that it is clearly visible and shall at all times, display a valid state license plate and safety inspection sticker.

30. PERMITS. The Contractor shall, without additional expense to the Government, obtain or renew as necessary all appointments, licenses, and permits required for the prosecution of the work and for complying with all applicable federal, state, and local laws. Evidence of such permits and licenses shall be provided to the OIC before work commences. Existing federal, state, & local permits are described in Section 00005, Technical Specification. Unless otherwise directed, the Contractor shall not communicate directly with federal, state, or local environmental agencies, but shall provide any necessary information, applications, or documentation to the OIC for submittal to such agencies.

31. DAMAGE OR LOSS OF CONTRACTOR'S SUPPLIES AND CONTRACTOR'S EMPLOYEES PROPERTY. The Contractor is responsible for taking that action necessary to protect his supplies, materials, and equipment and the personal property of his employees from loss, damage, or theft.

32. WARRANTY OF SERVICES. All maintenance work performed by the Contractor shall be covered by a one-year warranty against defects in material and workmanship. Any recurreance of maintenance problems due to defects in such material or workmanship within this timeframe will be repaired or replaced by the Contractor at no additional cost to the Government. Damage to Government and private property by such defect will be repaired or replaced at no additional cost to the Government. This clause supercedes the "WARRANTY OF SERVICES" Clause, Section 00003, for all maintenance work provided under the contract. The "WARRANTY OF SERVICES" Clause, Section 00003, shall apply to all other services provided under the contract.

33. WORK SCHEDULE. The Contractor shall arrange his work so as not to cause interference with normal occurence of Government business. All work schedules shall be submitted to and be approved by the OIC. Immediately after receipt of notice of award, the Contractor shall submit to the OIC a schedule of planned performance of work for the contract period. The schedule shall indicate the day or days of the week that weekly or more frequent items will be accomplished at the locations indicated and the week of the month in which lesser than weekly frequencies will be accomplished. Whenever periodic services have been scheduled on the date a holiday occurs, then such services will be performed on the following working day. In no event shall the Contractor change the approved work schedule without the prior written consent of the OIC.

34. WORK OUTSIDE REGULAR HOURS. Except as may otherwise be specified, all routine & urgent work, as defined in Section 00005, Technical Specification Para 3.4.1.5., shall be performed during regular hours. If the Contractor desires to carry on routine or urgent work on Saturday, Sunday, holidays or outside of the Station's regular hours, he may submit an application to the OIC for approval. Emergency service work efforts, as defined in Para. 3.4.1.2., may be performed at any hour, day or night, depending on the extent of the particular emergency.

35. EMERGENCY MEDICAL CARE. Only emergency medical care is available in Government facilities to Contractor employees who suffer on-the-job injury or disease. Care will be rendered at the rates established in:

Navy BUMEDINST 6320.4 series

Reimbursement will be made to the:

Navy - Regional Medical Center Collection Agent

upon receipt of statement.

36. FIRE PREVENTION. The Contractor will familiarize himself and require his employees to become familiar with the method of turning in a FIRE ALARM. The Contractor and his employees shall be cognizant of and observe all requirements for handling and storage of combustible supplies and materials, daily disposal of combustible waste, trash, etc.

37. ENVIRONMENTAL PROTECTION. The Contractor will comply with all applicable environmental protection requirements, except as they may be modified by this contract.

!**********
NOTE TO SPECIFICATION WRITER: Any special paragraphs added to this section should be included here and the SCHEDULE OF DEDUCTIONS clause renumbered.
**********!

!**********
NOTE TO SPECIFICATION WRITER: Schedule of Deductions Clause will only be used when, Bid Item 1, "ITEM OF BID" Clause 17, Section 00001 is used (fixed-price lump sum, lump sum work items). If an indefinite quantity or requirements type specification is used delete this clause.
**********!

38. SCHEDULE OF DEDUCTIONS.

a. The successful Contractor is required to provide an acceptable Schedule of Deductions within fifteen days after award. The total of the Schedule of Deductions must equal the amount entered for bid item 1 in the "ITEMS OF BID" Clause, Section 00001. Prices shown in the Schedule of Deductions will be utilized in conjuction with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004 in making payment deductions for nonperformance or unsatisfactory performance. Unbalancing in the Schedule of Deductions submitted shall be cause for withholding approval and requiring resubmission of a balanced schedule, and may be ground for Termination For Default. The Government also reserves the right to unilaterally establish a Schedule of Deductions in the event the successful Contractor presents a Schedule of Deductions which is unbalanced or materially deficient. The approved Schedule of Deductions shall be a part of the contract. DO NOT SUBMIT SCHEDULE OF DEDUCTIONS WITH BID.

SCHEDULE OF DEDUCTIONS

The low bidder shall within 15 days after award, complete the Schedule of Deductions for approval of the Officer-in-Charge. This schedule is to be used in conjunction with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004 in making payment deductions for nonperformance or unsatisfactory performance. DO NOT SUBMIT SCHEDULE OF DEDUCTIONS WITH BID.

ITEM	UNIT	QTY	SUB UNIT PRICE/YR.	LINE ITEM TOTAL/YR.
1.Operations:		—	—	—
1A.Operate Waste Collection System & Treatment Facilities.	Montly	12	$_____	
1B.Perform Sampling and Lab Analyses	Lump Sum		$_____	
1C.Prepare Required Operating Reports	Lump Sum		$_____	
				$_____
2.Perform Control Inspections	Lump Sum	—	—	$_____
3.Perform Preventative Maintenance/ Inspections	Lump Sum	—	—	$_____
4.Repairs:	Lump Sum	—	—	—
4A.Perform Scheduled and Routine Repairs:		--		
Treatment Facility	Lump Sum		$_____	
Collection System	Lump Sum		$_____	
	4A. Sub-Total		$_____	

4B. Perform Emergency and Temporary Repairs: —

Treatment Facility	Lump Sum	$_____
Collection System	Lump Sum	$_____
4B. Sub-Total		$_____

$_____

5. Waste Collection and Disposal: Lump Sum — — —

5A. Waste Collection and Transportation to Disposal Site	Lump Sum	$_____
5B. Perform Associated Lab Analyses	Lump Sum	$_____

$_____

6. Other (Specify) $_____

TOTAL FIXED-PRICE LUMP SUM..... $_____

(Total must equal the total price bid for bid item 1, the Base year of the contract. For Option years, the total must equal the total price bid for Bid Item 2 for the First Option Year, and the total price bid for Bid Item 3 for the Second Option Year. Schedule of Deductions for Option Years shall be submitted within 15 days after Notice of Intent to Exercise the Option.)

END OF SECTION 00004

WATER PLANTS AND SYSTEMS

SECTION 00004 SPECIAL PARAGRAPHS

!**********
NOTICE TO SPECIFICATION WRITER: Unique functional terms should be added to the following list of definitions.
**********!

1. DEFINITIONS. As used throughout this contract, the following terms shall have the meaning set forth below:

a. Contractor - The term Contractor as used herein refers to both the prime Contractor and any subcontractors. The Contractor will be responsible for insuring that his subcontractors comply with the provisions of this contract.

b. Contractor Representative - A foreman, superintendent, or manager assigned in accordance with the "SUPERINTENDENCE BY CONTRACTOR" Clause, Section 00004.

c. Government Representative - Person(s) designated by the OIC to be his authorized representative.

d. Officer in Charge (OIC) - The Officer designated by the Contracting Officer to administer the contract. As used herein, Officer in Charge (OIC) and Officer in Charge of Construction (OICC) are synonymous. Throughout this contract, the term OIC will be used to refer to the Officer designated to administer the contract. See the "Definitions" Clause, Section 00003.

e. Quality Assurance (QA) - A method used by the Government, to provide some measure of control over the quality of purchased goods and/or services received.

f. Quality Control (QC) - A method used by the Contractor, to control quality of goods and/or services provided.

g. Quality Assurance Evaluator (QAE) - The QAE is that Government employee responsible for the monitoring of the Contractor's performance.

h. Regular Hours - The Government's regular hours are from (starting hour) to (ending hour), Mondays through Fridays, except (a) Federal Holidays and (b) other days specifically designated by the OIC.

i. Where "as shown", "as required", "as detailed" or words of similar import are used, it shall be understood that reference is made to the drawings accompanying this specification unless stated otherwise.

j. Where "as directed", "as required", "as permitted", "approval", "acceptance" or words of similar import are used, it shall be understood that direction, requirement, permission, approval or acceptance of the OIC is intended unless stated otherwise.

k. Task Verification Document (TVD) - A Task Verification Document is a form designed and prepared by the Contractor for his use in planning and scheduling items of work in the contract. The Contractor shall use the TVD to provide verification and accountability of accomplished Lump Sum Work to the OIC. The OIC will utilize the TVD in the inspection program of the QA Plans and to establish accountability and verification of accomplishment of work in the Lump Sum Portion of the contract. The format of all TVD's will be approved for use by the OIC.

l. Engineered Performance Standards (EPS). EPS is a Department of Defense method for establishing the estimated manhour requirements to perform various types of maintenance, repair, construction and housekeeping tasks.

!**********
NOTE TO SPECIFICATION WRITER: The following clause is only required when there are indefinite quantity work items. Appendix _____ should be used to specify work order forms, time requirements for work accomplishment, and minimum and maximum work order quantities. The contract serves as the ordering document for those services furnished under the fixed-price lump sum portion of this contract. Indefinite quantity work however, is not recommended for Water Plants and Systems Services in which case the following paragraphs 2 and 3 should not be used.
**********!

2. ORDERING OF WORK. Services to be furnished under the indefinite quantities portion of the contract shall be ordered by the OIC or, when specifically delegated, the Government Representative.

a. Work orders will take the form of (i) Department of Defense form DD Form 1155 (1 Feb 75) and (ii) forms identified in Appendix _____.

b. Work orders, other than DD Form 1155, will be issued to the Contractor in triplicate. The Original to be submitted by the Contractor with the invoice for payment, one copy to be submitted within 24 hours of completion of work; and one copy retained by the Contractor. DD Form 1155 will be processed as described on the form.

c. The contractor is required to respond to, and complete work ordered in the time(s) specified in Appendix _____ unless otherwise specified in other parts of this contract.

!**********
NOTICE TO SPECIFICATION WRITER: Sub-paragraphs should be added to the following paragraph, as necessary, to provide specific information on invoice data requirements. Appendix _____ should be used to specify invoice format and submittal requirements.
**********!

3. INVOICING INSTRUCTIONS. Contractor's invoices shall be submited in (# of copies) at (frequency) intervals for services performed, to the OIC. The original of each invoice shall have attached to it a copy of the work order document(s) and a summary of the charges in a format similar to the Schedule of Deductions. Upon verification of work actually performed and receipt of required Contractor submittals as identified in Appendix _____ invoices will be processed for payment. Payment will be based on:

* * * *

(b) may, at its option, afford the Contractor the opportunity to re-perform the unsatisfactory work within 6 hours in the case of daily services, or 24 hours in the case of all other services, of the notice to the Contractor of such unsatisfactory performance, at no additional cost to the Government; or

(c) may, at its option, perform the work by Government personnel or other means.

b. Should the Government elect options a.(1)(a), a.(1)(b), a.(2)(a), or a.(2)(b) above, the Government will also deduct, as liquidated damages, to compensate the Government for administrative costs and other expenses resulting from the nonperformance or unsatisfactory performance, an additional 10% of the rate set forth in the Schedule of Deductions for such work.

c. Should the Government elect options a.(1)(c) or a.(2)(c) above, the Government will effect the deduction described in a.(1)(a) or a.(2)(a) above, and will deduct an additional 20% of the rate set forth in the Schedule of Deductions for such work. This 20% is as liquidated damages to compensate the Government for administrative costs and other expenses incurred by the Government to obtain satisfactory completin of the services.

d. Said deductions by the Government for monies otherwise due the contractor shall represent agreed liquidated damages assessed by the Government for nonperformance or unsatisfactory performance.

e. Repeated instances of nonperformance or unsatisfactory performance will be grounds for termination of the contract for default in accordance with the "DEFAULT" Clause, Section 00003.

4(2). CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES

a. If there is a failure in the system due to lack of adequate staffing, the Government may assign other persons to perform the work, and deductions shall be made from the month's invoice as follows:

(1) When a Government employee is assigned to perform the work required, the Government will deduct from the amount due the Contractor the entire cost to the Government (wages, retirement contribution, and fringe benefits) of the Government employee who actually performed the work, PLUS, as agreed liquidated damages, an additional deduction of 20% of such cost, for administrative or other expenses resulting from the nonperformance of the work. If the replacement person is obtained by the Government under another contract, the deduction will equal the cost to the Government under that contract, plus 20% as described above.

(2) If no replacement is furnished by the Government and the work is not performed, to preclude the contractor from being paid for not performing, the Government will deduct from the amount invoiced by the contractor an amount equal to the cost to the Government of having a Government employee perform the work. This cost shall be computed in accordance with the Federal Wage Board rate schedule described in (c) below at the appropriate grade level, PLUS an additonal 10% of that cost as agreed liquidated damages for administrative or other expenses incurred by the Government as a result of the nonperformance of the work.

b. However, the Government reserves the following rights:

(1) The rights described in the "Default" clause of the General Provisions of this contract, and all other remedies for default as may be provided by law.

(2) To hold the contractor liable for property losses sustained by the Government as a direct, consequentive result of a failure to furnish the required personnel.

c. Computations of the costs of Government employees performance of work not performed by the contractor shall be in accordance with "Statement of Wage and Fringe Benefit Rates Applicable to Federal Wage Board (Blue Collar) Employees."

d. The parties to this contract hereby agree that the Contractor as a result of his contractual obligation to supervise the personnel furnished and oversee the quality of their performance shall be conclusively presumed to have actual knowledge of work not performed, and that therefore a written notice shall not be a prerequisite for withholding payment or assessing liquidated damages for nonperformed invoices.

5. PRE-PERFORMANCE CONFERENCE. Prior to commencing work, the Contractor shall meet in conference with the OIC, or his designated representative, at a time specified, to discuss and develop mutual understandings relative to scheduling and administration of work.

6. GOVERNMENT QUALITY ASSURANCE. In accordance with the "INSPECTION OF SERVICES" Clause, Section 00003, each phase of the services rendered under this contract is subject to Government inspection during both the Contractor's operations and after completion of the tasks. The Government's Quality Assurance Program is not a substitute for Quality Control by the Contractor. All findings of incomplete or defective performance will be administered in accordance with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES" Clause, Section 00004. All costs associated with rework are the responsibility of the Contractor. When the Contractor's overall performance is unsatisfactory a Contract Discrepancy Report will be issued by the OIC or his designated representative. The Contractor shall reply in writing, giving the reason(s) for unsatisfactory performance and identify the corrective action(s) to be taken to prevent recurrence.

7. CONTRACTOR QUALITY CONTROL. In accordance with the INSPECTION OF SERVICES" Clause, Section 00003, the Contractor shall establish and maintain a complete Quality Control Program that is acceptable to the OIC, to assure that the requirements of the contract are provided as specified.

a. A general description of the Contractor's Quality Control Program shall be available for Government review during the preaward survey. Within 10 days after award, (number of) copies of the Quality Control Program shall be provided to the OIC and as changes are made thereafter. The program shall include the following:

(1) A quality control inspection system covering all services included in the contract. It must specify areas to be inspected on either a scheduled or unscheduled basis and how inspections are to be conducted.

(2) A method for identifying deficiencies in the quality of services performed and taking corrective action before the level of performance becomes unsatisfactory.

b. A file of all Quality control Inspections, inspection results, and any corrective action required, shall be maintained by the Contractor through the term of this contract. This file shall be the property of the Government and be made available to the OIC during regular hours. The file shall be turned over to the OIC within (number_of) days after completion/termination of the contract.

8. PERFORMANCE EVALUATION MEETINGS. Meetings will be held as often as necessary at the discretion of the OIC. A mutual effort will be made to resolve all problems identified. The written minutes of these meetings, prepared by the Government, shall be signed by the Contractor's Representative and the Government's Representative. Should the Contractor not concur with the minutes, the Contractor will state, in writing, to the OIC any areas of disagreement.

9. ORDER OF PRECEDENCE. In the event of an inconsistency between the provisions of this solicitation, the inconsistency shall be resolved by giving precedence in the following order: (a) the Schedule (excluding the Specifications); (b) Terms and Conditions of the solicitation, if any; (c) General Provisions; (d) other provisions of the contract, when attached or incorporated by reference; and (e) the Specifications.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine what facilities will be provided to the Contractor and select clause 10(1) or 10(2) as appropriate. If Clause 10(1) is selected, the writer must state what facility support services, if any, are to be provided by the Contractor. Appendix _____ is used to list all facilities provided to the Contractor.
**********!

10(1). FACILITIES PROVIDED FOR CONTRACTOR'S USE. The Government shall furnish or make available to the contractor, the facilities described in Appendix _____. The contractor shall assume responsibility and accountability of such facilities provided for their use and shall take adequate precautions to prevent fire hazards, odors and vermin. At the completion of the contract, all facilities shall be returned to the Government in the same condition as received, except for reasonable wear and tear. The contractor shall be held responsible for the cost of any repairs caused by negligence or abuse on his part, or on the part of his employees.

10(2). FACILITIES NOT PROVIDED FOR CONTRACTOR'S USE. The Government will not provide office space and operational facilities to the Contractor. The contractor is responsible, at his expense, to secure and maintain the necessary office space and other facilities required for the performance of this contract.

!**********!

NOTE TO SPECIFICATION WRITER: The specification writer must determine what equipment and material will be provided to the contractor and select or modify Clauses 11 or 12 as appropriate. An Appendix listing provided equipment and equipment maintenance requirements must be included with this specification or the following paragraphs modified. If equipment is located at other than job site, specify location and responsibility for transportation.

!**********!

11. EQUIPMENT PROVIDED FOR CONTRACTOR'S USE. The Government will provide the Contractor the use of existing and available Government-owned equipment in the performance of the contract.

a. Such Government-furnished equipment is listed in Appendix _____. The Contractor shall be responsible for the periodic servicing, maintenance and repairs of the equipment listed at no cost to the Government. Such servicing, mainteanance and repairs shall be made in accordance with guidelines specified in Appendix _____. Upon completion or termination of the contract, all Government-owned equipment shall be returned to the Government in the same condition as received, except for normal wear and tear. The Contractor shall be responsible for the cost of any repairs caused by negligence or abuse by the Contractor or his employees.

b. The Contractor and the Government Representative shall conduct a joint inventory before commencing work under this contract to determine the exact number and serviceability of Government-furnished equipment. The contractor shall then certify the findings of this inventory and shall assume accounting responsibility and, subsequently, report inventory discrepancies to the Government Representative. Government furnished equipment shall not be removed from the military base unless approved by the OIC.

12. MATERIAL PROVIDED FOR CONTRACTOR'S USE. The Government shall furnish at no expense to the Contractor the material listed in Appendix _____. The Contractor shall be held accountable for all materials supplied. All material unused at the end of the contract shall be returned to the Government.

!**********!

NOTICE TO SPECIFICATION WRITER. The following is a DAR clause and is required when the Government provides facilities, equipment, and or material for Contractor's use. The clause shown here is the "Short Form" version and is applicable when (i) the Government is to furnish to the contractor Government property having an acquisition cost of $50,000 or less, or (ii) property is furnished to a contractor for use on a Government installation and contract administration is retained by the purchasing office. If Government personnel maintain property records, if this specification is for overseas contracts, or if (i) or (ii) do not apply, see DAR 7-104.24.

!**********!

13. GOVERNMENT-FURNISHED PROPERTY. Facilities, equipment, and material provided for the contractor's use is defined in this contract as Government-furnished property. As such the following provisions apply:

(a) The Government shall deliver to the Contractor, for use only in connection with this contract, the property described in the schedule or specifications (hereinafter referred to as "Government-furnished property"), at the times and locations stated therein. If the Government-furnished property, suitable for its intended use, is not so delivered to the Contractor, the OIC shall, upon timely written request made by the Contractor, and if the facts warrant such action, equitably adjust any affected provision of this contract pursuant to the procedures of the "Changes" clause hereof.

(b) Title to Government-furnished property shall remain in the Government. The Contractor shall maintain adequate property control records of Government-furnished property in accordance with sound industrial practice.

(c) Unless otherwise provided in this contract the Contractor, upon delivery to him of any Government-furnished property, assumes the risk of, and shall be responsible for, any loss thereof or damage thereto except for reasonable wear and tear, and except to the extent that such property is consumed in the performance of this contract.

(d) The Contractor shall, upon completion of this contract, prepare for shipment, deliver f.o.b. origin, or dispose of all Government-furnished property not consumed in the performance of this contract or not theretofore delivered to the Government, as may be directed or authorized by the OIC. The net proceeds of any such disposal shall be credited to the contract price or paid in such other manner as the OIC may direct.

!**********!

NOTE TO SPECIFICATION WRITER: In general the selection of specific brands or types of material/supplies to be consumed during the execution of work should be left to the Contractor's discretion. Material/supplies used should meet some minimum industrial standard. It may be desirable to specify the quality of material/supplies that are provided when use by activity personnel. If so, modify the following clause as required and use Appendix _____ to identify specific material/supplies. Quality standards should address "type of" rather than "brand of".

**********!

14. MATERIAL PROVIDED BY THE CONTRACTOR. The Contractor shall provide all materials and supplies necessary to perform the work specified in the contract, and not otherwise furnished by the Government. Materials and supplies identified in Appendix ___ shall conform to referenced Federal Specifications. Materials and supplies not specifically identified shall be acceptable industrial grade and quality.

The Contractor shall maintain a stockpile of parts for normal maintenance. Where material can be obtained more economically through the Government Supply System the Contractor may order such materials through said system.

!**********!
NOTE TO SPECIFICATION WRITER: The specification writer must determine if utilities will be provided to the Contractor and select clause 15(1) or 15(2) as appropriate. 15(2) is recommended.
!**********!

15(1). AVAILABILITY OF UTILITIES. The Government will furnish (insert names of specific utilities to be provided) at existing outlets as may be required for the work to be performed under the contract at no cost to the Contractor. Information concerning the location of existing outlets may be secured from the OIC. The Conractor shall provide and maitain, at his expense, the necessary service lines from existing Government outlets to the site of work.

15(2). AVAILABILITY OF UTILITIES. The Contractor shall be required to pay for utilities consumed.

a. The Contractor shall, at his expense, install meters as directed by the OIC to measure consumption of utilities provided by the Government.

b. The rate for reimbursement to the Government of metered utilities will be:

!**********!
NOTE TO SPECIFICATION WRITER: List the rates of reimbursement.
!**********!

c. In the event that the Government is unable to provide the required types of utilities, the Contractor shall, at his expense, arrange for the required utilities.

16. ACCESS TO BUILDINGS. It shall be the Contractor's responsibility, through the OIC, to obtain access to buildings and arrange for the buildings to be opened and closed.

a. Keys may be issued to the contractor, however, it shall be the contractor's responsibility that adequate arrangements are made for security of the building(s) at the end of each work day.

b. The Contractor shall be responsible for the cost of replacing any keys that are furnished to and lost by his employees. If the OIC decides that a lock must be replaced because of the loss of a key by the Contractor's employee(s), the Contractor shall pay the cost of that replacement. Similarly, the Contractor shall pay the cost of changing a combination if the OIC has reasonable cause to assume that the combination has been compromised.

17. PASSES AND BADGES. All Contractor employees shall obtain the required employee and vehicle passes. The Contractor will, prior to the start of the contract, submit to the OIC an estimate of the number of personnel expected to be utilized at any one time on the contract. The Government will issue (number of) badges without charge. The Contractor shall reimburse the Government (dollar amount) for each badge in excess of (number of). Each employee shall wear the Government issued badge over the front of the outer

clothing. When an employee leaves the Contractor's service, the employee's pass and badge shall be returned within (number_of) days. Passes and badges issued to Contractor employees shall not negate the requirement for employee identification required in the "IDENTIFICATION OF CONTRACTOR EMPLOYEES" Clause, Section 00004 of this Section.

!**********
NOTE TO SPECIFICATION WRITER: Specification writer should add any special or unique station regulations, or security requirements to Clauses 18 and 19 respectively. The Specification Writer should also mention any parking fees which the Contractor may have to pay before passes will be issued for his employees personal vehicles. In addition, vehicles which must be used by a contractor in the performance of his contractual functions, as opposed to vehicles used by his employees for commuting, should not be required to pay station parking fees.
**********!

18. STATION_REGULATIONS. The Contractor and his employees shall become acquainted with and obey all Government regulations as posted, or as requested by the OIC.

19. SECURITY_REQUIREMENTS. The Contractor shall comply with all Station Security Requirements. Upon request, the Contractor shall submit the name and address of each employee hired for work on this contract and shall cause to be filled out questionnaires and other forms as may be required for security. If access to Classified Material is involved a DD-254 form must be included in the I.F.B.

!**********
NOTE TO SPECIFICATION WRITER: The following clause should be included, and modified as required, if Contractor employees have access to privileged information (e.g. directories, mailing lists, classified information, etc.) otherwise the clause should be deleted.
**********!

20. DISCLOSURE_OF_INFORMATION.

a. Neither the Contractor nor any of its employees will disclose or cause to be disseminated any information concerning the operations of the activity which could result in or increase the likelihood of the possibility of a breach of the activity's security or interrupt the continuity of its operations.

b. Disclosure of information relating to the services hereunder to any person not entitled to receive it, or failure to safeguard any classified information that may come to the Contractor or any person under his control in connection with work under this contract, may subject the Contractor, his agents or employees to criminal liability under Title 18, Sections 793 and 798 of the United states Code..

c. All inquiries, comments or complaints arising from any matter observed, experienced, or learned of as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information will be directed to the activity Commander.

d. Deviations from or violations of any of the provisions of this paragraph will in addition to all other criminal and civil remedies provided by law subject the Contractor to immediate termination for default and/or the individuals involved to a withdrawal of the Government's acceptance and approval of employment.

!**********
NOTE TO SPECIFICATION WRITER: Review each directive for contract applicability.
**********!

21. DIRECTIVES. All applicable Department of Defense (DOD), Secretary of the Navy (SECNAV), Chief of Naval Operations (OPNAV), and other directives, instructions, and regulations are listed in Appendix _____.

22. SAFETY REQUIREMENTS. All work shall be conducted in a safe manner and shall comply with the requirements described in Appendix H of this contract.

a. Prior to the commencement of work, the Contractor shall meet in conference with the OIC to discuss and develop mutual understandings relative to administration of the Safety Program.

b. If the Contractor fails or refuses to promptly comply with safety requirments, the OIC may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop order shall be made the subject of claim for extension of time or for excess costs or damages to the Contractor.

23. ACCIDENT REPORTING. The Contractor shall maintain an accurate record of and shall report to the OIC in the manner and on the forms prescribed by the OIC, exposure data and all accidents resulting in death, trauma, or occupational disease. All accidents must be reported to the OIC within 24 hours of their occurrence.

24. DAMAGE REPORTS. In all instances where Government property an/or equipment are damaged by contractor's employees, a full report of the fact and extent of such damage shall be submitted to the OIC within 24 hours of occurrence.

25. SUPERINTENDENCE BY CONTRACTOR. The contractor shall provide competent supervision to provide the performance requirements of this contract.

26. CONTRACTOR EMPLOYEES. The Contractor shall furnish sufficient personnel to perform all work specified within the contract.

a. The Contractor's employees will conduct themselves in a proper and efficient manner at all times.

b. The Contractor expressly agrees to remove from the site any individual whose continued employment is deemed by the OIC to be contrary to the public interest or inconsistent with the best interest of National Security.

c. No employee or representative of the Contractor will be admitted to the work site unless he furnishes satisfactory proof that he is a citizen of the United States, or, if an alien, that his residence within the United States is legal.

27. IDENTIFICATION OF CONTRACTOR EMPLOYEES. All Contractor employees shall be identified by a distinctive name plate, emblem, or patch attached in a prominent place to an outer garment. Employee identification shall not be substituted for station required passes or badges.

28. IDENTIFICATION OF CONTRACTOR VEHICLES. Each Contractor provided vehicle shall show the Contractor's name so that it is clearly visible and shall at all times, display a valid state license plate and safety inspection sticker.

29. PERMITS. The Contractor shall, without additional expense to the Government, obtain all appointments, licenses, and permits required for the prosecution of the work and for complying with all applicable federal, state, and local laws. Evidence of such permits and licenses shall be provided to the OIC before work commences.

30. DAMAGE OR LOSS OF CONTRACTOR'S SUPPLIES AND CONTRACTOR'S EMPLOYEES PROPERTY. The Contractor is responsible for taking that action necessary to protect his supplies, materials, and equipment and the personal property of his employees from loss, damage or theft.

31. WARRANTY OF SERVICES. All maintenance work performed by the Contractor shall be covered by a one-year warranty against defects in material and workmanship. Any recurrence of maintenance problems due to defects in such material or workmanship within this timeframe will be repaired or replaced by the Contractor at no additional cost to the Government. Damage to Government and private property by such defect will be repaired or replaced at no additional cost to the Government. This clause supercedes the "WARRANTY OF SERVICES" Clause, Section 00003, for all maintenance work provided under the contract. The "WARRANTY OF SERVICES" Clause, Section 00003, shall apply to all other services provided under the contract.

32. WORK SCHEDULE. The Contractor shall arrange his work so as not to cause interference with normal occurence of Government business. All work schedules shall be submitted to and be approved by the OIC. Immediately after receipt of notice of award, the Contractor shall submit to the OIC a schedule of planned performance of work for the contract period. The schedule shall indicate the day or days of the week that weekly or more frequent items will be accomplished at the locations indicated and the week of the month in which lesser than weekly frequencies will be accomplished. Whenever periodic services have been scheduled on the date a holiday occurs, then such services will be performed on the following working day. In no event shall the Contractor change the approved work schedule without the prior written consent of the OIC.

33. RESERVED.

34. RESERVED.

!**********!
NOTE TO SPECIFICATION WRITER: Any special paragraphs added to this section should be included here and the SCHEDULE OF DEDUCTIONS clause renumbered.
!**********!

35. SCHEDULE OF DEDUCTIONS. The low bidder shall within 15 days after bid opening and prior to award, complete the Schedule of Deductions for approval of the Officer in Charge. The total of the Schedule of Deductions must equal the amount entered for bid item 1 in the "ITEMS OF BID" Clause, Section 00001. Prices shown in the Schedule of Deductions will be utilized in conjunction with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004 in making payment deductions for nonperformance or unsatisfactory performance. Unbalancing in the Schedule of Deductions submitted shall be cause for withholding approval and requiring resubmission of a balanced schedule, and may be cause for rejection of the bid. Upon award, the approved Schedule of Deductions shall be a part of the contract. DO NOT SUBMIT SCHEDULE OF DEDUCTIONS WITH BID. Schedule of Deductions for Option Years shall be submitted within 15 days after notice of intent to exercise the option.

In the event the contractor fails to perform required services, payment deductions shall be made in conjuction with the "CONSEQUENCES OF CONTRACTOR's FAILURE TO PERFORM" Clause of Section 4. The amount of each deduction shall be determined by the Government and shall not exceed amounts derived through application of the formulae established in this Schedule of Deductions. Measurable parameters of contract output and acceptable performance levels are listed in TABLE 1. A percentage of total contract price is assigned to each measurable output in proportion to the relative effort required to accomplish that output.

TABLE 1

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL (± OF UNITS)	% OF TOTAL CONTRACT PRICE
1. QUANTITY	GALLONS/WEEK	(1)	[*] %
2. QUALITY			[**] %
a. INORGANIC CHEMICALS			(a%)
Arsenic	mg/l	0.05	
Barium	mg/l	1.0	
Cadmium	mg/l	0.010	
Chromium	mg/l	0.05	
Lead	mg/l	0.05	
Mercury	mg/l	0.002	
Nitrate (as N)	mg/l	10.0	
Selenium	mg/l	0.01	
Silver	mg/l	0.05	
b. ORGANIC CHEMICALS			(b%)
Endrin	mg/l	0.0002	
Lindane	mg/l	0.0004	
Methaxychlor	mg/l	0.10	
Toxaphene	mg/l	0.005	
2, 4-D	mg/l	0.10	
Sivex	mg/l	0.01	
TTHM	mg/l	0.10	

(1) Quantity contracted for varies in accordance with activity requirements.

TABLE 1

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL (± OF UNITS)	% OF TOTAL CONTRACT PRICE
1. QUANTITY	GALLONS/WEEK	(1)	[*] %
2. QUALITY			[**] %
a. INORGANIC CHEMICALS			(a%)
Arsenic	mg/l	0.05	
Barium	mg/l	1.0	
Cadmium	mg/l	0.010	
Chromium	mg/l	0.05	
Lead	mg/l	0.05	
Mercury	mg/l	0.002	
Nitrate (as N)	mg/l	10.0	
Selenium	mg/l	0.01	
Silver	mg/l	0.05	
b. ORGANIC CHEMICALS			(b%)
Endrin	mg/l	0.0002	
Lindane	mg/l	0.0004	
Methaxychlor	mg/l	0.10	
Toxaphene	mg/l	0.005	
2, 4-D	mg/l	0.10	
Sivex	mg/l	0.01	
TTHM	mg/l	0.10	

(1) Quantity contracted for varies in accordance with activity requirements.

TABLE 1 (Ctd.)

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL	% OF TOTAL CONTRACT PRICE
c. TURBIDITY	NTU	1.0	(cZ)
d. MICROBIOLOGICAL	MPN/100 ml coliform	2.0	(dZ)
e. RADIOACTIVITY			(eZ)
Rd 226 + Rd 228	p Ci/l	5.0	
Gross Alpha	p Ci/l	15.0	
B/photon	mrem/yr	4.0	
f. CHLORINE RESIDUAL			(fZ)
Sample point (a)	mg/l	0.2	
Sample point (b)	mg/l	0.2	
Sample point (c)	mg/l	0.2	
Sample point (d)	mg/l	0.2	
Sample point (etc.)	mg/l	0.2	
g. FLUORIDATION	mg/l	1.4-2.4*	(gZ)
h. HARDNESS	mg/l as CaCO3	180	(hZ)

* Depending on maximum average daily temperature.

TABLE 1 (Ctd.)

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL	% OF TOTAL CONTRACT PRICE
3. TREATMENT PLANT OPERATING RECORD NAVFAC 11340/2 (REV 7-81)	Complete As Required	Daily, Weekly, Monthly & Annual Entries	[***]%
4. MINIMUM WATER-PRESSURE AT SPECIFIED SYSTEM ENDPOINTS*			[****]%
a. Point 1	psi or ft. head		
b. Point 2	psi or ft. head		
c. Point 3	psi or ft. head		
etc.	etc.		
5. WATER SUPPLY & DISTRIBUTION OPERATING RECORD NAVFAC 11330/6 (1-76)	Complete as required	Daily	[*****]%

* Includes hydrastatic measurements at reservoirs to insure minimum storage for fire protection, etc.

TABLE 1 (Ctd.)

MEASURABLE OUTPUT	UNIT OF MEASURE	PERFORMANCE LEVEL	% OF TOTAL CONTRACT PRICE
6. MAINTENANCE *	Observed Defects (ODR)	Varies	[******]%
7. MAINTENANCE RECORDS	Report Entry	Entry For Each Item Maintained	[*******]%
8. CUSTODIAL SERVICES	Observed Defects (ODR)	Varies	[********]%
9. WATER QUALITY ANALYSIS			[*********]%
a. Timeliness			(a%)
b. Completeness			(b%)
c. Accuracy			(c%)

* Includes discretionary preventive, mandatory preventive, and corrective maintenance. Only mandatory preventive maintenance will be monitored by the government. Contractor will perform discretionary preventive and corrective maintenance at contractors' expense as needed to maintain outputs 1, 2, and 4. See section 5, clause _____.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #1 - QUANTITY OF WATER

a. Shortage = Contract Quantity - Quantity Produced = Shortage (Gal/Wk)*

b. Maximum Deduction = $\frac{\text{(SHORTAGE)}}{\text{(Contract Quantity)}}$ X [*]% of total contract price

c. AQL = * *

* Can be applied also on daily or monthly basis if desired.
** To be determined by the activity.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #2 WATER QUALITY

a. Any one or more inorganic chemicals measured in concentrations greater than performance levels indicated in Table 1, Item 2.a

maximum daily deduction = ((a %) of [**]% of Total contract price/365.

b. Any one or more organic chemicals measured in concentrations greater than performance levels indicated in Table 1, Item 2.b

maximum daily deduction = ((b%) of [**]% of total contract price/365.

c. For turbidity measurements greater than 1.0 NTU

maximum daily deduction = ((c%) of [**]% of total contract price/365.

d. For microbiological measurements greater than performance levels indicated in Table 1, Item 2.d.

maximum daily deduction = ((d%) of [**]% of total contract price/365.

e. For any radioactivity measurement greater than performance levels in table 1, item 2.e

maximum daily deduction = ((e%) of [**]% of total contract price/365.

f. For chlorine residual measrements greater than 3.0 mg/l or less than 1.0 mg/l *

maximum daily deduction = ((f%) of [**]% of total contract price/365.

g. For fluoride concentration measurements less than _____ mg/l

maximum daily deduction = ((g%) of [**]% of total contract price/365.

h. For hardness measurements greater than 180 mg/l as $CaCO_3$

maximum daily deduction = ((h%) of [**]% of total contract price/365.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #3 - TREATMENT PLANT OPERATING RECORD
(NAVFAC 11340/2 (Rev 7-81) or equivalent)

- Deduction for missing daily entries = [***]% of total price X (A)*
- Deduction for missing weekly entries = [***]% of total price X (B)*
- Deduction for missing monthly entries = [***]% of total price X (C)*
- Deduction for missing annual entry = [***]% of total price X (D)*

* Percentage of total effort required for given frequency entries. (i.e. daily entries require 50% of total effort) A + B + C + D = 100%

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #4 WATER PRESSURE

For any endpoint* at which less than performance level pressure is measured, any given day or part thereof:

$$\text{maximum daily deduction} = \frac{[****]\% \text{ of total price}}{\#\text{ endpoints X } 365}$$

* Endpoints could be service taps which could be spot checked at random - it would be preferable; however, to have continuous recorders at key system junctions (i.e., booster pumps, clearwells, pressure regulators).

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #5 - WATER SUPPLY & DISTRIBUTION OPERATING RECORD
(NAVFAC 11330/6 (1-76) or equivalent)

- Deduction for missing daily* entry = $\frac{[*****]\% \text{ of total price}}{365}$

* All entries daily unless otherwise specified by OIC.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #6 - MAINTENANCE

- Observed Defect Rate * (ODR) = $\frac{\text{\# U's}}{(\text{\# U's} + \text{S's})}$

Where U = Unsatisfactory rating
S = Satisfactory rating
U + S = Total # of evaluations made (i.e. pieces of equipment inspected) per inspection period.

Deduction = $\frac{[* * * * * *]\ \%\ \text{of total price}}{\text{\# of inspections per contract period}}$ X ODR

* Only the equipment listed in appendix D and designated as subject to mandatory scheduled preventive maintenance can be considered for deductions under output #6, MAINTENANCE.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #7 - MAINTENANCE RECORDS*

Deduction = monthly lump sum for unsatisfactory record maintenance

$$= \frac{[*******]\% \text{ of total price}}{12}$$

* Records to be maintained on all mandatory and discretionary preventive maintenance and corrective maintenance.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #8 - CUSTODIAL SERVICES

- Observed Defect Rate* (ODR) = $\frac{\text{\# U's}}{(\text{\# U's} + \text{\# S's})}$

Where U = Unsatisfactory ratings
S = Satisfactory ratings
U + S = Total # of evaluations made (i.e., clean floors) per inspection period.

SCHEDULE OF DEDUCTIONS

MEASURABLE OUTPUT #9 - WATER QUALITY SAMPLING, ANALYSIS, AND REPORTS

- Timeliness deduction for analysis not submitted to OIC within____days following 1st day of month = (a%) of [*********]% of total contract price

- Completeness deduction for any one or more required analyses missing = (b%) of [**********]% of total contract price.

- Accuracy deduction for discrepancies greater than ± 20% between contractor analysis and independent government analysis = (c%) of [*********]% of total contract price.

END, SCHEDULE OF DEDUCTIONS

AND SECTION 00004

WATER PLANTS AND SYSTEMS
SECTION 00005

TECHNICAL SPECIFICATION

TABLE OF CONTENTS

CLAUSE	TITLE	PAGE
1.	GENERAL REQUIREMENTS	00005-1
2.	REFERENCES, REGULATIONS	00005-1
3.	PERFORMANCE REQUIREMENTS	00005-2
4.	MAJOR WORK FUNCTIONS	00005-2
5.	ESTIMATES	00005-4

WATER PLANTS AND SYSTEMS

SECTION 00005
Technical Specifications

1. General Requirements. The Contractor shall provide labor and material requirements as described in this specification for the operation and maintenance of a water treatment plant and appurtenant water supply storage/distribution system. The Contractor shall operate and maintain the system so as to provide an adequate water supply 24 hours a day, seven days a week, 365 days per year over the entire contract period.

