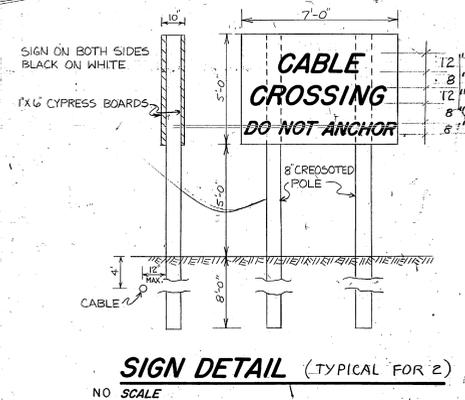
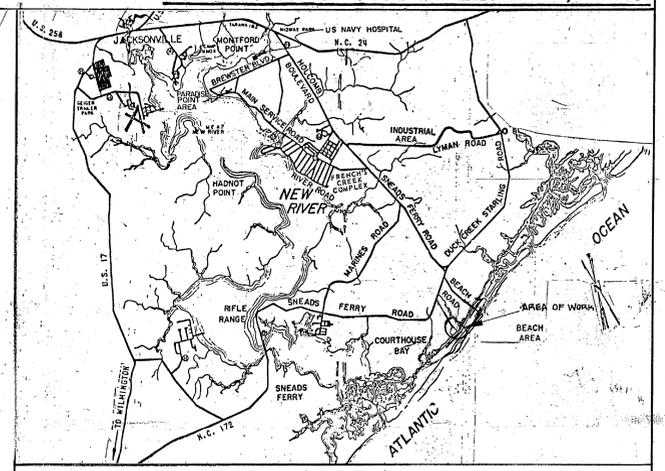
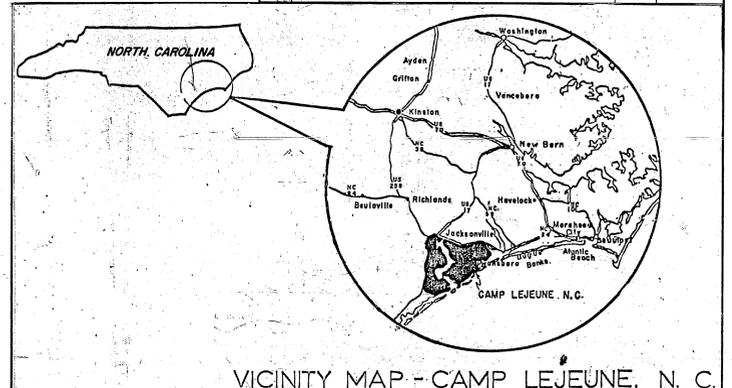


SITE PLAN - CONTROL CABLE
SCALE 1" = 400'-0"



SIGN PAINTING REQUIREMENTS
 1. FIELD PAINT ALL SIDES & EDGES WITH ONE COAT PRIMER CONFORMING TO MIL-P-28582 & TWO COATS FINISHES CONFORMING TO FED. SPECS. TT-E-489-G

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



GENERAL NOTES

- 1) CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATIONS PRIOR TO USING MECHANICAL TRENCHERS OR DIGGERS.
- 2) THE WORK SHALL NOT CAUSE PERMANENT OR TEMPORARY RIDGES ACROSS THE BED OF THE WATERWAY.
- 3) PROVIDE SUFFICIENT CABLE SLACK AT EACH TERMINAL PEDESTAL.
- 4) ALL WORK & MATERIALS, UNLESS NOTED OTHERWISE AS EXISTING, ARE NEW & SHALL BE PROVIDED BY THE CONTRACTOR.
- 5) EXISTING EQUIPMENT IS TO REMAIN UNLESS NOTED OTHERWISE.
- 6) SUBMARINE CABLE SHALL BE CONTINUOUS & WITHOUT SPICE BETWEEN TERMINAL PEDESTALS.
- 7) DEPOSIT & STORE EXCAVATED MATERIAL FROM MARSH AREA ON HIGH GROUND PRIOR TO BACKFILLING. EXCAVATED MATERIAL SHALL NOT BE DEPOSITED WITHIN MARSH AREA. EXCESS MATERIAL SHALL REMAIN STOCKPILED ON HIGH GROUND RESTORE EXCAVATED AREAS TO PRECONSTRUCTION WETLAND CONDITIONS.
- 8) AT CABLE CROSSING, REMOVE EXISTING SHORE STABILIZATION RUBBLE AS REQUIRED; AFTER CABLE INSTALLATION, SHORE STABILIZATION RUBBLE SHALL BE RESTORED TO ITS ORIGINAL ELEVATION & CONDITION.
- 9) SILT & SHELL ROCK WILL BE ENCOUNTERED AT CABLE CROSSING. USE OF EXPLOSIVES IS PERMISSIBLE AS DIRECTED BY THE CONTRACTING OFFICER; SUBMIT PLAN OF EXECUTION PRIOR TO USE OF EXPLOSIVES.