2. References

2.1 Government Regulations

2.1.1 National Interim Primary Safe Drinking Water Regulations. (NIPSDWR)

2.1.2 State Regulations

_____

_____

2.2 NAVFAC Regulations and Manuals

2.2.1 Maintenance and Operation of Water Supply Systems -NAVDOCKS MO-210, June 1964

2.2.2 Maintenance and Operation of Water Supply System at (Name of Activity)

!**********
NOTE TO SPECIFICATION WRITER - Some systems, not all, have A-E prepared O&M Manuals specific to that system - if system does not have appropriate Manual, one should be prepared prior to contracting out M&O.
**********!

2.2.3. NAVFACINST 11330.14A - Safe Drinking Water at Navy Shore Activities - with enclosures:

(1) Ship-to-shore potable water connections
(2) Disinfection procedures for potable water mains, storage tanks and wells
(3) Standard operation procedure: Monitoring for the Safe Drinking Water Act

(a) Definitions
(b) Frequency of sampling
(c) Summary of national primary and secondary monitoring regulations for drinking water

(d) Chlorine residual
(e) Turbidity tests (Nephelometric method)
(f) Maximum contaminant levels for the Safe Drinking Water Act
(g) Reporting and record keeping procedures.

(4) Instructions for shipment of potable water samples for radionucleide analysis.

2.3 Manufacturer's or designer's O&M manuals, bulletins, etc.

!**********
NOTE TO SPECIFICATION WRITER - Some systems, or parts thereof, may have manufacturer's or designer's O&M specs. These should be provided in addition, or better yet, in lieu of 2.2.1 & 2.2.2
**********!

3. Performance Requirements -The Contractor shall operate, monitor, maintain and keep records on a Government-Furnished (GF) potable water treatment plant and appurtenant water supply storage/distribution system. Appendix A contains as-built drawings, and E, equipment lists of all GF facilities and equipment. Operational procedures and maintenance schedules shall be established by the Contractor generally in accordance with GF advisory specifications except where mandatory specific procedures or schedules are established by incorporation in this specification.

3.1 Performance Evaluation - The OIC will evaluate the Contractor's performance on the basis of measurable indicators and minimum standards established by this specification for each major work function to be performed by the Contractor. Performance evaluation procedures and standards are discussed in Section 4, Schedule of Deductions.

4. Major Work Functions - The Contractor shall perform the five major work functions described in paragraphs 4.1 through 4.5.

4.1 Water Treatment - The Contractor shall operate the GF treatment plant located at (Name of Activity) generally in accordance with Reference 2. The Contractor shall produce _____ gallons per day (GPD) of potable water meeting the minimum water quality standards described in Clause _____, Section 4, of this specification. The Contractor shall maintain treated water free of taste and/or odor. Flow gauging methods and sample collection points for performance measurement are described in Appendix C to this specification. The Contractor shall furnish a level - certified water treatment plant operator who shall act as the person responsible for plant operation and who shall be available for consultation with the COR or with pertinent regulatory agencies as needed. Plant operation records including the following data are in Appendix B to this specification for 19____ through 19_____.

- Water Quantity Logs
- Influent Water Quality Logs
- Effluent Water Quality Logs
- Manpower Utilization Summaries

- Material Utilization Summary
- Power and Fuel Consumption Records

Water treatment records (NAVFAC 11340/2 (Rev. 7-81) shall be maintained by the Contractor and be made available for Government review as needed.

4.2 Water Storage/Distribution - The Contractor shall operate the water storage/distribution system at (Activity) and make all necessary adjustments to maintain minimum pressure at all system end points as specified in Clause ____, Section 4. Water distribution system operation shall be generally in accordance with Reference 2.2. Schematic and as-built drawings of the water distribution system (including all pumps, reservoirs, meters, clean-outs, pressure regulators, etc.) are in Appendix A. System boundaries delineating the area of Contractor's responsibility are also shown in Appendix A. Contractor shall maintain a minimum of _____ days (____ gallons) of potable water storage in the supply reservoir(s) at all times unless otherwise authorized by the OIC. Operational records for 19____ through 19____ are in Appendix B.

Water Supply and Distribution records (NAVFAC 11330/6 (1-76) shall be maintained by the Contractor and be made available for Government review as needed.

4.3 Maintenance. The Contractor shall perform all preventive maintenance and repairs needed to keep GF and CF equipment in operational condition. All equipment required for proper plant and distribution systems' operation is listed in Appendix A. All equipment is classified as being subject to either mandatory or discretionary preventive maintenance. The Contractor shall prepare for those items identified as mandatory, an Annual Preventive Maintenance Plan (APMP) based on the requirements of reference 2.2.1 (or 2.2.2 or 2.3). The Contractor may include any item subject to discretionary preventive maintenance in the mandatory APMP. APMP shall describe the type of maintenance to be performed and the date for which performance is scheduled. The Contractor shall submit a draft APMP to the Government no later than _____ days following the NTP. Upon Government approval, the APMP shall be incorporated into this specification as Appendix D and the contractor shall perform preventive maintenance in accordance therewith. (See Clause 35, Section 4 Schedule of Deductions for performance evaluation standards for maintenance.) The Contractor may, of his discretion, perform preventive maintenance on equipment not included in the APMP in order to avoid potential repair costs. The Contractor shall perform at his own expense all repair services needed to maintain operation or specifically requested by the Government provided the cost of the corrective action, including labor and materials, is less than $4000. Individual repair/replacement projects with an estimated sum of labor and materials costs exceeding $4000.00 are not covered by this contract. The Contractor shall be responsible for all repair/replacement costs less than this amount. The OIC shall retain the right to determine how repairs with a labor and materials cost greater than $4000.00 are to be accomplished, such as through change orders, separate contracts, or by Government forces. If an individual repair item exceeds $4,000, the Contractor shall provide the OIC a detailed cost estimate prepared

in accordance with the "Estimates" clause of Section 00005. The cost of repairs on equipment not included in the APMP (discretionary preventive maintenance) shall be borne entirely by the Contractor unless equipment failures can be partly or wholly attributed to conditions existing prior to the award which could not have been detected by the Contractor during the course of normal operations. Since interruptions due to equipment failures will result in payment deductions for failure to meet the applicable performance standards specified in Section 4, Schedule of Deductions. The quantity of corrective maintenance to be performed by the Contractor will be dependent on the quantity and quality of preventive maintenance performed and cannot be accurately estimated Maintenance (preventive and corrective) schedules and records for 19____ through 19____ are in Appendix B.

4.4 Custodial Services - The Contractor shall maintain all facilities, equipment, buildings and grounds identified in Appendix G clean and free of clutter, debris or unsightly matter. Custodial services shall be performed in accordance with the schedule in Appendix I.

4.5 Sampling, Analysis and Documentation - The Contractor shall furnish a U.S. Environmental Protection Agency (EPA) or State Certified laboratory fully equipped to conduct water quality analysis in accordance with References 2.2.3. The Contractor shall collect raw and treated water samples at the locations and frequency indicated in Appendix C, Part 1, using the collection procedures specified in Appendix C, Part 2. Samples shall be analyzed using the procedures specified in Appendix C, Part 3. The Contractor shall consolidate the results of all sample analyses in a report which shall be submitted to the OIC not later than eight (8) working days following the first day of each month.

* *
The Report is due to State or EPA normally within ten (10) days of the beginning of the month. The OIC may choose to have Contractor submit report directly.
* *

5. ESTIMATES. All estimates shall be based on Navy Engineered Performance Standards (EPS P-700 Series). In areas where EPS standards do not exist, other industry standards as approved by the OIC shall be used. Material costs shall be based on the lowest price of at least two quotations. Any material handling charge will be indicated separately.

End of Section 00005

APPENDIX A - GOVERNMENT FURNISHED FACILITY, EQUIPMENT AND MATERIAL

Part 1 FACILITIES

a. Treatment Plant

b. Distribution System

Part 2 EQUIPMENT

a. Clarifier

b. Pumps

c. Motors

d. Chlorinators

e.

f.

Part 3 MATERIALS

a. Alum

b. Chlorine

c. Filter Media

d.

Part 4 DRAWINGS

a. Schematics

i. Treatment Plant
ii. Distribution System

b. As - builts

i. Treatment Plant

APPENDIX B - HISTORICAL MAINTENANCE AND OPERATIONS RECORDS (19-- through 19--)

a. Raw Water Quality

b. Treated Water Quality

c. In-Plant Water Quality (At all points as per Appendix C)

d. Water Quality in Distribution Line (At all points as per Appendix C)

e. Maintenance Records

   (1) Corrective Repairs and Replacements

   (2) Preventive Maintenance Schedule

   (3) Custodial Services Schedule

f. Energy Consumption

   (1) Vehicles

   (2) Equipment

   (3) Electricity

g. Materials Consumption

   (1) Alum

   (2) Ferric Salts

   (3) Electrolytes

   (4) Lab Chemicals

   (5) Anthracite

   (6) Sand/Gravel/Garnet

   (7) Chlorine

   (8) Etc.

h. Labor

   (1) Class I Operator(s)

   (2) Class II Operator(s)

   (3) Class III Operator(s)

   (4) Chemist

APPENDIX C - SAMPLING LOCATIONS, ANALYTICAL STANDARDS AND PROCEDURES

a. As-built Drawing Labeling Sampling Locations

(1) Raw Water Inlet

(2) In Plant Locations

(3) Treated Water Outlet

(4) In Distribution Lines(s)

b. Frequency of Sampling

(As required for each contaminant and depending on size of system - See Safe Drinking Water Act or applicable State regulation.)

c. Analytical Procedures

(1) Bacteriological Quality

(2) Inorganic Chemicals

(3) Organic Chemicals

(4) Fluoride

(5) Turbidity

(6) Radioactivity

(7) Corrositivity

(8) Chlorine Residual

(Etc. as required - See Safe Drinking Water Act Regulations or applicable State Regulations - also NAVFACINST 11330.14A)

d. As a minimum, for each of the past three years provide the No. of repair orders under $4,000 and the average cost. Provide breakdown by Labor discipline.

e. Indicate the No. of estimates prepared for the plant and distribution system for repair orders over $4,000.

Wastewater Collection Systems & Treatment Facilities

SECTION 00004 SPECIAL PARAGRAPHS

!**********
NOTE TO SPECIFICATION WRITER: Unique functional terms should be added to the following list of definitions.
**********!

1. DEFINITIONS. As used throughout this contract, the following terms shall have the meaning set forth below:

a. Contractor - The term Contractor as used herein refers to both the prime Contractor and any subcontractors. The Contractor will be responsible for insuring that his subcontractors comply with the provisions of this contract.

b. Contractor Representative - A foreman, superintendent, or manager assigned in accordance with the "SUPERINTENDENCE BY CONTRACTOR" Clause, Section 00004.

c. Government Representative - Person(s) designated by the OIC to be his authorized representative.

d. Officer in Charge (OIC) - The Officer designated by the Contracting Officer to administer the contract. As used herein, Officer in Charge (OIC) and Officer in Charge of Construction (OICC) are synonymous. Throughout this contract, the term OIC will be used to refer to the Officer designated to administer the contract. See the "Definitions" Clause, Section 00003.

e. Quality Assurance (QA) - A method used by the Government, to provide some measure of control over the quality of purchased goods and/or services received.

f. Quality Control (QC) - A method used by the Contractor, to control quality of goods and/or services provided.

g. Regular Hours - The Government's regular hours are from _(starting hour)_ to _(ending hour)_, Mondays through Fridays, except (a) Federal Holidays and (b) other days specifically designated by the OIC.

h. Where "as shown", "as required", "as detailed" or words of similar import are used, it shall be understood that reference is made to the drawings accompanying this specification unless stated otherwise.

i. Where "as directed", "as required", "as permitted", "approval", "acceptance" or words of similar import are used, it shall be understood that direction, requirement, permission, approval or acceptance of the OIC is intended unless stated otherwise.

j. Task Verification Document (TVD) - A Task Verification Document is a form designed and prepared by the Contractor for his use in planning and scheduling items of work in the Lump Sum Portion of the contract. The Contractor shall use the TVD to provide verification and accountability of accomplished Lump Sum Work to the OIC. The OIC will utilize the TVD in the inspection program of the QA Plans and to establish accountability and verification of accomplishment of work in the Lump Sum Portion of the contract. The format of all TVD's will be approved for use by the OIC.

k. Engineered Performance Standards (EPS) - EPS is a Department of Defense method for establishing the estimated manhour requirements to perform various types of maintenance, repair, construction and housekeeping tasks.

!**********
NOTE TO SPECIFICATION WRITER: The following clause is required when there are indefinite quantity work items. Appendix A should be used to specify work order forms, time requirements for work accomplishment, and minimum and maximum work order quantities. The contract serves as the ordering document for those services furnished under the fixed-price lump sum portion of this contract. Specification of indefinite quantity work is not recommended for wastewater services, in which case the following paragraph 2 should not be used.
**********!

2. ORDERING OF WORK. Services to be furnished under the indefinite quantities portion of the contract shall be ordered by the OIC or, when specifically delegated, the Government Representative.

a. Work orders will take the form of (i) Department of Defense form DD Form 1155 (1 Feb 75) and (ii) forms identified in Appendix A.

b. Work orders, other than DD Form 1155, will be issued to the Contractor in triplicate. The original to be submitted by the Contractor with the invoice for payment, one copy to be submitted within 24 hours of completion of work, and one copy retained by the Contractor. DD Form 1155 will be processed as described on the form.

c. The Contractor is required to respond to, and complete work ordered in the time(s) specified in Appendix A unless otherwise specified in other parts of this contract.

!**********
NOTICE TO SPECIFICATION WRITER: Sub-paragraphs should be added to the following paragraph, as necessary, to provide specific information on invoice data requirements. Appendix B should be used to specify invoice format and submittal requirements.
**********!

3. INVOICING INSTRUCTIONS. Contractor's invoices shall be submitted in !(# of copies)! at !(frequency)! intervals for services performed, to the OIC. The original of each invoice shall have attached to it a copy of

the work order document(s) and a summary of the charges in a format similar to the Schedule of Deductions. Upon verification of work actually performed and receipt of required Contractor submittals as identified in Appendix B, invoices will be processed for payment. Payment will be based on:

!**********
NOTICE TO SPECIFICATION WRITER: Choose one or more of the following as appropriate. Consult EFD Code 02 for cases of multiple contract types.
**********!

a. a monthly charge for the fixed-price lump sum portion of the work.

b. the percentages of the fixed-price lump sum portion of the work which has been verified as completed, and

c. the actual quantities of work performed which are authorized by work orders.

!**********
NOTICE TO SPECIFICATON WRITER: Select appropriate clause. Clause 4.1 is to be used where there are unit prices established. For watchstanding or other services not having unit prices, use clause 4.2. See NAVFAC P-68 Section 9-302.
**********!

4. CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES

4.1. Service Requirements

a. The Government will give the Contractor written notice of deficiencies by copies of the Inspector's Daily Reports or otherwise, (i) prior to charging liquidated damages, and (ii) whenever unsatisfactory services are performed. The parties hereto agree that the Contractor shall be conclusively presumed to have actual knowledge of work not performed, and that therefore such written notice shall not be a prerequisite for withholding payment for unperformed services. Therefore:

(1) In the case of non-performed work, the Government:

(a) shall deduct from Contractor's invoice all billings associated with such non-performed work at the rates set out in the "Schedule Of Deductions" Clause, Section 00004 or the "Items of Bid" Clause, Section 00001, whichever is applicable, required by other provisions of this contract, unless the contractor is afforded an opportunity to perform pursuant to (b) below and satisfactorily completes the work;

(b) may, at its option, afford the Contractor an opportunity to perform the non-performed work within 3 hours of the Contractor's being advised that he will be afforded the opportunity, in the case of daily services; or 24 hours in the case of all other services; or

(c) may, at its option, perform the services by Government personnel or other means.

(2) In the case of unsatisfactory work, the Government:

(a) shall deduct from the Contractor's invoice all billings associated with such unsatisfactory work at the rates set out in the "Schedule of Deductions" Clause, Section 00004 or the "Items of Bid" Clause, Section 00001, whichever is applicable, unless the contractor is afforded an opportunity to perform pursuant to (b) below and satisfactorily completes the work;

(b) may, at its option, afford the Contractor the opportunity to re-perform the unsatisfactory work within 6 hours in the case of daily services, or 24 hours in the case of all other services, of the notice to the Contractor of such unsatisfactory performance, at no additional cost to the Government; or

(c) may, at its option, perform the work by Government personnel or other means.

b. Should the Government elect options a.(1)(a), a.(1)(b), a.(2)(a), or a.(2)(b) above, the Government will also deduct, as liquidated damages, to compensate the Government for administrative costs and other expenses resulting from the nonperformance or unsatisfactory peformance, an additional 10% of the rate set forth in the "Schedule Of Deductions" Clause, Section 00004 or the "Items of Bid" Clause, Section 00001, whichever is applicable, for such work.

c. Should the Government elect options a.(1)(c) or a.(2)(c) above, the Government will effect the deduction described in a.(1)(a) or a.(2)(a) above, and will deduct an additional 20% of the rate set forth in the "Schedule Of Deductions" Clause, Section 00004 or "Items of Bid" Clause, Section 00001, whichever is applicable, for such work. This 20% is as liquidated damages to compensate the Government for administrative costs and other expenses incured by the Government to obtain satisfactory completion of the services.

d. Said deductions by the Government for monies otherwise due the Contractor shall represent agreed liquidated damages assessed by the Government for nonperformance or unsatisfactory performance.

e. Repeated instances of nonperformance or unsatisfactory performance will be grounds for termination of the contract for default in accordance with the "DEFAULT" Clause, Section 00003.

4.2. Personnel Requirements.

a. In the event that the Contractor fails to provide a properly qualified supervisor, plant operator, or repair/maintenance technician at any time during any shift or special detail in which such a supervisor, plant operator, or repair/maintenance technician is required as set out

in the Work Requirements of these specifications, the Government may assign other persons to perform such work, and deductions shall be made from the month's invoice as follows:

(1) When a Government employee is assigned to perform the work required, the Government will deduct from the amount due the Contractor the entire cost to the Government (wages, retirement contribution, and fringe benefits) of the Government employee who actually performed the work, PLUS, as agreed liquidated damages, an additional deduction of 20% of such cost, for administrative or other expenses resulting from the nonperformance of the work. If the replacement person is obtained by the Government under another contract, the deduction will equal the cost to the Government under that contract, plus 20% as described above.

(2) If no replacement is furnished by the Government and the work is not performed, to preclude the Contractor from being paid for not performing, the Government will deduct from the amount invoiced by the Contractor an amount equal to the cost to the Government of having a Government employee perform the work. This cost shall be computed in accordance with the Federal Wage Board rate schedule described in (c) below at the appropriate grade level, PLUS an additional 10% of that cost as agreed liquidated damages for administrative or other expenses incurred by the Government as a result of the nonperformance of the work.

b. However, the Government reserves the following rights:

(1) The rights described in the "Default" clause of the General Provisions of this contract, and all other remedies for default as may be provided by law.

(2) To hold the Contractor liable for property losses sustained by the Government as a direct, consequentive result of a failure to furnish the required personnel.

c. Computations of the costs of Government employees performance of work not performed by the Contractor shall be in accordance with "Statement of Wage and Fringe Benefit Rates Applicable to Federal Wage Board (Blue Collar) Employees".

d. The parties to this contract hereto agree that the Contractor as a result of his contractual obligation to supervise the personnel furnished and oversee the quality of their performance shall be conclusively presumed to have actual knowledge of work not performed, and that therefore a written notice shall not be a prerequisite for withholding payment or assessing liquidated damages for nonperformed invoices.

5. PRE-PERFORMANCE CONFERENCE. Prior to commencing work, the Contractor shall meet in conference with the OIC, or his designated representative, at a time specified, to discuss and develop mutual understandings relative to scheduling and administration of work.

6. GOVERNMENT QUALITY ASSURANCE. In accordance with the "INSPECTION OF SERVICES" Clause, Section 00003, each phase of the services rendered under this contract is subject to Government inspection during both the Contractor's operations and after completion of the tasks. The Government's Quality Assurance Program is not a substitute for Quality Control by the Contractor. All findings of incomplete or defective performance will be administered in accordance with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES" Clause, Section 00004. All costs associated with rework are the responsibility of the Contractor. When Contractor's overall performance is unsatisfactory a Contract Discrepancy Report will be issued by the OIC or his designated representative. The Contractor shall reply in writing, giving the reason(s) for unsatisfactory performance and identify the corrective action(s) to be taken to prevent recurrence.

7. CONTRACTOR QUALITY CONTROL. In accordance with the "INSPECTION OF SERVICES" Clause, Section 00003, the Contractor shall establish and maintain a complete Quality Control Program that is acceptable to the OIC, to assure that the requirements of the contract are provided as specified.

a. A general description of the Contractor's Quality Control Program shall be available for Government review during the preaward survey. Within 10 days after award, !(number of)! copies of the Quality Control Program shall be provided to the OIC and as changes are made thereafter. The program shall include the following:

(1) A quality control inspection system covering all services included in the contract. It must specify areas to be inspected on either a scheduled or unscheduled basis and how inspections are to be conducted.

(2) The name(s) of the individual(s) tasked to perform the quality control inspections, their qualifications, and the extent of their authority.

(3) A method for identifying deficiencies in the quality of services performed and taking corrective action before the level of performance becomes unsatisfactory.

b. A file of all Quality Control Inspections, inspection results, and any corrective action required, shall be maintained by the Contractor through the term of this contract. This file shall be the property of the Government and be made available to the OIC during regular hours. The file shall be turned over to the OIC within !(number of)! days after completion/termination of the contract.

8. PERFORMANCE EVALUATION MEETINGS. The Contractor's Representative shall meet with the Government's Representative !(insert frequency - suggest weekly)! during the first !(Insert number of months - 2 or 3 is recommended)! month(s) of the contract. Meetings will be as often as necessary at the discretion of the OIC, but not less than !(insert frequency - suggest monthly)! thereafter. A mutual effort will be made

to resolve all problems identified. The written minutes of these meetings, prepared by the Government, shall be signed by the Contractor's Representative and the Government's Representative. Should the Contractor not concur with the minutes, the Contractor will state, in writing, to the OIC any areas of disagreement.

9. ORDER OF PRECEDENCE. In the event of an inconsistency between the provisions of this solicitation, the inconsistency shall be resolved by giving precedence in the following order: (a) the Schedule (excluding the Specifications); (b) Terms and Conditions of the solicitation, if any; (c) General Provisions; (d) other provisions of the contract, when attached or incorporated by reference; and (e) the Specifications.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine what facilities will be provided to the Contractor and select clause 10(1) or 10(2) as appropriate. If Clause 10(1) is selected (as will be the normal case), the writer must state what facility support services, if any, are to be provided by Contractor i.e. custodial and janitorial services. Appendix C is used to list all facilities provided to the Contractor.
**********!

10(1). FACILITIES PROVIDED FOR CONTRACTOR'S USE. The Government shall furnish or make available to the Contractor, the facilities described in Appendix C. The Contractor shall assume responsibility and accountability of such facilties provided for their use and shall take adequate precautions to prevent fire hazards, odors and vermin. At the completion of the contract, all facilities shall be returned to the Government in the same condition as received, except for reasonable wear and tear. The Contractor shall be held responsible for the cost of any repairs caused by negligence or abuse on his part, or on the part of his employees.

10(2). FACILITIES PROVIDED FOR CONTRACTOR'S USE The Government will not provide office space and operational facilities to the Contractor. The Contractor is responsible, at his expense, to secure and maintain the necessary office space and other facilities required for the performance of this contract.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine what equipment and material will be provided to the Contractor and select or modify Clauses 11 or 12 as appropriate. An Appendix listing provided equipment and equipment maintenance requirements must be included with this specification or the following paragraphs modified. If equipment is located at other than job site, specify location and responsibility for transportation.
**********!

11(1). EQUIPMENT PROVIDED FOR CONTRACTOR'S USE. The Government will not provide the Contractor the use of existing and available Government-owned equipment in the performance of the contract.

11(2). EQUIPMENT PROVIDED FOR CONTRACTOR'S USE. The Government will provide the Contractor the use of existing and available Government-owned equipment in the performance of the contract.

a. Such Government-furnished equipment is listed in Appendix D. The Contractor shall be responsible for the periodic servicing, maintenance, and repairs of the equipment listed at no cost to the Government. Upon completion or termination of the contract, all Government-owned equipment shall be returned to the Government in the same condition as received, except for normal wear and tear. The Contractor shall be responsible for the cost of any repairs caused by negligence or abuse by the Contractor or his employees.

b. The Contractor and the Government Representative shall conduct a joint inventory before commencing work under this contract to determine the exact number and serviceability of Government-furnished equipment. The Contractor shall then certify the findings of this inventory and shall assume accounting responsibility and, subsequently, report inventory discrepancies to the Government Representative. Government furnished equipment shall not be removed from the military base unless approved by the OIC.

!**********
NOTE TO SPECIFICATION WRITER: The specification writer must determine if existing maintenance material will be turned over to the Contractor.
**********!

12(1). MATERIAL PROVIDED FOR CONTRACTOR'S USE. The Government will not provide the Contractor any material under the terms of this contract.

12(2). MATERIAL PROVIDED FOR CONTRACTOR'S USE. The Government shall furnish at no expense to the Contractor the material listed in Appendix E. The Contractor shall be held accountable for all materials supplied. All material unused at the end of the contract shall be returned to the Government.

!**********
NOTICE TO SPECIFICATION WRITER. The following is a DAR clause and is required when the Government provides facilities, equipment, and/or material for Contractor's use. The clause shown here is the "Short Form" version and is applicable when (i) the Government is to furnish to the Contractor Government property having an acquisition cost of $50,000 or less, or (ii) property is furnished to a contractor for use on a Government installation and contract administration is retained by the purchasing office. If Government personnel maintain property records, if this specification is for overseas contracts, or if (i) or (ii) do not apply, see DAR 7-104.24.
**********!

13. GOVERNMENT-FURNISHED PROPERTY. Facilities, equipment, and material provided for the Contractor's use is defined in this contract as Government-furnished property. As such the following provisions apply:

(a) The Government shall deliver to the Contractor, for use only in connection with this contract, the property described in the schedule or specifications (hereinafter referred to as "Government-furnished property"), at the times and locations stated therein. If the Government-furnished property, suitable for its intended use, is not so delivered to the Contractor, the OIC shall, upon timely written request made by the Contractor, and if the facts warrant such action, equitably adjust any affected provision of this contract pursuant to the procedures of the "Changes" clause hereof.

(b) Title to Government-furnished property shall remain in the Government. The Contractor shall maintain adequate property control records of Government-furnished property in accordance with sound industrial practice.

(c) Unless otherwise provided in this contract the Contractor, upon delivery to him of any Government-furnished property, assumes the risk of, and shall be responsible for, any loss thereof or damage thereto except for reasonable wear and tear, and except to the extent that such property is consumed in the performance of this contract.

(d) The Contractor shall, upon completion of this contract, prepare for shipment, deliver f.o.b. origin, or dispose of all Government-furnished property not consumed in the performance of this contract or not theretofore delivered to the Government, as may be directed or authorized by the OIC. The net proceeds of any such disposal shall be credited to the contract price or paid in such other manner as the OIC may direct.

!**********
NOTE TO SPECIFICATION WRITER: In general the selection of specific brands or types of material/supplies to be consumed during the execution of work should be left to the Contractor's discretion. Material/supplies used should meet some minimum industrial standard. It may be desirable to specify the quality of material/supplies that are provided when used by activity personnel. If so, modify the following clause as required and use appendix F to identify specific material/supplies. Quality standards should address "type of" rather then "brand of".
**********!

14. MATERIAL PROVIDED BY THE CONTRACTOR. The Contractor shall provide all materials and supplies necessary to perform the work as specified in the contract. Appendix F provides a partial list of material requirements. Materials and supplies provided shall be of acceptable industrial grade and quality. The Contractor shall maintain a stockpile of maintenance parts for normal maintenance, where such materials and suppies can be obtained more economically through the Government supply system, then the Contractor may order such materials and supplies through the Government supply system.

!**********!
NOTE TO SPECIFICATION WRITER.....The Specification Writer must determine if utilities will be provided to the Contractor and select clause 15(1) or 15(2) as appropriate. Clause 15(2) is suggested where feasible.
!**********!

15(1). AVAILABILITY OF UTILITIES. The Government will furnish such potable water and elective current at existing outlets as may be required for the work to be performed under the contract at no cost to the Contractor. Information concerning the location of existing outlets may be secured from the OIC. The Contractor shall provide and maintain, at his expense, the necessary service lines from existing Government outlets to the site of work.

15(2). AVAILABILITY OF UTILITIES. The Contractor shall be required to pay for utilities consumed.

a. The Contractor shall, at his expense, install meters as directed by the OIC to measure consumption of utilities provided by the Government.

b. The rate for reimbursement to the Government of metered utilities will be:

!**********!
NOTE TO SPECIFICATION WRITER.....List the rates of reimbursement.
!**********!

c. In the event that the Government is unable to provide the required types of utilities, the Contractor shall, at his expense, arrange for the required utilities.

16. ACCESS TO BUILDINGS. It shall be the Contractor's responsibility, through the OIC, to obtain access to buildings and arrange for the buildings to be opened and closed.

a. Keys may be issued to the Contractor; however, it shall be the Contractor's responsibility to see that adequate arrangements are made for security of the building(s) at the end of each work day.

b. The Contractor shall be responsible for the cost of replacing any keys that are furnished to and lost by his employees. If the OIC decides that a lock must be replaced because of the loss of a key by the Contractor's employee(s), the Contractor shall pay the cost of that replacement. Similarly, the Contractor shall pay the cost of changing a combination if the OIC has reasonable cause to assume that the combination has been compromised.

17. PASSES AND BADGES. All Contractor employees shall obtain the required employee and vehicle passes. The Contractor will, prior to the start of the contract, submit to the OIC an estimate of the number of personnel expected to be utilized at any one time on the contract. The Government will issue !(number_of)! badges without charge. The Contractor shall reimburse the Government !(dollar_amount)! for each badge in excess of !(number_of)!. Each employee shall wear the

Government issued badge over the front of the outer clothing. When an employee leaves the Contractor's service, the employee's pass and badge shall be returned within !(number of)! days. Passes and badges issued to Contractor employees shall not negate the requirement for employee identification required in the "IDENTIFICATION OF CONTRACTOR EMPLOYEES" Clause, Section 00004. of this Section.

!**********!

NOTE TO SPECIFICATION WRITER: The Specification Writer should add any special or unique station regulations, or security requirements to Clauses 18 and 19 respectively . The Specification Writer should also mention any parking fees which the Contractor may have to pay before passes will be issued for his employees personal vehicles. In addition, vehicles which must be used by a contractor in the performance of his contractual functions, as opposed to vehicles used by his employees for commuting, should not be required to pay station parking fees.

**********!

18. STATION REGULATIONS. The Contractor and his employees shall become acquainted with and obey all Government regulations as posted, or as requested by the OIC.

19. SECURITY REQUIREMENTS. The Contractor shall comply with all Station Security Requirements. Upon request, the Contractor shall submit the name and address of each employee hired for work on this contract and shall cause to be filled out questionnaires and other forms as may be required for security.

!**********!

NOTE TO SPECIFICATION WRITER....The following clause should be included, and modified as required, if Contractor employees have access to privileged information (e.g. directories, mailing lists, classified information, etc.) otherwise the clause should be deleted.

**********!

20. DISCLOSURE OF INFORMATION.

a. Neither the Contractor nor any of its employees will disclose or cause to be disseminated any information concerning the operations of the activity which could result in or increase the likelihood of the possibility of a breach of the activity's security or interrupt the continuity of its operations.

b. Disclosure of information relating to the services hereunder to any person not entitled to receive it, or failure to safeguard any classified information that may come to the Contractor or any person under his control in connection with work under this contract, may subject the Contractor, his agents or employees to criminal liability under Title 18, Sections 793 and 798 of the United States Code.

c. All inquiries, comments or complaints arising from any matter observed, experienced, or learned of as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information will be directed to the activity Commander.

d. Deviations from or violations of any of the provisions of this paragraph will in addition to all other criminal and civil remedies provided by law subject the Contractor to immediate termination for default and/or the individuals involved to a withdrawal of the Government's acceptance and approval of employment.

!**********
NOTE TO SPECIFICATION WRITER: Review each directive for contract applicability.
**********!

21. DIRECTIVES. All applicable Department of Defense (DOD), Secretary of the Navy (SECNAV), Chief of Naval Operations (OPNAV), and other directives, instructions, and regulations are listed in Appendix G.

22. SAFETY REQUIREMENTS. All work shall be conducted in a safe manner and shall comply with the requirements described in Appendix H of this contract.

a. Prior to the commencement of work, the Contractor shall meet in conference with the OIC to discuss and develop mutual understandings relative to administration of the Safety Program.

b. If the Contractor fails or refuses to promptly comply with safety requirements, the OIC may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop order shall be made the subject of claim for extension of time or for excess costs or damages to the Contractor.

23. ACCIDENT REPORTING. The Contractor shall maintain an accurate record of and shall report to the OIC in the manner and on the forms prescribed by the OIC, exposure data and all accidents resulting in death, trauma, or occupational disease. All accidents must be reported to the OIC within 24 hours of their occurrence.

24. DAMAGE REPORTS. In all instances where Government property and/or equipment are damaged by Contractor's employees, a full report of the fact and extent of such damage shall be submitted to the OIC within 24 hours of occurrence.

25. SUPERINTENDENCE BY CONTRACTOR. The Contractor shall give his personal superintendence to the work or have a competent foreman or superintendent, satisfactory to the OIC, on the work at all times during progress, with authority to act for him.

26. CONTRACTOR EMPLOYEES. The Contractor shall furnish sufficient personnel to perform all work specified within the contract.

a. The Contractor's employees will conduct themselves in a proper and efficient manner at all times.

b. The Contractor expressly agrees to remove from the site any individual whose continued employment is deemed by the OIC to be contrary to the public interest or inconsistent with the best interests of National Security.

c. No employee or representative of the Contractor will be admitted to the work site unless he furnishes satisfactory proof that he is a citizen of the United States, or, if an alien, his residence within the United States is legal.

27. DRUG ABUSE BY CONTRACT EMPLOYEES. The Secretary of the Navy has determined that the illegal possession and use of drugs and paraphernalia by civilian and contract employees in the military setting contributes directly to military drug abuse and undermines Command efforts to eliminate drug abuse among military personnel. The policy of the Department of the Navy (including the Marine Corps) is to deter and detect drug offenses by civilian and contract employees on military installations. Measures to be taken to identify drug offenses on military installations, and to prevent introduction of illegal drugs and paraphernalia include routine, random inspections of vehicles on entry or exit, with drug detection dog teams, when available, and random inspection of personal possessions on enty or exit. Where there is probable cause to believe that a civilian or contract employee on board a Naval or Marine Corps installation has been engaged in use, possession or trafficking of drugs, that employee may be restricted or detained for the period necessary until he can be removed from the installation or can be turned over to local law enforcement authorities having jurisdiction, as appropriate. When illegal drugs are discovered in the course of an inspection or search of a vehicle operated by a civilian or contract employee, the employee and vehicle may be detained for a resonable period of time necessary to turn the employee and the vehicle over to appropriate civil law enforcement officials, and action may be taken to suspend, revoke or deny installation driving privileges. Implicit with the acceptance of this contract is the contractor's agreement to comply with all federal statutes, laws and regulations, including those regulations issued by the Commander of the military installation.

28. IDENTIFICATION OF CONTRACTOR EMPLOYEES. All Contractor employees shall be identified by a distinctive name plate, emblem, or patch attached in a prominent place to an outer garment. Employee identification shall not be substituted for station required passes or badges.

29. IDENTIFICATION OF CONTRACTOR VEHICLES. Each Contractor provided vehicle shall show the Contractor's name so that it is clearly visible and shall at all times, display a valid state license plate and safety inspection sticker.

30. PERMITS. The Contractor shall, without additional expense to the Government, obtain or renew as necessary all appointments, licenses, and permits required for the prosecution of the work and for complying with all applicable federal, state, and local laws. Evidence of such permits and licenses shall be provided to the OIC before work commences. Existing federal, state, & local permits are described in Section 00005, Technical Specification. Unless otherwise directed, the Contractor shall not communicate directly with federal, state, or local environmental agencies, but shall provide any necessary information, applications, or documentation to the OIC for submittal to such agencies.

31. DAMAGE OR LOSS OF CONTRACTOR'S SUPPLIES AND CONTRACTOR'S EMPLOYEES PROPERTY. The Contractor is responsible for taking that action necessary to protect his supplies, materials, and equipment and the personal property of his employees from loss, damage, or theft.

32. WARRANTY OF SERVICES. All maintenance work performed by the Contractor shall be covered by a one-year warranty against defects in material and workmanship. Any recurreance of maintenance problems due to defects in such material or workmanship within this timeframe will be repaired or replaced by the Contractor at no additional cost to the Government. Damage to Government and private property by such defect will be repaired or replaced at no additional cost to the Government. This clause supercedes the "WARRANTY OF SERVICES" Clause, Section 00003, for all maintenance work provided under the contract. The "WARRANTY OF SERVICES" Clause, Section 00003, shall apply to all other services provided under the contract.

33. WORK SCHEDULE. The Contractor shall arrange his work so as not to cause interference with normal occurence of Government business. All work schedules shall be submitted to and be approved by the OIC. Immediately after receipt of notice of award, the Contractor shall submit to the OIC a schedule of planned performance of work for the contract period. The schedule shall indicate the day or days of the week that weekly or more frequent items will be accomplished at the locations indicated and the week of the month in which lesser than weekly frequencies will be accomplished. Whenever periodic services have been scheduled on the date a holiday occurs, then such services will be performed on the following working day. In no event shall the Contractor change the approved work schedule without the prior written consent of the OIC.

34. WORK OUISIDE REGULAR HOURS. Except as may otherwise be specified, all routine & urgent work, as defined in Section 00005, Technical Specification Para 3.4.1.5., shall be performed during regular hours. If the Contractor desires to carry on routine or urgent work on Saturday, Sunday, holidays or outside of the Station's regular hours, he may submit an application to the OIC for approval. Emergency service work efforts, as defined in Para. 3.4.1.2., may be performed at any hour, day or night, depending on the extent of the particular emergency.

35. EMERGENCY MEDICAL CARE. Only emergency medical care is available in Government facilities to Contractor employees who suffer on-the-job injury or disease. Care will be rendered at the rates established in:

Navy BUMEDINST 6320.4 series

Reimbursement will be made to the:

Navy - Regional Medical Center Collection Agent

upon receipt of statement.

36. FIRE PREVENTION. The Contractor will familiarize himself and require his employees to become familiar with the method of turning in a FIRE ALARM. The Contractor and his employees shall be cognizant of and observe all requirements for handling and storage of combustible supplies and materials, daily disposal of combustible waste, trash, etc.

37. ENVIRONMENTAL PROTECTION. The Contractor will comply with all applicable environmental protection requirements, except as they may be modified by this contract.

!**********
NOTE TO SPECIFICATION WRITER: Any special paragraphs added to this section should be included here and the SCHEDULE OF DEDUCTIONS clause renumbered.
**********!

!**********
NOTE TO SPECIFICATION WRITER: Schedule of Deductions Clause will only be used when, Bid Item 1, "ITEM OF BID" Clause 17, Section 00001 is used (fixed-price lump sum, lump sum work items). If an indefinite quantity or requirements type specification is used delete this clause.
**********!

38. SCHEDULE OF DEDUCTIONS.

a. The successful Contractor is required to provide an acceptable Schedule of Deductions within fifteen days after award. The total of the Schedule of Deductions must equal the amount entered for bid item 1 in the "ITEMS OF BID" Clause, Section 00001. Prices shown in the Schedule of Deductions will be utilized in conjuction with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004 in making payment deductions for nonperformance or unsatisfactory performance. Unbalancing in the Schedule of Deductions submitted shall be cause for withholding approval and requiring resubmission of a balanced schedule, and may be ground for Termination For Default. The Government also reserves the right to unilaterally establish a Schedule of Deductions in the event the successful Contractor presents a Schedule of Deductions which is unbalanced or materially deficient. The approved Schedule of Deductions shall be a part of the contract. DO NOT SUBMIT SCHEDULE OF DEDUCTIONS WITH BID.

SCHEDULE OF DEDUCTIONS

The low bidder shall within 15 days after award, complete the Schedule of Deductions for approval of the Officer-in-Charge. This schedule is to be used in conjunction with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004 in making payment deductions for nonperformance or unsatisfactory performance. DO NOT SUBMIT SCHEDULE OF DEDUCTIONS WITH BID.

ITEM	UNIT	QTY	SUB UNIT PRICE/YR.	LINE ITEM TOTAL/YR.
1.Operations:		—	—	—
1A.Operate Waste Collection System & Treatment Facilities.	Montly	12	$_____	
1B.Perform Sampling and Lab Analyses	Lump Sum		$_____	
1C.Prepare Required Operating Reports	Lump Sum		$_____	
				$_____
2.Perform Control Inspections	Lump Sum	—	—	$_____
3.Perform Preventative Maintenance/ Inspections	Lump Sum	—	—	$_____
4.Repairs:	Lump Sum	—	—	—
4A.Perform Scheduled and Routine Repairs:		—		
Treatment Facility	Lump Sum		$_____	
Collection System	Lump Sum		$_____	
	4A. Sub-Total		$_____	

4B. Perform Emergency and Temporary Repairs: —

Treatment Facility	Lump Sum	$_____
Collection System	Lump Sum	$_____
4B. Sub-Total		$_____

$_____

5. Waste Collection and Disposal: Lump Sum — — —

5A. Waste Collection and Transportation to Disposal Site	Lump Sum	$_____
5B. Perform Associated Lab Analyses	Lump Sum	$_____

$_____

6. Other (Specify) $_____

TOTAL FIXED-PRICE LUMP SUM..... $_____

(Total must equal the total price bid for bid item 1, the Base year of the contract. For Option years, the total must equal the total price bid for Bid Item 2 for the First Option Year, and the total price bid for Bid Item 3 for the Second Option Year. Schedule of Deductions for Option Years shall be submitted within 15 days after Notice of Intent to Exercise the Option.)

END OF SECTION 00004

WASTEWATER COLLECTION SYSTEMS & TREATMENT FACILITIES

SECTION 00005 TECHNICAL SPECIFICATIONS

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WASTEWATER COLLECTION SYSTEMS & TREATMENT FACILITIES

SECTION 00005 TECHNICAL SPECIFICATIONS

1. General Requirements. The Contractor shall furnish all personnel, supervision, managament, materials, tools, transportation, supplies, equipment and repair/replacement parts except as specified herein as Government-furnished for the operation, inspection, maintenance, and repair of the !(specify activity name)! wastewater collection systems, pumping stations, and wastewater treatment facilities.

2. Applicable Publications and References. The publications and references included as Appendix G form a part of this specification to the extent indicated within the referencing paragraphs of this specification. Such referenced documents, or their subparts, are designated as either mandatory or advisory. Those publications and documents not directly referenced within this specification shall also form a part of this specification with the same designated mandatory and advisory action codings. The Contractor shall follow and abide by all references designated as mandatory. Those designated as advisory are provided for information and guidance purposes only and their usage is not obligatory. Navy publications shall be furnished at the start of contract; any supplements or amendments to mandatory Navy publications may be issued throughout the life of the contract and shall be considered effective immediately upon Contractor receipt. It is the Contractor's responsibility to insure that all mandatory references are current. In the event of conflict between the contents of this specification and applicable federal, state, or local requirements, the Contractor shall abide by those federal, state, or local requirements.

3. Scope of Work.

3.1. Description of Facilities.

3.1.1. Wastewater Collection and Pumping Systems. The wastewater collection and pumping systems serve the areas listed below and consist of the following elements. ! (SPECIFY SYSTEM SERVICE AREAS AND DESCRIPTIONS. SEE USERS GUIDE PARARAGRAPH II,B,1 FOR ASSISTANCE).!

3.1.2. Wastewater Treatment Facilities. The wastewater treatment facilities consist of the following elements. !(SPECIFY FACILITIES DESCRIPTIONS. SEE USERS GUIDE PARAGRAPH II,B,2 FOR ASSISTANCE).!

3.2. Wastewater Characteristics. The wastewater characteristics subject to the treatment requirements of this specification are variable. However, for general purposes of this specification, the characteristics listed below may be expected. !(SPECIFY WASTEWATER CHARACTERISTICS. SEE USERS GUIDE PARAGRAPH II,B,3 FOR DIRECTIONS).!

3.3. Areas of Responsibility. The Contractor shall be responsible for the satisfaction of all applicable regulatory agency requirements, including those for effluent quality. In the event that a regulatory agency assesses a monetary fine against the Government for violations caused by Contractor negligence, the Contractor shall reimburse the Government for the amount of that fine. Also within the scope of Contractor responsibility are personnel qualifications, avoidance of nuisance conditions and complaints, and performance of all necessary and required wastewater collection, pumping, and treatment operational, maintenance, and repair functions, including acceptable disposal of screenings, grit, sludge, waste oil, and other waste materials.

3.3.1. NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES). The Contractor shall be responsible for compliance with all requirements of the NPDES permit, as imposed by the Environmental Protection Agency (or as imposed by the state or local government if so authorized by EPA). The NPDES permit restrictions on effluent quality for treated wastewater are summarized below. !(SPECIFY PERMIT RESTRICTIONS. SEE USERS GUIDE PARAGRAPH II,B,4 FOR DIRECTIONS).!

3.3.2. Properly Qualified Personnel. The Contractor shall provide properly qualified personnel to operate the wastewater treatment facilities. Individuals providing general supervision or who are in responsible charge of plant operations for any period of time shall possess a class !(SPECIFY PROPER CLASSIFICATION)! or higher operator certification issued by !(SPECIFY APPROPRIATE AUTHORITY).! All certifications shall be maintained up to date and valid at all times. Certification records shall be maintained on file and readily available for OIC review upon request.

3.3.3. Medical Directives. The Contractor shall comply with the instructions of the cognizant Navy Medical Department with respect to avoidance of conditions which create a nuisance or which may be hazardous to the health of military or civilian personnel.

3.3.4. State and Local Regulations. The Contractor shall comply with all regulations of state and local regulatory agencies with respect to wastewater effluent quality which are not in conflict with the NPDES permit administered by the Environmental Protection Agency. !(IF THE STATE HAS NPDES PRIMACY OR IMPOSES SEPARATE RESTRICTIONS ON EFFLUENT QUALITY MORE STRINGENT THAN DOES NPDES, SO NOTE AND SPECIFY RESTRICTIONS AS IN PARA. 3.3.1. ALSO MAKE CHANGES TO PARAGRAPH 3.3.1 AS NECESSARY)!.

3.3.5. Accomodation of Guests. The Contractor shall assist and cooperate as needed in routine facility inspections and studies, and shall provide for the general accommodation of all guests of the OIC at the treatment facilities. Such guests may include representatives of other Navy Commands, local and state environmental agencies, and the Environmental Protection Agency. An activity representative will normally be appointed by the OIC to act as a liason in the case of such visits.

3.4. Services Provided.

3.4.1. Waste Collection and Pumping Systems. The Contractor shall be required to provide the following specific services relating to the wastewater collection and pumping systems.

3.4.1.1. General Services. The waste collection and pumping system operations shall be conducted in order to provide continuous, cost effective, and efficient conveyance of all activity-generated wastewater to the !(SPECIFY TREATMENT FACILITY NAME)! wastewater treatment facility. Flow shall be maintained so as to prevent the cause of nuisance odors and to prevent interruptions of service. Operations shall be in accordance with applicable health and regulatory agency standards at all times. Systems shall be maintained to minimize unsatisfactory service conditions including flooding conditions, pump station failures, pipe blockages, and excessive infiltration and inflow conditions. Facilities shall be maintained clean and orderly with generated waste materials (such as waste oils, grit screenings, and other waste solids) to be routinely collected, as necessary, and removed to an appropriate disposal site. The location of the disposal site shall be subject to OIC approval. All transportation and disposal practices shall be in accordance with all applicable environmental regulations. (Note: For purposes of this specification, specific system boundaries for buildings shall begin five feet from the building plumbing connection.)

3.4.1.2. Temporary and Emergency Services. Temporary and emergency collection services may be necessary to accomplish certain repairs, maintenance efforts, and new service connections. Such temporary and emergency services shall be coordinated with the OIC and shall be accomplished using methods to avoid service interruptions, where possible, or to minimize system downtime where such interruptions of service are unavoidable. The OIC shall be notified of scheduled temporary service conditions at the time of job scheduling and shall be notified of emergency situations as soon as possible, with notification time not to exceed one hour after Contractor identification of the emergency. For purposes of this specification, an emergency situation is defined as any condition that requires immediate action to eliminate life or serious injury hazards to personnel, prevent loss or damage to Government property or restore essential services.

3.4.1.3. Control Inspection Program. A control inspection program shall be established and implemented by the Contractor in order to identify and project system deficiencies and to determine the physical condition of system components. Inspections shall be accomplished annually and inspectors shall possess at least a craftsman rating in their respective trades. The OIC reserves the right to have representatives present during Contractor inspections, or to make separate inspections in order to determine the accuracy and completeness of the Contractor's control inspections. Attention is invited to NAVFAC MO-322, Volume 1, Chapter 3 (Inspection of Shore Facilities, "Control Inspection

Procedures") for program formulation guidance. Strict adherence to this chapter is not required; however, a completed control inspection plan shall be submitted to the OIC for approval within 30 calendar days after the contract award date. Yearly deficiency listings and condition reports, based upon inspection findings, shall also be submitted annually to the OIC to support the Navy's Annual Inspection Summary report. In order to maintain continuity, the formats of these submittals shall conform to those as described in Chapter 7 ("Annual Inspection Summary") of the above named document. These deficiency listings and condition reports shall be submitted no later than !(SPECIFY DATE)! of each year. Records and files documenting the control inspection program shall be maintained accurately, up to date, and available for OIC review during all normal working hours.

3.4.1.4. Preventative Maintenance/Inspection (PMI) Program. A preventative maintenance/inspection program shall be implemented by the Contractor in order to help prevent and correct deficiencies with designated dynamic equipment items, thus minimizing breakdowns and service interruptions, extending component service life, and maximizing operating efficiency. PMI shall include inspections and services of lubrication, minor adjustment, and minor repair of components. Attention is invited to NAVFAC MO-322, Volume 1, Chapter 4 ("Preventative Maintenance Inspection Procedures") for program formulation guidance. Strict adherence to this document is not required; however, a completed PMI plan shall be submitted to the OIC for approval within 30 calendar days after the contract award date and shall be approved prior to use. The PMI program is to be established based upon manufacturers' recommendations, handbooks, operating/service manuals, Contractor expertise, and general engineering judgments. The submitted plan shall include components to be inspected and maintained, inspection and maintenance techniques, inspection and maintenance frequencies, and reporting methodology. The Contractor shall update schedules as necessary to reflect any changes in equipment inventory. Once established, the PMI program shall be executed as scheduled with documentation maintained accurately and up to date at all times. Inspectors shall possess at least a craftsman rating in their respective trades. Logs, records, check-lists, and any other documentation maintained by the Contractor shall be available during all normal working hours for OIC review and shall be the property of the government.

3.4.1.5. Service/Trouble Call Desk. A service call desk with response services shall be provided by the Contractor to receive personal and telephone notifications of problems with system operations and requests for maintenance and repair efforts. This desk shall be manned during all normal working hours and an emergency service off-base telephone number shall be provided for emergency response during all other hours, day or night. A service desk log shall be maintained by the Contractor and each service request call shall be recorded with appropriate response actions and times denoted. Each service call log recording shall include a brief description of the reported problem and time of call reception. The log shall be made available for OIC review upon request during all normal working hours. Service call response actions may include both maintenance and repair efforts and will be classified as emergency, urgent, or routine.

3.4.1.5.1. Emergency Calls. Response to an emergency call (emergency as defined in Paragraph 3.4.1.2. of this specification) shall be immediate and corrective actions shall begin, when necessary, within one hour of receipt of problem notification during any time, day or night. Work shall be accomplished without interruption until completion or until the emergency situation is arrested and work can be completed at a later date in a routine manner.

3.4.1.5.2. Urgent Calls. Urgent services, for purposes of this specification, include those services which do not immediately endanger personnel or threaten damage to property, but would soon inconvience and affect the health or well-being of personnel or disrupt essential services. Urgent services shall be accomplished during Government normal working hours, or on a second or split shifts when within the capability of Contractor personnel. Urgent services shall be completed or arrested within two working days or as directed by the OIC.

3.4.1.5.3. Routine Calls. Routine services, for the purpose of this specification, include all services not qualified as emergency or urgent. Routine services shall be completed within a reasonable time frame as directed by the OIC and normally within five working days. Some judgment on the part of the Contractor and cooperation on the part of the customer will be required for this classification of service calls.

3.4.1.6. Repairs. Repairs to the wastewater collection and pumping systems shall be performed by the Contractor as required to maintain proper and efficient system operations as described in Paragraph 3.4.1. Repairs shall be made in accordance with manufacturers' specifications and guidelines, where applicable, and shall be of such quality to prevent any malfunction reoccurences due to poor workmanship or other Contractor inadequacies. The Contractor shall be responsible for the acquisition and purchase of all necessary replacement parts, as described in Section 00004 of this specification. Quality of such replacement parts shall be as good or better than the existing parts. Repair efforts shall be coordinated, initiated, and completed as specified in Paragraphs 3.4.1.2. and 3.4.1.5, and shall always be accomplished with proper regard to loss of life and property. All repair efforts shall be documented with purchase records and component history files shall be maintained accurately and up to date at all times. All logs, records, and documentation shall be made available for OIC review upon request during all normal working hours. Monthly, the Contractor shall submit a complete and accurate listing to the OIC itemizing the past month's repair efforts and corresponding associated costs. This submittal shall be due on!(SPECIFY DATE).!

3.4.2. Waste Treatment Facilities. The Contractor shall be required to provide the following specific services relating to wastewater treatment facilities.

3.4.2.1. General Waste Treatment Operations. Wastewater treatment facility operations shall be conducted in order to provide continuous, cost effective, and efficient treatment of all wastewater delivered to the facility. Such operations shall include general operation of plant equipment, valves and piping, sampling and lab analyses, waste and effluent disposal, and other related services. All operations shall be accomplished in accordance with the treatment facility operations manual where applicable. !(NOTE TO SPECIFICATION WRITER: NOT ALL PLANTS HAVE SUCH AN OPERATIONS MANUAL AND THEREFORE PREVIOUS SENTENCE SHOULD BE INCLUDED OR DELETED ACCORDINGLY).! Treatment facility conditions shall be maintained clean and orderly at all times and adherence to applicable health and safety standards shall be maintained. Operations shall be accomplished with proper regard to equipment and components to insure operating efficiency and longevity of service life. Facility operations and effluent discharge practices shall comply with all applicable federal, state, and local regulatory standards, including the NPDES permit requirements. The preparation of all related correspondences and operating reports are also Contractor responsibilities, as discussed in Paragraphs 3.4.2.4. and 3.4.2.5. of this specification.

3.4.2.2. Waste Disposal. Waste disposal services shall be provided by the Contractor at a frequency sufficient to maintain clean and orderly collection sites with no overflow of waste material. Wastes (including sludges, grit, screenings, and other waste solids) shall be routinely collected and transported to a properly classified disposal site, with location subject to OIC approval. The Contractor shall provide all necessary laboratory services and maintain records of such laboratory analyses on file, also subject to OIC review. Wastes deemed hazardous shall be transported and disposed of accordingly. All waste disposal practices shall be accomplished in accordance with all applicable environmental regulations. All records, receipts, manifests, and log entries shall be subject to OIC review during all normal working hours and shall be the property of the government.

3.4.2.3. Sampling and Laboratory Analyses. Sampling and laboratory analytical services shall be provided by the Contractor as necessary to support OIC and regulatory agency operating requirements. Such sampling and testing procedures shall be accomplished in accordance with applicable operating permit conditions and as directed by the OIC. Unless otherwise directed, all sampling and laboratory analyses shall be accomplished as described in the latest edition of Standard Methods for the Examination of Water and Wastewater, American Public Health Association, or in accordance with other regulatory agency approved methods. The Contractor is responsible for such analytical services as listed in Appendix I of this specification at the frequency indicated. A complete set of laboratory records shall be kept for all laboratory tests to include: date and time of sampling, type of sample, name of sample, location of sample, test performed, and test results. In addition, results of such laboratory analyses shall be assembled into reports to conform with the procedures and requirements of the NPDES permit (or other state and local permits if applicable) and shall be delivered to

the OIC for signature and submittal to the EPA (or state and local agency). Copies of all testing records and associated correspondences shall be maintained on file subject to OIC review. The OIC reserves the right to collect wastewater samples and have tests performed to verify the Contractor's performance of work.

3.4.2.4. Notice of Violations. Notice of violations of any of the NPDES permitted parameters, of any lift station bypassing and of any discharges of any other type in violation of the NPDES permit shall be prepared by the Contractor and submitted to the OIC within 24 hours of the Contractor's identification of the noncompliance. The notice of violation shall be prepared in a manner suitable for OIC signature and submittal to the EPA. This notice shall include a description of the discharge, the cause of noncompliance, and the period of noncompliance including exact dates and times (or if not corrected, the anticipated time the noncompliance is expected to continue and steps being taken to reduce, eliminate, and prevent the reoccurence of the noncomplying discharge). Direct submittals of Contractor supplied notices of violation shall be the responsibility of the OIC. (Note: Any similar notice requirements of state and local agencies shall also be the responsibility of the Contractor and accomplished in a similar manner).

3.4.2.5. Operating Reports. In addition to the above required correspondences, the Contractor shall also prepare and submit to the OIC all required operating reports containing routine control analyses and flow readings as described in the NPDES permit and in NAVFACINST 5450.19, Enclosure 2, Part II (included in Appendix G). These reports shall be prepared and submitted to the OIC monthly to arrive by the fifth !(OR SPECIFY OTHER APPROPRIATE DATE)! of the month following the reporting period.

3.4.2.6. Control Inspection Program. A control inspection program shall be established and implemented by the Contractor in order to indentify and project system deficiencies and to determine the physical condition of system components. Inspections shall be accomplished annually and inspectors shall possess at least a craftsman rating in their respective trades. The OIC reserves the right to have representatives present during Contractor inspections, or to make separate inspections in order to determine the accuracy and completeness of the Contractor's control inspections. Attention is invited to NAVFAC MO-322, Volume 1, Chapter 3 (Inspection of Shore Facilities, "Control Inspection Procedures") for program formulation guidance. Strict adherence to this chapter is not required; however, a completed control inspection plan shall be submitted to the OIC for approval within 30 calendar days after the contract award date. Yearly deficiency listings and condition reports, based upon inspection findings, shall also be submitted annually to the OIC to support the Navy's Annual Inspection Summary report. In order to maintain continuity, the formats of these submittals shall conform to those as described in Chapter 7 ("Annual Inspection Summary") of the above named document. These deficiency listings and condition reports shall be submitted no later than !(SPECIFY DATE)! of each year. Records and files documenting the control inspection program shall be maintained accurately, up to date, and available for OIC review during all normal working hours.

3.4.2.7. Preventative Maintenance/Inspection (PMI) Program. A preventative maintenance/inspection program shall be implemented by the Contractor in order to help prevent and correct deficiencies with designated dynamic equipment items, thus minimizing breakdowns and service interruptions, extending component service life, and maximizing operating efficiency. PMI shall include inspections and services of lubrication, minor adjustment, and minor repair of components. Attention is invited to NAVFAC MO-322, Volume 1, Chapter 4 ("Preventative Maintenance Inspection Procedures") for program formulation guidance. Strict adherence to this document is not required; however, a completed PMI plan shall be submitted to the OIC for approval within 30 calendar days after the contract award date and shall be approved prior to use. The PMI program is to be established based upon manufacturers' recommendations, handbooks, operating/service manuals, Contractor expertise, and general engineering judgments. The submitted plan shall include components to be inspected and maintained, inspection and maintenance techniques, inspection and maintenance frequencies, and reporting methodology. The Contractor shall update schedules as necessary to reflect any changes in equipment inventory. Once established, the PMI program shall be executed as scheduled with documentation maintained accurately and up to date at all times. Inspectors shall possess at least a craftsman rating in their respective trades. Logs, records, check-lists, and any other documentation maintained by the Contractor shall be available during all normal working hours for OIC review and shall be the property of the government.

3.4.2.8. Repairs. Repairs to the wastewater treatment facility shall be performed by the Contractor as required to maintain proper and efficient waste treatment operations as described in Paragraph 3.4.2.1 Repairs shall be made in accordance with manufacturers' specifications and guidelines, where applicable, and shall be of such quality as to prevent any malfunction reoccurence due to poor workmanship or other Contractor inadequacies. The Contractor shall be responsible for the acquisition and purchase of all necessary replacement parts, as described in Section 00004 of this Specification. Quality of such replacement parts shall be as good or better than the existing parts. Repair efforts shall be coordinated, initiated, and completed so as not to violate any effluent discharge restrictions and shall always be accomplished with proper regard to loss of life and property. All repair efforts shall be documented with purchase records and component history files shall be maintained accurately and up to date at all times. All logs, records, and documentation shall be made available for OIC review upon request during all normal working hours. Monthly, the Contractor shall submit a complete and accurate listing to the OIC itemizing the past month's repair efforts and corresponding associated costs. This submittal shall be due on!(SPECIFY DATE).!

!**********

NOTE TO SPECIFICATION WRITER: The Government should retain the right to determine how major repairs are to be accomplished and in addition it is desirable to "cap" the work for which the Contractor will be held responsible. The using activity must determine at what point it wants to exercise control due to Davis-Bacon implications, $4000.00 is used below as the cut-off value for Contractor responsibility. Special paragraphs must be added if the value exceeds $4000.00. See User's Guide Paragraph III, D. for discussion and direction on determining this value.

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4. WORK CLASSIFICATION. Individual repair/placement projects with an estimated sum of labor and materials costs exceeding $4000 are not covered by this contract. The Contractor shall be responsible for all repair/replacement costs less than this amount. The OIC shall retain the right to determine how repairs with a labor and materials cost greater than $4000 are to be accomplished, such as through change orders, separate contracts, or by Government forces. If an individual repair item exeeds $4000, the Contractor shall provide the OIC a detailed cost estimate pressed in accordance with the "Estimates" clause of Section 00005.

5. ESTIMATES. All estimates shall be based on Navy Engineered Performance Standards (EPS P-700 Series). In areas where EPS standards do not exist, other industry standards as approved by the OIC shall be used. Material costs shall be based on the lowest price of at least two quotations. Any material handling charge will be indicated separately.

END OF SECTION 00005

B. Function Definition - Water plants and systems functions can be defined in terms of measurable outputs based on which Contractor performance is evaluated. The Contractor is to provide all labor, transportation, equipment, materials, supplies, management, coordination, and supervision required to deliver these outputs. The Government should, as much as possible, avoid defining the Contractor's responsibility in terms of methods or procedures to be followed. Instead, the Government should rely on the contractor's expertise and contractual obligation to deliver an agreed upon output. The functions (outputs) to be delivered by the contractor pursuant to the Water Plants and Systems Standard PWS include the following:

1. Quantity of Water
2. Quality of Water
3. Treatment Plant Operating Records
4. Minimum Water Pressure at Specified System Endpoints
5. Water Supply and Distribution Operating Records
6. Maintenance (including preventive and/or corrective)
7. Maintenance Records
8. Custodial Services
9. Water Quality Sampling, Analysis and Reports

This standard list of deliverables can be modified as needed for application to a specific system. For instance, an output can be added regarding disposal of sludge in an acceptable manner, if that is a significant problem requiring operator attention. The list, however, generally covers adequately all the outputs which might be expected to result from the operation and maintenance of a water treatment plant and appurtenant supply distribution system. Careful definition and quantification to the extent possible of measurable outputs is extremely important because these outputs become the central theme and driving force behind the Specifications, the Schedule of Deductions, and the Quality Assurance Guide.

C. CA Inventory - Inventory of WPS functions, CA Code S-727, is prepared in accordance with OPNAVINST 4860.6C. All aspects of WPS functions are commercial in nature and therefore, not exempt from the CA (formerly CITA) program.

D. Use - The first step in tailoring a standard PWS to a specific case is for the User to become intimately familiar with the Standard PWS and its User's Guide. The User must know what is, and what is not, included in the standard PWS and what was intended before he can assess modifications required. The PWS is the instrument that lays out the functional and technical requirements and ultimately becomes part of a contract. The User's Guide provides the User information about the Standard PWS and provides instruction on how to tailor it. Users should not assume that standard PWS or PWS tailored by other users, can be "plugged" into their application with little or no effort. A detailed analysis of the activity's requirements is necessary. Most helpful would be an Operations and Maintenance Manual with suitable schematics.

In tailoring the standard PWS, the user should first determine what the desired contract outputs are for his activity. The job analysis procedure described in NAVFAC MO-327 "Service Contracts: Specifications and Surveillance" and this USER's GUIDE can be used as an aid in identifying outputs. If the activity's specific output requirements differ from those presented in the standard PWS, either in type or in quantity, the user will make appropriate changes in the PWS. Note that the Schedule of Deductions in Section 4 of the PWS contains a precise listing of all required outputs and would be a good place to begin making any necessary revisions.

E. Responsibilities - The following activity personnel should be involved in specification development:

(1) Specification Writer - The WPS specification is most properly prepared by an Engineer or Engineering Technician at the activity who has had some experience in writing Maintenance Service Contracts. The use of a Planner and Estimator (P&E) is also appropriate if experienced with writing Contract specifications. The writer, regardless of who he is, should have attended the Civil Engineer Corps Officers School (CECOS course on Service Contracts). Assistance/guidance may be requested from the EFD Code 10.

(2) Engineering - In preparing the Schedule of Deductions and/or the Schedule of Indefinite Quantity Work, if any, it is necessary to review all historical records for water plants operations and maintenance. This can be a tedious process if Engineering does not already have a layout and past performance records. If this information is not readily available, the Specification Writer must work with the customer to develop that data.

(3) Reviewers - The tailored PWS should be reviewed by the customer representatives, Engineering Director and Maintenance Control Director prior to submission to a Contract Specialist for processing. Consult EFD directives for those contracts which require review/approval by thwe EFD prior to solicitation.

(4) Contract Specialist - The Contract Specialist is the person responsible for contract preparation. This person will work with the writer in the preparation of sections 00001 and 00004. There are several actions required to be initiated by the Contract Specialist. This person should provide contractual guidance to the Specification Writer.

NOTE: All personnel must keep in mind that this specification is to be performance oriented. Rely on a statement of the required output as an end product.

INPUT-PROCESS-OUTPUT-MEASUREMENTS-STANDARDS

Reference: OFPP Pamphlet No. 4 (Oct. '80)

II. DEVELOPMENT:

A. Analysis. PWS development requires the identification of major contract outputs. Such a breakdown of the basic effort is depicted in paragraph IB, Function Definition. This is to be used as a guide.

B. Technical Specification. The Technical Specification (Section 00005) is a performance type specification. That is, the specification tells the Contractor what the desired service outputs are, but not how to perform the work.

III. TAILORING THE PWS:

A.(1) General - The NAVFAC standard PWS for WPS Services is not intended to fit the requirements of a specific activity, but rather, to serve as a model to be tailored by activities in preparing site specific PWS'S. In order to achieve the desired Performance Work Statement for a specific activity, it is important that the User collect and/or develop certain information. Some of this information, needed by potential Contractors to develop bids, will be included in the specification developed. Information gathered during the tailoring process will also play an important part in contract surveillance. The PWS tailoring process is described in the NAVFAC manual "Service Contracts: Specifications and surveillance."

A.(2) Tailoring Standard PWS Outputs - Standard PWS-WPS outputs are listed in paragraph IB and further defined in Section 4, last Clause, SCHEDULE OF DEDUCTIONS and Section 5, TECHNICAL SPECIFICATIONS. The following paragraphs describe procedures for specifying outputs in terms of the activity's specific needs:

a. Water Quantity - To determine the amount of water to be provided by the Contractor, the activity should consider the water demand and the plant design capacity. Water demand can be estimated from residential, administrative and commercial populations, irrigation needs, industrial use records and previous water influent and supply records. The specified output should be sufficient to cover demand, including peak seasonal use, but should not be in excess of design plant capacity. Quantity can be expressed in unit volume (most typical, Kgal) per unit period of time. The unit period of time can be a day, a week, a month or a year. The longer the time unit used, the more leeway the Contractor has to operate on a schedule of his own choosing. A shorter time unit gives the Government more control and the Contractor less flexibility. The activity should review past production records to determine whether a relatively steady demand exists on a day-to-day, week-to-week, or month-to-month basis, and select an appropriate time unit accordingly. The point of quantity measurement should be specified in the Contract. Ideally, flow will be monitored and integrated automatically on a continuous basis and the Government can rely on such records for output evaluation.

b. Water Quality - To determine water quality outputs to be delivered by the Contractor, the activity should review past treated and raw water quality records and applicable water quality regulations. The National Interim Primary Drinking Water Regulations (NIPDWR) pursuant to the Federal Clean Water Act are summarized in Table 1, Section 00004, last Clause, (SCHEDULE OF DEDUCTIONS) and in Appendix C to Section 00005 (TECHNICAL SPECIFICATIONS) of the Standard PWS. More or less stringent state and local regulations may apply to a specific activity. Other non-regulatory requirements such as chlorination, fluoridation and taste and odor control should also be considered. Prior to establishing a given standard as a contract mandated output, the activity should ensure that the plant is physically capable of producing water meeting that standard. The Contractor should not be tasked with meeting quality standards which can only be met through plant alterations or major process changes. The sampling locations and analytical processes to be used for Contractor performance evaluation should be specified in Appendix C of Section 00005 of the Contract. The reports to be produced by the Contractor (Output I.B.9) can be used to evaluate Contractor performance. Independent quality checks should be performed by the Government to verify reporting accuracy (See Quality Assurance Guide).

c. Treatment Plant Operating Record - NAVFAC 11340/2 (Rev 7-81) or an equivalent form is used to record operations at water treatment plants. A copy of NAVFAC 11340/2 is attached to this Guide as attachment 1. Daily, weekly, and monthly entries are required for various parameters including temperature, pH, quantity, turbidity, chemical usage, etc. The activity should specify the frequency required for each individual entry.

d. Minimum Water Pressure at Specified System End-points - System endpoints are points within or on the boundary of the water distribution system where water pressure measurements can be made or recorded for Contractor performance evaluation. Each residential water outlet or service connection could be considered an endpoint. However, there are probably thousands of such outlets and connections and it may not be practical nor necessary to check each of them because the pressure at those outlets is usually controlled by the pressure at a central distribution reservoir, or booster pump or pressure regulator. Therefore, the activity should attempt to identify central pressure control points within the system and specify minimum continuous pressure requirements at those points. The specified pressure at each control point should be sufficient to maintain adequate pressure throughout the system. Pressure drops could result from a break or blockage in the line betweeen the central control point and service connections. Any such failure would come to the attention of the Contractor through inspection or customer complaints and would be repaired by the Contractor under the provisions of output I.B.6, Maintenance.

e. Water Supply & Distribution Operating Records - NAVFAC 11330/6 (1-76) - Self Explanatory., See Attachment 2.

f. Maintenance - Maintenance of the treatment and distribution system is difficult to define in terms of measurable outputs. The output of maintenance is the continued satisfactory performance of the system over its entire design life. The design life of the system, however, normally exceeds the Contract period of services. Thus, a contractor may choose to neglect maintenance expecting that the system will not fail until after his Contractual obligations have been fulfilled. This possibility may necessitate that certain maintenance schedules and procedures be made mandatory by inclusion in the specifications. The approach recommended for adaptation of the standard PWS to a specific activity is as follows: First, determine all preventive maintenance requirements from available maintenance schedules interviews with operators, and maintenance manuals. Then, determine whether performance of each given preventive maintenance procedure is verifiable by quality assurance inspection. (For example, it may be impossible to determine whether a certain pump has been lubricated on schedule; on the other hand, the quality assurance inspector can verify that a gage has been recently calibrated by repeating the calibration procedure). Those procedures which are easily verifiable can be made subject to mandatory scheduled performance and performance evaluation can be based on the Observed Defect Rate as discussed in the Quality Assurance Guide. For those preventive maintenance procedures which cannot be easily verified, the Government still has some leverage: The Contractor retains responsibility for corrective maintenance and would have to repair or replace, at his own expense, any system or part which fails to perform, and thus causes failure to deliver other more measurable outputs. It would therefore be to the Contractor's own advantage to perform preventive maintenance to the extent needed to minimize corrective maintenance and non-performance deductions. The activity should rely on this leverage to the maximum extent possible by making it clear to the Contractor that the Government will hold the Contractor responsible for equipment failures. If the activity desires to maintain close control of maintenance through mandatory schedules and inspections it should do so, keeping in mind that unless the quality assurance inspector has reported a particular piece of equipment as being not properly maintained, and the equipment fails, the Contractor will claim, probably successfully, that the failure was not caused by his neglect or misuse and the Government will probably absorb the loss. If the Contractor maintains equipment at his own discretion, the burden of proof shifts from the Government to the Contractor. Note that paragraph 4.3 of section 00005 states that the Contractor will be held responsible for all repairs that do not exceed $4,000. This $4,000 value is of particular importance for this PWS as related to the Davis-Bacon Act. If this value is not sufficient or satisfactory for a particular activity, the selection of a more appropriate dollar value should be made. IF A CEILING VALUE IS CHOSEN THAT EXCEEDS $4,000.00 FOR THIS PWS, THE SPECIFICATION WRITER SHOULD CONTACT HIS LOCAL EFD, CODE 02 FOR ASSISTANCE IN ADDRESSING APPLICABLE PORTIONS OF THE DAVIS-BACON ACT.

g. Maintenance Records - The Contractor should maintain a record of all preventive and corrective maintenance performed. The activity should provide a preferred record-keeping format based on current activity practice. Records should include a description of maintenance performed (i.e., replacement of corroded valves in #2 chlorinator) date of performance, parts and materials costs, and labor costs.

h. Custodial Services - Measurable outputs are not so readily identified. The following details must be considered:

1. Items to be cleaned (complete inventory is required.
   a. Description (office, restroom, lab)
   b. Number
   c. Size (square footage)
2. Frequency of cleaning (daily, weekly)
3. Class of Service (usually four)
4. Indefinite Quality of Work Items where Contractor performs "as ordered".

The NAVFAC "Guideline Performance Work Statement" for Custodial Services can be used as a guide.

i. Water Quality Sampling Analysis and Reports - The Contractor will perform turbidity, temperature, pH, hardness, chlorine, etc. analysis on a regular basis in order to control the treatment process and produce outputs I.B.1, I.B.2, I.B.3, etc. In addition, a monthly (usually) report will be prepared to satisfy regulatory requirements. The activity should specify which parameters are to be included in the report and the monitoring frequency for each parameter. The activity should also specify the date of submittal (i.e. the 10th of each month) and the recipient of the report (either the activity or the regulatory agency directly with copies furnished as necessary to the cognizant EFD's and other interested parties).

B. Bid Items. The next step is to tailor the Bid items to cover the modified list of work items. Only one Bid Item is shown in the standard PWS-WPS is intended to encompass all WPS services common to most activities. The User should delete those services not required. Next, check to see if any WPS requirements are covered under other existing contracts. If some services are covered by separate contract, but it is desired to include them in the WPS contract at the termination of the other contract, then the Bid Items must consider that portion of the year for which they will be covered and adjust the quantities accordingly.

Fixed-price lump sum items are bid lump-sum for the total performance of a given work item and payment is made on a 1/12 per month basis (or other scheduled basis). Fixed-price lump sum work items are those items where work requirements (time, location, frequency, quantity, etc.) are known or can be estimated. In essence there is one work order. The Contractor performs the work as scheduled and invoices are submitted for the services provided.

C. Technical Specifications (Section 00005) - The technical specifications are the single most important part of a PWS. Within this section, one should describe, in detail, what services are desired and when they are to be performed. Requirements provided in the standard PWS are designed to meet general requirements of most activities. When tailoring this PWS these requirements may need to be modified to meet local conditions. Special or unique requirements may need to be added. Job Analyses, as described in the NAVFAC Manual "Service contracts: Specifications and Surveillance," should provide the data required to tailor this section.

The Technical Specification is tailored to reflect modifications made to work requirements. The writer should keep in mind that this is a performance type specification. All requirements specified in this section should state the desired results. "How to" instructions should not be specified. We want to allow the Contractor to be able to exercise his expertise.

When a technical manual, manufacturer's instructions, or A&E specifications are referenced, "How to" instructions are likely to be found in those documents. If such is the case, the contractor should be told that such references are to be interpreted as advisory in nature, unless otherwise specified, and that he must use his expertise to improve upon them in order to obtain the required quality of services or outputs.

D. Sections 00001 and 00004. The Specification writer works with the PWS "team" in the preparation of Sections 00001 and 00004. The NAVFAC manual "Service Contracts: Specifications and Surveillance" discusses the tailoring of these sections.

E. Performance Requirements Summary. Once the standard PWS has been tailored a Performance Requirements Summary Table should be prepared. This table will be used by the QAE in preparing QA Plans. The table will also be of use to the OIC, ROIC, SCM, and Customers to provide a convenient overview of services to be provided, standards of performance for those services, intended method of evaluation, and AQLs.

A sample Performance Requirements Summary Table is provided in the QA Guide of this PWS. This table reflects the standard PWS's requirements. The Specification Writer should modify this table to reflect the tailored PWS requirements.

IV. PRE-AWARD CONSIDERATIONS

Prior to Award it is essential that the Activity consider certain aspects of the operation and administration of the contract.

A. QAE Training - Ideally, the QAE should attend the Quality Assurance Evaluator (QAE) Training Course provided by each of the EFD's. If this training has not been received the OIC should take steps to have the QAE(s) trained and in the meantime develop a local training program. The geographic EFD may provide assistance. Prior to Bid Opening it is essential that the Quality Assurance Evaluator (QAE) become familiar with the PWS specification.

B. Questions to Ask - The specification writer should be asking himself the followiong questions prior to contract award:

(1) Is Government Furnished Property ready for turnover?

(2) Are QA Plans prepared?

(3) Is the specification sufficiently clear to insure that bids will be competitive and developed on the same basis by all competitors?

(4) Is the specification overspecifying?

(5) Are there any restricted areas included in the Contract? If so, can the contractor get the required clearance?

(6) What is the low bidder's track record? The user can assist in identifying other activities that have contracted for services from this low bidder in the past.

C. Site Visit - The Specification Writer and QAE shoud be prepared to conduct 2 types of pre-award site visits.

(1) Site visits by the Specification Writer and QAE during specification development. These visits are to familiarize the writer and QAE with the WPS requirements, and establish a contact with customer representatives.

(2) Site visits by the QAE with potential bidders after inviting bids. The purpose is to familiarize the Contractor with the location of the WPS requirements. The QAE must be briefed by the O.T.C., or his representative, and the Contract Specialist, and others, as to what can be discussed with the potential bidders.

D. Bid Evaluation - Prior to award, all personnel involved in the development of the PWS should carefully review the apparent low bidder's price to determine whether the bid is consistent with the Gevernment Estimate. Procedures for preparation of the Government Estimate are described in paragraph IV. E. of this USER's GUIDE. A deviation of more than 20% of the total price or any sub-item (output) may indicate a potential inbalance or lack of understanding of the performance requirements by the Contractor. The Contractor then should be asked to reaffirm or re-submit his bid prior to award.

E. Government and Contractor Estimates - The Government and each bidder must estimate the costs of performing the tasks necessary to deliver the outputs specified by the Contract. Some of the tasks will be performed in pursuit of more than one output (e.g. Sampling for operational purposes - output B.2, and for reporting purposes - output B.9). Also, contractors may choose to perform a different set or combination of tasks than that envisioned by the Government to deliver the same output (e.g. the contractor may choose to reduce the coagulant dosage by adjusting alkalinity.) The Government and Contractor estimates therefore should be itemized in terms of outputs rather than tasks. The activity should prepare the Government estimate by analyzing available operation, maintenance, labor and material consumption records from previous years. (See Appendix B - Section 00005, Standard PWS). This data will also be available to the bidders for their use. The total cost of performance obtained from analysis of records should be distributed over the nine separate outputs in proportion to the relative expenditure of effort and materials required to accomplish each output. The following is an over-simplified description of the recommended procedure:

(1) Determine total cost of plant and distribution system operation for previous years. Include escalation, general and administrative overhead rates and contingencies to determine total current Government estimate.

(2) Select outputs which correspond directly to a particular task or set of tasks and estimate the cost of performing those tasks. The following outputs can be easily converted to costs:

From Section I,

Output B.3 - Task involves making daily readings and entries in a form, estimate _____ hours per day - Annual labor cost $_____. Materials cost : NEGLIGIBLE.

Output B.4 - Same as B.5, but involves going out to the field estimate_____ hrs/day Annual labor cost $_____. Material cost : NEGLIGIBLE.

Output B.6 - Estimate from maintenance records from previous years. Preventive maintenance requires, estimate, _____ hrs/day, labor $_____ /yr. parts and materials $_____/yr. Corrective maintenance, including service and emergency calls, calls required _____ hrs/day. Material cost $_____/year. Note that the estimate for maintenance is the sum of preventive and corrective maintenance costs. The two cannot be separated because presumably as preventive maintenance increases, corrective maintenance decreases. The contractor will submit one bid sub-item to cover all preventive and corrective maintenance costs and out of this one sub-item he will try to keep the system functioning (delivering outputs). If the system fails (and it is more likely to do so if preventive maintenance is not performed) the Contractor's maintenance costs may increase.