E-1		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND	
MARINE CORPS BASE		CAMP LEJEUNE, NORTH CAROLINA	
DES. KAREN M. FORKEY	DR. TOM WEISSELBERGER	REPLACE SERVICE PUMP CONTROL CABLE FROM SBA-10B TO BA-13B	
CHK. R. YANNEY	SUBMITTED BY: [Signature] P.E.	PLAN, MAPS, ELEVATION, NOTES	
DESIGN DIR. [Signature]	APPROVED: PWO OR DICC [Signature]	DATE: 5-20-86	SIZE: F
SATISFACTORY TO: [Signature]	DATE: 5-20-86	CODE IDENT. NO. 80091	NAVFAC DRAWING NO. 4132975
SCALE: NOTED		SPEC. CE-86-5504	CONSTR. CONTR. NO. N6270-86-0-5504
SHEET 1 OF 1			



07 Feb 1986

MEMORANDUM

TO: 0525

FROM: 404C, Steve Dumont

Subj: Contract Number N62470-81-C-1644, Expansion of Holcomb Boulevard Water Treatment Plant, Camp Lejeune, NC

Ref: ltr of 4 Dec 1985, Aquatrol Resubmittal

1. The contractor's transmittal number 75A, Controls, has been reviewed and is returned 'approved as noted' with the attached comments.

2. Please note that the submittal is only approved as meeting the requirements of section 16750, paragraphs 1.12.1a through 1.12.1f. The documentation required by paragraph 1.12.1g must still be submitted.

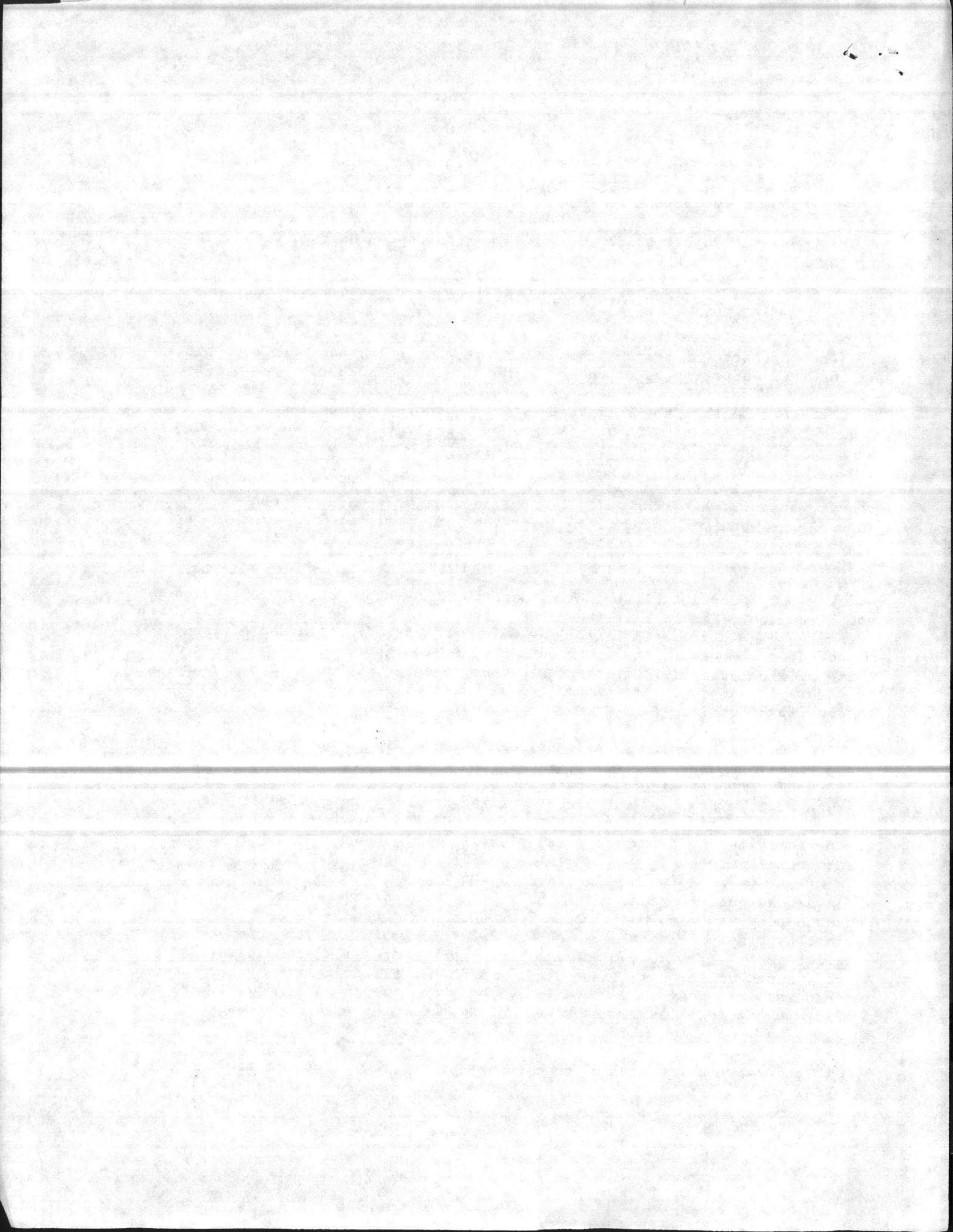
3. Additionally, the submittal is not considered acceptable as meeting the requirements of paragraph 1.12.2, Operation and Maintenance manuals. Although some of the required information is present in submittal 75A, much more is needed and it should be presented as a separate document from the shop drawings.