Output B.7 - Maintenance records will consists of written entries as needed. Estimate $_____/day labor, materials cost: NEGLIGIBLE.

Output B.8 - Custodial services will be performed on a pre-determined schedule or frequency complete with agreed upon unit costs. Estimates should be based on prior year's records (historical data) and analysis of requirements. Analysis utilizing Engineered Performance Standards (EPS) can also be undertaken. (Ref. NAVFAC P-700 Series of Manuals)

Output B.9 - The cost of sampling, analysis and reports can be estimated based on the estimated sampling labor requirements plus standard laboratory fees for each analysis times the quantity of analyses required.

(3) Add the costs computed in paragraph E.2 adjusted for escalation, overhead, contingencies, etc., and subtract the total from the total Government estimate from paragraph E.1. The remainder can be distributed equally among Outputs (B.1), (B.2) and (B.4) which are the major outputs of water quantity (B.1), quality (B.2) and distribution (B.4). An equal distribution is recommended because it would be futile and counterproductive

to try to differentiate and isolate tasks which produce quantity from those which produce quality or distribution. Basically, the operator monitors all three functions simultaneously and makes adjustments as necessary, and no adjustment can be made in any one function without affecting the other two.

(4) Check the resulting break-down for balance.

A typical breakdown may look like this:

Output	% of total bid
B.1	20
B.2	20
B.3	5
B.4	20
B.5	5
B.6	10
B.7	5
B.8	10
B.9	5
Total	100%

The percentages will inevitably vary. It is important to make sure that the "minor" secondary outputs (i.e. outputs B.3, B.7 or B.9) do not end up with a disproportionate share of the total or vice versa. The break-down shown in the Schedule of Deductions submitted by the Contractor (See paragraph IV.F) will be checked against the Government estimated break-down for balance. If an unbalanced Schedule of Deductions is accepted, the contract could be insufficiently deducted for major infractions (e.g. Contractor fails to produce any water but maintains accurate records and receives 90% of his pay) or excessively deducted for minor infractions.

F. Schedule of Deductions. A standard Schedule of Deductions is included in Section 00004, last Clause, of the PWS-WPS. The schedule is based strictly on the ouputs (functions) defined in paragraph I. B, above, and the output-by-output cost breakdown described in paragraph IV.E. Once these outputs and breakdowns have been adjusted for application to a particular activity, the Schedule of Deductions should be modified accordingly. Note that certain outputs are further broken down into sub-outputs. Water Quality, for instance, is broken down into constituent parameters including Inorganic Chemicals, Organic Chemicals, Turbidity, Microbiological, Radioactivity, Chlorine Residual, Fluoridation and Hardness. Each of these parameters is assigned a percentage of the total Contract fee assigned to water quality. The percentage assigned should be consistent with the likelihood of violation of that parameter. For example, there is probably no radioactivity to worry about in most water supply sources and most treatment plants are not equipped to handle removal anyway. Therefore, the deduction for exceedance of this parameter should be nominal or none.

As shown in the standard Schedule of Deductions, payment deductions would be made when any one of the identified standard parameter concentrations is exceeded any given day. The deduction would be in proportion to the value

(percentage) assigned to that parameter. The activity may choose to simplify this system by adopting one standard maximum daily deduction for any type of violation.

V. POST-AWARD CONSIDERATIONS

A. Deduction, Non Performance. In the event of non-performance, or partial performance, deductions will be made in accordance with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004. The Quality Assurance Evaluator (QAE) will apply the performance evaluation procedures described in detail in the Quality Assurance Guide accompanying this standard PWS. Payment deductions will be made when warranted by failure of the Contractor to deliver the specified outputs. The amount of each payment deduction will be computed in accordance with the formula established in Section 0004, last clause, SCHEDULE OF DEDUCTIONS.

END OF UG SECTION

WATER PLANTS AND SYSTEMS

SECTION 00001 BIDDING INFORMATION

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WATER PLANTS AND SYSTEMS (WP&S)
(FUNCTION S-727)
SECTION 00001 BIDDING INFORMATION

1. GENERAL INTENTION. It is the declared and acknowledged intention and meaning to obtain, by means of a (Specify Contract Type) contract, the operations, maintenance and repairs of the water treatment plant and distribution system in accordance with the standards contained herein.

2. GENERAL DESCRIPTION. The Contractor shall furnish all labor, materials, equipment, transportation, facilities, utilities, supervision, and management, unless otherwise specified herein, required for the operation and maintenance of the water supply treatment and distribution system which consists of:

a._ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
b._ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
c._ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

3. LOCATION. The work shall be located at the (insert name of activity). The exact location(s) will be indicated by the Officer in Charge (OIC)

```
!*************************************************************************
*  NOTE TO SPECIFICATION WRITER:  Select clause 4(1), 4(2), or 4(3) as   *
*  required depending on the number of option years desired (see P-68    *
*  9-103).  In blank, insert one of the following:                       *
*              a.  Contract start date and hour                          *
*              b.  Statement to read: "_____days after date of          *
*                  notice of award"                                      *
*************************************************************************!
```

4. 4(1). TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 is to be deleted in its entirety.

4(2) TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The Government has the option to extend the contract for an additional (or second) year in accordance with the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 of this contract.

4(3). TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The Government has the option to extend the contract for an additional (or second) year and an option to extend for a further (or third) year in accordance with the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 of this contract.

5. DISCOUNT LIMITATIONS. Prompt payment discounts shall not be considered in the evaluation of offers. However, any discount offered will form a part of the award, and will be taken by the payment center if payment is made within the discount period specified by the offeror. As an alternative to indicating

a discount in conjunction with the offer, offerors may prefer to offer discounts on individual invoices. This clause modifies the "Discounts" clause of Section 00002 "Instruction to Bidders" (12-81) of this solicitation.

6. DRAWINGS ACCOMPANYING SPECIFICATION. (Provide drawing(s), schematic(s) identification, or specifically state "NONE". Use NAVFAC numbers as appropriate). See Section 00005, Appendix A.

7. EXAMINATION OF PREMISES. Bidders are expected to satisfy themselves as to the general and local conditions that may affect the cost of the performance of the work to the extent that such information is reasonably obtainable. It is considered impracticable to determine, without inspection, the exact nature of the work and site conditions under which the work is to be performed. Arrangements to visit the site are scheduled as follows: !(Indicate hours and days the site of work will be available to potential bidders. Indicate contact point for scheduling visits to job site.)!

!**********
NOTE TO THE SPECIFICATION WRITER: Determination as to Total Set-Aside for Small Business concerns will be made in accordance with the provisions of DAR 1-706.5 and NAVFAC P-68 section 4.219. The contract file shall be documented, in writing, to support the determination.
**********!

8. NOTICE OF TOTAL SMALL BUSINESS SET ASIDE:

a. Restriction. Offers under this procurement are solicited from small business concerns only and this procurement is to be awarded only to one or more small business concerns. This action is based on a determination by the OIC, alone or in conjunction with a representative of the Small Business Administration that it is in the interest of maintaining or mobilizing the Nation's full productive capacity, in the interest of war or national defense programs, or in the interest of assuring that a fair proportion of Government procurement is placed with small business concerns. Offers received from firms which are not small business concerns shall be considered non-responsive and shall be rejected.

b. Definition: A "small business concern" is a concern, including its affiliates, which is independently owned and operated, it is not dominant in the field of operation in which it is offering on Government contracts, and can further qualify under the criteria set forth in regulations of the Small Business Administration (Code of Federal Regulations, Title 13, Section 121.3-8). In addition to meeting these criteria, a manufacturer or a regular dealer submitting offers in his own name must agree to furnish in the performance of the contract end items manufactured or produced by small business concerns: Provided that this additional requirement does not apply in connection with construction or service contracts.

9. DEFINITION OF SMALL BUSINESS. For this procurement, a small business concern is a concern that is certified as a small business concern by the Small Business Administration and, in the (insert name of industry see DAR 1.701.1) service industries, the average annual receipts of the concern and its affiliates for the preceding three fiscal years must not exceed (see DAR 1.701.1).

B. Technical Specification. The Technical Specification (Section 00005) is a performance specification. That is, the specification tells the Contractor what the desired service outputs are, but not how to perform the work. The technical section specifies the requirements for each task. Any additional activity requirements should also be specified based upon performance, including a statement of desired results. The below discussions are included for assistance in completing activity facility descriptions referenced in Section 00005, Para. 3.1., and should be modified to meet individual activity situations.

(1) Wastewater Collection and Pumping Systems - general descriptions and component listings: The collection system should be described to identify the different types of systems on the activity, e.g., the domestic sewage system, the industrial system, the ship's wastewater system, or any combination thereof. The subject system's description should include pipe material and size, the number linear feet of each pipe size, the number and types of pumping stations, and locations of the systems. The pumping station descriptions should also include number, type, and capacity of the pumps in each pump station and other related equipment as considered appropriate, e.g., barscreen, comminutor, controls, type of electrical switching, emergency power, ventilation, etc.

(2) Wastewater treatment facilities - general descriptions and component listings: The wastewater treatment plant should be described as to the type of plant and the disposal point of the effluent. The following are typical examples:

The wastewater treatment plant is a high-rate trickling filter plant with outfall to the Mississippi River.

The wastewater treatment plant is an activated sludge plant with outfall to the Atlantic Ocean.

The wastewater treatment plant is an aerated lagoon system followed by land application effluent disposal.

After the plant description, a listing of the plant's components, structures, and equipment should be provided. Dimensions, size, number, and/or capacity of the components, structures, and equipment should also be provided as appropriate. The following provides a fairly comprehensive, but not all inclusive, list of various wastewater treatment plant components, structures, and equipment:

PRETREATMENT

Screening

Influent Channel

Racks

Bar Screens - Manually or Mechanically Cleaned

Hydrasieve Screens

Shredding and Grinding

Barminutor

Comminutor

Macerator

Grit Removal

Grit Channel - Manual or Chain and Flight Grit Collector

Aerated Grit Chamber

Pista Grit Chamber

Cyclone Grit Chamber

Cyclone Grit Separators

Grit Classifier

Grit Washer

Screw Conveyor

Grit Pump

Grit Storage - Hopper or Bin

PRIMARY TREATMENT

Rectangular Primary Clarifier

Chain and Sludge Scraper Collector

Travelling Bridge Collector

Circular Primary Clarifier

Scum Skimmer and Sludge Blade and Scraper Collector

Sludge Rake Blade with Riser Suction Pipe Collector

Lamella Gravity Settler

Combined Sedimentation - Digestion Units

Imhoff Tank

Surge Tank

Pumps - Wastewater and Sludge

SECONDARY TREATMENT

Trickling Filters and Packed Towers - Rotary Distributor or Fixed Nozzle

Media - Rock, Plactic, or Redwood Lath

Activated Sludge - Conventional, Step Aeration, Extended Aeration, Complete Mix, or Contact Stabilization

Aeration Tanks - Mechanical or Diffused Aeration

Oxidation Ditch - Surface Type Aerator, e.g., Brush Rotor

Activated Biofilter Process - Redwood Racks

Aeration Tank - Surface Type Aerator

Rotating Biological Contactors

Lagoons/Ponds - Aerobic, Anaerobic, or Facultative

Secondary Clarifier - Rectangular or Circular

Pumps - Wastewater and Sludge

DISINFECTION

Chlorination - Chlorine Contact Chamber

Ozonation - Ozone Contact Basin

Ultraviolet Light

FLOW MEASUREMENT

Propeller Meter

Magnetic Flow Meter

Venturi Tube

Positive Displacement Diaphragm Meter

Weirs

Flumes

Kennison or Parabolic Nozzle

Rotameter

Float Type Met

Dipper Meter

Ultrasonic Meter

Bubble Type Meter

SLUDGE HANDLING

Thermal Treatment

Gravity Thickeners

Flotation Thickening

Anaerobic Digestion

Aerobic Digestion

Centrifuge

Vacuum Filtration

Pressure Filtration

Drying Bed

Drying Lagoons

Incineration

OTHER TREATMENT PROCESSES

Filtration

Microscreening

Activated Carbon Adsorption

Ammonia Stripping

Chemical Feeding and Conditioning

Rapid Mixing and Flocculation

Recarbonation

Land Treatment of Wastewater and Sludge

EMERGENCY AND AUXILIARY POWER

Generators

Motor Driver Equipment - Diesel, Gas, etc.

(3) Wastewater Characteristics - general description: For each type of wastewater treatment plant, the raw wastewater characteristics should be described. This information is recorded on the Wastewater Treatment Plant Operating Record, NAVFAC Form 11340/1. Also, some of the raw wastewater charateristics are reported as required by the NPDES permit. The NPDES permit data and the Operating Record data should be reviewed and a range of the raw wastewater characteristics should be defined. The following provides a typical composition of a raw domestic wastewater:

Constituent	Concentration (mg/1 unless specified) Weak	Medium	Strong
Biochemical Oxygen Demand, 5 day at 20 degrees C	110	220	400
Chemical Oxygen Demand	250	500	1,000
Total Dissolved Solids	250	500	850
Suspended Solids	100	220	350
Settleable Solids (mg/1)	5	10	20

(4) NPDES permitted subject areas - general description: The Environmental Protection Agency issues a NPDES permit to authorize the discharge of treated and sometimes untreated wastewater to a receiving water. In some states, a state permit may replace or may be in addition to the NPDES permit. A copy of these permits should be obtained from the Utilities Supervisor or Environmental Coordinator of the activity.

Some NPDES permits have other discharge requirements (usually identified under Part III) not relating to the wastewater collection system or treatment plant. These other discharge requirements should be excluded from the specifications.

The permit normally specifies the following:

a. which facilities are authorized to discharge,

b. the receiving waters,

c. the effective and expiration dates,

d. the effluent limitations and monitoring requirements,

e. a schedule of compliance,

f. monitoring and reporting requirements,

g. management requirements,

h. responsibilities,

i. and, sometimes, other requirements. These requirements should not be included in the specification as discussed in the previous paragraph.

After reviewing the permit(s), the appropriate requirements should be summarized in the specification. The following provides a typical example for effluent quality requirements of a wastewater treatment plant:

Parameter	Discharge Limits			
	Kg/day (lbs/day)		Other Units	
	Monthly Ave.	Weekly Ave.	Monthly Ave.	Weekly Ave.
Flow, cubic meters/day (MGD)	7,570 (2.00)			
Biochemical Oxygen Demand, 5 day at 20 degrees C (BOD-5)	227(500)	340(750)	30 mg/l	45 mg/l
Suspended Solids (SS)	227(500)	340(750)	30 mg/l	45 mg/l
Fecal Coliform Bacteria, Geometric Mean			200/100 ml	400/100 ml
Dissolved Oxygen			5.0 mg/l	

pH shall not be less than 6.0 nor more than 9.0 standard units. There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent shall not cause a visible sheen on the receiving water.

The monthly average effluent BOD-5 and SS concentrations shall not exceed 10 percent of the respective monthly average influent concentrations.

Chlorine residual shall be maintained at 0.5 mg/l continuous.

The following provides a typical example for effluent quality requirements of an industrial wastewater treatment plant:

Parameter	Discharge Limits			
	Kg/day (lbs/day)		Other Units	
	Daily Ave.	Daily Max.	Daily Ave.	Daily Max.
Chemical Oxygen Day	N/A	946 (2,085)	N/A	125 mg/l
Oil and Grease	N/A	113 (250)	N/A	15 mg/l
Cyanide	N/A	0.15 (0.33)	N/A	0.02 mg/l
Phenol	N/A	1.51 (3.34)	N/A	0.20 mg/l
Chromium (Total)	N/A	0.38 (0.83)	N/A	0.05 mg/l
Copper	N/A	3.78 (8.34)	N/A	0.50 mg/l
Cadmium	N/A	0.38 (0.83)	N/A	0.05 mg/l
Zinc	N/A	7.6 (16.7)	N/A	1.0 mg/l
Iron	N/A	2.27 (5.00)	N/A	0.30 mg/l
Detergents	N/A	3.78 (8.34)	N/A	0.50 mg/l
Nickel	N/A	1.51 (3.34)	N/A	0.20 mg/l
Lead	N/A	0.38 (0.83)	N/A	0.05 mg/l
Total Kjedahl Nitrogen	N/A	22.7 (50.0)	N/A	3.0 mg/l
Total Phosphorous	N/A	22.7 (50.0)	N/A	3.0 mg/l

Depending on the type of plant, its components, and the receiving water, there may be greater or fewer parameters and they may be more or less stringent.

The permit(s) prescribes the monitoring requirements (measurement frequency, sample type, and sampling point) for each parameter. These requirements will be the minimum monitoring requirements. The specification writer will also have to review the plant's operation and maintenance manual to specify the monitoring requirements prescribed in the manual to ensure adequate operation of the plant. Additionally, the monitoring requirements on NAVFAC Form 11340/1 (Rev. 7-81), Wastewater Treatment Plant Operating Record, which apply to the plant shall be included in the specification.

The permit indicates the reporting procedures for the monitoring results. Usually the permit requires the results to be forwarded to the regulatory agencies on a quarterly basis. The Contractor should also be required to complete NAVFAC Form 11340/1(Rev. 7-81) and submit it monthly to the QAE.

The specification will generally require the Contractor to comply with all requirements and procedures of the permit. The specification may also place operation and management requirements and responsibilities upon the Contractor which may be similar to the permit requirements. The Specification Writer shall ensure there is no conflict between the permit and the specification, except that the specification can have stricter requirements than the permit to meet the activity's requirements of having cost effective and environmentally acceptable operation and maintenance of the wastewater treatment plant.

ATTENTION: Care should be taken in cases where the activity has experienced repeated problems in meeting regulatory permit requirements for plant operations due to design/equipment deficiencies or improper/excessive plant loadings (not to be confused with poor operational practices and operator errors). In such cases, the Contractor cannot be required to meet permit restraints when the activity has not been able to meet the same regulatory restraints in the past. Therefore, when a plant exhibits a history of such poor perfomance, the Specification Writer and Quality Assurance Evaluator should recognize that such instances of non-compliance are not necessarily indicative of poor Contractor performance and the usual actions of payment deductions and discrepancy reporting may not be appropriate.

C. Potential Problem Areas. It is recognized that an all-inclusive work specification package cannot be offered to each individual activity through a general performance work statement such as this. It is the intent, therefore, to provide a general model with guidelines directed to the Specification Writer and to rely on the Specification Writer to prepare a specific document individualized to meet his activity demands. This very nature of specification development plus the subject matter involved allow the below listed potential problem areas to develop, thus necessitating special examination by the Specification Writer.

(1) Inclusion of Unique Activity Functions. Those functions or services which are highly individualistic or unique to an activity should be denoted within the specification and not omitted for the Contractor to discover after contract award. Such omissions could cause low bid submittals and possibly the necessity for contract change orders. For example, if effluent land application is specified as a Contractor responsibility, then all associated major supportive functions such as pump/well maintenance, ground water monitoring, and supportive laboratory analyses should also be specified, if within contract scope.

10. MINIMUM WAGE RATES AND OTHER LABOR STANDARDS.

a. The minimum wages required to be paid for work under this specification (SELECT ONE OF THE FOLLOWING) "are attached" (identified by decision no. and date)", "have been requested from the Department of Labor and will be issued by amendment upon receipt".

b. Fair Labor Standards Act: (FLSA - May 1974). Notwithstanding any other provision of this contract, mimimum wage payment shall be as specified by P.L. 93-259 or the Service Contract Act Wage Determination, if any, whichever is greater.

11. SERVICE CONTRACT ACT - SUPPLEMENTAL INFORMATION AND REQUIREMENTS. Bidders are advised that this procurement is subject to the requirements of the Service Contract Act, as amended by P.L. 92-473 9 October 1972, and attention is invited to the obligations of the contractor under Section 4.C of the amended Service Contract Act. Any questions regarding the extent of these obligations should be addressed to the Department of Labor.

a. The Contractor agrees to provide to the OIC, upon request, a copy of any collective bargaining agreement applicable to employees performing on this contract.

b. Section 2(a)(5) of the Service Contract Act of 1965, as amended, requires that every contract (and bid specification therefore) subject to the Act contain a statement of the rates that would be paid by the Federal Agency to the various classes of service employees if 5 U.S.C. 5341 were applicable to them. The required statement follows and is for information only:

1. FRINGE BENEFITS (All classifications):

(a) Health and insurance - contribution of 5.1% of basic hourly rate
(b) Retirement - contribution of 7% of basic hourly rate
(c) Nine (9) paid holidays: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.
(d) Paid annual leave (vacation): Two (2) hours of annual leave each week for an employee with less than three (3) years of service; three (3) hours of annual leave each week for an employee with three (3) but less than fifteen (15) years of service; four (4) hours of annual leave each week for an employee with fifteen (15) or more years of service.

(2) BASIC HOURLY RATE BY CLASSIFICATION:
(Insert appropriate data.)

CLASSIFICATION	BASIC HOURLY RATE
_____	_____
_____	_____
_____	_____

12. NOTICE OF CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM. Offerors are advised that this contract includes a provision delineating the consequences of Contractor's failure to perform the services, as specified. See "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004.

13. PRECEPT TO BIDDERS.. Invitation, Bid and Award, NAVFAC 4330/24/(12/73) and Section 00002, Instructions to Bidders, shall be observed in the preparation of bids. Bidders shall affix their name and return address in the upper left corner of the envelope.

14. TELEGRAPHIC MODIFICATIONS OR WITHDRAWAL OF BIDS. In accordance with the "LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWAL OF BIDS" Clause, Section 00002 telegraphic modifications or withdrawal of bids may be made. Telegraphic modifications or withdrawal of bids should be identified as follows:

"Telegraphic modification of bid of (Insert title and contract number), Specification No. (Insert specification number) and forwarded immediately to the office to which the written bids were submitted.

15. REFERENCE TO AMENDMENT. Each bidder shall refer in his bid to all amendments to this solicitation in accordance with the "ACKNOWLEDGEMENT OF AMENDMENTS TO SOLICITATIONS" Clause, Section 00002 of this contract: failure to do so may constitute an informality in the bid and be cause for rejection of the bid.

16. AVAILABILITY OF SPECIFICATIONS, STANDARDS AND DESCRIPTIONS (1977 Jun)

Specifications, standards and descriptions cited in this solicitation are available as indicated below:

(a) Unclassified Federal, Military and Other Specifications and Standards (Excluding Commercial), and Data Item Descriptions. Submit request on DD Form 1425 (Specifications and Standards Requisition) to:

Commanding Officer
U. S. Naval Publications and Forms Center
5802 Tabor Avenue
Philadelphia, Pa. 19120

The Acquisition Management Systems and Data Requirements Control List, DoD Directive 5000.19-L, Volume II, may be ordered on the DD Form 1425. The Department of Defense Index of Specifications and Standards (DODISS) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington D.D. 20402. When requesting a specification or standard, the request shall indicate the title, number, date and any applicable amendment thereto by number and date. When requesting a data item description, the request shall cite the applicable data item number set forth in the solicitaion. When DD Form 1425 is not available, the request may be submitted in letter form, giving the same information as listed above, and the solicitation or contract number involved. Such request may also be to the activity by telex number 334295, Western Union No. 710-570-1535, or Telephone Number (Area Code 215-697-3321) in case of urgency.

(b) Commercial Specifications, Standards and Descriptions. These specification standards and descriptions are not available from Government sources. They may be obtained from the publisher.

(c) SINGLE COPIES OF FEDERAL SPECIFICATIONS AND STANDARDS are available as specified in paragraph (a) above and in addition are available from the General Services Administration. Request should be addressed to the nearest Capital Regional Director of Business Affairs. The three West Coast offices are as follows:

Regional Director of Public Services
General Services Adminstration
525 Market Street
San Francisco, CA 94105
Telephone Number (415-556-2114)

Business Service Center
General Services Administration
300 N. Los Angeles Street, Rm. 1004
Los Angeles, CA 90012
Telephone Number (213-688-3210)

Business Service Center
General Services Administration
440 Federal Building
915 Second Avenue
Seattle, WA 98174
Telephone Number (206-442-3336)

(d) AVAILABILITY FOR EXAMINATION OF SPECIFICATIONS, STANDARDS, PLANS, DRAWINGS, DATA ITEM DESCRIPTIONS, AND OTHER PERTINENT DOCUMENTS.

The Specifications, Standards, Plans, Drawings, Descriptions and other pertinent documents cited in ths solicitation may be examined at the following location:

_____
_____
_____

!**********
NOTICE TO SPECIFICATION WRITER: The dollar amount of insurance coverage shown below is for illustrative purposes only. Minimum insurance requirements depend on specific functional considerations. A Contract Specialist should be consulted to determine appropriate insurance coverage.
**********!

17. INSURANCE. Within fifteen days after the award of this contract, the Contractor shall furnish the OIC a certificate of insurance as evidence of the existence of the following insurance coverage in amounts not less than the amounts specified below in accordance with the "INSURANCE" Clause, Section 00003.

COVERAGE			
	PER PERSON	PER ACCIDENT	PROPERTY
Comprehensive General Liability	$300,000	$1,000,000	$100,000
Automobile Liability	$300,000	$1,000,000	$100,000
Workman's Compensation		AS REQUIRED BY STATE LAW	
(Other as required by State Law)			

The Certificate of Insurance shall further provide for thirty day's written notice to the OIC by the Insurance company prior to cancellation or material change in policy coverage. Other requiremnts and information are contained in the aforementioned "Insurance Clause".

!**********
NOTE TO SPECIFICATION WRITER: Item of Bid is to be inserted as Clause 17 of Section 00001 in accordance with P-68, section 4-201.1. The item of bid inserted here is to be exactly duplicated on the face of NAVFAC 4330/24(12-73) Invitation, Bid, and Award Maintenance Service Contract. Clause 18 has been written to reflect a fixed-price lump sum specification. This approach has been taken since the contractor will be made responsible for all repairs under $4,000. If a higher limit is used, Davis-Bacon considerations will be applicable which may require use of a combination Lump Sum Indefinite Quantity contract. For inclusion of other contract types, the contract specialist should be consulted. Clause 18 is also written to require Pre-Priced Options for solicitation under the Commercial Activities Program. If Pre-Priced Options are not required, delete all references and "Schedule of Indefinite Quantity Work" for First and Second Year Option periods.
**********!

18. ITEMS OF BID. Bids shall be submitted in duplicate on NAVFAC 4330/24(12/73) upon the following item:

Bid Item 1. Price for the performance of work for the Base Year in accordance with the specification.

Total price for bid item 1..... $_____

Bid Item 2. Price for the performance of work for the First Option Year in accordance with the specification.

Total price for bid item 2..... $_____

Bid Item 3. Price for performance of work the Second Option Year in accordance with the specification.

Total price for bid item 3..... $_____

EVALUATION OF BIDS. The low bidder for purposes of Cost Comparison (see "Notice of Cost Comparison" clause, Section 00001) shall be the conforming responsible bidder offering the low aggregate sum of the total bid prices for Bid Item 1, 2, and 3. Pending the result of the Cost Comparison, Bid Item 1 only will be awarded. The bidder shall not include in the bid price any contingency or allowance for wage adjustments due to a revised wage rate determination. Notwithstanding the provisions of the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003, concerning extension of the ontract at the same price, the ontract will be extended at the prices contained in the Items of Bid for the option years.

!**********
NOTE TO SPECIFICATION WRITER: Clause 19 has been written for a Fixed-Price lump sum contract. If another contract type is used, consult the contract specialist for assistance.
**********!

19. CONTRACT TYPE. This is a "fixed-price lump sum" contract awarded on a lump sum basis. Perforamance of work is not subject to price adjustment unless work is accomplished pursuant to the "CHANGES" Clause, Section 00003. Past historical data for this work is indicated in Appendix "B".

20. PRE-AWARD SURVEY. The Government may make a pre-award survey of the low conforming bidder to determine whether such bidder is qualified and capable to perform the contract. The pre-award survey will involve examination of the bidder's financial and technical status and its understanding of the contract requirements.

The following are examples of the type of information that, upon request, the bidder shall be prepared to provide in writing to the pre-award survey team. Requested information shall be forwarded within three days of such a request:

(a) Identification of the Contractor's personnel and management to be used on this contract.

(b) The Contractor's technical and management plans for performing the required services.

(c) Description of Contractor's facilities and equipment.

(d) Summary of the Contractor's experience in performing work of the type required by this specification.

(e) Current financial statements and data.

(f) Other work presently under contract.

(g) Prior contracts for similar work, and the names and addresses of individuals with the organization issuing the contract who may be contacted for information concerning the contractor's performance.

The failure to provide requested information, or a determination, after review of the information, of the bidder's non-responsibility, may result in bid rejection.

!**********!

NOTICE TO THE SPECIFICATION WRITER: See NAVFC P-68 Sections 4-204.1; 4-204.3; 4-204.5. Bid Guarantee will be required in all contracts where the EFD has authorized the use of payment and performance bonds. Justification for any such requirements must be fully documented and maintained in the official contract files. If Payment and Performance Bonds are not approved for use, Clause 20 and 21 are to be eliminated and subsequent clauses renumbered.

**********!

21. NOTICE OF BID GUARANTEE. A bid guarantee is required by this invitation for bids. Failure to furnish a bid guarantee in the proper form and amount by the time set for opening of bids, may be cause for rejection of the bid.

a. A bid guarantee shall be in the form of a firm commitment, such as a bid bond, postal money order, certified check, cashier's check, irrevocable letter of credit or in accordance with Treasury Department regulations certain bonds or notes of the United States. Bid guarantees, other than bid bonds, will be returned (a) to unsuccessful bidders as soon as practicable after the opening of bids, and/or (b) to the successful bidder upon execution of such further contractual documents and bonds as may be required by the bids as accepted.

b. If the successful bidder, upon acceptance of his bid by the Government within the period specified therein for acceptance (sixty days if no period is specified) fails to execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the bid as accepted within the time specified (ten days if no period is specified) after receipt of the forms by him, his contract may be terminated for default. In such event he shall be liable for any cost of procuring the work which exceeds the amount of his bid, and the bid guaranted shall be available toward offsetting such difference.

22. NOTICE OF PAYMENT AND PERFORMANCE BOND REQUIREMENTS. Within 10 days after the prescribed forms are presented to him for signature, the bidder to whom the award is made shall enter into a written contract on the form prescribed by the specification and shall furnish two bonds each with satisfactory security; namely, a performance bond (Standard Form 25) and a payment bond (DD Form 1673). The performance bond shall be in a penal sum equal to 100 percent of the contract price. The payment bond shall be equal to 50 percent of the contract price, except that it shall be 40 percent of the contract price if that price is more than $1,000,000 and not more than $5,000,000, and in the fixed sum of $2,500,000 if the contract price is more than $5,000,000. The bond of any surety company holding a certificate of authority from the Secretary of Treasury as an acceptable surety on Federal bonds will be accepted. Individual sureties will be acceptable if each such surety deposits with the OIC cash, bonds, or notes of the United States, or certified check drawn to the order of the Treasurer of the United State, or such other security as the OIC may deem necessary for the required amount of

the guaranty, under the agreement that the collateral so deposited shall remain in the possession and control of the Treasurer of the Unted States for at least one year after the completion of the contract. The contract time for purposes of fixing the completion date, default, and liquidated damages shall begin to run five days from the mailing of acceptance, regardless of when the formal contract and bonds are executed.

!**********
NOTE TO SPECIFICATION WRITER: If this contract is to be awarded using the Firm Bid/Offer Procedure required by OMB Circular A-76, Commercial/Industrial Program, then the following two clauses are required. See DAR 4-1200.4 for further information.
**********!

23. RIGHT OF FIRST REFUSAL FOR EMPLOYMENT OPENINGS (May 1980).
Consistent with Government post employment conflict of interest standards, the contractor shall give Government employees, displaced as a result of the conversion to contract performance, the right of first refusal for employment openings on the contract in positions for which they are qualified.

24. NOTICE OF COST COMPARISON (ADVERTISED) (MAY 1980).

a. Bidders are notified that this solicitation is a part of a cost comparison to determine whether accomplishing the specified work in-house or by contract is more economical.

b. The Government's in-house cost estimate shall be based on the statement of work set forth in this solicitation and shall be submitted to the Contracting Officer in a sealed envelope no later than the time set for bid opening. At the time of the bid opening, the bids and the sealed Government in-house estimate will be opened and the results announced. This announcement is based upon an inital comparison of the cost of in-house performance with the cost of contracting out as indicated on the cost comparison form. The abstract of bids, the completed cost comparison form and detailed supporting data relative to the in-house cost estimate shall be made available to interested parties for review.

c. A period of (insert number of working days, see DAR 4-1200) working days will be provided for public review by interested parties of the cost comparison data. No final determination regarding the question of in-house or contractor performance will be made during this review period. Interested parties may file written requests, based on specific objections, for review of the cost comparison results with the Contracting Officer during this period. This review shall ony be used to resolve questions covering the calculation of the cost comparison, and shall not apply to decisions regarding selection of one bidder in preference to another. Decisions with regard to such requests are final.

d. After evaluation of bids, and resolution of requests for review, if any, the Contracting Officer shall announce the results of the cost comparison and either award a contract or cancel the solicitation. The completed cost comparison analysis shall be made available to interested parties.

e. In accordance with provisions of the "LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWAL OF BIDS" Clause, Section 00002 a late modification which displaces the otherwise low in-house cost estimate shall not be considered. An otherwise low in-house cost estimate is considered a successful bid and cannot be displaced by a late modification within subparagraph (d) of that clause.

!**********!
NOTE TO SPECIFICATION WRITER: Add the following clause 24(1) or 24(2) if applicable. See NAVFAC P-68 Section 9-202.
!**********!

25(1). AVAILABILITY OF FUNDS. Funds are not presently available for this procurement. The Government's obligation hereunder is contingent upon the availability of appropriate funds from which payment for the contract purposes can be made. No legal liability on the part of the Government for payment of any money shall rise unless and until funds are made available to the OIC for this procurement and notice of such availability to be confirmed in writing by the OIC, is given to the Contractor.

25(2). AVAILABILITY OF FUNDS FOR NEXT FISCAL YEAR. Funds are not presently available for performance under this contract beyond (insert date). The Government's obligation for performance of this contract beyond this date is contigent upon the availability of appropriated funds from which payment for the contract purposes can be made. No legal liability on the part of the Government for payment of any money for performance under this contract beyond (insert date) shall arise unless and until funds are made available to the OIC for such performance and notice of such availability, to be confirmed in writing by the OIC, is given to the Contractor.

!**********!
NOTE TO SPECIFICATION WRITER: Add the following clause if applicable see NAVFAC P-68, Section 4-306.
!**********!

26. PRE-BID CONFERENCE. A pre-bid conference will be held at (insert location) on (insert date) and (insert time). The purpose of the conference is to provide bidders an opportunity to attend a briefing on work to be contracted out and to submit written questions concerning the requirements of this IFB.

END OF SECTION 00001

WATER PLANTS AND SYSTEMS (FUNCTION S-72Z)

SECTION 00004 SPECIAL PARAGRAPHS

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18. ITEMS OF BID. Bids shall be submitted in duplicate on NAVFAC 4330/24(12-73) upon the following item:

Bid Item 1. Price for performance of work for the Base Year in accordance with the specification. The price for bid item 1 should be obtained by the bidder entering the proposed unit price for each work item listed in the "SCHEDULE OF DEDUCTIONS" Clause, Section 00004; multiplying it by the estimated quantity; and entering the mathematical extension in the item total column. The price for bid item 1 is the total of all item totals listed in the Schedule of Deductions. BIDDERS ARE NOT TO SUBMIT A COMPLETED SCHEDULE OF DEDUCTIONS WITH THEIR BIDS.

Total price for bid item 1..... $_____

Bid Item 2. Price for performance of work for the First Option Year in accordance with the specification. The price for bid item 2 should be obtained by the bidder entering the proposed unit price for each work item listed in the "SCHEDULE OF DEDUCTIONS" Clause, Section 00004; multiplying it by the estimated quantity; and entering the mathematical extension in the item total column. The price for bid item 2 is the total of all item totals listed in the Schedule of Deductions. BIDDERS ARE NOT TO SUBMIT A COMPLETED SCHEDULE OF DEDUCTIONS WITH THEIR BIDS.

Total price for bid item 2..... $_____

Bid Item 3. Price for performance of work for the Second Option Year in accordance with the specification. The price for bid item 3 should be obtained by the bidder entering the proposed unit price for each work item listed in the "SCHEDULE OF DEDUCTIONS" Clause, Section 00004; multiplying it by the estimated quantity; and entering the mathematical extension in the item total column. The price for bid item 3 is the total of all item totals listed in the Schedule of Deductions. BIDDERS ARE NOT TO SUBMIT A COMPLETED SCHEDULE OF DEDUCTIONS WITH THEIR BIDS.

Total price for bid item 3..... $_____

EVALUATION OF BIDS. The low bidder for purposes of Cost Comparison (see "Notice of Cost Comparison" Clause, Section 00001) shall be the conforming responsible bidder offering the low aggregate sum of the total bid prices for Bid Item 1, 2, and 3. Pending the result of the Cost Comparison, Bid Item 1 only will be awarded. The bidder shall not include in the bid price any contingency or allowance for wage adjustments due to a revised wage rate determination. Notwithstanding the provisions of the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003, concerning the extension of the contract at the same price, the contract will be extended at the prices contained in the Items of Bid for the option years.

WATER PLANTS AND SYSTEMS (WP&S)
(FUNCTION S-727)
SECTION 00001 BIDDING INFORMATION

1. GENERAL INTENTION. It is the declared and acknowledged intention and meaning to obtain, by means of a (_Specify Contract Type_) contract, the operations, maintenance and repairs of the water treatment plant and distribution system in accordance with the standards contained herein.

2. GENERAL DESCRIPTION. The Contractor shall furnish all labor, materials, equipment, transportation, facilities, utilities, supervision, and management, unless otherwise specified herein, required for the operation and maintenance of the water supply treatment and distribution system which consists of:

a._ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
b._ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
c._ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

3. LOCATION. The work shall be located at the (insert name of activity). The exact location(s) will be indicated by the Officer in Charge (OIC)

!**
* NOTE TO SPECIFICATION WRITER: Select clause 4(1), 4(2), or 4(3) as *
* required depending on the number of option years desired (see P-68 *
* 9-103). In blank, insert one of the following: *
* a. Contract start date and hour *
* b. Statement to read: "_____days after date of *
* notice of award" *
**!

4. 4(1). TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 is to be deleted in its entirety.

4(2) TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The Government has the option to extend the contract for an additional (or second) year in accordance with the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 of this contract.

4(3). TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The Government has the option to extend the contract for an additional (or second) year and an option to extend for a further (or third) year in accordance with the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 of this contract.

5. DISCOUNT LIMITATIONS. Prompt payment discounts shall not be considered in the evaluation of offers. However, any discount offered will form a part of the award, and will be taken by the payment center if payment is made within the discount period specified by the offeror. As an alternative to indicating

a discount in conjunction with the offer, offerors may prefer to offer discounts on individual invoices. This clause modifies the "Discounts" clause of Section 00002 "Instruction to Bidders" (12-81) of this solicitation.

6. DRAWINGS ACCOMPANYING SPECIFICATION. (Provide drawing(s), schematic(s) identification, or specifically state "NONE". Use NAVFAC numbers as appropriate). See Section 00005, Appendix A.

7. EXAMINATION OF PREMISES. Bidders are expected to satisfy themselves as to the general and local conditions that may affect the cost of the performance of the work to the extent that such information is reasonably obtainable. It is considered impracticable to determine, without inspection, the exact nature of the work and site conditions under which the work is to be performed. Arrangements to visit the site are scheduled as follows: !(Indicate hours and days the site of work will be available to potential bidders. Indicate contact point for scheduling visits to job site.)!

!**********
NOTE TO THE SPECIFICATION WRITER: Determination as to Total Set-Aside for Small Business concerns will be made in accordance with the provisions of DAR 1-706.5 and NAVFAC P-68 section 4.219. The contract file shall be documented, in writing, to support the determination.
**********!

8. NOTICE OF TOTAL SMALL BUSINESS SET ASIDE:

a. Restriction. Offers under this procurement are solicited from small business concerns only and this procurement is to be awarded only to one or more small business concerns. This action is based on a determination by the OIC, alone or in conjunction with a representative of the Small Business Administration that it is in the interest of maintaining or mobilizing the Nation's full productive capacity, in the interest of war or national defense programs, or in the interest of assuring that a fair proportion of Government procurement is placed with small business concerns. Offers received from firms which are not small business concerns shall be considered non-responsive and shall be rejected.

b. Definition: A "small business concern" is a concern, including its affiliates, which is independently owned and operated, it is not dominant in the field of operation in which it is offering on Government contracts, and can further qualify under the criteria set forth in regulations of the Small Business Administration (Code of Federal Regulations, Title 13, Section 121.3-8). In addition to meeting these criteria, a manufacturer or a regular dealer submitting offers in his own name must agree to furnish in the performance of the contract end items manufactured or produced by small business concerns: Provided that this additional requirement does not apply in connection with construction or service contracts.