4. The only substantial deviation noted was the method of control sequence specification. The fill-in-the-blanks 'template' type method offered does not offer the high degree of flexibility which the specified 'laddered diagram' method does. However, the proposed method is a high level, easy to use method which will be acceptable if the contractor consults with the activity and provides the necessary 'templates' to allow for implementation of all expected future expansion.

5. Included with the submittal was reference (a) which addressed the requirement that any flow meter signal (raw water, plant influent, or Holcomb boulevard) can be assigned to pace any of the three chlorine feed rates. This feature will be provided via manual valving on the pneumatic piping between the meters and the chlorinators. This method is acceptable to code 404C and to the activity per a phone conversation with Mr. Johnson, manager at the treatment plant.

6. A second question concerning the central control system selection of the backwash pump was also addressed. The contractor intends to provide this feature by simply connecting an output from the Aquatrol system to each backwash pump. This output shall either inhibit or allow pump operation. Actual pump start/stop shall be performed at the filter console. (Hardwired interlocks permitting only operation of only one pump at a time will also be provided as an additional measure of safety.) This is also acceptable to code 404C.

7. If there are any questions concerning this review please contact me at 444-9842.



General Comments:

This submittal is 'approved as noted' under section 16750, paragraphs 1.12.1a through 1.12.1f. The documentation required by paragraph 1.12.1g must still be submitted. Additionally, the submittal is not considered acceptable as meeting the requirements of paragraph 1.12.2, Operation and Maintenance Manuals. Although some of the required information is present in this submittal, much more is needed and it should be presented as a separate document from the shop drawings.

Options shown on manufacturers data are seldom highlighted as to which are being provided. All options necessary to meet the contract requirements shall be provided.

Section 16750, paragraphs 3.1.4 and 3.2.2:

Expansion capability of main memory to 1 megabyte is required. The Aquatrol literature states on the front feature summary sheet for the W-8016 that this is possible. Conversely, the Intel literature states that the processor board is expandable only to 896 kilobytes. A system expandable to 1 Megabyte is required.

The following specification paragraphs were not adequately addressed in the submittal. In order to expedite this project a telephone call was made to Mr. Robert Erickson of Aquatrol in order to determine specification conformance. The code 404C understanding of the how the specification paragraphs are met by the Aquatrol system is explained below. Full printed documentation describing these features and verifying the descriptions below must be submitted before final system acceptance.

Section 16750, paragraph 4.2.1a:

A change in state of any digital point causes the event to be logged to the printer.

Section 16750, paragraph 4.2.3:

The scheduling of logs is completely flexible. Periodic logs are operator defined and can be operator scheduled for any preset time such as every shift change.

Section 16750, paragraph 4.3.3:

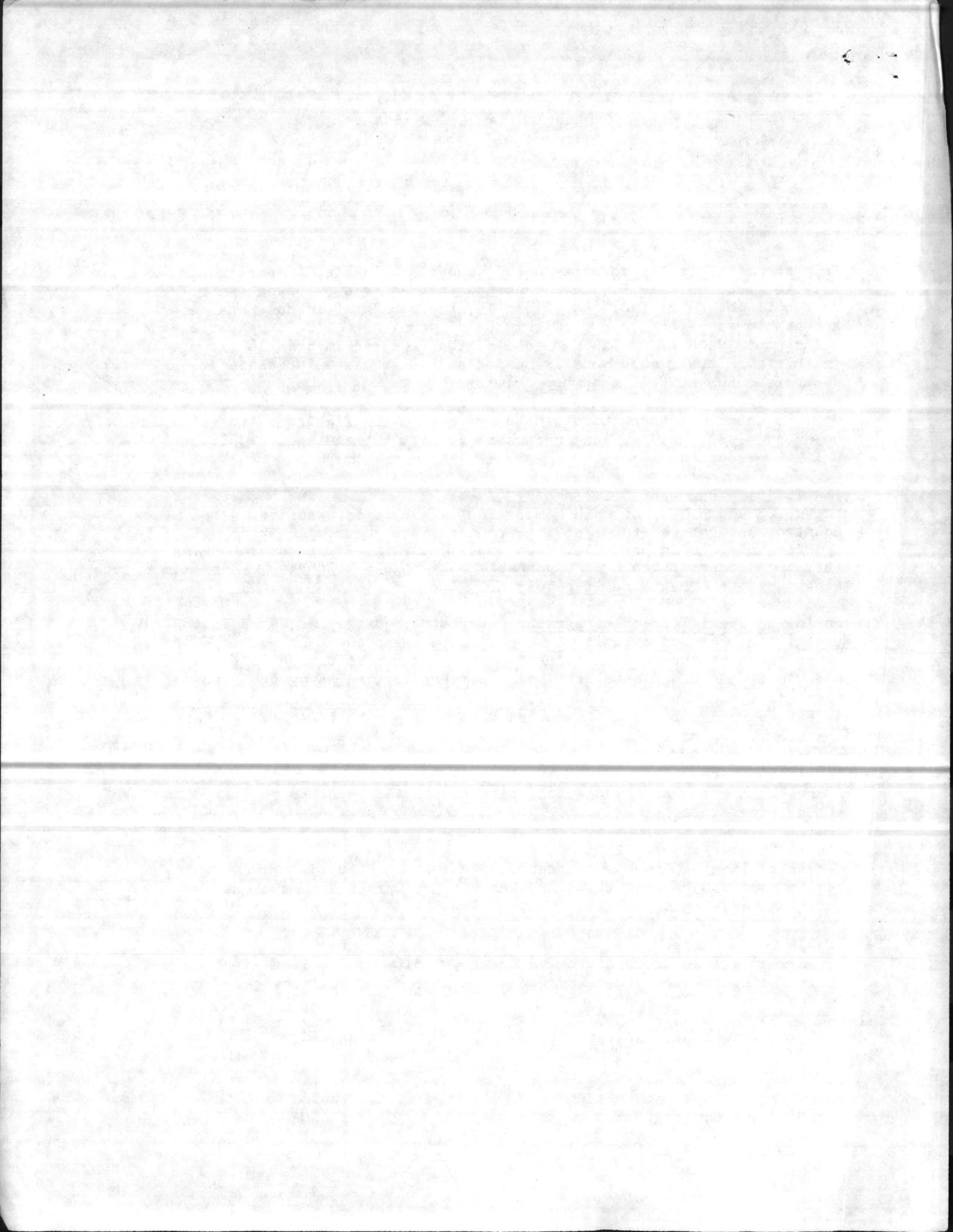
The system allows the operator to create, modify, and delete graphics while the system is concurrently on-line performing monitoring and control.

Section 16750, paragraph 4.5.2:

All point display information is available via the Edit mode.

Section 16750, paragraph 4.5.3:

The Station Display is a software configured feature which will be provided as required.



Section 16750, paragraph 4.5.4:

The Graphics Menu Display is a software configured feature which will be provided as required.

Section 16750, paragraph 4.5.8:

The Log Control Display features are accomplished via the Edit mode.

Section 16750, paragraph 4.5.10:

The System Display functions are split-up and provided via several different system commands rather than under one menu.

 Section 16750, paragraph 4.6:

'Ladder logic' is not the control specification method used by the Aquatrol system. Instead, a high-level fill-in-the-blanks 'template' method is used. Although this method may be easier to use, it does not allow the high degree of flexibility offered by ladder logic and is therefore not in full conformance with the contract requirements. However this deviation is acceptable if the contractor consults with the activity and provides a system configured with all necessary templates to allow implementation of all expected future expansion.

Section 16750, paragraph 4.7:

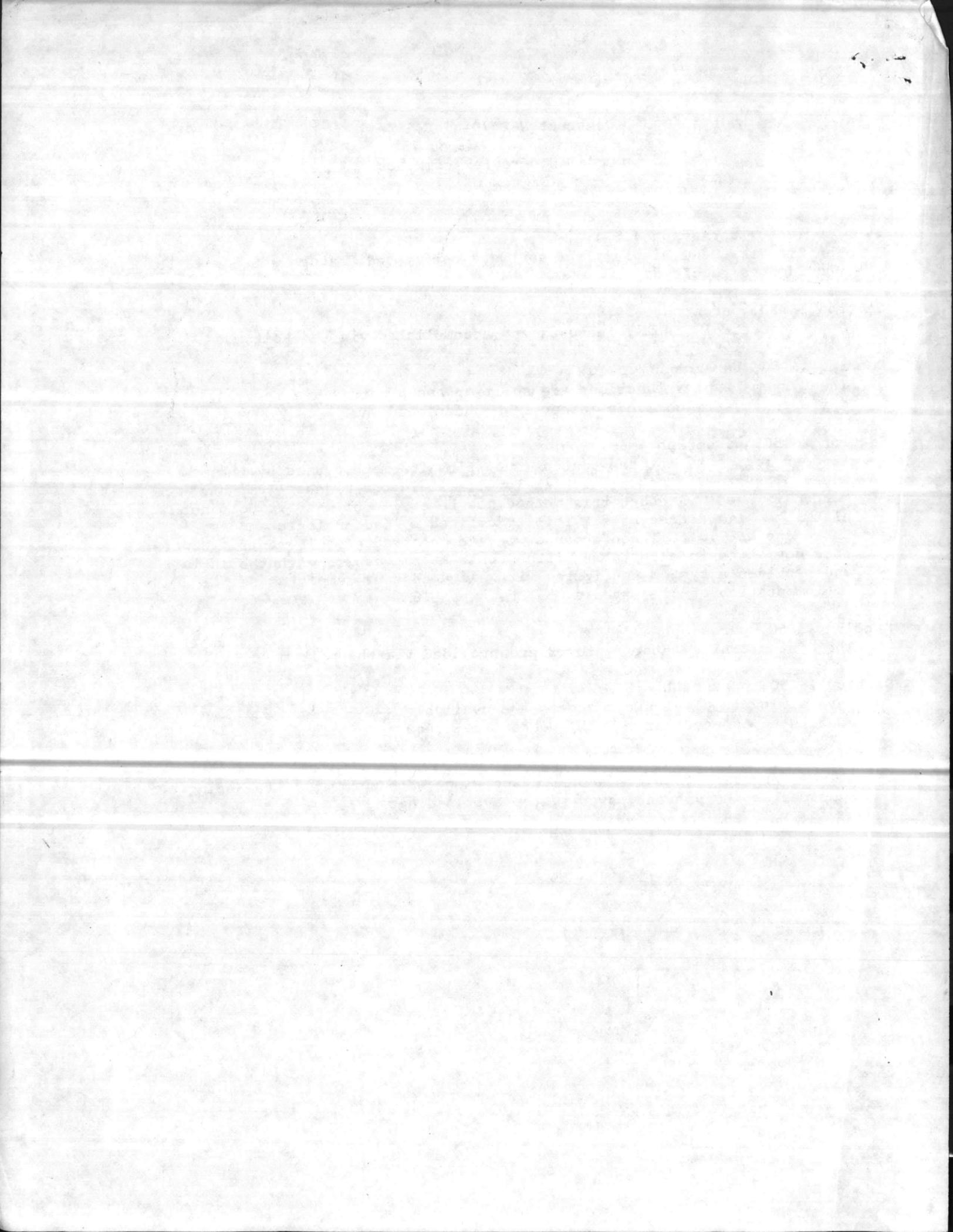
The System Configurator features are provided via the Edit mode.

Section 16750, paragraph 4.8:

Several levels of password access are available. The system will be configured in accordance with the contract requirements.

Section 16750, paragraph 4.9:

All auto/restart features are standard along with automatic staggering of pump restart to prevent power system overloading.