9. DEFINITION OF SMALL BUSINESS. For this procurement, a small business concern is a concern that is certified as a small business concern by the Small Business Administration and, in the (insert name of industry see DAR 1.701.1) service industries, the average annual receipts of the concern and its affiliates for the preceding three fiscal years must not exceed (see DAR 1.701.1).

10. MINIMUM WAGE RATES AND OTHER LABOR STANDARDS.

a. The minimum wages required to be paid for work under this specification (SELECT ONE OF THE FOLLOWING) "are attached" (identified by decision no. and date)", "have been requested from the Department of Labor and will be issued by amendment upon receipt".

b. Fair Labor Standards Act: (FLSA - May 1974). Notwithstanding any other provision of this contract, mimimum wage payment shall be as specified by P.L. 93-259 or the Service Contract Act Wage Determination, if any, whichever is greater.

11. SERVICE CONTRACT ACT - SUPPLEMENTAL INFORMATION AND REQUIREMENTS. Bidders are advised that this procurement is subject to the requirements of the Service Contract Act, as amended by P.L. 92-473 9 October 1972, and attention is invited to the obligations of the contractor under Section 4.C of the amended Service Contract Act. Any questions regarding the extent of these obligations should be addressed to the Department of Labor.

a. The Contractor agrees to provide to the OIC, upon request, a copy of any collective bargaining agreement applicable to employees performing on this contract.

b. Section 2(a)(5) of the Service Contract Act of 1965, as amended, requires that every contract (and bid specification therefore) subject to the Act contain a statement of the rates that would be paid by the Federal Agency to the various classes of service employees if 5 U.S.C. 5341 were applicable to them. The required statement follows and is for information only:

1. FRINGE BENEFITS (All classifications):

(a) Health and insurance - contribution of 5.1% of basic hourly rate
(b) Retirement - contribution of 7% of basic hourly rate
(c) Nine (9) paid holidays: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.
(d) Paid annual leave (vacation): Two (2) hours of annual leave each week for an employee with less than three (3) years of service; three (3) hours of annual leave each week for an employee with three (3) but less than fifteen (15) years of service; four (4) hours of annual leave each week for an employee with fifteen (15) or more years of service.

(2) BASIC HOURLY RATE BY CLASSIFICATION:
(Insert appropriate data.)

CLASSIFICATION	BASIC HOURLY RATE
_____	_____
_____	_____
_____	_____

12. NOTICE OF CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM. Offerors are advised that this contract includes a provision delineating the consequences of Contractor's failure to perform the services, as specified. See "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004.

13. PRECEPT TO BIDDERS.. Invitation, Bid and Award, NAVFAC 4330/24/(12/73) and Section 00002, Instructions to Bidders, shall be observed in the preparation of bids. Bidders shall affix their name and return address in the upper left corner of the envelope.

14. TELEGRAPHIC MODIFICATIONS OR WITHDRAWAL OF BIDS. In accordance with the "LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWAL OF BIDS" Clause, Section 00002 telegraphic modifications or withdrawal of bids may be made. Telegraphic modifications or withdrawal of bids should be identified as follows:

"Telegraphic modification of bid of (Insert title and contract number), Specification No. (Insert specification number) and forwarded immediately to the office to which the written bids were submitted.

15. REFERENCE TO AMENDMENT. Each bidder shall refer in his bid to all amendments to this solicitation in accordance with the "ACKNOWLEDGEMENT OF AMENDMENTS TO SOLICITATIONS" Clause, Section 00002 of this contract: failure to do so may constitute an informality in the bid and be cause for rejection of the bid.

16. AVAILABILITY OF SPECIFICATIONS, STANDARDS AND DESCRIPTIONS (1977 Jun)

Specifications, standards and descriptions cited in this solicitation are available as indicated below:

(a) Unclassified Federal, Military and Other Specifications and Standards (Excluding Commercial), and Data Item Descriptions. Submit request on DD Form 1425 (Specifications and Standards Requisition) to:

Commanding Officer
U. S. Naval Publications and Forms Center
5802 Tabor Avenue
Philadelphia, Pa. 19120

The Acquisition Management Systems and Data Requirements Control List, DoD Directive 5000.19-L, Volume II, may be ordered on the DD Form 1425. The Department of Defense Index of Specifications and Standards (DODISS) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington D.D. 20402. When requesting a specification or standard, the request shall indicate the title, number, date and any applicable amendment thereto by number and date. When requesting a data item description, the request shall cite the applicable data item number set forth in the solicitaion. When DD Form 1425 is not available, the request may be submitted in letter form, giving the same information as listed above, and the solicitation or contract number involved. Such request may also be to the activity by telex number 334295, Western Union No. 710-570-1535, or Telephone Number (Area Code 215-697-3321) in case of urgency.

(b) Commercial Specifications, Standards and Descriptions. These specification standards and descriptions are not available from Government sources. They may be obtained from the publisher.

(c) SINGLE COPIES OF FEDERAL SPECIFICATIONS AND STANDARDS are available as specified in paragraph (a) above and in addition are available from the General Services Administration. Request should be addressed to the nearest Capital Regional Director of Business Affairs. The three West Coast offices are as follows:

Regional Director of Public Services
General Services Adminstration
525 Market Street
San Francisco, CA 94105
Telephone Number (415-556-2114)

Business Service Center
General Services Administration
300 N. Los Angeles Street, Rm. 1004
Los Angeles, CA 90012
Telephone Number (213-688-3210)

Business Service Center
General Services Administration
440 Federal Building
915 Second Avenue
Seattle, WA 98174
Telephone Number (206-442-3336)

(d) AVAILABILITY FOR EXAMINATION OF SPECIFICATIONS, STANDARDS, PLANS, DRAWINGS, DATA ITEM DESCRIPTIONS, AND OTHER PERTINENT DOCUMENTS.

The Specifications, Standards, Plans, Drawings, Descriptions and other pertinent documents cited in ths solicitation may be examined at the following location:

_____
_____
_____

!**********
NOTICE TO SPECIFICATION WRITER: The dollar amount of insurance coverage shown below is for illustrative purposes only. Minimum insurance requirements depend on specific functional considerations. A Contract Specialist should be consulted to determine appropriate insurance coverage.
**********!

17. INSURANCE. Within fifteen days after the award of this contract, the Contractor shall furnish the OIC a certificate of insurance as evidence of the existence of the following insurance coverage in amounts not less than the amounts specified below in accordance with the "INSURANCE" Clause, Section 00003.

	COVERAGE		
	PER PERSON	PER ACCIDENT	PROPERTY
Comprehensive General Liability	$300,000	$1,000,000	$100,000
Automobile Liability	$300,000	$1,000,000	$100,000
Workman's Compensation	AS REQUIRED BY STATE LAW		
(Other as required by State Law)			

The Certificate of Insurance shall further provide for thirty day's written notice to the OIC by the Insurance company prior to cancellation or material change in policy coverage. Other requiremnts and information are contained in the aforementioned "Insurance Clause".

!**********

NOTE TO SPECIFICATION WRITER: Item of Bid is to be inserted as Clause 17 of Section 00001 in accordance with P-68, section 4-201.1. The item of bid inserted here is to be exactly duplicated on the face of NAVFAC 4330/24(12-73) Invitation, Bid, and Award Maintenance Service Contract. Clause 18 has been written to reflect a fixed-price lump sum specification. This approach has been taken since the contractor will be made responsible for all repairs under $4,000. If a higher limit is used, Davis-Bacon considerations will be applicable which may require use of a combination Lump Sum Indefinite Quantity contract. For inclusion of other contract types, the contract specialist should be consulted. Clause 18 is also written to require Pre-Priced Options for solicitation under the Commercial Activities Program. If Pre-Priced Options are not required, delete all references and "Schedule of Indefinite Quantity Work" for First and Second Year Option periods.

**********!

18. ITEMS OF BID. Bids shall be submitted in duplicate on NAVFAC 4330/24(12/73) upon the following item:

Bid Item 1. Price for the performance of work for the Base Year in accordance with the specification.

Total price for bid item 1..... $_____

Bid Item 2. Price for the performance of work for the First Option Year in accordance with the specification.

Total price for bid item 2..... $_____

Bid Item 3. Price for performance of work the Second Option Year in accordance with the specification.

Total price for bid item 3..... $_____

EVALUATION OF BIDS. The low bidder for purposes of Cost Comparison (see "Notice of Cost Comparison" clause, Section 00001) shall be the conforming responsible bidder offering the low aggregate sum of the total bid prices for Bid Item 1, 2, and 3. Pending the result of the Cost Comparison, Bid Item 1 only will be awarded. The bidder shall not include in the bid price any contingency or allowance for wage adjustments due to a revised wage rate determination. Notwithstanding the provisions of the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003, concerning extension of the ontract at the same price, the ontract will be extended at the prices contained in the Items of Bid for the option years.

!**********
NOTE TO SPECIFICATION WRITER: Clause 19 has been written for a Fixed-Price lump sum contract. If another contract type is used, consult the contract specialist for assistance.
**********!

19. CONTRACT TYPE. This is a "fixed-price lump sum" contract awarded on a lump sum basis. Performance of work is not subject to price adjustment unless work is accomplished pursuant to the "CHANGES" Clause, Section 00003. Past historical data for this work is indicated in Appendix "B".

20. PRE-AWARD SURVEY. The Government may make a pre-award survey of the low conforming bidder to determine whether such bidder is qualified and capable to perform the contract. The pre-award survey will involve examination of the bidder's financial and technical status and its understanding of the contract requirements.

The following are examples of the type of information that, upon request, the bidder shall be prepared to provide in writing to the pre-award survey team. Requested information shall be forwarded within three days of such a request:

(a) Identification of the Contractor's personnel and management to be used on this contract.

(b) The Contractor's technical and management plans for performing the required services.

(c) Description of Contractor's facilities and equipment.

(d) Summary of the Contractor's experience in performing work of the type required by this specification.

(e) Current financial statements and data.

(f) Other work presently under contract.

(g) Prior contracts for similar work, and the names and addresses of individuals with the organization issuing the contract who may be contacted for information concerning the contractor's performance.

The failure to provide requested information, or a determination, after review of the information, of the bidder's non-responsibility, may result in bid rejection.

!**********!

NOTICE TO THE SPECIFICATION WRITER: See NAVFC P-68 Sections 4-204.1; 4-204.3; 4-204.5. Bid Guarantee will be required in all contracts where the EFD has authorized the use of payment and performance bonds. Justification for any such requirements must be fully documented and maintained in the official contract files. If Payment and Performance Bonds are not approved for use, Clause 20 and 21 are to be eliminated and subsequent clauses renumbered.

**********!

21. NOTICE OF BID GUARANTEE. A bid guarantee is required by this invitation for bids. Failure to furnish a bid guarantee in the proper form and amount by the time set for opening of bids, may be cause for rejection of the bid.

a. A bid guarantee shall be in the form of a firm commitment, such as a bid bond, postal money order, certified check, cashier's check, irrevocable letter of credit or in accordance with Treasury Department regulations certain bonds or notes of the United States. Bid guarantees, other than bid bonds, will be returned (a) to unsuccessful bidders as soon as practicable after the opening of bids, and/or (b) to the successful bidder upon execution of such further contractual documents and bonds as may be required by the bids as accepted.

b. If the successful bidder, upon acceptance of his bid by the Government within the period specified therein for acceptance (sixty days if no period is specified) fails to execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the bid as accepted within the time specified (ten days if no period is specified) after receipt of the forms by him, his contract may be terminated for default. In such event he shall be liable for any cost of procuring the work which exceeds the amount of his bid, and the bid guaranted shall be available toward offsetting such difference.

22. NOTICE OF PAYMENT AND PERFORMANCE BOND REQUIREMENTS. Within 10 days after the prescribed forms are presented to him for signature, the bidder to whom the award is made shall enter into a written contract on the form prescribed by the specification and shall furnish two bonds each with satisfactory security; namely, a performance bond (Standard Form 25) and a payment bond (DD Form 1673). The performance bond shall be in a penal sum equal to 100 percent of the contract price. The payment bond shall be equal to 50 percent of the contract price, except that it shall be 40 percent of the contract price if that price is more than $1,000,000 and not more than $5,000,000, and in the fixed sum of $2,500,000 if the contract price is more than $5,000,000. The bond of any surety company holding a certificate of authority from the Secretary of Treasury as an acceptable surety on Federal bonds will be accepted. Individual sureties will be acceptable if each such surety deposits with the OIC cash, bonds, or notes of the United States, or certified check drawn to the order of the Treasurer of the United State, or such other security as the OIC may deem necessary for the required amount of

the guaranty, under the agreement that the collateral so deposited shall remain in the possession and control of the Treasurer of the Unted States for at least one year after the completion of the contract. The contract time for purposes of fixing the completion date, default, and liquidated damages shall begin to run five days from the mailing of acceptance, regardless of when the formal contract and bonds are executed.

****

NOTE TO SPECIFICATION WRITER: If this contract is to be awarded using the Firm Bid/Offer Procedure required by OMB Circular A-76, Commercial/Industrial Program, then the following two clauses are required. See DAR 4-1200.4 for further information.

****

23. RIGHT OF FIRST REFUSAL FOR EMPLOYMENT OPENINGS (May 1980).

Consistent with Government post employment conflict of interest standards, the Contractor shall give Government employees, displaced as a result of the conversion to contract performance, the right of first refusal for employment openings on the contract in positions for which they are qualified.

24. NOTICE OF COST COMPARISON (ADVERTISED) (MAY 1980).

a. Bidders are notified that this solicitation is a part of a cost comparison to determine whether accomplishing the specified work in-house or by contract is more economical.

b. The Government's in-house cost estimate shall be based on the statement of work set forth in this solicitation and shall be submitted to the Contracting Officer in a sealed envelope no later than the time set for bid opening. At the time of the bid opening, the bids and the sealed Government in-house estimate will be opened and the results announced. This announcement is based upon an inital comparison of the cost of in-house performance with the cost of contracting out as indicated on the cost comparison form. The abstract of bids, the completed cost comparison form and detailed supporting data relative to the in-house cost estimate shall be made available to interested parties for review.

c. A period of (insert number of working days, see DAR 4-1200) working days will be provided for public review by interested parties of the cost comparison data. No final determination regarding the question of in-house or contractor performance will be made during this review period. Interested parties may file written requests, based on specific objections, for review of the cost comparison results with the Contracting Officer during this period. This review shall ony be used to resolve questions covering the calculation of the cost comparison, and shall not apply to decisions regarding selection of the bidder in preference to another. Decisions with regard to such requests are final.

d. After evaluation of bids, and resolution of requests for review, if any, the Contracting Officer shall announce the results of the cost comparison and either award a contract or cancel the solicitation. The completed cost comparison analysis shall be made available to interested parties.

e. In accordance with provisions of the "LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWAL OF BIDS" Clause, Section 00002 a late modification which displaces the otherwise low in-house cost estimate shall not be considered. An otherwise low in-house cost estimate is considered a successful bid and cannot be displaced by a late modification within subparagraph (d) of that clause.

!**********!
NOTE TO SPECIFICATION WRITER: Add the following clause 24(1) or 24(2) if applicable. See NAVFAC P-68 Section 9-202.
!**********!

25(1). AVAILABILITY OF FUNDS. Funds are not presently available for this procurement. The Government's obligation hereunder is contingent upon the availability of appropriate funds from which payment for the contract purposes can be made. No legal liability on the part of the Government for payment of any money shall rise unless and until funds are made available to the OIC for this procurement and notice of such availability to be confirmed in writing by the OIC, is given to the Contractor.

25(2). AVAILABILITY OF FUNDS FOR NEXT FISCAL YEAR. Funds are not presently available for performance under this contract beyond (insert date). The Government's obligation for performance of this contract beyond this date is contigent upon the availability of appropriated funds from which payment for the contract purposes can be made. No legal liability on the part of the Government for payment of any money for performance under this contract beyond (insert date) shall arise unless and until funds are made available to the OIC for such performance and notice of such availability, to be confirmed in writing by the OIC, is given to the Contractor.

!**********!
NOTE TO SPECIFICATION WRITER: Add the following clause if applicable see NAVFAC P-68, Section 4-306.
!**********!

26. PRE-BID CONFERENCE. A pre-bid conference will be held at (insert location) on (insert date) and (insert time). The purpose of the conference is to provide bidders an opportunity to attend a briefing on work to be contracted out and to submit written questions concerning the requirements of this IFB.

END OF SECTION 00001

B. Function Definition - Water plants and systems functions can be defined in terms of measurable outputs based on which Contractor performance is evaluated. The Contractor is to provide all labor, transportation, equipment, materials, supplies, management, coordination, and supervision required to deliver these outputs. The Government should, as much as possible, avoid defining the Contractor's responsibility in terms of methods or procedures to be followed. Instead, the Government should rely on the contractor's expertise and contractual obligation to deliver an agreed upon output. The functions (outputs) to be delivered by the contractor pursuant to the Water Plants and Systems Standard PWS include the following:

1. Quantity of Water
2. Quality of Water
3. Treatment Plant Operating Records
4. Minimum Water Pressure at Specified System Endpoints
5. Water Supply and Distribution Operating Records
6. Maintenance (including preventive and/or corrective)
7. Maintenance Records
8. Custodial Services
9. Water Quality Sampling, Analysis and Reports

This standard list of deliverables can be modified as needed for application to a specific system. For instance, an output can be added regarding disposal of sludge in an acceptable manner, if that is a significant problem requiring operator attention. The list, however, generally covers adequately all the outputs which might be expected to result from the operation and maintenance of a water treatment plant and appurtenant supply distribution system. Careful definition and quantification to the extent possible of measurable outputs is extremely important because these outputs become the central theme and driving force behind the Specifications, the Schedule of Deductions, and the Quality Assurance Guide.

C. CA Inventory - Inventory of WPS functions, CA Code S-727, is prepared in accordance with OPNAVINST 4860.6C. All aspects of WPS functions are commercial in nature and therefore, not exempt from the CA (formerly CITA) program.

D. Use - The first step in tailoring a standard PWS to a specific case is for the User to become intimately familiar with the Standard PWS and its User's Guide. The User must know what is, and what is not, included in the standard PWS and what was intended before he can assess modifications required. The PWS is the instrument that lays out the functional and technical requirements and ultimately becomes part of a contract. The User's Guide provides the User information about the Standard PWS and provides instruction on how to tailor it. Users should not assume that standard PWS or PWS tailored by other users, can be "plugged" into their application with little or no effort. A detailed analysis of the activity's requirements is necessary. Most helpful would be an Operations and Maintenance Manual with suitable schematics.

In tailoring the standard PWS, the user should first determine what the desired contract outputs are for his activity. The job analysis procedure described in NAVFAC MO-327 "Service Contracts: Specifications and Surveillance" and this USER's GUIDE can be used as an aid in identifying outputs. If the activity's specific output requirements differ from those presented in the standard PWS, either in type or in quantity, the user will make appropriate changes in the PWS. Note that the Schedule of Deductions in Section 4 of the PWS contains a precise listing of all required outputs and would be a good place to begin making any necessary revisions.

E. Responsibilities - The following activity personnel should be involved in specification development:

(1) Specification Writer - The WPS specification is most properly prepared by an Engineer or Engineering Technician at the activity who has had some experience in writing Maintenance Service Contracts. The use of a Planner and Estimator (P&E) is also appropriate if experienced with writing Contract specifications. The writer, regardless of who he is, should have attended the Civil Engineer Corps Officers School (CECOS course on Service Contracts). Assistance/guidance may be requested from the EFD Code 10.

(2) Engineering - In preparing the Schedule of Deductions and/or the Schedule of Indefinite Quantity Work, if any, it is necessary to review all historical records for water plants operations and maintenance. This can be a tedious process if Engineering does not already have a layout and past performance records. If this information is not readily available, the Specification Writer must work with the customer to develop that data.

(3) Reviewers - The tailored PWS should be reviewed by the customer representatives, Engineering Director and Maintenance Control Director prior to submission to a Contract Specialist for processing. Consult EFD directives for those contracts which require review/approval by thwe EFD prior to solicitation.

(4) Contract Specialist - The Contract Specialist is the person responsible for contract preparation. This person will work with the writer in the preparation of sections 00001 and 00004. There are several actions required to be initiated by the Contract Specialist. This person should provide contractual guidance to the Specification Writer.

NOTE: All personnel must keep in mind that this specification is to be performance oriented. Rely on a statement of the required output as an end product.

INPUT-PROCESS-OUTPUT-MEASUREMENTS-STANDARDS

Reference: OFPP Pamphlet No. 4 (Oct. '80)

II. DEVELOPMENT:

A. Analysis. PWS development requires the identification of major contract outputs. Such a breakdown of the basic effort is depicted in paragraph IB, Function Definition. This is to be used as a guide.

B. Technical Specification. The Technical Specification (Section 00005) is a performance type specification. That is, the specification tells the Contractor what the desired service outputs are, but not how to perform the work.

III. TAILORING THE PWS:

A.(1) General - The NAVFAC standard PWS for WPS Services is not intended to fit the requirements of a specific activity, but rather, to serve as a model to be tailored by activities in preparing site specific PWS'S. In order to achieve the desired Performance Work Statement for a specific activity, it is important that the User collect and/or develop certain information. Some of this information, needed by potential Contractors to develop bids, will be included in the specification developed. Information gathered during the tailoring process will also play an important part in contract surveillance. The PWS tailoring process is described in the NAVFAC manual "Service Contracts: Specifications and surveillance."

A.(2) Tailoring Standard PWS Outputs - Standard PWS-WPS outputs are listed in paragraph IB and further defined in Section 4, last Clause, SCHEDULE OF DEDUCTIONS and Section 5, TECHNICAL SPECIFICATIONS. The following paragraphs describe procedures for specifying outputs in terms of the activity's specific needs:

a. Water Quantity - To determine the amount of water to be provided by the Contractor, the activity should consider the water demand and the plant design capacity. Water demand can be estimated from residential, administrative and commercial populations, irrigation needs, industrial use records and previous water influent and supply records. The specified output should be sufficient to cover demand, including peak seasonal use, but should not be in excess of design plant capacity. Quantity can be expressed in unit volume (most typical, Kgal) per unit period of time. The unit period of time can be a day, a week, a month or a year. The longer the time unit used, the more leeway the Contractor has to operate on a schedule of his own choosing. A shorter time unit gives the Government more control and the Contractor less flexibility. The activity should review past production records to determine whether a relatively steady demand exists on a day-to-day, week-to-week, or month-to-month basis, and select an appropriate time unit accordingly. The point of quantity measurement should be specified in the Contract. Ideally, flow will be monitored and integrated automatically on a continuous basis and the Government can rely on such records for output evaluation.

b. Water Quality - To determine water quality outputs to be delivered by the Contractor, the activity should review past treated and raw water quality records and applicable water quality regulations. The National Interim Primary Drinking Water Regulations (NIPDWR) pursuant to the Federal Clean Water Act are summarized in Table 1, Section 00004, last Clause, (SCHEDULE OF DEDUCTIONS) and in Appendix C to Section 00005 (TECHNICAL SPECIFICATIONS) of the Standard PWS. More or less stringent state and local regulations may apply to a specific activity. Other non-regulatory requirements such as chlorination, fluoridation and taste and odor control should also be considered. Prior to establishing a given standard as a contract mandated output, the activity should ensure that the plant is physically capable of producing water meeting that standard. The Contractor should not be tasked with meeting quality standards which can only be met through plant alterations or major process changes. The sampling locations and analytical processes to be used for Contractor performance evaluation should be specified in Appendix C of Section 00005 of the Contract. The reports to be produced by the Contractor (Output I.B.9) can be used to evaluate Contractor performance. Independent quality checks should be performed by the Government to verify reporting accuracy (See Quality Assurance Guide).

c. Treatment Plant Operating Record - NAVFAC 11340/2 (Rev 7-81) or an equivalent form is used to record operations at water treatment plants. A copy of NAVFAC 11340/2 is attached to this Guide as attachment 1. Daily, weekly, and monthly entries are required for various parameters including temperature, pH, quantity, turbidity, chemical usage, etc. The activity should specify the frequency required for each individual entry.

d. Minimum Water Pressure at Specified System End-points - System endpoints are points within or on the boundary of the water distribution system where water pressure measurements can be made or recorded for Contractor performance evaluation. Each residential water outlet or service connection could be considered an endpoint. However, there are probably thousands of such outlets and connections and it may not be practical nor necessary to check each of them because the pressure at those outlets is usually controlled by the pressure at a central distribution reservoir, or booster pump or pressure regulator. Therefore, the activity should attempt to identify central pressure control points within the system and specify minimum continuous pressure requirements at those points. The specified pressure at each control point should be sufficient to maintain adequate pressure throughout the system. Pressure drops could result from a break or blockage in the line betweeen the central control point and service connections. Any such failure would come to the attention of the Contractor through inspection or customer complaints and would be repaired by the Contractor under the provisions of output I.B.6, Maintenance.

e. Water Supply & Distribution Operating Records - NAVFAC 11330/6 (1-76) - Self Explanatory., See Attachment 2.

f. Maintenance - Maintenance of the treatment and distribution system is difficult to define in terms of measurable outputs. The output of maintenance is the continued satisfactory performance of the system over its entire design life. The design life of the system, however, normally exceeds the Contract period of services. Thus, a contractor may choose to neglect maintenance expecting that the system will not fail until after his Contractual obligations have been fulfilled. This possibility may necessitate that certain maintenance schedules and procedures be made mandatory by inclusion in the specifications. The approach recommended for adaptation of the standard PWS to a specific activity is as follows: First, determine all preventive maintenance requirements from available maintenance schedules interviews with operators, and maintenance manuals. Then, determine whether performance of each given preventive maintenance procedure is verifiable by quality assurance inspection. (For example, it may be impossible to determine whether a certain pump has been lubricated on schedule; on the other hand, the quality assurance inspector can verify that a gage has been recently calibrated by repeating the calibration procedure). Those procedures which are easily verifiable can be made subject to mandatory scheduled performance and performance evaluation can be based on the Observed Defect Rate as discussed in the Quality Assurance Guide. For those preventive maintenance procedures which cannot be easily verified, the Government still has some leverage: The Contractor retains responsibility for corrective maintenance and would have to repair or replace, at his own expense, any system or part which fails to perform, and thus causes failure to deliver other more measurable outputs. It would therefore be to the Contractor's own advantage to perform preventive maintenance to the extent needed to minimize corrective maintenance and non-performance deductions. The activity should rely on this leverage to the maximum extent possible by making it clear to the Contractor that the Government will hold the Contractor responsible for equipment failures. If the activity desires to maintain close control of maintenance through mandatory schedules and inspections it should do so, keeping in mind that unless the quality assurance inspector has reported a particular piece of equipment as being not properly maintained, and the equipment fails, the Contractor will claim, probably successfully, that the failure was not caused by his neglect or misuse and the Government will probably absorb the loss. If the Contractor maintains equipment at his own discretion, the burden of proof shifts from the Government to the Contractor. Note that paragraph 4.3 of section 00005 states that the Contractor will be held responsible for all repairs that do not exceed $4,000. This $4,000 value is of particular importance for this PWS as related to the Davis-Bacon Act. If this value is not sufficient or satisfactory for a particular activity, the selection of a more appropriate dollar value should be made. IF A CEILING VALUE IS CHOSEN THAT EXCEEDS $4,000.00 FOR THIS PWS, THE SPECIFICATION WRITER SHOULD CONTACT HIS LOCAL EFD, CODE 02 FOR ASSISTANCE IN ADDRESSING APPLICABLE PORTIONS OF THE DAVIS-BACON ACT.

g. Maintenance Records - The Contractor should maintain a record of all preventive and corrective maintenance performed. The activity should provide a preferred record-keeping format based on current activity practice. Records should include a description of maintenance performed (i.e., replacement of corroded valves in #2 chlorinator) date of performance, parts and materials costs, and labor costs.

h. Custodial Services - Measurable outputs are not so readily identified. The following details must be considered:

1. Items to be cleaned (complete inventory is required.
   a. Description (office, restroom, lab)
   b. Number
   c. Size (square footage)
2. Frequency of cleaning (daily, weekly)
3. Class of Service (usually four)
4. Indefinite Quality of Work Items where Contractor performs "as ordered".

The NAVFAC "Guideline Performance Work Statement" for Custodial Services can be used as a guide.

i. Water Quality Sampling Analysis and Reports - The Contractor will perform turbidity, temperature, pH, hardness, chlorine, etc. analysis on a regular basis in order to control the treatment process and produce outputs I.B.1, I.B.2, I.B.3, etc. In addition, a monthly (usually) report will be prepared to satisfy regulatory requirements. The activity should specify which parameters are to be included in the report and the monitoring frequency for each parameter. The activity should also specify the date of submittal (i.e. the 10th of each month) and the recipient of the report (either the activity or the regulatory agency directly with copies furnished as necessary to the cognizant EFD's and other interested parties).

B. Bid Items. The next step is to tailor the Bid items to cover the modified list of work items. Only one Bid Item is shown in the standard PWS-WPS is intended to encompass all WPS services common to most activities. The User should delete those services not required. Next, check to see if any WPS requirements are covered under other existing contracts. If some services are covered by separate contract, but it is desired to include them in the WPS contract at the termination of the other contract, then the Bid Items must consider that portion of the year for which they will be covered and adjust the quantities accordingly.

Fixed-price lump sum items are bid lump-sum for the total performance of a given work item and payment is made on a 1/12 per month basis (or other scheduled basis). Fixed-price lump sum work items are those items where work requirements (time, location, frequency, quantity, etc.) are known or can be estimated. In essence there is one work order. The Contractor performs the work as scheduled and invoices are submitted for the services provided.

C. Technical Specifications (Section 00005) - The technical specifications are the single most important part of a PWS. Within this section, one should describe, in detail, what services are desired and when they are to be performed. Requirements provided in the standard PWS are designed to meet general requirements of most activities. When tailoring this PWS these requirements may need to be modified to meet local conditions. Special or unique requirements may need to be added. Job Analyses, as described in the NAVFAC Manual "Service contracts: Specifications and Surveillance," should provide the data required to tailor this section.

The Technical Specification is tailored to reflect modifications made to work requirements. The writer should keep in mind that this is a performance type specification. All requirements specified in this section should state the desired results. "How to" instructions should not be specified. We want to allow the Contractor to be able to exercise his expertise.

When a technical manual, manufacturer's instructions, or A&E specifications are referenced, "How to" instructions are likely to be found in those documents. If such is the case, the contractor should be told that such references are to be interpreted as advisory in nature, unless otherwise specified, and that he must use his expertise to improve upon them in order to obtain the required quality of services or outputs.

D. Sections 00001 and 00004. The Specification writer works with the PWS "team" in the preparation of Sections 00001 and 00004. The NAVFAC manual "Service Contracts: Specifications and Surveillance" discusses the tailoring of these sections.

E. Performance Requirements Summary. Once the standard PWS has been tailored a Performance Requirements Summary Table should be prepared. This table will be used by the QAE in preparing QA Plans. The table will also be of use to the OIC, ROIC, SCM, and Customers to provide a convenient overview of services to be provided, standards of performance for those services, intended method of evaluation, and AQLs.

A sample Performance Requirements Summary Table is provided in the QA Guide of this PWS. This table reflects the standard PWS's requirements. The Specification Writer should modify this table to reflect the tailored PWS requirements.

IV. PRE-AWARD CONSIDERATIONS

Prior to Award it is essential that the Activity consider certain aspects of the operation and administration of the contract.

A. QAE Training - Ideally, the QAE should attend the Quality Assurance Evaluator (QAE) Training Course provided by each of the EFD's. If this training has not been received the OIC should take steps to have the QAE(s) trained and in the meantime develop a local training program. The geographic EFD may provide assistance. Prior to Bid Opening it is essential that the Quality Assurance Evaluator (QAE) become familiar with the PWS specification.

B. Questions to Ask - The specification writer should be asking himself the followiong questions prior to contract award:

(1) Is Government Furnished Property ready for turnover?

(2) Are QA Plans prepared?

(3) Is the specification sufficiently clear to insure that bids will be competitive and developed on the same basis by all competitors?

(4) Is the specification overspecifying?

(5) Are there any restricted areas included in the Contract? If so, can the contractor get the required clearance?

(6) What is the low bidder's track record? The user can assist in identifying other activities that have contracted for services from this low bidder in the past.

C. Site Visit - The Specification Writer and QAE shoud be prepared to conduct 2 types of pre-award site visits.

(1) Site visits by the Specification Writer and QAE during specification development. These visits are to familiarize the writer and QAE with the WPS requirements, and establish a contact with customer representatives.

(2) Site visits by the QAE with potential bidders after inviting bids. The purpose is to familiarize the Contractor with the location of the WPS requirements. The QAE must be briefed by the O.T.C., or his representative, and the Contract Specialist, and others, as to what can be discussed with the potential bidders.

D. Bid Evaluation - Prior to award, all personnel involved in the development of the PWS should carefully review the apparent low bidder's price to determine whether the bid is consistent with the Gevernment Estimate. Procedures for preparation of the Government Estimate are described in paragraph IV. E. of this USER's GUIDE. A deviation of more than 20% of the total price or any sub-item (output) may indicate a potential inbalance or lack of understanding of the performance requirements by the Contractor. The Contractor then should be asked to reaffirm or re-submit his bid prior to award.

E. Government and Contractor Estimates - The Government and each bidder must estimate the costs of performing the tasks necessary to deliver the outputs specified by the Contract. Some of the tasks will be performed in pursuit of more than one output (e.g. Sampling for operational purposes - output B.2, and for reporting purposes - output B.9). Also, contractors may choose to perform a different set or combination of tasks than that envisioned by the Government to deliver the same output (e.g. the contractor may choose to reduce the coagulant dosage by adjusting alkalinity.) The Government and Contractor estimates therefore should be itemized in terms of outputs rather than tasks. The activity should prepare the Government estimate by analyzing available operation, maintenance, labor and material consumption records from previous years. (See Appendix B - Section 00005, Standard PWS). This data will also be available to the bidders for their use. The total cost of performance obtained from analysis of records should be distributed over the nine separate outputs in proportion to the relative expenditure of effort and materials required to accomplish each output. The following is an over-simplified description of the recommended procedure:

(1) Determine total cost of plant and distribution system operation for previous years. Include escalation, general and administrative overhead rates and contingencies to determine total current Government estimate.

(2) Select outputs which correspond directly to a particular task or set of tasks and estimate the cost of performing those tasks. The following outputs can be easily converted to costs:

From Section I,

Output B.3 - Task involves making daily readings and entries in a form, estimate _____ hours per day - Annual labor cost $_____. Materials cost : NEGLIGIBLE.

Output B.4 - Same as B.5, but involves going out to the field estimate_____ hrs/day Annual labor cost $_____. Material cost : NEGLIGIBLE.

Output B.6 - Estimate from maintenance records from previous years. Preventive maintenance requires, estimate, _____ hrs/day, labor $_____ /yr. parts and materials $_____/yr. Corrective maintenance, including service and emergency calls, calls required _____ hrs/day. Material cost $_____/year. Note that the estimate for maintenance is the sum of preventive and corrective maintenance costs. The two cannot be separated because presumably as preventive maintenance increases, corrective maintenance decreases. The contractor will submit one bid sub-item to cover all preventive and corrective maintenance costs and out of this one sub-item he will try to keep the system functioning (delivering outputs). If the system fails (and it is more likely to do so if preventive maintenance is not performed) the Contractor's maintenance costs may increase.

Output B.7 - Maintenance records will consists of written entries as needed. Estimate $_____/day labor, materials cost: NEGLIGIBLE.

Output B.8 - Custodial services will be performed on a pre-determined schedule or frequency complete with agreed upon unit costs. Estimates should be based on prior year's records (historical data) and analysis of requirements. Analysis utilizing Engineered Performance Standards (EPS) can also be undertaken. (Ref. NAVFAC P-700 Series of Manuals)

Output B.9 - The cost of sampling, analysis and reports can be estimated based on the estimated sampling labor requirements plus standard laboratory fees for each analysis times the quantity of analyses required.

(3) Add the costs computed in paragraph E.2 adjusted for escalation, overhead, contingencies, etc., and subtract the total from the total Government estimate from paragraph E.1. The remainder can be distributed equally among Outputs (B.1), (B.2) and (B.4) which are the major outputs of water quantity (B.1), quality (B.2) and distribution (B.4). An equal distribution is recommended because it would be futile and counterproductive

to try to differentiate and isolate tasks which produce quantity from those which produce quality or distribution. Basically, the operator monitors all three functions simultaneously and makes adjustments as necessary, and no adjustment can be made in any one function without affecting the other two.

(4) Check the resulting break-down for balance.

A typical breakdown may look like this:

Output	% of total bid
B.1	20
B.2	20
B.3	5
B.4	20
B.5	5
B.6	10
B.7	5
B.8	10
B.9	5
Total	100%

The percentages will inevitably vary. It is important to make sure that the "minor" secondary outputs (i.e. outputs B.3, B.7 or B.9) do not end up with a disproportionate share of the total or vice versa. The break-down shown in the Schedule of Deductions submitted by the Contractor (See paragraph IV.F) will be checked against the Government estimated break-down for balance. If an unbalanced Schedule of Deductions is accepted, the contract could be insufficiently deducted for major infractions (e.g. Contractor fails to produce any water but maintains accurate records and receives 90% of his pay) or excessively deducted for minor infractions.

F. Schedule of Deductions. A standard Schedule of Deductions is included in Section 00004, last Clause, of the PWS-WPS. The schedule is based strictly on the ouputs (functions) defined in paragraph I. B, above, and the output-by-output cost breakdown described in paragraph IV.E. Once these outputs and breakdowns have been adjusted for application to a particular activity, the Schedule of Deductions should be modified accordingly. Note that certain outputs are further broken down into sub-outputs. Water Quality, for instance, is broken down into constituent parameters including Inorganic Chemicals, Organic Chemicals, Turbidity, Microbiological, Radioactivity, Chlorine Residual, Fluoridation and Hardness. Each of these parameters is assigned a percentage of the total Contract fee assigned to water quality. The percentage assigned should be consistent with the likelihood of violation of that parameter. For example, there is probably no radioactivity to worry about in most water supply sources and most treatment plants are not equipped to handle removal anyway. Therefore, the deduction for exceedance of this parameter should be nominal or none.

As shown in the standard Schedule of Deductions, payment deductions would be made when any one of the identified standard parameter concentrations is exceeded any given day. The deduction would be in proportion to the value

(percentage) assigned to that parameter. The activity may choose to simplify this system by adopting one standard maximum daily deduction for any type of violation.

V. POST-AWARD CONSIDERATIONS

A. Deduction, Non Performance. In the event of non-performance, or partial performance, deductions will be made in accordance with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004. The Quality Assurance Evaluator (QAE) will apply the performance evaluation procedures described in detail in the Quality Assurance Guide accompanying this standard PWS. Payment deductions will be made when warranted by failure of the Contractor to deliver the specified outputs. The amount of each payment deduction will be computed in accordance with the formula established in Section 0004, last clause, SCHEDULE OF DEDUCTIONS.

END OF UG SECTION

WATER PLANTS AND SYSTEMS

SECTION 00001 BIDDING INFORMATION

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APPENDIX A - GOVERNMENT FURNISHED FACILITY, EQUIPMENT AND MATERIAL

Part 1 FACILITIES

a. Treatment Plant

b. Distribution System

Part 2 EQUIPMENT

a. Clarifier

b. Pumps

c. Motors

d. Chlorinators

e.

f.

Part 3 MATERIALS

a. Alum

b. Chlorine

c. Filter Media

d.

Part 4 DRAWINGS

a. Schematics

i. Treatment Plant
ii. Distribution System

b. As - builts

i. Treatment Plant

APPENDIX B - HISTORICAL MAINTENANCE AND OPERATIONS RECORDS (19-- through 19--)

a. Raw Water Quality

b. Treated Water Quality

c. In-Plant Water Quality (At all points as per Appendix C)

d. Water Quality in Distribution Line (At all points as per Appendix C)

e. Maintenance Records

   (1) Corrective Repairs and Replacements

   (2) Preventive Maintenance Schedule

   (3) Custodial Services Schedule

f. Energy Consumption

   (1) Vehicles

   (2) Equipment

   (3) Electricity

g. Materials Consumption

   (1) Alum

   (2) Ferric Salts

   (3) Electrolytes

   (4) Lab Chemicals

   (5) Anthracite

   (6) Sand/Gravel/Garnet

   (7) Chlorine

   (8) Etc.

h. Labor

   (1) Class I Operator(s)

   (2) Class II Operator(s)

   (3) Class III Operator(s)

   (4) Chemist

APPENDIX C - SAMPLING LOCATIONS, ANALYTICAL STANDARDS AND PROCEDURES

a. As-built Drawing Labeling Sampling Locations

(1) Raw Water Inlet

(2) In Plant Locations

(3) Treated Water Outlet

(4) In Distribution Lines(s)

b. Frequency of Sampling

(As required for each contaminant and depending on size of system - See Safe Drinking Water Act or applicable State regulation.)

c. Analytical Procedures

(1) Bacteriological Quality

(2) Inorganic Chemicals

(3) Organic Chemicals

(4) Fluoride

(5) Turbidity

(6) Radioactivity

(7) Corrositivity

(8) Chlorine Residual

(Etc. as required - See Safe Drinking Water Act Regulations or applicable State Regulations - also NAVFACINST 11330.14A)

d. As a minimum, for each of the past three years provide the No. of repair orders under $4,000 and the average cost. Provide breakdown by Labor discipline.

e. Indicate the No. of estimates prepared for the plant and distribution system for repair orders over $4,000.

SECTION 00001 BIDDING INFORMATION

1. GENERAL INTENTION. It is the declared and acknowledged intention and meaning to obtain by a (_Specify Contract Type_) contract the operation, maintenance, & repair of the wastewater collection systems, pumping stations, and treatment facilities in accordance with the standards contained herein.

2. GENERAL DESCRIPTION. The Contractor shall furnish all labor, materials, equipment, transportation, facilities, utilities, supervision, and management, unless otherwise specified herein, required to operate, maintain and repair the wastewater collection systems, pumping stations, and treatment facilities. These systems & facilities include but are not limited to:.

!**********
NOTICE TO SPECIFICATION WRITER: List major components of your systems below.
**********!

a. Wastewater collection system -
b. Pumping stations -
c. Treatment facilities -

3. LOCATION. The work shall be located at the !(insert name of activity)!. The exact location(s) will be indicated by the Officer in Charge (OIC).

!**********
NOTE TO SPECIFICATION WRITER.....Select clause 4(1), 4(2), or 4(3) as required depending on the number of option years desired (see P-68, 9-103). In blank, insert one of the following:

! a. Contract start date and hour
! b. Statement to read: "_____days after date of notice of award"
! c. For indefinite quantity contract delete first sentence and insert the following: "The contract term shall be either for a period of one year commencing (select (a) or (b) above) or whenever the maximum amount is ordered, whichever occurs first."

**********!

4(1). TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003 is to be deleted in its entirety.

4(2). TERM OF CONTRACT. The contract term shall be for a period of one year commencing _____. The Government has the option to extend the contract for an additional (or second) year in accordance with

The permit indicates the reporting procedures for the monitoring results. Usually the permit requires the results to be forwarded to the regulatory agencies on a quarterly basis. The Contractor should also be required to complete NAVFAC Form 11340/1(Rev. 7-81) and submit it monthly to the QAE.

The specification will generally require the Contractor to comply with all requirements and procedures of the permit. The specification may also place operation and management requirements and responsibilities upon the Contractor which may be similar to the permit requirements. The Specification Writer shall ensure there is no conflict between the permit and the specification, except that the specification can have stricter requirements than the permit to meet the activity's requirements of having cost effective and environmentally acceptable operation and maintenance of the wastewater treatment plant.

ATTENTION: Care should be taken in cases where the activity has experienced repeated problems in meeting regulatory permit requirements for plant operations due to design/equipment deficiencies or improper/excessive plant loadings (not to be confused with poor operational practices and operator errors). In such cases, the Contractor cannot be required to meet permit restraints when the activity has not been able to meet the same regulatory restraints in the past. Therefore, when a plant exhibits a history of such poor perfomance, the Specification Writer and Quality Assurance Evaluator should recognize that such instances of non-compliance are not necessarily indicative of poor Contractor performance and the usual actions of payment deductions and discrepancy reporting may not be appropriate.

C. Potential Problem Areas. It is recognized that an all-inclusive work specification package cannot be offered to each individual activity through a general performance work statement such as this. It is the intent, therefore, to provide a general model with guidelines directed to the Specification Writer and to rely on the Specification Writer to prepare a specific document individualized to meet his activity demands. This very nature of specification development plus the subject matter involved allow the below listed potential problem areas to develop, thus necessitating special examination by the Specification Writer.

(1) Inclusion of Unique Activity Functions. Those functions or services which are highly individualistic or unique to an activity should be denoted within the specification and not omitted for the Contractor to discover after contract award. Such omissions could cause low bid submittals and possibly the necessity for contract change orders. For example, if effluent land application is specified as a Contractor responsibility, then all associated major supportive functions such as pump/well maintenance, ground water monitoring, and supportive laboratory analyses should also be specified, if within contract scope.

(2) In-Scope Versus Out-of-Scope Functions. Performance of some functions of a wastewater collection system and treatment facility are necessary on a multi-yearly basis and, therefore, are not always suitable for inclusion in a short term contract. Such functions should be carefully examined in order to aid in the decision to include the functions and frequency requirements in this wastewater specification or to have the functions accomplished by other means. For example, sludge accumulation in a waste oil tank may require a number of years before removal is necessary. Questions to ask include: Is this a recurring operation/maintenance task that is suitable for inclusion in a short term contract? Is this task better suited for accomplishment by a separate contract (possibly a one-time service contract) once critical sludge depth is reached? Or could this task best be accomplished through utilization of activity personnel? Other topics to question similarly include infiltration and inflow, and closed-circuit television surveying of below ground piping, which probably could be best accomplished through separate contracts.

(3) Preventative Maintenance/Inspections (PMI) Program. The fact that results of a neglected or incomplete PMI plan are seldom seen until a component malfunctions due to improper care, combined with the short term nature of this Contract, make PMI efforts a task to be specified and enforced in a defensive manner. Equipment and components for wastewater systems and treatment plants are costly items and appropriate PMI measures must be guaranteed to insure service life longevity. The Contractor should be encouraged to perform PMI tasks, not only through specification directives, but also with methods which will make performance of these tasks more profitable for the Contractor. For example, a Contractor will most likely take necessary measures to insure the continuous operation of a lift station pump when he is made responsible for all repair and replacement costs associated with pump failure. Also an out of service penalty cost will insure a timely Contractor response to such breakdowns.

III. TAILORING THE PWS

A. General. The NAVFAC standard PWS for Wastewater Collection Systems and Treatment Facilities is not intended to fit the requirements of a specific activity, but rather, is to serve as a model to be tailored by activities in preparing their specific PWS's. In order to achieve the desired scope of work for a specific activity, it is important that the User collect and/or develop certain information. Much of this information, needed by potential Contractors to develop bids, will be included in the specification. Information gathered during the tailoring process will also play an important part in contract surveillance. The PWS tailoring process is also described in NAVFAC MO-327.

In order to achieve the desired scope of work for a specific activity it is important that the User start with the Wastewater Collection System and Treatment Facility sub-functions, listed in Figure 1, and delete or add the appropriate work items.

B. Bid Items. The next step is to tailor the Bid Items to cover the modified list of work items. The Bid Items shown in the standard PWS are intended to encompass all services common to most activities. The User should delete those services not required. Next, check to see if any requirements are covered under other existing contracts. If some services are covered by a separate contract, but it is desired to include them in this wastewater contract at the termination of the other contract, then the Bid Items must consider that portion of the year for which they will be covered and adjust the quantities accordingly for the first year of the contract.

Firm-fixed price items are bid lump-sum for the total performance of a given work item and are made on a 1/12 month basis or other predetermined schedule. Firm-fixed price work items are those items where work requirements (time, location, frequency, quantity, etc.) are known. In essence, there is one work order. The Contractor performs the work as scheduled and invoices are submitted for the services provided.

C. Technical Specifications (Section 00005). The Technical Specification is the single most important part of a PWS. Within this section, one should describe, in detail, what services are desired and when they are to be performed. Requirements provided in the standard PWS are designed to meet the general requirements of most activities. When tailoring the PWS, these will need to be modified to meet local conditions. Job analyses, as described in NAVFAC MO-327, should provide the data required to tailor this section.

The Technical Specifications are tailored to reflect modifications made to work requirements. The writer should keep in mind that this is a performance type specification. All requirements added to this section should state the desired results. If the desired result is subjective, then the writer may have to specify the frequency of work performance. Methods of performing the work should not be specified, however, since we want to allow the Contractor to be able to exercise his expertise.

D. Sections 00001 and 00004. The Specification Writer works with the Contract Specialist in the preparation of Sections 00001 and 00004. The NAVFAC MO-327 Service Contracts: Specifications and Surveillance discusses the tailoring of these sections.

Note that Paragraph 4 of Section 00005 states that the Contractor will not be held responsible for major repair costs exceeding $4000.00. This $4000.00 value is of particular importance for this PWS as related to the Davis-Bacon Act. If this value is not sufficient or satifactory for a particular activity, the selection of a more appropriate dollar value should be made. IF A CEILING VALUE IS CHOSEN THAT EXCEEDS $4000.00 FOR THIS PWS, THE SPECIFICATION WRITER SHOULD CONTACT HIS LOCAL EFD, CODE 02 FOR ASSISTANCE IN ADDRESSING APPLICABLE PORTIONS OF THE DAVIS-BACON ACT. The selection of another dollar value, if appropriate, should be made carefully as if preparing the public works department's own operating budget. A value should be selected which separates those cost items which can normally be absorbed into an operating budget from those which require supportive funding from additional sources - i.e., project funds, emergency funds, etc. A properly chosen dollar value will allow the Contractor to absorb those smaller, unforeseen cost items in his operating budget and provide a basis for additional funding for larger, out-of-scope cost items. Also note that there

is not a smaller, separate price ceiling for service call-related material costs. As discussed above, it is the Contractor's responsibility to provide PMI services. The absence of such a ceiling value will prompt Contractor performance of such services.

E. Performance Requirements. The standard PWS, as written, specifies performance requirements and establishes performance indicators with specified standards. The Contractor's performance is measured by looking at the established standards and comparing results to the specified standards.

Acceptable Quality Levels (AQL's) are a management tool used to determine when and if administrative remedies, in addition to deductions, are required for poor Contractor performance. AQL's set the point at which performance becomes unsatisfactory to the customer, and stronger action on the part of the Service Contract Manager and/or OIC is required. (Deductions are always required whenever an instance of non-compliance is observed and documented.) The AQL is stated as either a percentage of total work or absolute number of observed defects. When occurences of poor performance or non-performance exceed the established AQL, the Contractor's overall performance is not acceptable. The AQL reflects that point where overall service becomes unsatisfactory. AQL's are used solely as a tool to administer the contract and can be adjusted according to local conditions. AQL values should not be made known to the Contractor.

A Performance Requirements Summary Table is to be prepared by the Specification Writer as the standard PWS is tailored. This table will be used by the QAE to determine the types of QA Plans required for contract surveillance. The tailored PWS will be the basis for individual plans.

A sample Performance Requirements Summary Table is provided in the QA Guide of this PWS. The Specification Writer should modify this table to reflect the tailored PWS requirements.

IV. PRE-AWARD CONSIDERATIONS

Prior to Award it is essential that the Activity consider the following aspects of the operation and administration of the Wastewater contract.

A. QAE Training. Ideally, the QAE should attend the Quality Assurance Evaluator (QAE) Training Course provided by each of the EFD's. If this training has not been received, the OIC should take steps to have the QAE(s) trained and in the meantime should develop a local training program. The geographic EFD may provide assistance. Prior to Bid Opening it is essential that the QAE becomes familiar with the Wastewater specification.

B. Questions to Ask. The specification writer should be asking himself the following questions prior to contract award:

(1) Is Government Furnished Property, if any, ready for turnover?

(2) Are QAE monitors designated to act as focal points for customer complaints? If so have they been properly trained? Are they familiar with the specification? Has a method been developed for customers to submit complaints to the QAE, OIC or his representative?

B. Technical Specification. The Technical Specification (Section 00005) is a performance specification. That is, the specification tells the Contractor what the desired service outputs are, but not how to perform the work. The technical section specifies the requirements for each task. Any additional activity requirements should also be specified based upon performance, including a statement of desired results. The below discussions are included for assistance in completing activity facility descriptions referenced in Section 00005, Para. 3.1., and should be modified to meet individual activity situations.

(1) Wastewater Collection and Pumping Systems - general descriptions and component listings: The collection system should be described to identify the different types of systems on the activity, e.g., the domestic sewage system, the industrial system, the ship's wastewater system, or any combination thereof. The subject system's description should include pipe material and size, the number linear feet of each pipe size, the number and types of pumping stations, and locations of the systems. The pumping station descriptions should also include number, type, and capacity of the pumps in each pump station and other related equipment as considered appropriate, e.g., barscreen, comminutor, controls, type of electrical switching, emergency power, ventilation, etc.

(2) Wastewater treatment facilities - general descriptions and component listings: The wastewater treatment plant should be described as to the type of plant and the disposal point of the effluent. The following are typical examples:

The wastewater treatment plant is a high-rate trickling filter plant with outfall to the Mississippi River.

The wastewater treatment plant is an activated sludge plant with outfall to the Atlantic Ocean.

The wastewater treatment plant is an aerated lagoon system followed by land application effluent disposal.

After the plant description, a listing of the plant's components, structures, and equipment should be provided. Dimensions, size, number, and/or capacity of the components, structures, and equipment should also be provided as appropriate. The following provides a fairly comprehensive, but not all inclusive, list of various wastewater treatment plant components, structures, and equipment:

PRETREATMENT

Screening

Influent Channel

Racks

Bar Screens - Manually or Mechanically Cleaned

Hydrasieve Screens

Shredding and Grinding

Barminutor

Comminutor

Macerator

Grit Removal

Grit Channel - Manual or Chain and Flight Grit Collector

Aerated Grit Chamber

Pista Grit Chamber

Cyclone Grit Chamber

Cyclone Grit Separators

Grit Classifier

Grit Washer

Screw Conveyor

Grit Pump

Grit Storage - Hopper or Bin

PRIMARY TREATMENT

Rectangular Primary Clarifier

Chain and Sludge Scraper Collector

Travelling Bridge Collector

Circular Primary Clarifier

Scum Skimmer and Sludge Blade and Scraper Collector

Sludge Rake Blade with Riser Suction Pipe Collector

Lamella Gravity Settler

Combined Sedimentation - Digestion Units

Imhoff Tank

Surge Tank

Pumps - Wastewater and Sludge

SECONDARY TREATMENT

Trickling Filters and Packed Towers - Rotary Distributor or Fixed Nozzle

Media - Rock, Plactic, or Redwood Lath

Activated Sludge - Conventional, Step Aeration, Extended Aeration, Complete Mix, or Contact Stabilization

Aeration Tanks - Mechanical or Diffused Aeration

Oxidation Ditch - Surface Type Aerator, e.g., Brush Rotor

Activated Biofilter Process - Redwood Racks

Aeration Tank - Surface Type Aerator

Rotating Biological Contactors

Lagoons/Ponds - Aerobic, Anaerobic, or Facultative

Secondary Clarifier - Rectangular or Circular

Pumps - Wastewater and Sludge

DISINFECTION

Chlorination - Chlorine Contact Chamber

Ozonation - Ozone Contact Basin

Ultraviolet Light

FLOW MEASUREMENT

Propeller Meter

Magnetic Flow Meter

Venturi Tube

Positive Displacement Diaphragm Meter

Weirs

Flumes

Kennison or Parabolic Nozzle

Rotameter

Float Type Met

Dipper Meter

Ultrasonic Meter

Bubble Type Meter

SLUDGE HANDLING

Thermal Treatment

Gravity Thickeners

Flotation Thickening

Anaerobic Digestion

Aerobic Digestion

Centrifuge

Vacuum Filtration

Pressure Filtration

Drying Bed

Drying Lagoons

Incineration

OTHER TREATMENT PROCESSES

Filtration

Microscreening

Activated Carbon Adsorption

Ammonia Stripping

Chemical Feeding and Conditioning

Rapid Mixing and Flocculation

Recarbonation

Land Treatment of Wastewater and Sludge

EMERGENCY AND AUXILIARY POWER

Generators

Motor Driver Equipment - Diesel, Gas, etc.

(3) Wastewater Characteristics - general description: For each type of wastewater treatment plant, the raw wastewater characteristics should be described. This information is recorded on the Wastewater Treatment Plant Operating Record, NAVFAC Form 11340/1. Also, some of the raw wastewater charateristics are reported as required by the NPDES permit. The NPDES permit data and the Operating Record data should be reviewed and a range of the raw wastewater characteristics should be defined. The following provides a typical composition of a raw domestic wastewater:

Constituent	Concentration (mg/1 unless specified) Weak	Medium	Strong
Biochemical Oxygen Demand, 5 day at 20 degrees C	110	220	400
Chemical Oxygen Demand	250	500	1,000
Total Dissolved Solids	250	500	850
Suspended Solids	100	220	350
Settleable Solids (mg/1)	5	10	20

(4) NPDES permitted subject areas - general description: The Environmental Protection Agency issues a NPDES permit to authorize the discharge of treated and sometimes untreated wastewater to a receiving water. In some states, a state permit may replace or may be in addition to the NPDES permit. A copy of these permits should be obtained from the Utilities Supervisor or Environmental Coordinator of the activity.

Some NPDES permits have other discharge requirements (usually identified under Part III) not relating to the wastewater collection system or treatment plant. These other discharge requirements should be excluded from the specifications.

The permit normally specifies the following:

a. which facilities are authorized to discharge,

b. the receiving waters,

c. the effective and expiration dates,

d. the effluent limitations and monitoring requirements,

e. a schedule of compliance,

f. monitoring and reporting requirements,

g. management requirements,

h. responsibilities,

i. and, sometimes, other requirements. These requirements should not be included in the specification as discussed in the previous paragraph.

After reviewing the permit(s), the appropriate requirements should be summarized in the specification. The following provides a typical example for effluent quality requirements of a wastewater treatment plant:

Parameter	Discharge Limits			
	Kg/day (lbs/day)		Other Units	
	Monthly Ave.	Weekly Ave.	Monthly Ave.	Weekly Ave.
Flow, cubic meters/day (MGD)	7,570 (2.00)			
Biochemical Oxygen Demand, 5 day at 20 degrees C (BOD-5)	227(500)	340(750)	30 mg/l	45 mg/l
Suspended Solids (SS)	227(500)	340(750)	30 mg/l	45 mg/l
Fecal Coliform Bacteria, Geometric Mean			200/100 ml	400/100 ml
Dissolved Oxygen			5.0 mg/l	

pH shall not be less than 6.0 nor more than 9.0 standard units. There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent shall not cause a visible sheen on the receiving water.

The monthly average effluent BOD-5 and SS concentrations shall not exceed 10 percent of the respective monthly average influent concentrations.

Chlorine residual shall be maintained at 0.5 mg/l continuous.

The following provides a typical example for effluent quality requirements of an industrial wastewater treatment plant:

Parameter	Discharge Limits			
	Kg/day (lbs/day)		Other Units	
	Daily Ave.	Daily Max.	Daily Ave.	Daily Max.
Chemical Oxygen Day	N/A	946 (2,085)	N/A	125 mg/l
Oil and Grease	N/A	113 (250)	N/A	15 mg/l
Cyanide	N/A	0.15 (0.33)	N/A	0.02 mg/l
Phenol	N/A	1.51 (3.34)	N/A	0.20 mg/l
Chromium (Total)	N/A	0.38 (0.83)	N/A	0.05 mg/l
Copper	N/A	3.78 (8.34)	N/A	0.50 mg/l
Cadmium	N/A	0.38 (0.83)	N/A	0.05 mg/l
Zinc	N/A	7.6 (16.7)	N/A	1.0 mg/l
Iron	N/A	2.27 (5.00)	N/A	0.30 mg/l
Detergents	N/A	3.78 (8.34)	N/A	0.50 mg/l
Nickel	N/A	1.51 (3.34)	N/A	0.20 mg/l
Lead	N/A	0.38 (0.83)	N/A	0.05 mg/l
Total Kjedahl Nitrogen	N/A	22.7 (50.0)	N/A	3.0 mg/l
Total Phosphorous	N/A	22.7 (50.0)	N/A	3.0 mg/l

Depending on the type of plant, its components, and the receiving water, there may be greater or fewer parameters and they may be more or less stringent.

The permit(s) prescribes the monitoring requirements (measurement frequency, sample type, and sampling point) for each parameter. These requirements will be the minimum monitoring requirements. The specification writer will also have to review the plant's operation and maintenance manual to specify the monitoring requirements prescribed in the manual to ensure adequate operation of the plant. Additionally, the monitoring requirements on NAVFAC Form 11340/1 (Rev. 7-81), Wastewater Treatment Plant Operating Record, which apply to the plant shall be included in the specification.

18. ITEMS OF BID. Bids shall be submitted in duplicate on NAVFAC 4330/24(12-73) upon the following item:

Bid Item 1. Price for performance of work for the Base Year in accordance with the specification. The price for bid item 1 should be obtained by the bidder entering the proposed unit price for each work item listed in the "SCHEDULE OF DEDUCTIONS" Clause, Section 00004; multiplying it by the estimated quantity; and entering the mathematical extension in the item total column. The price for bid item 1 is the total of all item totals listed in the Schedule of Deductions. BIDDERS ARE NOT TO SUBMIT A COMPLETED SCHEDULE OF DEDUCTIONS WITH THEIR BIDS.

Total price for bid item 1..... $_____

Bid Item 2. Price for performance of work for the First Option Year in accordance with the specification. The price for bid item 2 should be obtained by the bidder entering the proposed unit price for each work item listed in the "SCHEDULE OF DEDUCTIONS" Clause, Section 00004; multiplying it by the estimated quantity; and entering the mathematical extension in the item total column. The price for bid item 2 is the total of all item totals listed in the Schedule of Deductions. BIDDERS ARE NOT TO SUBMIT A COMPLETED SCHEDULE OF DEDUCTIONS WITH THEIR BIDS.

Total price for bid item 2..... $_____

Bid Item 3. Price for performance of work for the Second Option Year in accordance with the specification. The price for bid item 3 should be obtained by the bidder entering the proposed unit price for each work item listed in the "SCHEDULE OF DEDUCTIONS" Clause, Section 00004; multiplying it by the estimated quantity; and entering the mathematical extension in the item total column. The price for bid item 3 is the total of all item totals listed in the Schedule of Deductions. BIDDERS ARE NOT TO SUBMIT A COMPLETED SCHEDULE OF DEDUCTIONS WITH THEIR BIDS.

Total price for bid item 3..... $_____

EVALUATION OF BIDS. The low bidder for purposes of Cost Comparison (see "Notice of Cost Comparison" Clause, Section 00001) shall be the conforming responsible bidder offering the low aggregate sum of the total bid prices for Bid Item 1, 2, and 3. Pending the result of the Cost Comparison, Bid Item 1 only will be awarded. The bidder shall not include in the bid price any contingency or allowance for wage adjustments due to a revised wage rate determination. Notwithstanding the provisions of the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause, Section 00003, concerning the extension of the contract at the same price, the contract will be extended at the prices contained in the Items of Bid for the option years.

PROPOSED TELEMETRY UNITS TO EXPAND 670

SWIMMING POOLS	MONITORING
M-139	pH, ORP, Chlorine Leak, Intrusion, Circulating pump on, Circulating pump off, Power failure.
TT-20	"
Area 2 B-236	"
Area 5 B-540	"
MCAS Officers MCAS 709	"
MCAS Enlisted MCAS 202	"
Paradise Point Officers PP-2632	"

030142

Approximate Cost $3500/unit

ELEVATED WATER TANKS	MONITORING
S-1000	Level, Intrusion, Power failure
S-29	"
S-5	"
Force Troops SFC-314	"

Approximate Cost $3800/unit

Estimated one day installation on Elevated Tanks with existing level transmitter.

Estimated three days installation on Swimming Pools because of wiring necessary for sensors.

Parts for: Bldg 670 Computer I/O rack check + test set

	UNIT OF ISSUE	QTY	UNIT PRICE
DESCRIPTION:			
Test Set P/N T2027	ea	1	$1500

Mr Baker is Pursuing Service Contract - Do we still need this

M

SS: Aquatro
4480 Wes
Arden Hil

Round Lake Road
Minnesota 55112 612 634-3750

JUSTIFICATION: Test I/O Rack Computer interface & simulation

REQUESTED DELIVERY DATE: 87

JON: Am1-23-A -2383T

Approved _____
Do not substitute

attn: R. Vik
Written: 01/28/87

Parts for: Bldg 670 Computer I/O rack check + test set

DESCRIPTION:	UNIT OF ISSUE	QTY	UNIT PRICE
Test Set P/N T2027	ea	1	$1500

SS: Aquatrol
4480 West Round Lake Road
Arden Hills, Minnesota 55112 612 636-3950

JUSTIFICATION: Test I/O Rack Computer interface & simulation

REQUESTED DELIVERY DATE: Q7

JON: Am1-23-A -2383T

Approved _____
Do not substitute

attn: R. Vick
Written: 01/28/87

NOTICE:

Bids to be opened at 2:00 p.m.
at the office of
Officer in Charge of Construction
Jacksonville, North Carolina area
Building 1005, Marine Corps Base
Camp Lejeune, North Carolina 28542

SPECIFICATION
No. 05-84-7943

UTILITIES SERVICE

Marine Corps Air Station (Helicopter), New River, North Carolina
Marine Corps Base, Camp Lejeune, North Carolina
Contract No. N62470-84-B-7943

NOTICE

All inquiries concerning any phase of the specification prior to bid opening shall be presented to the Officer in Charge, Contract Division, Atlantic Division, Naval Facilities Engineering Command, Building N-21, Room 105, Naval Station, Norfolk, Virginia 23511, telephone area code 804, 444-9897.

Contracts or purchase orders to be awarded as a result of this contract shall be assigned DO S1 Rating in accordance with the provisions of DPS Regulation 1 and/or DMS Regulation 1.

ENCL (1)

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B	LISTING OF NAVAL FACILITIES ENGINEERING COMMAND ENGINEERING FIELD DIVISIONS
C	SAMPLE ESTIMATE
D	FORMS FOR SAMPLE ESTIMATE
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UTILITIES SERVICE

SECTION 00001 BIDDING INFORMATION

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SECTION 00001 BIDDING INFORMATION UTILITIES SERVICE

1. GENERAL INTENTION. This is a combination "FIXED PRICE" and "INDEFINITE QUANTITY" Contract with the declared and acknowledged intention and meaning to provide and obtain utilities services for Marine Corps Air Station (Helicopter), New River, North Carolina, and Marine Corps Base, Camp Lejeune, North Carolina in accordance with the standards contained herein.

2. GENERAL DESCRIPTION. The Contractor shall furnish all labor, materials, equipment, facilities, transportation, utilities, supplies and certified supervision and management, unless otherwise specified herein and required to perform the operations, maintenance, and repairs of the water supply treatment and distribution system to include sprinkler systems and wash racks; the wastewater treatment and distribution system to include storm sewer, the steam generation and distribution systems; and the cold storage plant.

The locations and capacities of the water treatment plants are as follows: building 20 with a capacity of five million gallons per day (MGD), building 670 with a capacity of two MGD; AS110 with a capacity of 3.5 MGD, TT38 with a capacity of one MGD, BB190 with a capacity of .6 MGD; RR85 with a capacity of .6 MGD, BA138 with a capacity of .25 MGD; and M178 with a capacity of .75 MGD.

The locations and capacities of the wastewater treatment plants are as follows: building 22, with a capacity of eight

million gallons per day (MGD); TC563 with a capacity of 1.6 MGD; TT35 with a capacity of 1.25 MGD; M136 with a capacity of 1.0 MGD; BB-207 with a capacity of .525 MGD; RR92 with a capacity of .525 MGD; BA160 with a capacity of .195 MGD.

The locations and capacities of the steam heating plants are as follows: building 1700, five boilers, with a total plant capacity of 500,000 pounds of steam per hour (pph); AS4151, three boilers, with a total plant capacity of 120,000 pph; G650, three boilers, with a total plant capacity of 100,000 pph; M625, three boilers, with a plant capacity of 54,400 pph; M230, three boilers, with a total plant capacity of 19,458 pph; PP2615, two boilers, with a total plant capacity of 26,000 pph; RR15, two boilers, with a total plant capacity of 24,000 pph; BB9, three boilers, with a total plant capacity of 50,500 pph; FC202, two boilers, with a total plant capacity of 12,450 pph. In addition, there are 68 unmanned boilers located on Base.

The cold storage plant, located at building 1300, has a total chill (33°F and below) of 271,713 (cu.ft.).

As of June 84, Base Plant Account records show there to be at Marine Corps Base 7,573,665 linear feet of water line, 195,111 linear feet of steam line; 174,770 linear feet of condensate line; 1,178,845 linear feet of sanitary sewer line; and 271,603 linear feet of storm sewer line. These records also show there to be at Marine Corps Air Station (Helicopter) 147,436 linear feet of water line; 26,706 linear feet of steam line; 29,146 linear feet of condensate line; 128,023 linear feet

of sanitary sewer line, and 75,281 linear feet of storm sewer line.

3. LOCATION. The work shall be located at the U. S. Marine Corps Base, Camp Lejeune, North Carolina, and the Marine Corps Air Station (Helicopter), at New River, North Carolina. The exact location(s) will be indicated by the Officer in Charge (OIC).

4. TERM OF CONTRACT. The contract shall be effective for a period of one year commencing within 60 days after notice of award. The Government reserves the right to extend the term of the contract in accordance with the "OPTION TO EXTEND THE TERM OF THE CONTRACT" Clause. Section 00003 of this contract is modified to add:

"Price Adjustments for Davis-Bacon Work during option periods. Where, as a result of the Department of Labor determination of minimum prevailing wages and fringe benefits applicable at the beginning of the renewal option period, the Contractor increases or decreases wages or fringe benefits of the employees working on this contract to comply with such legislation, the affected contract unit prices and composite labor rates will be adjusted to reflect such increases or decreases. Any such adjustments will be limited to increases or decreases in wages or fringe benefits as described above, and the concomitant increases or decreases in social security and unemployment taxes

amount for general and administrative costs, overhead, or profits. The Contractor warrants that the prices set forth in this contract do not include any allowance for any contingency to cover increased costs for which adjustment is provided under this clause." Notwithstanding any provision of contract at the "same price," the contract will be extended based on the pre-priced option for the first or second option year, as appropriate.

5. DISCOUNTS. Prompt payment discounts will not be considered in the evaluation of bids. However, any offered discount will form a part of the award and will be taken if payment is made within the discount period indicated in the bid by the bidder. As an alternative to bidding a prompt payment discount in conjunction with the bid, bidders awarded contract may include prompt payment discounts in individual invoices.

6. DRAWINGS ACCOMPANYING SPECIFICATIONS. The following drawings accompany the specifications.

TITLE
Index Sheet
Acquistion Areas and Survey
Quadrangle Numbers
Montford Point Area & Vicinity
Montford Point Area & Vicinity

Trailer Spaces - Knox Area - Privately
Owned Trailers

Tarawa Terrace II Quarters

Tarawa Terrace I Quarters

Midway Park Housing Park

Open Storage Area

Officers Quarters Paradise Point Area

MEMQ Berkeley Manor Area

Watkins Village

Naval Hospital Area (old)

Hadnot Point Area

Legend Sheet for Hadnot Point Area

French Creek Area

Legend Sheet for French Creek Area

Geiger Area - A

Geiger Area and Vicinity

Geiger Area - B

Camp Geiger Trailer Park

Rhodes Point Area

Rifle Range Area

Engineer and Amphibian Troops Area

Courthouse Bay

Beach Area

Engineer Stockade and Anti-Tank Range

Air Station - Marine Corps Air Station
(Helicopter), New River, North Carolina

Legend Sheet for Air Station Area, Marine Corps Air Station
(Helicopter), New River, North Carolina

7. EXAMINATION OF PREMISES. Bidders are expected to satisfy themselves as to the general and local conditions that may affect the cost of the performance of the work to the extent that such information is considered impractical to determine, without inspection, the exact nature of the work and site conditions under which the work is to be performed. To inspect the site of the work prior to bid opening, make appointment with the Director of Utilities, Base Maintenance Division, Building 1202, Camp Lejeune, North Carolina 28542, telephone (919) 451-5161. All questions pertaining to the bidding or specifications arising before bid opening shall be presented to the Officer-in-Charge, Atlantic Division, Naval Facilities Engineering Command, Norfolk, Virginia 23511, telephone (804) 444-9897. Such questions must be delivered at least 10 days before bid opening. Required responses to such questions will be made by amendment only. Unless amendments are received, all bids should be based on the specifications as issued.

8. NOTICE OF TOTAL SMALL BUSINESS SET ASIDE

8.1 Restriction. Offers under this procurement are solicited from small business concerns only and this procurement is to be awarded only to one or more small business concerns. This action is based on a determination by the Contracting Officer alone, or in conjunction with a representative of the Small Business Administration, that it is in the interest of maintaining or mobilizing the Nation's full productive capacity, in the interest of assuring that a fair proportion of Government procurement is placed with small business concerns. Offers received from firms which are not small business concerns shall be considered non-responsive and shall be rejected.

8.2 Definition. A "small business concern" is a concern, including its affiliates, which is independently owned and operated, it is not dominant in the field of operation in which it is offering on Government contracts, and can further qualify under the criteria set forth in regulations of the Small Business Administration (Code of Federal Regulations, Title 13, Section 121.3.8). In addition to meeting these criteria, a manufacturer or a regular dealer submitting offers in his own name must agree to furnish in the performance of the contract end items manufactured or produced by small business concerns; provided that this additional requirement does not apply in connection with construction or service contracts.

9. DEFINITION OF SMALL BUSINESS. For this procurement, a small business concern is a concern that is certified as a small business concern by the Small Business Administration and, in the Utilities Industry, the average annual receipts of the concern and its affiliates for the preceding three fiscal years must not exceed $7.5 million.

10. MINIMUM WAGE RATES AND OTHER LABOR STANDARDS

10.1 The minimum wages required to be paid for work under this specification have been requested from the Department of Labor and will be issued by amendment upon receipt.

10.2 Maintenance, repairs, new construction, alteration and equipment installation type work over 16 total work hours is classed as construction work and is subject to Davis-Bacon Wages. This work is identified on the Schedule of Indefinite Quantity Work "ITEMS OF BID" Clause, Section 00001 of this specification. Clauses 64 through 71 of Section 00003 of this specification apply on to this work. All work provided under this specification is classed as service work and is subject to the Service Contract Act Wage Determination.

10.3 Notwithstanding any other provision of this contract, minimum wage payment shall be as specified by Public Law 93-259

or the Service Contract Act Wage Determination, if any, whichever is greater.

11. SERVICE CONTRACT ACT - SUPPLEMENTAL INFORMATION AND REQUIREMENTS. Bidders are advised that this procurement is subject to the requirements of the Service Contract Act, as amended by Public Law 92-473, 9 October 1972, and attention is invited to the obligations of the Contractor under Section 4C of the amended Service Contract Act. Any questions regarding the extent of these obligations should be addressed to the Department of Labor.

11.1 The Contractor agrees to provide to the Contracting Officer upon request a copy of any collective bargaining agreement applicable to employees performing on this contract.

11.2 Section 2(a)(5) of the Service Contract Act of 1965, as amended requires that every contract (and bid specification therefore) subject to the Act contain a statement of the rates that would be paid by the Federal Agency to the various classes of service employees if 5 U.S.C. 5341 were applicable to them. The required statement follows and is for information only:

11.2.1 Fringe Benefits (All classifications)

11.2.1.1 Health and insurance - contribution of 5.1% of basic hourly rate.

11.2.1.2 Retirement - contribution of 7% of basic hourly rate.

(12)

11.2.1.3 Nine (9) paid holidays through December 1985, ten paid holidays after January 1, 1986: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day and Christmas Day, and effective January 1, 1986, Martin Luther King's Birthday.

11.2.1.4 Paid annual leave (vacation): Two (2) hours of annual leave each week for an employee with less than (3) years of service; three (3) hours of annual leave each week for an employee with three (3) but less than fifteen (15) years of service; four (4) hours of annual leave each week for an employee with (15) or more years of service.

11.2.1.5 Paid sick leave: 13 days per year.

11.2.1.6 Medicare: contribution of 1.3% of basic hourly rate.

11.2.2 Classification

The following classifications are expected to be used in the performance of work as described herein.

STEAM

Supv General Engineer	$14.57
Utilities General Foreman	17.75
Boiler Plt Oper Gen Foreman	16.23
Boiler Plt Oper Foreman	15.65

STEAM (cont.)

Boiler Plt Oper Foreman	14.24
Boiler Plt Operator (Ldr)	12.07
Boiler Plant Operator (WG-11)	11.50
Instrument Mechanic	11.50
Maintenance Mechanic	10.95
Boiler Plt Equip Mechanic	10.95
Boiler Plant Operator (WG-10)	10.95
Insulator	10.95
Boiler Plant Operator (WG-9)	10.41
Boiler Plant Operator (WG-7)	9.30
Boiler Tender	8.73
Coal Handling Equip Operator	8.73
Boiler Plant Oper Helper (WG-6)	8.17
Chemist	10.05
Secretary (Typing)	6.63
Clerk Typist	5.28
Pipefitter General Foreman	15.65
Pipefitter Foreman	14.80
Pipefitter	10.85
Insulator	10.85
Pipefitter Worker	9.84
Pipefitter Helper	8.17

WATER/SEWER

Util Systems Plt Gen Foreman	15.65
Water Trmt Plt Oper Foreman	14.80
Sewage Trmt Plt Oper Foreman	14.80
Water Trmt Plt Oper Leader	11.90
Sewage Trmt Plt Oper Leader	11.90
Instrument Mechanic	11.50
Industrial Equip Mechanic	10.95
Welder	10.95
Water Trmt Plt Operator	10.41
Sewage Trmt Plt Operator (WG-9)	10.41
Sewage Trmt Plt Operator (WG-8)	9.84
Industrial Equip Repairer	9.84
Water Plant Operator (WG-8)	9.30
Water Plant Oper Helper	8.17
Sewage Trmt Plt Operator	8.17
Clerk Typist	5.28
Plumber Foreman	14.24
Plumber	10.41
Plumbing Worker	9.30
Plumber Helper	8.17

COLD STORAGE

A/C Equip Mechanic Foreman	14.24
A/C Equip Operator	10.95

12. NOTICE OF CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM. Offerors are advised that this contract includes a provision delineating the consequences of Contractor's failure to perform the required services. See Section 00004, Clause 8 infra.

13. PRECEPT TO BIDDERS. Invitations, Bid and Award, NAVFAC 4330/24 (12/73) and Section 00002, Instruction to Bidders, shall be observed in the preparation of bids. Bidders shall affix their name and return address in the upper left corner of the envelope. Bids must set forth full, accurate and complete information as required in the solicitation. The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001. Envelopes containing bids must be sealed, marked and addressed as follows:

"Bids for Utility Service Camp Lejeune"	Officer in Charge of Construction, Jacksonville, North Carolina Area, Building 1005, Marine Corps Base, Camp Lejeune, NC 28542

14. TELEGRAPHIC MODIFICATIONS OR WITHDRAWAL OF BIDS. In accordance with the "LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWAL OF BIDS" Clause, Section 00002, telegraphic modifications or withdrawal of bids may be made. Telegraphic modifications or withdrawal of bids should be identified as follows:

"Telegraphic modification of bid of Utility Service, Camp Lejeune, Contract No. N62470-84-B-7943, Specification No. 05-84-7943" and forwarded immediately to the office to which the written bids were submitted. Telephone notice of telegraphic modification not accepted.

15. REFERENCE TO AMENDMENT. Each bidder shall refer in his bid to all amendments to this solicitation in accordance with Clause 4 of Section 00002 to this contract; failure to do so may constitute an informality in the bid and be cause for rejection of the bid.

16. AVAILABILITY OF SPECIFICATIONS, STANDARDS AND DESCRIPTIONS (1977 JAN). Specifications, standards and descriptions cited in this solicitation are available as indicated below:

16.1 Unclassified Federal, Military and Other Specifications and Standards (Excluding Commercials) and Data Item Descriptions, Submit request on Form DD-1425 (Specifications and Standards Requisition) to:

Commanding Officer
Naval Publications and Forms Center
5801 Tabor Avenue, Philadelphia, PA 19120

The Acquisition Management Systems and Data Requirements Control List, DoD Directive 5000.19L, Volume II may be ordered on the DD Form 1425. The Department of Defense Index and Specifications and Standards (DODISS) may be purchased from the Superintendent of Documents, U. S. Goverment Printing Office, Washington, D. C. 20402. When requesting a specification or standard, the request shall indicate the title, number, data and any applicable amendment thereto by number and date. When requesting data item subscription, the request shall cite the applicable data item number set forth in the solicitation. When DD Form 1425 is not available, the request may be submitted in letter form giving the same information as listed above, and the solicitation or contract number involved. Such request may also be made to the activity by Telex No. 834295, Western Union No. 710-1685 or telephone (Area Code 215-697-3321) in case of emergency.

16.2 Commercial specifications, standards and descriptions are not available from Government sources. They may be obtained from the publishers.

16.3 Availability of specifications and standards not listed in DODISS. Data item descriptions not listed in DoD Directive 5000.19L, Volume II, and plans, drawings and other pertinent documents may be obtained by submitting a request to:

Design Division
Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

16.3.1 Requests should give the number of the solicitation and the title and number of the specification, standard, plan drawing or other pertinent document requested, exactly as cited in this solicitation. The drawings included with this specification are half scale.