N62470-81-B-1644

**NAVFAC
SPECIFICATION**

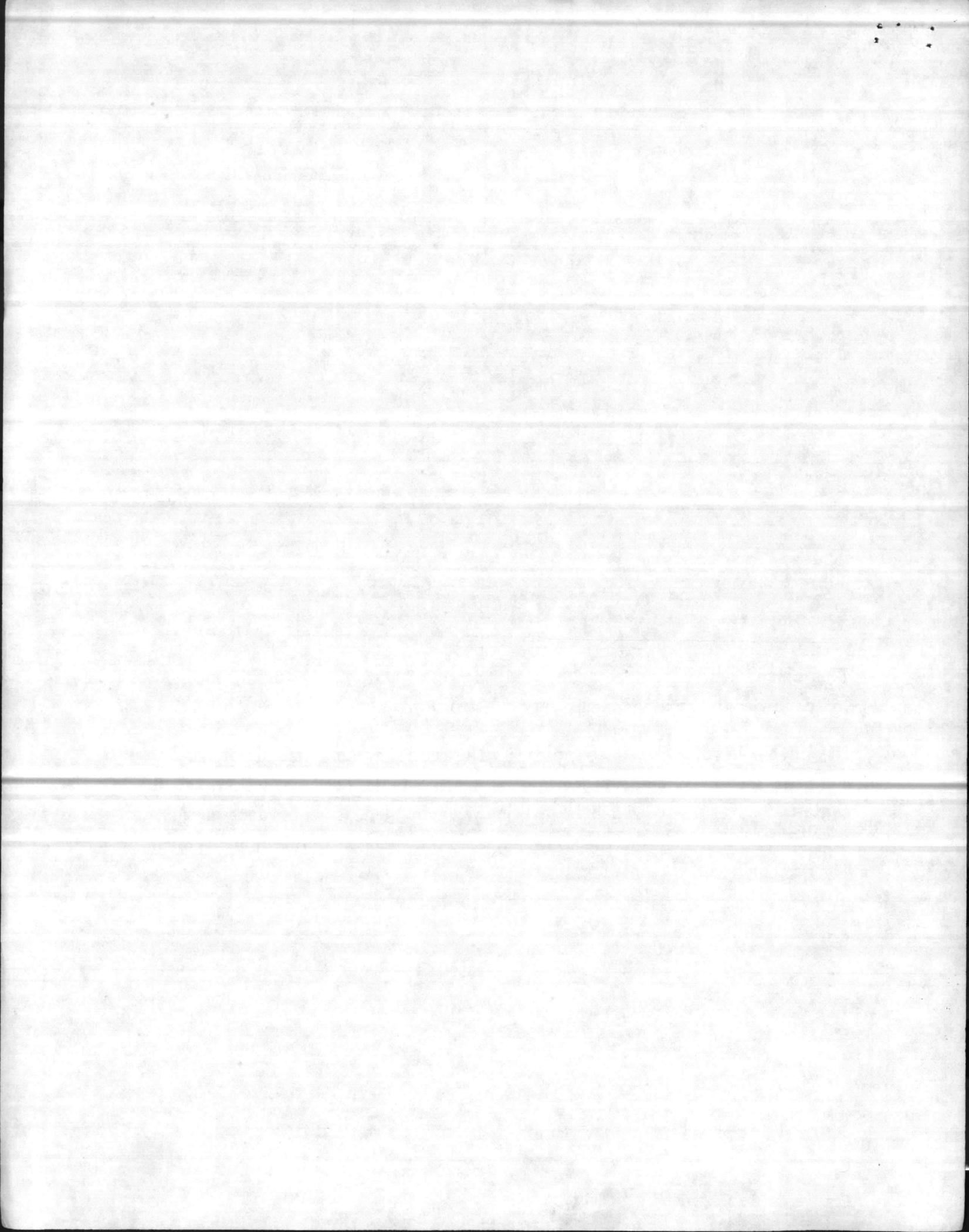
No. 05-81-1644

AMENDMENT NO. 0004

IMPORTANT

This amendment should be acknowledged when your bid is submitted. Failure to acknowledge the amendment may constitute grounds for rejection of the bid.

If your bid has been submitted prior to the receipt of this amendment, acknowledgment should be made by telegram, which should state whether the price contained in your sealed bid is to remain unchanged, is to be decreased by an amount, or is to be increased by an amount. The acknowledgment must be received prior to bid opening time.



AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. AMENDMENT/MODIFICATION NO. 0004	2. EFFECTIVE DATE 11-30-84	3. REQUISITION/PURCHASE REQUEST NO.	4. PROJECT NO. (If applicable)
5. ISSUED BY Commander, Atlantic Division Naval Facilities Engineering Command Norfolk, Virginia 23511-6287		6. ADMINISTERED BY (If other than block 5) CODE	

7. CONTRACTOR NAME AND ADDRESS (Street, city, county, state, and ZIP Code)	CODE	FACILITY CODE	8. AMENDMENT OF SOLICITATION NO. N62470-81-B-1644 DATED 10-29-84 (See block 9) MODIFICATION OF CONTRACT/ORDER NO. DATED (See block 11)
---	------	---------------	---

9. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in block 12. The hour and date specified for receipt of Offers is extended, is not extended.

Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation, or as amended, by one of the following methods:

(a) By signing and returning 2 copies of this amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If, by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided such telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

10. ACCOUNTING AND APPROPRIATION DATA (If required)

11. THIS BLOCK APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS

(a) This Change Order is issued pursuant to _____
The Changes set forth in block 12 are made to the above numbered contract/order.

(b) The above numbered contract/order is modified to reflect the administrative changes (such as changes in paying office, appropriation data, etc.) set forth in block 12.

(c) This Supplemental Agreement is entered into pursuant to authority of _____
It modifies the above numbered contract as set forth in block 12.

12. DESCRIPTION OF AMENDMENT/MODIFICATION

EXPANSION OF HOLCOMB BOULEVARD WATER TREATMENT PLANT

at the

MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

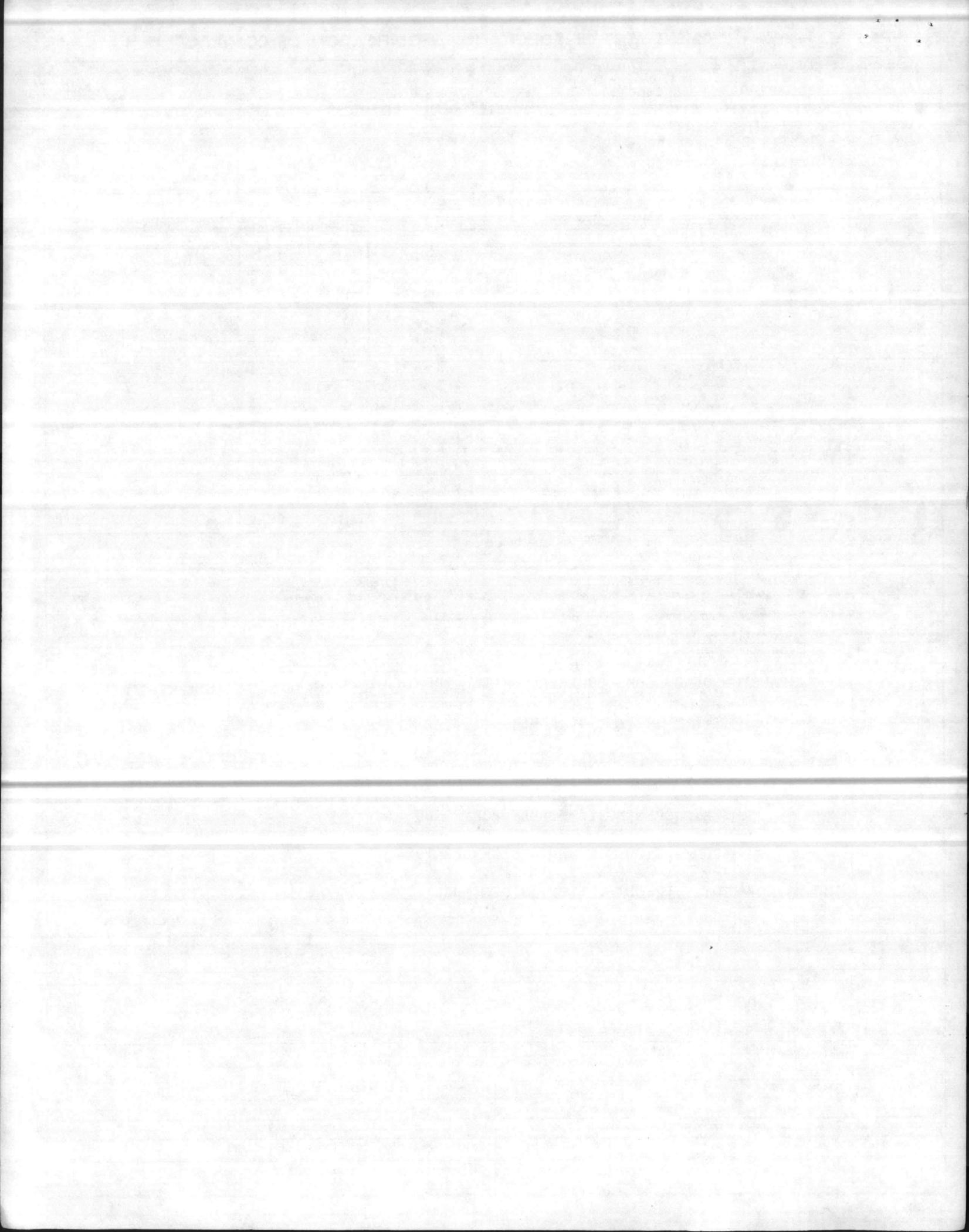
BID OPENING IS HEREBY POSTPONED

FROM: 2:00 P.M. ON 4 DECEMBER 1984

TO: 2:00 P.M. ON 13 DECEMBER 1984

Except as provided herein, all terms and conditions of the document referenced in block 8, as heretofore changed, remain unchanged and in full force and effect.

13. <input type="checkbox"/> CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT <input type="checkbox"/> CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE			
14. NAME OF CONTRACTOR/OFFEROR BY _____ (Signature of person authorized to sign)		17. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	
15. NAME AND TITLE OF SIGNER (Type or print)	16. DATE SIGNED	18. NAME OF CONTRACTING OFFICER (Type or print)	19. DATE SIGNED



SECTION 00101. BIDDING INFORMATION

2. BIDS:

2.3x Items of Bids:

NOTES: Add the following new note:

- "4. Of the 20 well pumps in the project, 10 are to receive auxiliary diesel engines, combination drives, and related work (See NAVFAC Dwg. No. 4107569). The 10 to receive diesel engine, combination drives, and related work will be designated by the Contracting Officer. For bidding purposes the 10 diesel engines, combination drives, and related work shall be included in the Base Bid."

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01011. GENERAL PARAGRAPHS

6. DRAWINGS ACCOMPANYING SPECIFICATION: Make the following drawing change:

On NAVFAC Dwg. No. 4107541

Room Finish Schedule, under "Area" change "CO₂ Storage" and "CO₂ feed" to read "Acid Storage" and "Acid Feed", respectively. Room Finish Schedule, under "Walls", "Acid Storage" change "DO" to read "Brick". In the Remarks column for Acid Storage add: "Acid storage and acid feed has 1 painted masonry block wall." Finish Schedule under "Walls", "Pump House Raw & Finish Water" change "DO see Remarks" to read "painted concrete & masonry block" and delete the note in the remarks column."