16.4 Availability for examination of specifications, standards, plans, drawings, data item descriptions, and other pertinent documents. The specifications, standards, plans, full size drawings, descriptions and other pertinent documents cited in this solicitation may be examined during regular working hours at the above office.

17. INSURANCE. Within fifteen days after the award of this contract, the Contractor shall furnish the Contracting Officer a Certificate of Insurance as evidence of the existence of the

following insurance coverage in amounts not less than the amounts specified below in accordance with Section 00003, Clause 27, "INSURANCE."

COVERAGE

	PER PERSON	PER ACCIDENT	PROPERTY
Comprehensive General Liability	$300,000	$10,000,000	$100,000
Automobile Liability	$300,000	$1,000,000	$100,000
Workman's Compensation	AS REQUIRED BY STATE LAW		

The Certificate of Insurance shall further provide for thirty day's written notice to the Contracting Officer by the Insurance Company prior to cancellation or material change in policy coverage. Other requirements and information are contained in Section 00003, Clause 27, "INSURANCE".

18. LIABILITY

18.1 The Contractor shall assume all liability for and shall indemnify and save harmless the Government, its officers, enlisted personnel, agents and employees from and against any loss, damage or injury which may be sustained by any person or persons, whether they be employees, agents or representatives of the parties hereto, or third persons, as a result of the performance of this contract, or as a result of intentionally or unintentionally violating any EPA regulation. In the event any such claim or demand is made upon the Government, its officers, enlisted personnel, agents, and employees, or in the event any suit therefore is instituted, the Government will give immediate notice of such claim or suit to the Contractor and will refrain from any payment or demand with respect to the claim or suit without first obtaining the written consent of the Contractor. The Contractor shall reimburse the Government, its officers, enlisted personnel, agents and employees for any judgments, payments or expenses occasioned to them in connection with claims, demands, or suits of which notice has been given by the Government.

18.2 The Contractor releases the Government, its officers, enlisted personnel, agents and employees from any liability for any loss, damage or injury which may be sustained by the Contractor in the performance of this contract and hereby agrees to indemnify the Government, its officers, enlisted personnel, agents and employees in connection therewith.

18.3 Notwithstanding any other provision of this clause, the Contractor shall not be required to reimburse the Government, its officers, enlisted personnel, agents, and employees for any judgments, payments or expenses arising out of negligence by the Government or by Governmental representatives.

19. PRE-AWARD SURVEY. The Government will make a pre-award survey of the apparent low bidder to determine whether or not such bidder is adequately qualified to perform the requirements of any contract that may be awarded on the basis of this specification. This survey will investigate the Contractor's experience and record in performing work of the type covered by this specification, the Contractor's personnel and management resources, and the Contractor's technical and management plan for performing the services required by this specification. The apparent low bidder will be required to submit to the OIC, within thirty (30) calendar days after bid opening, comprehensive Technical and Management Plans. These plans will be reviewed by a Government panel as a part of the pre-award survey. Approval of these plans will be a condition precedent to an affirmative responsibility determination and contract

award. The format and content of the required technical and management plans, and specific evaluation criteria to be used by the Government panel are described hereafter.

19.1 Technical and Management Plans. Six (6) copies of the bidder's technical and management plans shall be submitted for review with format and content as follows:

19.1.1 The Technical plan shall be precise, factual and complete and shall describe in sufficient detail, for each functional area, the Bidder's method of accomplishing the task described. It shall include, but not be limited to, organizational charts with narrative descriptions of the functions, administrative procedures, manning proposals, summaries of key personnel, and planned equipment utilization. The size of the Technical Proposal should not exceed 8 1/2" x 11" format and should be limited to a maximum of 60 pages including charts and diagrams.

19.1.2 The Management plan (Manpower and Utilization) shall include a complete organizational chart of executive and top supervisory personnel who are proposed to perform the work, and who will be responsible for overall management. The plan shall indicate where each individual will be utilized in the organizations structure. This plan must include separate attachments containing the following:

19.1.2.1 A complete and concise statement of the education, personal history and experience of the bidder's executive and top supervisory personnel.

19.1.2.2 A statement as to organizational placement of executive and top supervisory personnel and whether or not such individuals are currently on the bidder's payroll or have been personally committed for employment for performance of work proposed herein.

19.1.2.3 A summary of the bidder's experience in performing work of the type required by this specification.

19.1.3 Unnecessarily elaborate brochures or other presentations beyond that sufficient to present a complete and effective plan are not desired and will be construed as an indication of the bidder's lack of cost consciousness. Elaborate art work, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor wanted.

19.2 Pre-Award Evaluation Criteria. The Pre-Award Panel reserves the right to solicit additional information from the bidder or from other individuals, firms or agencies, to conduct personal interviews, and to visit the sites of the bidder's previous or on-going service contracts, as required, to make a considered responsibility determination regarding the bidder's overall capability to perform the specified work. The

Government panel will review and evaluate the bidder's formal pre-award submittal in accordance with factors as delineated hereafter.

19.2.1 Personnel, Resources, and Productiveness. Organization and proposed staffing for the management, supervision and performance of the required tasks, including, but not limited to:

19.2.1.1 Identification of Key Personnel

19.2.1.2 Qualifications of Key Personnel

19.2.1.3 Integration of Key Personnel

19.2.1.4 Size and Anticipated Productivity of Planned Workforce

19.2.2 Bidder's Experience in Contract Support Services. Overall experience in the operation and maintenance of a government or comparable civilian functional activity of the same or similar scope and size contemplated by the proposed contract/or utilities operation, maintenance and repair.

19.2.3 Management and Administration. Analysis of the interface between the functional areas and general management and administration including, but not limited to, the following:

19.2.3.1 Lines of Authority and Supervision

19.2.3.2 Accountability for Mission Function

19.2.3.3 Accounting Practices/Procedures

19.2.3.4 Phase-In Plan and Phase-Out Plan to assure continuous services

19.2.3.5 A general description of the proposed Contractor Quality Control Program

19.2.4 Comprehension of Specific Requirements. Plans shall establish comprehension of the scope of work including, but not limited to, the following areas:

19.2.4.1 Manning (prime versus subcontract force)

19.2.4.2 Material

19.2.4.3 Equipment

19.2.4.4 Special Requirements

19.2.5 Method of Operation. Proposed plan should describe how the proposed organization will perform the specified functional goals. Consideration shall be given, but not be limited to, the following:

19.2.5.1 Interface with Government operation

19.2.5.2 Innovation

19.2.5.3 Sufficiency of plan.

19.3 Inadequacy of Failure to Respond. An untimely or inadequate pre-award submittal, or persistent failure to respond to requests for information or clarification shall serve as a basis for bid rejection. Time is of the essence with regard to the conduct of the pre-award survey and extensions of the thirty (30) day submittal period will NOT be granted. Bidders are advised to formulate draft plans as an integral part of their bid preparation. Failure to submit adequate, timely technical and management plans will be construed as "prima facie" evidence of the Contractor's inability to provide the specified services.

20. NOTICE OF BID GUARANTEE. A bid guarantee is required by this invitation for bids. Bid guarantee should be in the amount of 20% of the award amount. Failure to furnish a bid guarantee in the proper form and amount by the time set for opening of bids, may be cause for rejection of the bid. The bid guarantee shall be accompanied by a verifax or facsimile copy of the agent's authority to sign bonds for the surety company.

20.1 A bid guarantee shall be in the form of a firm commitment, such as a bid bond, postal money order, certified check, cashier's check, irrevocable letter of credit or in accordance with Treasury Department regulations certain bonds or notes of the United States. Bid guarantees, other than bid bonds, will be returned (a) to unsuccessful bidders as soon as practicable

after the opening of bids, and (b) to the successful bidder upon execution of such further contractual documents and bonds as may be required by the bids as accepted.

20.2 If the successful bidder, upon acceptance of his bid by the government within the period specified therein for acceptance (ninety days if no period is specified) fails to execute such further contractural documents, if any, and give such bond(s) as may be required by the terms of the bid as accepted within the time specified (ten days if no period is specified) after receipt of the forms by him, his contract may be terminated for default. In such event, he shall be liable for any cost of procuring the work which exceeds the amount of his bid, and the bid guarantee shall be available toward offsetting such difference.

21. NOTICE OF PAYMENT AND PERFORMANCE BOND REQUIREMENTS. Within 10 days after the prescribed forms are presented to him for signature, the bidder to whom the award is made shall enter into a written contract on the form prescribed by the specification and shall furnish two bonds each with satisfactory security; namely, a performance bond (Standard Form 25) and a payment bond (DD Form 1673). The performance bond shall be in a penal sum equal to 50 percent of the contract price, except that it shall be 40 percent of the contract price if that price is more than $1,000,000 and not more than $5,000,000 and in the fixed sum of $2,500,000 if the contract price is more than $5,000,000. The bond of any surety company holding a

certificate of authority from the Secretary of Treasury as an acceptable surety on Federal bonds will be accepted. Individual sureties will be acceptable if each such surety deposits with the Contracting Officer case, bonds, or notes of the United States, or such other security as order of the Treasurer of the United States, or such other security as the Contracting Officer may deem necessary for the required amount of the guaranty, under the agreement that the collateral so deposited shall remain in the possession and control of the Treasurer of the United States for at least one year after the completion of the contract. The contract time for purposes of fixing the completion date, default, and liquidated damages shall begin to run five days from the mailing of acceptance, regardless of when the formal contract and bonds are executed.

22. NOTICE OF COST COMPARISON.

22.1 Bidders are notified that this solicitation is a part of a cost comparison to determine whether accomplishing the specified work in-house or by contract is more economical.

22.2 The Government's in-house cost estimate shall be based on the statement of work set forth in this solicitation and shall be submitted to the Contracting Officer in a sealed envelope not later than the time set for bid opening. At the time of the bid opening, the bids and the sealed Government in-house estimate will be opened and the results announced. This announcement is based upon an initial comparison of the cost of in-house

performance with the cost of contracting out as indicated on the cost comparison form. The abstract data relative to the in-house cost estimate shall be made available to interested parties for review.

22.3 A period of 15 working days will be provided for public review by interested parties of the cost comparison data. No final determination regarding the question of in-house or Contractor performance will be made during this review period. Interested parties may file written requests, based on specific objections, for review of the cost comparison results with the Contracting Officer during this period. This review shall only be used to resolve questions concerning the calculation of the cost comparison, and shall not apply to decisions regarding selection of one bidder in preference to another. Decisions with regard to such requests are final.

22.4 After evaluation of bids, and resolution of requests for review, if any, the Contracting Officer shall announce the results of the cost comparison and either award a contract or cancel the solicitation. The completed cost comparison analysis shall be made available to interested parties.

22.5 In accordance with provisions of the clause, "LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWAL OF BIDS," Section 00002 a late modification which displaces the otherwise low in-house cost estimate shall not be considered. An otherwise low in-

house cost estimate is considered a successful bid and cannot be displaced by a late modification within subparagraph (d) of that clause.

23. FEDERAL WORKERS' RIGHT OF FIRST REFUSAL FOR EMPLOYMENT OPENINGS. Consistent with Government post-employment conflict of interest standards, the Contractor shall give Federal employees, displaced as a result of the conversion to contract performance, the right of first refusal for employment openings resulting from the contract award in positions for which they are qualified. The following procedures will be used:

23.1 Displaced Federal Employees. A displaced Federal employee is an employee displaced or affected as a result of the contracting of a function previously performed by Federal employees. The displaced employee need not have been working in the function being contracted but nevertheless is affected through the exercise of "bumping" or "retreat" rights normally associated with a reduction-in-force (RIF) procedure.

23.2 Employment Openings. Employment openings are positions and jobs within the Contractor's organization created by the obligation to perform this contract and which the Contractor is unable to fill with personnel employed by the Contractor at the time the Officer in Charge (OIC) makes public the tentative decision that it appears contracting is the most cost effective method to accomplish the work defined by this contract. Employment openings also include positions and jobs which indirectly arise in the Contractor's total organizational structure as a result of managerial prerogative to reposition or shift employees due to the award of this contract. Similarly, any employment openings occurring during the first six (6)

months of the performance of this contract creates an employment opening within the context of this provision.

23.3 Procedure.

23.3.1 Listing of Employment Openings. The apparent successful Contractor shall submit, within thirty (30) calendar days after bid opening, a list of employment openings to be filled to implement the resulting contract, including a brief description of the critical elements (knowledges, skills, abilities, and unusual employment criteria) required to perform the duties of each opening. This same information shall be furnished to the OIC during the first six (6) months of the performance of this contract for all employment openings that occur as defined by Paragraph 23.2 of this section.

23.3.2 Initial Notice of Federal Employee Impact. Within twenty-one (21) calendar days after the initial decision for contract award, the OIC will provide to the Contractor an initial list of names and addresses of Federal employees who most probably will be effected if an actual contract award is made. Names will be released only with the employees written consent.

23.3.3 Notice of Availability. Within fourteen (14) calendar days but not earlier than eight (8) calendar days after the first issue of RIF notification, the OIC will make available to the Contractor a list of names and addresses of all Federal

employees participating in the right of refusal process. This list will be considered the notice of availability of Federal employees for placement by the Contractor within the context of the right of first refusal clause. This list will identify those names provided prior to issuance of RIF notifications. This notice of availability will continue to be updated with new names as bumping and retreat actions proceed.

23.3.4 Contractor Interviews of Federal Employees. Within seven (7) calendar days of receipt of the initial Notice of Availability, the Contractor shall solicit from the indicated available Federal employees information concerning the availability of the individual for employment. The Contractor shall contact the individual Federal employee and arrange a private interview at a mutually acceptable time in regard to employment openings for which the Federal employee is qualified. The Contractor shall maintain a record of each interview. The records shall include the date and location of the interview; indicate if an offer was made and its acceptance or rejection; pertinent information of the offer shall be included, i.e., hours of work, rate of pay, holidays, sick leave, vacation and other fringe benefits. If no offer is made, provide specific reasons for not making an offer. If there is no offer or the offer is rejected, indicate if the displaced employee wishes to be considered for subsequent vacancies. This record shall be made available to the OIC upon request.

23.3.5 Contractor's Offers to Displaced Federal Employees. The Contractor's offers of employment shall provide to the qualified displaced Federal employee all information reasonably pertinent to allow a decision under the particular circumstances. All offers must be made in writing. If a displaced Federal employee declines an employment opening, another qualified displaced Federal employee shall be afforded an opportunity for placement until a displaced Federal employee accepts the employment or all displaced Federal employees who are qualified and available have declined.

23.3.6 Right of First Refusal Compliance. The right of first refusal is considered satisfied if the foregoing procedures are followed or if, at some point within the process, a formal, legally enforceable offer of employment is made to a qualified displaced Federal employee. Offers made prior to receipt of RIF notice do not satisfy the right of first refusal unless accepted by the displaced Federal employee after receipt of the RIF notice.

24. AVAILABILITY OF FUNDS. Funds are not presently available for this procurement. The Government's obligation hereunder is contingent upon the availability of appropriate funds from which payment for the contract purposes can be made. No legal liability on the part of the Government for payment of any money shall arise unless and until funds are made available to the Contracting Officer for this procurement and notice of such

availability to be confirmed in writing by the Contracting Officer, is given the Contractor.

25. PRE-AWARD ON SITE EQUAL OPPORTUNITY COMPLIANCE REVIEW (1970 AUG). In accordance with regulations of the Office of Federal Contract Compliance, 41 CFR 60.1, effective 1 July 1968, an award in the amount of $1,000,000 or more will not be made under this solicitation unless the bidder and each of his known first-tier subcontractors (to whom he intends to award a subcontract of $1,000,000 or more) are found, on the basis of a compliance review, to be able to comply with the provisions of the Equal Opportunity Clause of this solicitation.

26. PRE-AWARD CONFERENCE. Prior to contract award, a pre-award conference shall be held with the apparent low bidder to review and evaluate the Schedule of Deductions, the Schedule of Indefinite Quantity Work, the Contractor's proposed Quality Control Plan, and the Contractor's Organization and Staffing Plan for performance of this contract.

27. CONTRACT TYPE. This is a combination "firm-fixed price" and "indefinite quantity" contract. Work items for the firm fixed-price portion are identified in the "SCHEDULE OF DEDUCTIONS" Clause, Section 00001. Work items for the indefinite quantity portion are identified in the "SCHEDULE OF INDEFINITE QUANTITIES WORK" Clause, Section 00001.

27.1 Firm Fixed-Price Portion. The quantities shown in the Schedule of Deductions are considered to be accurate estimates for this contract period. Work shown in this schedule includes work delivered on both a called and planned basis. The price for this portion is to include all work except that listed in the Schedule of Indefinite Quantity Work.

27.2 Indefinite Quantity Portion. The indefinite quantity portion of the contract is awarded with fixed unit prices. The actual amount of work to be performed and the time of such performance will be determined by the OIC or his properly authorized representative, who will issue written work orders to the Contractor, as specified in the "ORDERING OF WORK" Clause, Section 00004. The only work authorized under this portion of the contract is that which is performed upon receipt of such a work order. The Government makes no representation as to the number of work orders or actual amounts of services which will be requested. All work requiring an approved estimate shall be based on an approved final estimate for the work minus 12 composite craft hours and $100 material cost. The total amount of work to be ordered under the indefinite quantity portion of the contract shall not exceed a maximum of 200% of the total amounts for Bid Items 1.b., 2.b., or 3.b.

28. ITEMS OF BID: Bids shall be submitted in duplicate on NAVFAC Form 4330/24, "Invitation, Bid, and Award," December 1973 Ed., and shall be accompanied by NAVFAC Form 4330/39 June 1972 Ed., "Representations and Certifications."

Bid Item 1. Price for performance of work for the base year of the contract. The price for Bid Item 1 equals the sum of Bid Items 1.a. and 1.b. Total Price for Bid Item 1.
$_____

Bid Item 1.a. Price for performance of work for the base year in accordance with the specifications for all items listed in the Schedule of Deductions for the base year. Total Price for Bid Item 1.a. $_____

Bid Item 1.b. Price for performance of work for the base year in accordance with the specifications for all items listed in the Schedule of Indefinite Quantity Work for the base year. See paragraph 33.4, Section 00001 computation of Item 1.b. Total Price for Item 1.b.
$_____

Bid Item 2. Price for performance of work for the first option year of the contract. The price for Bid Item 2 equals the sum of Bid Items 2.a. and 2.b. Total Price for Item 2. $_____

Bid Item 2.a. Price for the performance of work for the first option year in accordance with the specifications for all items listed in the Schedule of Deductions for the first option year. Total Price for Item 2.a.
$_____

Bid Item 2.b. Price for the performance of work for the first option year in accordance with the specifications for all items listed in the Schedule of Indefinite Quantity Work for the first option year. See paragraph 33.4, Section 00001 for computation of Item 2.b. Total Price for Item 2.b. $_____

Bid Item 3. Price for performance of work for the second option year of the contract. The price for Bid Item 3 should equal the sum of Bid Items 3.a. and 3.b. Total Price for Item 3. $_____

Bid Item 3.a. Price for the performance of work for the second option year in accordance with the specifications for all items listed in the Schedule of Deductions for the second option year. Total Price Item 3.a. $_____

Bid Item 3.b. Price for the performance of work for the second option year in accordance with the specifications for all items listed in the Schedule of Indefinite Quantity Work for the second option year. See paragraph 33.4, Section 00001 for computation of Item 3.b. Total Price Item 3.b $_____

29. CONTRACT LINE ITEMS. Bidders shall enter unit prices and amounts for contract line items and sublline items in the schedules that follow. The Schedule of Deductions shall not be

submitted until after contract award. In the event there is a difference between a unit price and the extended total amount, the unit price will be held to be the intended bid and the total recomputed accordingly. If the bidder provides a total amount for a contract line item but fails to enter the unit price, the amount divided by the specified quantity will be held to be the intended unit price.

30. BIDDING UNIT PRICES FOR LABOR

30.1 A portion of the work included in the scope of this contract cannot be identified in advance in sufficient detail to be included in the Firm Fixed Price Lump Sum portion of the contract or as a Unit Priced Task in the Indefinite Quantity portion of the contract. Labor for this work will be ordered under the "SPECIFIC MAINTENANCE AND REPAIR WORK" clause in Section 00005 and paid for based on unit prices for labor bid by the contractor for crafts as listed in the Schedule of Indefinite Quantity Work-Craft Hour Labor, material and equipment line items 1b through 3b.

30.2 Estimated craft hours in the Schedule are a forecast of future requirements that were developed based on historical data adjusted to forecast future requirements. A summary of historical data is shown in Attachments I through IV. Additionally, more detailed data may be reviewed at Base Maintenance Division offices. The historical data depicts estimated standard craft hours by craft for performing "SPECIFIC

MAINTENANCE AND REPAIR WORK" accomplished in the time period shown. The standards used for these estimates were based on Engineered Performance Standards (EPS), NAVFAC P-700 series. EPS Manuals may be reviewed at any of the six regional NAVFAC Engineering Field Divisions.

30.3 The Contractor shall enter in the unit price bid space the unit price for performing a craft hour of work. The craft hour unit price shall include all direct and indirect costs associated with performing a craft hour of work. The craft hour unit price should be the contractor's hourly craft wage adjusted to allow for the bidder's work force productivity (i.e., the contractor's estimate of how its work force will perform in relation to the Engineered Performance Standards). The craft hour price should also include all costs for job preparation, travel, pre-expended bin materials and supplies, ordering and stockpiling job material, additional material handling, craft delay allowances, profit, tools, equipment, field and home office overhead, clerical support, supervision, inspection, fees, taxes, licenses, permits, insurance, etc.

31. BASIS FOR AWARD. The low bidder for purposes of award shall be the conforming, responsive, responsible bidder offering the lowest total bid price for Bid Items 1, 2, and 3.

32. EVALUATION OF BIDS. The bidder shall not include in the bid price any contingency or allowance for wage adjustments due to a revised wage rate determination. Notwithstanding the provisions of the "OPTION TO EXTEND THE TERM OF THE CONTRACT"

Clause, Section 00003, concerning extension of the contract at the same price, the contract will be extended at the prices contained in the "ITEMS OF BID" for the option years. Pending the result of the cost Comparison, only Bid Item 1 will be awarded.

33. SCHEDULE OF DEDUCTIONS. The successful Contractor shall comply with the following provisions:

33.1 Contractor Responsibility. The successful Contractor is required to provide an acceptable Schedule of Deductions within ten (10) days after award. No work may commence until such a schedule is approved. The total of the Schedule of Deductions must equal the amount entered for Bid Item 1.a. in the "ITEMS OF BID" Clause, Section 00001. Prices shown in the Schedule of Deductions will be utilized in conjunction with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM" Clause, Section 00004, in making payment deductions for nonperformance or unsatisfactory performance. Unbalancing in the Schedule of Deductions submitted shall be cause for withholding approval and requiring resubmission of a balanced schedule, and may be grounds for Termination for Default. The Government also reserves the right to unilaterally establish a Schedule of Deductions in the event the successful Contractor presents a Schedule of Deductions which is unbalanced or materially deficient. The approved Schedule of Deductions shall be a part of the contract. DO NOT SUBMIT SCHEDULE OF DEDUCTIONS WITH BID. Schedule of Deduction for Option Years shall be submitted

within ten (10) days after notice of intent to exercise the option.

33.2 Government Estimates. The Government estimate of the value of work will be based on the Schedule of Deductions for the fixed-price lump sum portion of the contract and the Schedule of Indefinite Quantity Work as listed in the "ITEMS OF BID" Clause, Section 00001, for the indefinite quantity portion of the contract in all instances except the following: for partially performed firm-fixed priced work items, the Engineered Performance Standards (EPS) manuals will be utilized to estimate manhour requirement. For pricing the government will estimate the Contractor's cost based on wage rates extracted from attached wage determinations, locally determined rate for contractors overhead and profit, employee fringe benefits times the EPS estimated manhours, and material costs if applicable.

33.3 Each attachment includes the material cost and the number of Service tickets projected (targeted) for the fiscal years under this contract. The Contractor utilizing this information as a guide shall provide a firm fixed monthly price to accomplish the Service Work allowing for a plus or minus 20% fluctuation in the number of Service Tickets per quarter at no adjusted cost to the Government or Contractor. The firm fixed monthly price shall include all direct and indirect labor cost, overhead, profit, operational expenses, fringe benefits, project and work management and any other associated cost to accomplish the Service Work.

33.4 The Government will list in the Schedule of Indefinite Quantity Work the projected (target) manhour requirements and material and equipment budget for the fiscal years under this contract to accomplish all indefinite quantity work. The Contractor shall enter a firm fixed hourly unit price which shall include all direct and indirect labor cost, overhead, operations expenses, fringe benefits, project and work management, and any other associated cost to accomplish the Indefinite Quantity Work. Each attachment includes the historical data of work actually performed during the last preceeding fiscal year by Government forces. The Schedule of Indefinite Quantity Work includes the Government work requirements projection (targets) for the fiscal years of this specification. The Government targets include an annual projection for programmed and non-programmed work which is based upon Government historical records, the capability of the Government work force and an engineering estimate of future requirements. This data is provided for informational purposes only. It DOES NOT form an exact or precise basis for delineating the total scope of the services required by this contract, but is only to be used for the development of the pricing of the work requirements.

33.5 Schedule of Deductions.

	Units	No. of Units	Unit Price	Total Price
HEATING PLANTS AND STEAM DISTRIBUTION SYSTEM - Attachment I				
a. Monthly Work Report	Report	12	$_____	$_____
b. Plant Operation - Manned Boilers				
Bldg 1700	Boiler	5	$_____	$_____
M625	Boiler	3	$_____	$_____
G650	Boiler	3	$_____	$_____
AS4151	Boiler	3	$_____	$_____
PP2615	Boiler	2	$_____	$_____
RR15	Boiler	2	$_____	$_____
BB9	Boiler	3	$_____	$_____
c. Operation - Unmanned Boilers	Boiler	68	$_____	$_____
d. Plant Maintenance/Repair-Manned Boilers				
Bldg 1700	Boiler	5	$_____	$_____
M625	Boiler	3	$_____	$_____
G650	Boiler	3	$_____	$_____
AS4151	Boiler	3	$_____	$_____
PP2615	Boiler	2	$_____	$_____
RR15	Boiler	2	$_____	$_____
BB9	Boiler	3	$_____	$_____
e. Maintenance/Repair-Unmanned Boilers	Boiler	68	$_____	$_____
f. Corrective/Preventative Maintenance of Steam Distribution System	Quarter	4	$_____	$-----
g. Service Calls (Distribution System)	Month	12	$_____	$_____

TOTAL OF HEATING PLANTS AND STEAM DISTRIBUTION SYSTEM $_____

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	No. of Units	Unit Units	Unit Price	Total Price
WATER TREATMENT PLANTS AND WATER DISTRIBUTION SYSTEM - Attachment II				
a. Monthly Work Report	Report	12	$_____	$_____
b. Water Treatment Plant - Operations				
Bldg 20	Month	12	$_____	$_____
Bldg 670	Month	12	$_____	$_____
TT38	Month	12	$_____	$_____
BB190	Month	12	$_____	$_____
RR83	Month	12	$_____	$_____
BA138	Month	12	$_____	$_____
AS110	Month	12	$_____	$_____
M178	Month	12	$_____	$_____
c. Water Treatment Plant - Maintenance/Repair				
Bldg 20	Month	12	$_____	$_____
Bldg 670	Month	12	$_____	$_____
TT38	Month	12	$_____	$_____
BB190	Month	12	$_____	$_____
RR83	Month	12	$_____	$_____
BA138	Month	12	$_____	$_____
AS110	Month	12	$_____	$_____
M178	Month	12	$_____	$_____
d. Service Calls (Distribution System)	Month	12	$_____	$_____

TOTAL OF WATER TREATMENT PLANTS AND WATER DISTRIBUTION SYSTEM $_____

	No. of Units	Unit Units	Unit Price	Total Price
WASTEWATER TREATMENT PLANTS AND WASTEWATER COLLECTION SYSTEM - Attachment III				
a. Monthly Work Report	Report	12	$_____	$_____
b. Wastewater Treatment Plant - Operations Bldg 22				
TC563	Month	12	$_____	$_____
BB4	Month	12	$_____	$_____
RR92	Month	12	$_____	$_____
M137	Month	12	$_____	$_____
TT35	Month	12	$_____	$_____
BA160	Month	12	$_____	$_____
	Month	12	$_____	$_____
c. Wastewater Treatment Plant - Maintenance/ Repair Bldg 22				
TC563	Month	12	$_____	$_____
BB4	Month	12	$_____	$_____
RR92	Month	12	$_____	$_____
M137	Month	12	$_____	$_____
TT35	Month	12	$_____	$_____
BA160	Month	12	$_____	$_____
	Month	12	$_____	$_____
d. Service Calls (Distribution System and Battery Acid Treatment)	Month	12	$_____	$_____

TOTAL OF WASTEWATER TREATMENT PLANTS AND WASTEWATER COLLECTION SYSTEM $_____

		No. of Units	Unit Units	Unit Price	Total Price
COLD STORAGE PLANT - Attachment IV					
a.	Monthly Work Report	Report	12	$_____	$_____
b.	Cold Storage Plant - Operation	Month	12	$_____	$_____
c.	Cold Storage Plant - Maintenance/Repair	Month	12	$_____	$_____
d.	Service Calls	Month	12	$_____	$_____

TOTAL OF COLD STORAGE PLANT $_____

TOTAL OF ALL LUMP SUM WORK $_____
(Total must equal the amount shown for Bid Item 1.a., Section 00001, Paragraph 28)

34. SCHEDULE OF INDEFINITE QUANTITY WORK

34.1 INDEFINITE QUANTITY WORK -UNIT PRICED TASKS

Price for labor and material in the BASE PERIOD to perform the specific maintenance and repair unit priced tasks listed below that will be paid for by the Government as specified in Section 00005. This work may be subject to wage rates under the Davis-Bacon Act. The price for this bid item is the total of the subline items listed in the Schedule of Indefinite Quantity Work-Unit Priced Tasks.

SCHEDULE OF INDEFINITE QUANTITY WORK - UNIT PRICED TASKS

BID ITEM	SUPPLIES/ SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
34.1.1	Painting (Clause 00005___)		sq. ft.	$_____	$_____
34.1.2	etc			$_____	$_____

TOTAL BID - UNIT PRICED TASKS $_____

34.2 ~~34.1.2~~ INDEFINITE QUANTITY WORK - CRAFT HOUR LABOR, MATERIAL AND EQUIPMENT

Price for labor, material and equipment in the BASE YEAR to perform the specific maintenance and repair work that cannot be identified in sufficient detail to be included in Bid Items 1 or 2. Total individual work shall cost in excess of $400 but less than $10,000. The individual work must be a complete independent stand-alone project. This work may be subject to wage rates under the Davis-Bacon Act as

defined in clause MINIMUM WAGE RATES AND OTHER LABOR STANDARDS. The price for this bid item is the total of the subline items listed in the Schedule of Indefinite Quantity Work-Craft Hour Labor, Material and Equipment.

SCHEDULE OF INDEFINITE QUANTITY WORK - CRAFT HOUR LABOR, MATERIAL, AND EPUIPMENT

BID ITEM	SUPPLIES/ SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
Labor subject to Davis-Bacon Wage Rate.					
34.2.1	Carpentry (CL 00005___)	_____	craft hr	$_____	$_____
34.2.2	Electrical (CL 00005___)	_____	craft hr	$_____	$_____
34.2.3	Masonry (CL 00005___)	_____	craft hr	$_____	$_____
34.2.4	Plumbing/Pipefitting (CL 00005___)	_____	craft hr	$_____	$_____
34.2.5	Material and Equipment (CL 00005___)	Material x (100 - % Discount) / (100)		=	$_____
34.2.6	Equipment	Equipment x (100 -% Discount) / (100)		=	$_____
	TOTAL BID ITEM 3				$_____

34.3 TOTAL OF INDEFINITE QUANTITY WORK

Total of Indefinite Quantity Work $_____
(Total must equal the amount shown for Bid Item 1.b, Section 00001, Paragraph 28 and must be the sum of the totals of paragraph 34.1 and 34.2, Section 00001.)

UTILITIES SERVICE

SECTION 00004 SPECIAL PARAGRAPHS

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SECTION 00004 SPECIAL PARAGRAPHS UTILITIES SERVICE

1. DEFINITIONS. As used throughout this contract, the following terms shall have the meaning set forth below. See "DEFINITIONS TECHNNICAL" clause in Section 00005.

1.1 Contractor. The term Contractor as used herein refers to both the prime Contractor and any subcontractors. The Contractor will be responsible for ensuring that his subcontractors comply with the provisions of this contract.

1.2 Contractor Representative. A superintendent or manager assigned in accordance with the "SUPERINTENDENCE BY CONTRACTOR" Clause, Section 00004, subparagraph 23.1.

1.3 Government Representative. A person or persons designated by the OIC to be his authorized representative. One such person shall serve as the Contractor's principal point of contact.

1.4 Officer in Charge (OIC). The Officer designated by the Contracting Officer to administer the contract. This term shall also refer to persons assigned by the Officer in Charge to perform his responsibilities.

1.5 Regular Working Hours. Working hours shall be from 8:00 a.m. to 4:30 p.m., Monday through Friday, except for national holidays and other days and time specifically designated by the OIC.

1.6 Quality Assurance (QA). A method used by the Government to provide some measure of control over the quality of purchased goods and/or services received.

1.7 Quality Control (QC). A method used by the Contractor to control quality of goods and/or services produced.

1.8 Quality Assurance Evaluator (QAE). A person or persons designated by the OIC to measure/monitor Contractor performance under this contract.

1.9 Engineered Performance Standards (EPS). EPS is a Department of Defense method for establishing the estimated manhour requirements to perform various types of maintenance and repair tasks.

1.10 As Directed, As Required, As Permitted, Approved, Acceptance. Where these words or words of similar import are used, it shall be understood that the direction, requirements, permission, approval, or acceptance of the Contracting Officer is intended, unless stated otherwise.

1.11 As Shown, As Detailed. Where these words or words of similar import are used, it shall be understood that reference is made to the drawings, tables, or narratives comprising this specification, unless stated otherwise.

1.12 Work Authorization (WA). A Work Authorization is a document issued to the Contractor by the OIC that authorizes the accomplishment of work under the terms of this contract. A sample Work Authorization is shown in Appendix.

1.13 Work Order (WO). A Work Order is a document (DD Form 1155) prepared by the OIC that obligates funds for the accomplishment of work under the terms of the contract. A sample copy of a Work Order is shown in Appendix.

1.14 Service Calls. Service calls are intended to encompass those maintenance and repair requirements, not otherwise a part of other work items, which are brief in scope and would not reasonably require separate job planning, estimating and scheduling and are limited to a cost of $400 of materials and labor or 16 manhours. Service calls may be classified by the OIC as emergency, urgent or routine. All work in this category is part of the Lump Sum portion of this contract. Service calls will only be made to plants when the Government desires upgrading/alteration of existing facilities or the installation of new equipment; the maintenance and repair of existing plant equipment up to $2,000 per complete independent stand-alone project is included and bid in the plant maintenance work items and is not called up by the OIC.

1.14.1 Emergency Calls. Service calls will be classified as emergency calls when the work consists of correcting failures which constitute an immediate danger to personnel or threaten to damage property.

1.14.2 Urgent Calls. Service calls will be classified as urgent calls when the work consists of minor leaks and other

failures in services which do not immediately endanger personnel or threaten damage to property, but would soon inconvenience and affect the health or well being of personnel or disrupt operational missions.

1.14.3 Routine Calls. Service calls will be classified as routine calls when the work does not qualify as an emergency or urgent call.

2. ORDERING OF WORK. Service to be furnished under the Indefinite Quantities portion of the contract shall be ordered by the OIC or, when specifically delegated, the Goverment Representative.

2.1 Work orders will take the form of Department of Defense DD Form 1155 (1 Feb 77). DD Form 1155 will be processed as described on the form. A copy of DD Form 1155 is contained in Appendix E.

2.2 Work authorizations will be issued to the Contractor in triplicate. The original to be submitted by the Contractor with the invoice for payment, one copy to be submitted within 24 hours of completion of work, and one copy retained by the Contractor. Work authorization forms are contained in Appendix E.

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2.3 The Contractor will respond to requests for "emergency" work received by verbal or telephone requests from the OIC or

his designated representative at the time of such request. When applicable, written requests will be prepared by the Government and forwarded to the Contractor on the next working day to cover such verbal/telephone requested work.

3. WORK CONTROL. The Contractor shall develop and implement the necessary work control procedures for controlling all work requirements. The work control procedures should accurately reflect the current status of known work requirements and ensure their timely completion.

4. WORK SCHEDULE. The Contractor shall arrange his work so as not to cause interference with normal occurrence of Government business. All work schedules shall be submitted to and be approved by the OIC. Within ten (10) days after award, the Contractor shall submit to the OIC a schedule of planned performance of work for the contract period. The schedule shall indicate the day or days of the week that weekly or more frequent items will be accomplished at the locations indicated and the week of the month in which items of less than weekly frequencies will be accomplished. Whenever periodic services have been scheduled on the date a holiday occurs, then such services will be performed on the following working day. In no event shall the Contractor change the approved work schedule without the prior written consent of the OIC. If any of the services in this specification (water, steam, waste-water, or cold storage) must be temporarily discontinued due to scheduled

repairs, the Contractor shall notify the OIC at least ten (10) working days in advance. If the discontinued service is due to an emergency breakdown, the Contractor shall notify the OIC as soon as possible.

4.1 Monthly Work Report. The Contractor shall develop a monthly work report for all work ordered under the Indefinite Quantity portion of this contract. The report shall be submitted to the OIC for approval fifteen (15) days prior to the beginning of each month. The report shall list all jobs scheduled for accomplishment during the month and shall be identified by Work Order Number and Title. The scheduled start and completion dates shall be indicated for each job. Work shall start on each job no later than one (1) day after the scheduled start date and shall be completed on schedule. Changes or additions to any job which might impair the Contractor's ability to complete the work on time or which change the scope of the work and thereby the cost estimate, shall be reported to the OIC in writing.

5. WORK OUTSIDE REGULAR BUSINESS HOURS. Except as may otherwise be specified, all scheduled and routine work shall be performed during normal working hours. If the Contractor desires to carry work on Saturday, Sunday, holidays, or outside of the Base's regular hours, the Contractor shall submit written application to the OIC for approval two working days in advance.

6. WORK AUTHORIZATION AND PAYMENT PROCESSING PROCEDURES.
The work the Contractor will be required to perform falls under two major categories.

6.1 Fixed-Price Lump Sum. This category includes: provision of all services in accordance with Section 00005, including service calls, operations, preventive maintenance, corrective maintenance, maintenance of facilities, equipment, and utility systems. These items are bid on a lump sum basis and are paid for each month on the basis of one part of the yearly total divided by the number of months over which the contract extends (i.e., monthly total usually equals 1/12 of the total).

6.2 Indefinite Quantity Work. This second category of work includes, but is not limited to maintenance, repair, and alteration, new construction and equipment installation. Monthly payment invoices shall be accompanied by a properly documented copy of each completed work authorization and approved manhours estimate and actual material invoices or the agreed to inventory price of GFM for which payment is requested. For work requiring approved manhours estimate, payment will be calculated by subtracting 12 composite craft hours and $100 material cost from the final estimate.

7. INVOICING INSTRUCTIONS. Contractor's invoices shall be submitted on NAVFAC Form 10-7300/30 accompanied by LANTDIV Form 4-4235/4 at monthly intervals for services performed to the

OIC. The original of each invoice shall have attached to it a copy of the work order, completed work authorizations, material invoices and a summary of the charges in a format similar to the Schedule of Deductions. Upon verification of work actually performed and receipt of required Contractor submittals, invoices will be processed for payment. Payment will be based on: a monthly charge for the firm fixed price portion of the work computed by dividing the annual cost by the number of months of service, and the actual quantities of work performed and material used for the Indefinite Quantity portion of the work, which are properly authorized, minus 12 composite craft hours and $100 material cost per individual job completed. The OIC reserves the right to verify prices and availability of materials purchased by the Contractor and pay the lowest price for materials reasonably available considering job priority. All parts and materials shall be purchased competitively to provide the lowest available price. For individual parts and materials in excess of $500 two (2) quotes shall be provided by the Contractor.

8. CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES. The Government will give the Contractor written notice of deficiencies by copies of the Inspector's Daily Reports or otherwise, prior to charging liquidated damages, and whenever unsatisfactory services are performed. The parties hereto agree that due to the obligation of Contractor under another clause hereof to maintain an effective inspection system, the Contractor shall be conclusively presumed to have actual knowledge of work not performed, and that therefore such

written notice shall not be a prerequisite for withholding payment for unperformed services.

8.1 Watchstanding. This paragraph applies to services required by Section 00005, Clause 4, OPERATIONAL REQUIREMENTS.

8.1.1 In the event that the Contractor fails to provide qualified supervision or personnel or allows any equipment or post to be unmanned for more than thirty (30) minutes at any time during any shift or special detail in which such supervision or personnel is required or in which said equipment or post requires manning as set out in the requirements of these specifications, the Government may assign other persons to perform such work or elect to not perform the work. In either case, deductions shall be made from the month's invoice as follows:

8.1.1.1 When a Government employee is assigned to perform the work required, deductions shall be computed based on the current Federal Pay Schedules including wages, retirement, and fringe benefits of the Government employee (civilian or military) who actually performed the work. An additional twenty percent (20%) of the computed cost shall be deducted as liquidated damages for the administrative or other expenses to the Government.

8.1.1.2 If no replacement is furnished by the Government and the work is not performed, to preclude the contractor from being

paid for not performing, the Government will deduct from the amount invoiced by the contractor an amount equal to the cost to the Government of having a Government employee perform the work. The cost shall be computed based on the current Federal Pay Schedule including wage and retirement fringe benefits. An additional ten percent (10%) of the computed cost shall be deducted as liquidated damages for administrative or other expenses to the Government.

8.1.2 However, the Government reserves the following rights:

8.1.2.1 The rights described in the "DEFAULT" Clause of the General Provisions of this contract, and all other remedies for default as may be provided by law.

8.1.2.2 To hold the contractor liable for property losses sustained by the Government as a direct, consequentive result of a failure to furnish the required personnel.

8.2 Other Services. This paragraph applies to all work not specifically identified in paragraph 8.1.

8.2.1 In the case of non-performed work, the Government:

8.2.1.1 shall deduct from the Contractor's invoice all billings associated with such non-performed work at the rates set out in the Schedule of Deductions or Items of Bid, required by other

provisions of this contract, unless the Contractor is afforded an opportunity to perform pursuant to 8.2.1.2 below and satisfactorily completes the work;

8.2.1.2 may, at its option, afford the Contractor an opportunity to perform the non-performed work. The Contractor must start the work within three (3) hours of notification, in the case of daily services, or within twenty-four (24) hours in the case of all other services; or

8.2.1.3 may, at its option, perform the services by Government personnel or otherwise.

8.2.2 In the case of unsatisfactory work, the Government:

8.2.2.1 shall deduct from the Contractor's invoice all billings associated with such unsatisfactory work at the rates set out in the Schedule of Deductions or Items of Bid, unless the Contractor is afforded an opportunity to perform pursuant to 8.2.2.2 below and satisfactorily completes the work;

8.2.2.2 may, at its option, afford the Contractor an opportunity to re-perform the unsatisfactory work. The Contractor must start the work within six (6) hours in the case of daily services, or within twenty-four (24) hours in the case of all other services, of the notice to the Contractor of such unsatisfactory performance, at no additional cost to the Government, or

8.2.2.3 may, at its option, perform the services by Government personnel or otherwise.

8.2.3 Should the Government elect options 8.2.1.1, 8.2.1.2, 8.2.2.1, or 8.2.2.2 above, the Government will also deduct, as liquidated damages, to compensate the Government for administrative costs and other expenses resulting from the non-performance or unsatisfactory performance, an additional ten percent (10%) amount computed for such work.

8.2.4 Should the Government elect options 8.2.1.3 or 8.2.2.3 above, the deductions shall be computed based on the current Federal Pay Schedules including wages and fringe benefits of the Government employee (civilian or military) who actually performed the work. An additional twenty percent (20%) of the computed cost shall be deducted as liquidated damages for administrative or other expenses to the Government.

8.2.5 Said deductions by the Government for monies otherwise due the contractor shall represent agreed liquidated damages assessed by the Government for non-performance or unsatisfactory performance.

9. CONTRACTOR FAILURE TO MEET MINIMUM EFFICIENCY STANDARD. If the Contractor fails to meet the efficiency range on a monthly basis for the boilers as established by Section 00005,

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Attachment I, paragraph ___., the Government shall deduct an amount equal to the cost of additional fuel required as a result of inefficient operations. The cost of additional fuel will be based on the Navy Stock Fuel Price. Also, the Government will deduct an additional twenty percent (20%) of the computed cost as liquidated damages, to compensate the Government for administrative costs and other expenses resulting from the inefficient operation.

9.1 The formula used to derive the additional fuel cost is:

$$\frac{BE - AE}{BE} \times 100 \times S.P. \times MV = \text{Additional Fuel Cost}$$

where:

B.E.	=	base efficiency as provided in Attachment I or as modified by OIC)
A.E.	=	actual monthly efficiency (____%)
S.P.	=	Navy Fuel Stock Price (dollars/unit volume)
M.V.	=	Monthly volume of fuel

10. PREPERFORMANCE CONFERENCE. Prior to commencing work, the Contractor shall meet in conference with the OIC at a time specified, to discuss and develop mutual understandings relative to scheduling and administration of work.

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11. GOVERNMENT QUALITY ASSURANCE. In accordance with the "INSPECTION OF SERVICES" Clause, Section 00003, each phase of the services rendered under this contract is subject to Government inspection during the Contractor's operations and after completion of the tasks. The Government's Quality Assurance Program is not a substitute for Quality Control by the Contractor. All findings of incomplete or defective performance will be administered in accordance with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM THE REQUIRED SERVICES" Clause, Section 00004. All costs associated with rework are the responsibility of the Contractor. When Contractor overall performance is unsatisfactory, a Contract Discrepancy Report will be issued by the OIC or his designated representative. The Contractor shall reply in writing, giving the reason(s) for unsatisfactory performance, and identify the corrective action(s) to be taken to prevent recurrence.

12. CONTRACTOR QUALITY CONTROL. In accordance with the "INSPECTION SERVICES" Clause, Section 00003, the Contractor shall establish and maintain a complete Quality Control Program that is acceptable to the OIC, to assure that the requirements of the contract are provided as specified. A general description of the Contractor's Quality Control Program shall be available for Government review during the preaward survey. Within ten (10) days after award, copies of the Quality Control

Program shall be provided to the OIC and as changes are made thereafter. The program shall include the following:

12.1 A quality control inspection system covering all services included in the contract. It must specify areas to be inspected, on either a scheduled or unscheduled basis, and how these inspections are to be conducted.

12.2 The name(s) of the individual(s) tasked to perform the quality control inspections, their qualifications, the extent of their authority and the extent of their time devoted to inspections.

12.3 A method for identifying deficiencies in the quality of services performed and taking corrective action before the level of performance becomes unsatisfactory.

12.4 A file of all Quality Control Inspections, inspection results, and any corrective action required, shall be maintained by the Contractor through the term of this contract. This file shall be the property of the Government and be made available to the OIC during regular hours. The file shall be turned over to the OIC within ten (10) days after completion/termination of the contract.

13. PERFORMANCE EVALUATION MEETINGS. The Contractor's Representative shall meet with the OIC every other week. More

frequent meetings may be scheduled at the discretion of the OIC. A mutual effort will be made to resolve all problems identified. The written minutes of these meetings, prepared by the Government, shall be signed by the Contractor's Representative and the OIC. Should the Contractor not concur with the minutes, the Contractor will state, in writing, to the OIC any areas of disagreement.

14. ORDER OF PRECEDENCE. In the event of an inconsistency between the provisions of this solicitation, the inconsistency shall be resolved by giving precedence in the following order:

14.1 the Schedule (excluding the Specifications);

14.2 Terms and Conditions of the solicitation, if any;

14.3 General Provisions, Section 00003;

14.4 Other provisions of the contract, when attached or incorporated by reference; and

14.5 The Specifications.

15. GOVERNMENT-FURNISHED PROPERTY. Facilities, equipment, and material provided for the Contractor's use are defined in this contract as Government-furnished property. As such, the following provisions apply:

15.1 The Government shall deliver to the Contractor, for use only in connection with this contract, the property described in the schedule or specifications (hereinafter referred to as "Government-furnished property"), at the times and locations stated therein. If the Government-furnished property, suitable for its intended use, is not so delivered to the Contractor, the OIC shall, upon timely written request made by the Contractor, and if the facts warrant such action, equitably adjust any affected provision of this contract pursuant to the procedures of the "CHANGES" Clause hereof.

15.2 Title to Government-furnished property shall remain in the Government. The Contractor shall maintain adequate property control records of Government-furnished property. These records shall be available to the OIC at all times.

15.3 Unless otherwise provided in this contract, the Contractor, upon delivery to him of any Government-furnished property, assumes the risk of, and shall be responsible for, any loss thereof or damage thereto except for reasonable wear and tear, and except to the extent that such property is consumed in the performance of this contract.

15.4 The Contractor shall, upon completion of this contract, turn over to the Government all Government-furnished property not consumed in the performance of this contract or not theretofore delivered to the Government.

16. GOVERNMENT-FURNISHED FACILITIES. Office, storage and shop space will be provided to the Contractor as ~~shown on the appropriate exhibit in each attachment~~. The Contractor shall assume responsibility for safe keeping of facilities provided for his use and shall take adequate precautions to prevent fire hazards, odors and vermin. Within ten (10) days after contract award, and before assuming responsibility for these facilities, the Contractor shall prepare and submit a written description of the condition of these facilities to the OIC. The Contractor shall not be provided use of these facilities until this description has been accepted and approved by the OIC. At the completion of the contract, all facilities shall be returned to

the Government in the same condition as received, except for reasonable wear and tear. The Contractor shall be held responsible for the cost of any repairs caused by negligence or abuse on his part, or on the part of his employees. The facilities available for use by the Contractor are shown in the appropriate exhibit for each attachment. The Contractor shall be responsible for housekeeping and maintenance services for all Government-furnished facilities.

17. ADEQUACY OF GOVERNMENT-OWNED FACILITIES. The Contractor shall be responsible for compliance with all applicable standards and regulations established by the Occupational Safety and Health Administration (OSHA) and all Federal, State, and Local regulations. The Contractor shall determine the adequacy of the Government-owned facilities to be provided during examination of premises, Section 00001, Clause 7. Any structural changes required to make the Government-owned maintenance facilities adequate for Contractor operations shall be made at no cost to the Government and must be approved by the OIC before implementation by the Contractor. Facilities shall be returned to the Government in the same condition as received except that any structural improvements shall become the property of the Government.

18. GOVERNMENT-FURNISHED EQUIPMENT (GFE). The Government will provide the Contractor the use of existing and available Government-owned equipment in the performance of the contract.

18.1 Joint Inventory. The Contractor and the Government Representative shall conduct a joint inventory of Government Furnished Equipment before commencing work under this contract to determine the exact number and serviceability of Government-furnished equipment. The Contractor shall then certify the findings of this inventory and shall assume accounting responsibility and, subsequently, report inventory discrepancies to the Government Representative. Government-furnished equipment shall not be removed from the site unless approved by the OIC. Government-Furnished Equipment is listed in the appropriate exhibit in each attachment.

18.2 Periodic Servicing. The Contractor shall be responsible for the periodic servicing, maintenance, repairs of the equipment listed at no cost to the Government. All GFE shall be maintained in accordance with the manufacturer's recommendations and applicable industry standards. Upon completion or termination of the contract, all GFE shall be returned to the Government in an equivalent condition, less normal wear and tear experienced during the term of this contract. Any GFE damaged from lack of Preventive Maintenance (PM), or through Contractor negligence or abuse, will be repaired by the Contractor at his expense. If the GFE breaks down and cannot be repaired, the Contractor is not relieved of any of the requirements of this specification. The Government shall not be responsible for replacing any equipment that breaks down beyond repair, but the Contractor shall replace any equipment that breaks down due to his own negligence or abuse. GFE used by the Contractor shall,

at the termination of this contract, be in essentially the same condition as when the contract began less normal wear and tear.

19. GOVERNMENT-FURNISHED MATERIAL (GFM). The Government has repair parts and materials stored on Base for maintenance of the facilities/equipment listed in Appendix H. Upon contract award, these parts and material shall become the property of the Contractor. The parts and materials will be jointly inventoried prior to commencement of work, the inventory to include nomenclature, size, type material, National Stock Number (NSN) (when available), number of units, agreed estimated unit price and estimated total price of the inventory. The inventory will also include materials ordered by the Government, but not yet received for which termination of the purchasing process is not possible. During the course of the contract, the Contractor may use these materials. The Contractor may, at the Contractor's discretion, maintain the inventory at original levels. Upon completion of the contract, the parts and materials which have been used will be reinventoried and the value of the inventory determined based on the previously negotiated prices. At that time, the Government will not accept or pay for any increases in any item unit number; both the Contractor will have deducted from his payments, the fair market value of any unit items below the original inventory. Title to the materials and parts will revert to the Government while the Contractor's payments are adjusted accordingly to reflect the transfer of title. Use of GFM in no way relieves the contractor of the responsibility to

adhere to the material requirements specified in the Attachments. The material available is within the spectrum of normal construction industry disciplines including structural, mechanical, electrical, and equipment repair and maintenance. The Contractor will include in his price the cost of the inventory which is currently estimated to take in excess of 580 manhours. The inventory must be completed within thirty (30) days after the notice of award. The items listed in Attachment ____, Exhibit ____ are considered to be unique to the equipments currently used at the Base. The Contractor shall maintain inventory levels of these items derived from the inventory held after contract award. In the event the unique equipment is replaced, and/or the Contractor desires to lower the inventory item unit amounts below that originally determined during the joint inventory, the Contractor must request, in writing, permission to proceed from the OIC.

20. AVAILABILITY OF UTILITIES. The Government will furnish utilities for heating purposes at Government-furnished facilities. The Government will also furnish electricity at existing outlets as may be required for the work to be performed under the contract at no cost to the Contractor. Information concerning the location of existing outlets may be secured from the OIC. The Contractor shall provide and maintain, at his expense, the necessary service lines from existing Government outlets to the site of work.

21. CONTRACTOR-FURNISHED MATERIAL. The Contractor shall, at all times, furnish sufficient material, and parts as necessary to perform work required by the contract, the only exception being Government-furnished material as detailed in other parts of the contract. Such material shall be subject to the inspection and approval of the OIC during the life of the contract. The Contractor shall supply all fuel, lubricants, and spare parts except as specified herein.

22. CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH OTHER ACTIVITY CONTRACTORS. The Contractor shall cooperate with, and coordinate with, other activity Contractors as directed by the OIC, to promote efficient utilization of labor and resources. The Contractor is directed to report, in writing, to the OIC for resolution, any scheduling conflicts or problems which may arise.

23. SUPERINTENDENCE BY CONTRACTOR. The Contractor shall provide adequate supervision as follows:

23.1 Contractor Representative. The Contractor shall have a competent manager on the Base at all times during normal working hours, who shall have the written authority to speak and act for the Contractor. He shall have the authority to purchase materials required for day-to-day maintenance and replacements. Prior to commencement of the contract period, the Contractor

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shall advise the Contracting Officer in writing the name of the designated representative of the Contractor. Changes in representatives shall be furnished to the Contracting Officer in writing prior to making such changes.

23.2 Contractor Representative Responsibility. The Contractor's Representative is responsible for assuring the inspection system required by the "INSPECTION OF SERVICES" Clause, Section 00003, and described in the "CONTRACTOR QUALITY CONTROL" Clause, Section 00004, is carried out. The Contractor shall employ sufficient number of supervisory personnel to ensure that adequate and competent supervision is provided continuously for all work accomplished by the Contractor and to assure performance and accomplishment in strict accordance with the provisions contained in the specification. The Contractor shall submit, in writing, to the Contracting Officer, prior to commencement of the contract period, a list indicating the names of supervisors and their assigned areas of responsibility. The listing be kept current by written modifications, when changes occur.

23.3 Communication Equipment. The Contractor shall provide adequate communication equipment to perform the services of this contract. Radio and pager frequencies must be approved by the OIC. The Contractor should establish contact with the OIC not later than ten (10) days after contract award to ensure frequencies are available at the start of the contract.

23.3.1 Telephones. The Contractor shall, upon award, provide sufficient personnel to answer a government provided telephone twenty-four (24) hours a day, seven (7) days a week at which he can be notified of work requirements, especially those involving emergency work. This telephone, provided by the Government, shall be located at Building 670. A specific Contractor employee shall be assigned to this phone during all normal working hours. This phone shall only be used for conducting contract-related business with the Contracting Officer or his authorized representatives.

24. CONTRACTOR PERSONNEL. The Contractor shall furnish an adequate number of personnel skilled in all of the needed trades to carry out the intent of this contract. All tradesmen and journeymen employed by the Contractor shall possess current valid certificates, if appropriate, to the trade and work involved. All tradesmen will be proficient in their field of work.

24.1 Removal from Premises. The Contractor expressly agrees to remove from the site any individual whose continued employment is deemed by the OIC to be contrary to the public interest or inconsistent with the best interests of National Security.

24.2 Appearance and Conduct. The Contractor's personnel shall be as neat and clean as practicable and shall conduct themselves

in a proper and efficient manner. The Contractor shall be responsible for the supervision and conduct of his employees. The Contractor's personnel shall obey all of the rules and regulations of the Base while on the premises. The OIC may request that any agent or employee of the Contractor, whose conduct is in violation of such rules and regulations, be removed from the Base. Failure to comply with such a request may be cause for action under the "DEFAULT" Clause.

24.3 The Contractor shall, upon award, submit to the Officer in Charge a roster of his employees which shall include the following for each: name, home address, citizenship status, social security number, certification status, employment date, and training. The Contractor shall be responsible for the maintenance of the roster's current status. Contractor employees added to the roster after the initial roster was accepted by the OIC shall not be permitted to work on the installation until seven (7) days after their name is submitted, or at such time as may be stipulated by the OIC.

24.4 No employees or representative of the Contractor will be admitted to the work site unless he furnishes satisfactory proof that he is a citizen of the United States or a legal alien.

25. <u>IDENTIFICATION OF CONTRACTOR EMPLOYEES</u>. All Contractor employees shall be identified by a distinctive nameplate, emblem, or patch attached in a prominent place to an outer garment. This badge will display the company name and employee

number of suitable size for reasonable recognition and be approved by the OIC. Employee identification shall not be a substitute for Base required passes and badges.

26. PASSES, BADGES, AND LICENSES. The Contractor and all his employees shall obtain the required employee and vehicle passes to enter Government property. The Contractor will, prior to the start of the contract, submit to the OIC an estimate of the number of personnel expected to be utilized at any one time on the contract. The Government will issue badges without charge. Each employee shall wear the Government issued badge over the front of the outer clothing. When an employee leaves the Contractor's service, the employee's pass and badge shall be returned within three (3) working days. Passes and badges issued to Contractor employees shall not negate the requirement for employee identification required in the "IDENTIFICATION OF CONTRACTOR EMPLOYEES" Clause, Section 00004.

27. DIRECTIVES. The Contractor shall become familiar with and obey all directives, instructions, and regulations as listed in Appendix ____ and as may be required by the OIC.

28. BASE REGULATIONS. The Contractor and his employees shall become acquainted with and obey all Government regulations as posted, or as requested by the OIC, including fire prevention. The Contractor shall permit a search of vehicles at any time, and will return any item or material not intended for disposal.

29. SECURITY REQUIREMENTS. The Contractor shall comply with all Base security requirements. Contractor employee and/or vehicles shall not be present in locations not required for proper performance under this contract.

30. DISCLOSURE OF INFORMATION. Neither the Contractor nor any of the Contractor's employees will disclose or cause to be disseminated any information concerning the operations of the activity which could result in or increase the likelihood of the possibility of a breach of the Base's security or interrupt the continuity of its operations. Disclosure of information relating to the services hereunder to any person not entitled to receive it, or failure to safeguard any classified information that may come to the Contractor or any person under his control in connection with work under this contract, may subject the Contractor, his agents or employees to criminal liability under Title 18, Sections 793 and 798 of the United States Code.

30.1 Inquiries. All inquiries, comments or complaints arising from any matter observed, experienced, or learned of as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information will be directed to the OIC.

30.2 Deviations or Violations. Deviations from or violations of any of the provisions of this paragraph will in addition to all other criminal and civil remedies provided by law subject

the Contractor to immediate termination for default and/or the individuals involved to a withdrawal of the Government's acceptance and approval of employment.

31. ACCESS TO BUILDINGS. It shall be the Contractor's responsibility, through the OIC, to obtain access to buildings and arrange for the buildings to be opened and closed. Keys may be issued to the Contractor; however, it shall be the Contractor's responsibility that adequate arrangements are made for security of the building(s) and the safeguarding of keys at the end of each work day. The Contractor shall be responsible for the cost of replacing any keys that are furnished to and lost by his employees. If the OIC decides that a lock must be replaced because of the loss of a key by the Contractor's employee(s), the Contractor shall pay the cost of that replacement. Similarly the Contractor shall pay the cost of changing a combination if the OIC has reasonable cause to assume that the combination has been compromised.

32. CONTRACTOR VEHICLES. Contractor vehicles will be maintained in a clean, safe and orderly fashion. All drivers/operators will be licensed as required by law and/or as specified herein.

33. IDENTIFICATION OF CONTRACTOR VEHICLES AND EQUIPMENT. Each vehicle shall show the Contractor's name so that it is clearly visible and shall, at all times, display a valid state license

plate and insurance sticker. These requirements shall also apply to all subcontractor and leased equipment.

34. PERMITS. The Contractor shall, without additional expense to the Government, obtain all licenses and permits required for the Contractor's employees for the prosecution of the work. The Contractor shall be responsible for all damages to persons and/or property that occur as a result of the Contractor's fault or negligence in connection with the prosecution of the work. The contractor shall also be responsible for all materials delivered and work performed until completion and final acceptance. Permits required for the operation of the plants, other than permits for the operators, shall be obtained by the Government.

35. SAFETY REQUIREMENTS. All work shall be conducted in a safe manner. The Contractor shall meet in conference with the OIC to discuss and develop mutual understandings relative to administration of the Safety Program. The two-man rule shall apply when working on live steam lines, on overhead steam lines, in confined spaces in the presence of gas, and when digging below six feet. The two-man policy applies when working on the following tasks on steam generation: cleaning inside condensate tanks, surge tanks, and heater storage tanks; cleaning trays and diffuser in DA tanks; blowing screen tubes, air heater tubes, and fireboxes; turbining boiler tubes and air heater tubes; working in coal pits, electrostatic precipitators, ash silos and

ash hoppers; cleaning coal baskets and air receiver tanks; welding inside boiler drums; washing boiler tubes. In wastewater treatment plant operations, the two-man rule applies on the following tasks: cleaning inside digestors and wet wells utilizing dry sump pump design; repairing chlorinators, chlorine leaks and digestors.

35.1 Non-Compliance. If the Contractor fails or refuses to comply promptly with safety requirements, the OIC may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop order shall be made the subject of claim for extension of time or for excess costs or damages to the Contractor.

36. DAMAGE OR LOSS OF CONTRACTOR'S SUPPLIES AND EMPLOYEES' PROPERTY. The Government does not assume any liability for fire, theft, accident, or any other cause resulting in damage or loss of Contractor's stored supplies, materials, equipment, or personal property or belongings of his employees.

37. FIRE PREVENTION. The Contractor will familiarize himself and require his employees to become familiar with the method of turning on a fire alarm. The Contractor and his employees shall be cognizant of and observe all requirements for handling and storage of combustible supplies, materials, and daily disposal of combustible waste, trash, etc.

38. EMERGENCY MEDICAL CARE. Emergency medical care only is available at Government facilities who suffer on-the-job injury or disease. Emergency care will be rendered at the prevailing rates established by the Bureau of Medicine. Reimbursement will be made by the Contractor to the Naval Regional Medical Center Collection Agent upon receipt of a statement.

39. ACCIDENT REPORTING. The Contractor shall maintain an accurate record of and shall report to the OIC in the manner and on the forms prescribed by the OIC, exposure data and all accidents resulting in death, trauma, or occupational disease or injury. All accidents must be reported to the OIC within twenty-four (24) hours of their occurrence.

40. DAMAGE REPORTS. In all instances where Government property and/or equipment are damaged by Contractor's employees, a full report of the fact and extent of such damage shall be submitted to the OIC within twenty-four (24) hours of occurrence. In all cases involving negligence or abuse by the Contractor, the Contractor shall be liable for damages and associated costs. Failure to report accidents and/or damage may be cause for a Contractor default decision. At a minimum, personnel found to be guilty of nonreporting shall have their right of entry to the Base revoked. The Contractor shall also report any damage caused by other personnel/activities that he becomes aware of.

41. SALVAGE. All existing materials and equipment which have been removed or disconnected and, in the opinion of the Government, are sound and of value shall remain the property of the Government. They will be delivered by the Contractor at his expense to a location on Base designated by the OIC. All nonusable surplus material and debris resulting from work under these specifications shall be removed from the site by the Contractor at his expense and deposited at the Base landfill.

42. GAS-FREE CERTIFICATION AND HOT WORK PERMIT. It shall be the responsibility of the Contractor to obtain all Gas-Free Certifications from the Base Safety Office if it becomes necessary to perform work in a closed or poorly ventilated space. The Base Fire Department will issue Hot Work Permits. No work will commence until appropriate certifications and permits have been obtained.

43. SANITATION AND CLEANLINESS. It will be the responsibility of the Contractor to maintain all shops, buildings, structures, and other areas utilized in the performance of this contract, in a clean, neat, orderly, and sanitary condition. The premises shall be kept free at all times from accumulations of waste material and/or rubbish resulting from work performed under this contract. Combustible waste shall be removed daily.

44. WARRANTY OF SERVICES. All maintenance work performed by the Contractor shall be warranted against defects in material

and workmanship for one year. Any recurrence of maintenance problems due to defects in such material or workmanship within this time frame will be repaired or replaced by the Contractor at no additional cost to the Government. Damage to Government and private property by such defect will be repaired or replaced at no additional cost to the Government. This clause supercedes the "WARRANTY OF SERVICES" Clause, Section 00003, for all maintenance work provided under the contract.

45. CONTINUITY OF SERVICES. The phase-in of contractor forces will occur in conjunction with a major reduction-in-force (RIF) of in-house Government employees. Therefore, government employees will be available to assist the Contractor in gaining familiarity with the Base facilities. For Steam generation in Building 1700, one government employee will be provided for each of the three shifts seven days a week for six weeks. In six other steam plants, one government employee will be provided for each of the three shifts per day at each plant for seven days a week for four weeks. For water treatment, one government employee will be provided for five plants for each of the three shifts for seven days a week for three weeks. For one plant, one government employee will be provided for each of two shifts seven days a week for three weeks. For one water plant with only one shift per day, one government employee will be provided seven days a week for three weeks. For sewer treatment, one government employee will be provided for the three plants for each of the three shifts for seven days a week for three weeks.

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For four plants with only one shift per day, one government employee will be provided for each plant seven days a week for three weeks. For the two roving patrols, one government employee will be provided for each patrol for each of the three shifts for seven days a week for three weeks. Two government employees will be provided for two weeks to assist the contractor in phasing in work pertaining to the steam, water and sewer distribution systems. The total manpower required at the beginning of the PHASE-IN/PHASE-OUT operations is eighty-eight government employees. These individuals will perform in an advisory capacity to ensure that continuity of services are maintained without interruption during the change over interval. It is not intended that these individuals provide training for contractor employees nor perform work required under the terms of this contract.

At the conclusion of this contract, the government shall have the option to require the contractor to provide PHASE-IN/PHASE-OUT (PIPO) training to a successor which may be either the government or another contractor. The contractor shall provide experienced personnel during the PIPO period to ensure that the services called for by this contract are maintained at a high level of proficiency. Reimbursement for contractor PHASE-IN/PHASE-OUT services will be processed as a change order to the contract.

The Government will have an ongoing quarterly plan or programmed work which shall consist of approximately 70 to 80 percent of the available manhours that has been set aside to address indefinite quantity work. Such work will have been initiated Government prepared job order and estimates based upon Government Engineered Performance Standards. The Contractor will indicate agreement with the estimated work hours by signing acceptance of the job orders and assume the responsibility for the accomplishment of the total first Quarterly Work Program at the fixed labor cost which will not be modified unless the job scope is changed. Should individual Specific Job Orders be in progress at the start-up of this contract or the Contractor refuse to accept the Government prepared Job Order and Estimate, the OIC may at his discretion have the Government forces complete the job orders, by other means, or work out an agreement whereas the Contractor may assume the balance of the work in progress.

46. GOVERNMENT USE OF CONTRACTOR-OWNED PROPERTY. In the event the Contractor fails to perform or defaults in the performance of any of the conditions of this contract, and thereby causes disruption or termination of the utility services which the Contractor has undertaken to perform in accordance with provisions of this contract, the Government will take and the Contractor shall grant possession, control and use of all facilities located within the confines of the military base and equipment without limitation. The Government will operate or cause the Contractor-owned property to be operated in whatever manner it deems best to accomplish the objectives for which this utility service contract was established. The Government use of Contractor-owned property is only an interim measure until a permanent solution to restore the performance of the provision of utility service is obtained, and not to exceed 120 days. Subject to an agreement reached between the Contracting Office and the Contractor, a negotiated rental rate based on prevailing price in the local market will be established for the Government's use of the Contractor's property. The Contractor shall be responsible for removing such equipment at no cost to the Government when notified by the OIC.

47. NATURAL DISASTER. In the event of storm, fire, or other natural disaster or similar emergency, the Contractor will make all resources available to be applied as directed. In such case, the Contractor will maintain such records as will permit determination of cost and after-the-fact negotiation to determine fair price for use of such resources.

48. ENVIRONMENTAL PROTECTION. Contractor personnel are expressly prohibited from littering, polluting, disturbing and/or destroying the flora, fauna, soil, air and water except as authorized by his contract. Specifically, the Contractor shall not introduce or dispense trash, litter, pollutants or garbage of any kind into or onto this complex. Materials may be introduced into the complex which are required for the performance of an awarded contract. Waste materials shall be removed from the base at the time said waste, trash or garbage is generated; or it may be delivered to a dump or disposal site when such a site is designated by the Contracting Officer. The Contractor shall not pollute the soil, air or waters with chemicals, oil, gases or other toxicants. Open burning is prohibited. The Contractor shall not damage or destroy existing trees, brush, shrubs, graded or turfed areas. Driving on lawns, cutting corners, or taking short cuts across grassed areas and through woods, etc., to/from job sites is strictly prohibited. The Camp Lejeune complex abounds in natural wildlife and has several endangered species. The Contractor and/or his personnel shall maintain at all times a "hands-off" policy pertaining to wildlife unless called for under this contract. They shall not molest, hunt, trap, fish, bag, or otherwise remove wildlife of any description from the complex unless called for under this contract. If the Contractor damages any building, equipment, or vegetation, he shall replace or repair the damage at no expense to the Government as directed by the Contracting Officer. If he

fails or refuses to make such repair or replacement, the Contractor shall be liable for the cost thereof which may be deducted from the contract price.

48.1 The Contractor further expressly agrees:

48.1.1 To comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 U.S.C. 1857 et. seq., as amended by Public Law 92-500), respectively relating to inspection, entry, monitoring, reports, and information, as well as other requirements specified in Section 114 and Section 308 of the Air Act and the Water Act, respectively, and all regulations and guidelines issued thereunder before the award of this contract.

48.1.2 That no portion of the work required by this prime contract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date this contract was awarded and until the EPA eliminates the name of the facility or facilities from such listing.

48.1.3 To use his best efforts to comply with clean water standards at the facilities in which the contract is being performed.

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48.1.4 To insert the substance of the provisions of this clause in any non-exempt subcontract, including this paragraph (37.1.4).

48.2 The terms used in this clause have the following meanings:

48.2.1 The term "Air Act" means the Clean Air Act, as amended (42 U.S.C. 1857 et. seq., as amended by Public Law 91-604).

48.2.2 The term "Water Act" means Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq., as amended by Public Law 92-500).

48.2.3 The term "clean air standards" means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation plan as described in Section 110(d) of the Air Act (42 U.S.C. 1857c-7(d)).

48.2.4 The term "clean water standards" means an enforceable limitation, control, condition, prohibition, standard or other requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the Environmental Protective Agency or by a State under an approved program, as authorized by Section 402 of the Water Act (33

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U.S.C. 1342, or by a local government to ensure compliance with pretreatment regulations as required by Section 307 of the Water Act (33 U.S.C. 1317).

48.2.5 The term "compliance" means compliance with clean air or water standards. Compliance shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency or an air or water pollution control agency in accordance with the requirement of the Air Act or Water Act and regulations issued pursuant thereto.

48.2.6 The term "facility" means any building, plant, installation, structure, main, vessel or other floating craft, location, or site of operations, owned, leased or supervised by a Contractor, subcontractor, to be utilized in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are collected in one geographical area.

48.2.7 The term "nonexempt contract or subcontract" means a contract or subcontract of more than $100,000 which is not otherwise exempted pursuant to the EPA regulations implementing

the Air Act and Water Act (40 CFR 15.5), as further implemented in ASPR 1-2302.4 or FPR 1-1, 2302 (whichever is applicable) and the procedures of the Department awarding the contract.

49. QUARANTINE. The entire Camp Lejeune complex has been quarantined by the United States and/or North Carolina Departments of Agriculture as to the Imported Fire Ant. Compliance with the quarantine regulations set forth in USDA Quarantine No. 81 dated 9 October 1970, and USDA Publications 301.81-2A of 23 July 1976, is required.

49.1 The following articles shall not be moved from Camp Lejeune to any point outside the County unless accompanied by a valid inspection certificate issued by an authorized Imported Fire Ant inspection:

49.1.1 Bulk soil.

49.1.2 Used mechanized soil-moving equipment.

49.1.3 Any other products, articles, or means of conveyance of any character whatsoever, not covered by subdivisions (1) and (2), when it is determined by an inspector that they present a hazard of spread of the Imported Fire Ant and the person in possession thereof has been so notified.

49.2 Authorization for movement of equipment shall be obtained from the Officer in Charge and requests for inspection shall be made sufficiently in advance of the date of movement to permit arrangements to the services of authorized inspectors. The equipment shall be prepared and assembled so that it may be readily inspected. All soil on or attached to equipment, supplies and material shall be removed by washing with water and/or such other means as necessary to accomplish complete removal. Resulting spoil shall be wasted as directed.

50. NORTH CAROLINA STATE AND LOCAL SALES AND USE TAX (1977 JAN)

50.1 As used throughout this clause, the term "materials" means building materials, supplies, fixtures and equipment which becomes a part of or are annexed to any building or structure erected, altered or repaired under this contract.

50.2 If this is a fixed-price type contract as defined in the Defense Acquistion Procurement Regulation, the contract price includes North Carolina Sales and Use Taxes to be paid with respect to materials, notwithstanding any other provision of this contract. If this is a cost reimbursement-type contract as defined in such regulation, any North Carolina Sales and Use Taxes paid by the Contractor with respect to materials shall constitute an allowable cost under this contract.

50.3 At the time specified in paragraph 50.4 below:

50.3.1 The Contractor shall furnish the Contracting Officer certified statements setting forth the cost of the materials purchased from each vendor and the amount of North Carolina Sales and Use Taxes paid thereon. In the event the Contractor makes several purchases from the same vendor, such certified statement shall indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices and the North Carolina Sales and Use Taxes paid thereon. Such statement shall also include the cost of any tangible personal property withdrawn from the Contractor's warehouse stock and the amount of North Carolina Sales and Use Tax paid thereon by the Contractor. The Contractor shall furnish such additional information as the Commissioner of Revenue of the State of North Carolina may require to substantiate a refund claim for sales or use taxes.

50.3.2 The Contractor shall obtain and furnish to the Contracting Officer similar certified statements by its subcontractors.

50.4 If this contract is complete before the next October 1, the certified statements to be furnished pursuant to paragraph 41.3.1 shall be submitted within sixty (60) days after completion. If this contract is not completed before the next October 1, such certified statement shall be submitted on or

before the 30th day of November of each year and shall cover taxes paid during the twelve month period which ended the preceding September 30.

50.5 The certified statements to be furnished pursuant to paragraph 50.3 above shall be in the following form:

"I hereby certify that during the period _____to _____, (name if Contractor or Subcontractor) paid North Carolina sales and use taxes aggregating $_____ with respect to building materials, supplies, fixtures and equipment which have become a part of or annexed to a building or structure erected, altered or repaired by (name of Contractor) for the United States of America, and that the vendors from whom the property was purchased, the dates and numbers of the invoices covering the purchases, the total amount of the invoices of each vendor, the North Carolina sales and use taxes paid thereon, and the cost of property withdrawn from warehouse stock and North Carolina sales or use taxes paid thereon are as set forth in the attachments hereto."

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with extensive experience covering federal, state and local government.

group's efforts, one group member [illegible]

Letters

From Page 10

the other person ends up in serious trouble.

While I am no Don Juan, I have been swatted on the bottom in passing and have received numerous comments from flirtatious women, regardless of their marital status. Men pat other men on the shoulder in greeting or for a job well done. Some men also pat women on the shoulder for the same reasons. However, a man running his hand up and down her back, putting his arm around her and patting her on the leg — that indeed may be too much.

For a country that is the most advanced in the world, we sure are prudish and backward about a lot of things. While I am only 31, I have heard from several men and women that this is the 1950s all over again, except with a new concept. Before you know it, Secretary's Day will become Sexual Harassment Day.

Anthony Sanseverino
Van Nuys, Calif.

Insurance Solutions

As the health insurance open season approaches, federal employees will have to answer some difficult questions.

The first and foremost is: How much can I afford to spend on health insurance? Secondly: Can I afford to gamble and subscribe to a cheaper plan, which I know will not pay all my expenses for diagnostic tests or other procedures?

Finally: Will I be able to afford one of the better plans when I retire?

One solution to rising health insurance costs is to allow a tax deduction for the health insurance premium. This would allow a person a certain amount of flexibility in choosing a health plan. The deduction could be between $3,595 and $944, depending on the plan selected.

The Federal Reserve, as well as many companies in the private sector, already have flexible spending accounts. The IRS code lets employers establish flexible benefit plans, where employees can contribute a percent of the wage into a flexible spending account. During the year the money can be used to pay health insurance premiums as well as out-of-pocket expenses, deductibles, etc. These accounts allow health plans to be paid for with pretax dollars.

If this type of tax deduction is allowable in the private sector and by some federal agencies, it should be allowed for all workers in both sectors.

William Cassel
Griffiss AFB, N.Y.

Contracting Out

It is clear from the letter by Gary Engebretson, president of Contract Services Association, that he is experiencing the gloom of failure in the contracting-out arena ["Letters to the Editor," July 29 issue].

Perhaps he had just read the latest General Accounting Office report documenting the rapid decline of ongoing Defense Department A-76 studies from 1,225 in 1987 to 113 in May 1991 — hardly a fact that will make his corporate members jump for joy.

Then again, he also may have been looking at the July 1990 DoD inspector general audit which concluded that in 41 audited contracts, the military not only didn't save the targeted $94.9 million, but also paid $63.4 million more than the cost of retaining the functions in-house. In fact, that's $158.3 million in wasted tax dollars.

It is these facts about "savings" that the American Federation of Government Employees opposes in the current contracting-out program, and it's this kind of "effective public policy" that must be changed before we roll over and play dead while hard working, dedicated federal employees lose their jobs to this misguided program.

AFGE has consistently called for a contracting-out program that:

- Includes systematic audits to verify estimated savings and actual payments;
- Includes worker involvement in the development of the work statement and most efficient organization, and
- Includes recompetition when contractor costs exceed estimated savings.

As a final point on wages and benefits, which Engebretson contends are higher under a contractor operation, he needs to look into the recent situation at Dahlgren Naval Surface Weapons Center, Va. In this case, the contractor made illegal changes to the union's existing wage agreement, discontinued sick and annual leave, stopped contributions to the employees' health and welfare trust fund, and even stopped employee work breaks.

Fortunately, AFGE got these benefits back through court action, but it is certainly a black mark on Engebretson's "unassailable" private sector record.

Until contracting out is brought under control by changes like those listed above, and situations like Dahlgren are stopped, AFGE will continue to lead the fight against contracting out.

John N. Sturdivant
National President,
AFGE
Washington, D.C.

Out with the Old

I have been privy to much of what has gone down at the Mail Handlers national headquarters, and I can say conclusively that a national election is needed now to salvage what respect and dignity can be saved for our union.

I can speak for the 200-plus members in my jurisdiction when I say that the entire national executive board of the Mail Handlers Union must go now. I implore all locals to demand the same.

Robert A. Magistad
Administrative Vice President,
Local 323
National Postal
Mail Handlers Union
Eagan, Minn.

Save HMOs

Regarding Rita Zeidner's article, "HMOs Told Not to Limit Options" [Oct. 14 issue], I am happy with my HMO and I wish to say: Don't tamper with our Health Maintenance Organizations.

How can HMOs keep their costs down when OPM opens wide the doors and gives enrollees "free reign when selecting services from six types of health professionals: qualified clinical social workers, clinical psychologists, optometrists, nurse midwives, nurse practitioners, and clinical nurse specialists." Our costs will skyrocket. We, whom the HMOs have been servicing so well for so long, will be subsidizing the group which opts for outside caregivers.

My concern is care and cost. If an enrollee opts for care from these six health professionals, and they are not on the HMO's panel, let the enrollees pay for the service, or find other caregivers who will let them use any doctors they wish. I'm for the best health care for the least cost.

Agnes E. Carrier
Wakefield, Mass.