DIVISION 2 - SITE WORK

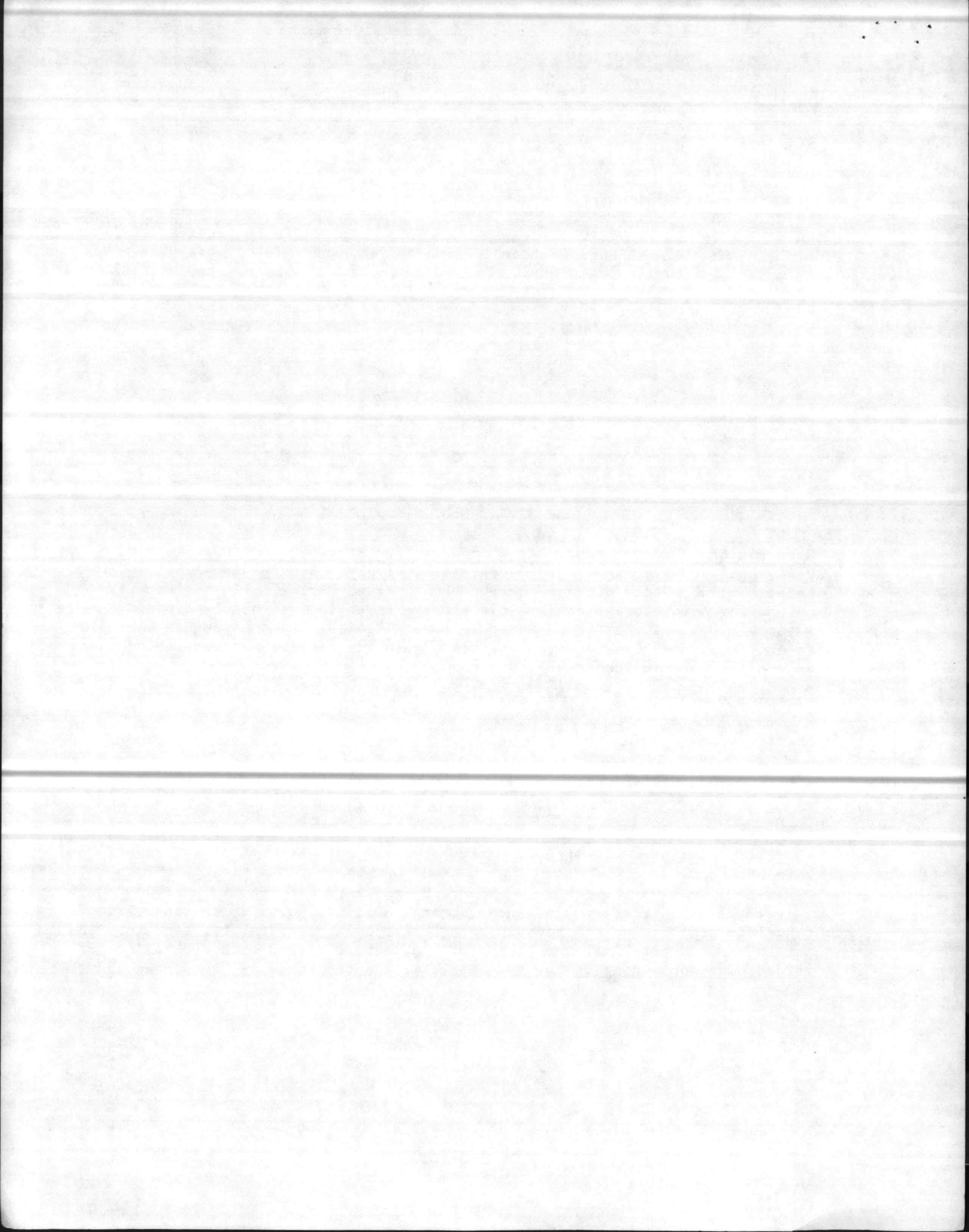
SECTION 02734. ROTARY-DRILLED WATER WELLS

PART 2 - PRODUCTS

2.1 MATERIALS:

2.1.1 Casings: In line 4, after "screwed" and before "joints" insert "or welded".

2.1.2 Well Screens: In line 5, change "0.1" to "0.05". In lines 7 and 8, delete sentence which reads in part "Fit a back pressure.....sand into the screen" and insert "Seal the bottom of the deepest screen with a threaded or welded plug consisting of the same material and thickness as the screen body."



DIVISION 3 - CONCRETE

SECTION 03350. PRESTRESSED CONCRETE RESERVOIRS

PART 1 - GENERAL

1.3 SUBMITTALS:

1.3.1 Drawings: To the end of this paragraph add the following: "Design for hydrostatic uplift shall be based on a groundwater elevation of 26."

DIVISION 11 - EQUIPMENT

SECTION 11335. PUMPING EQUIPMENT

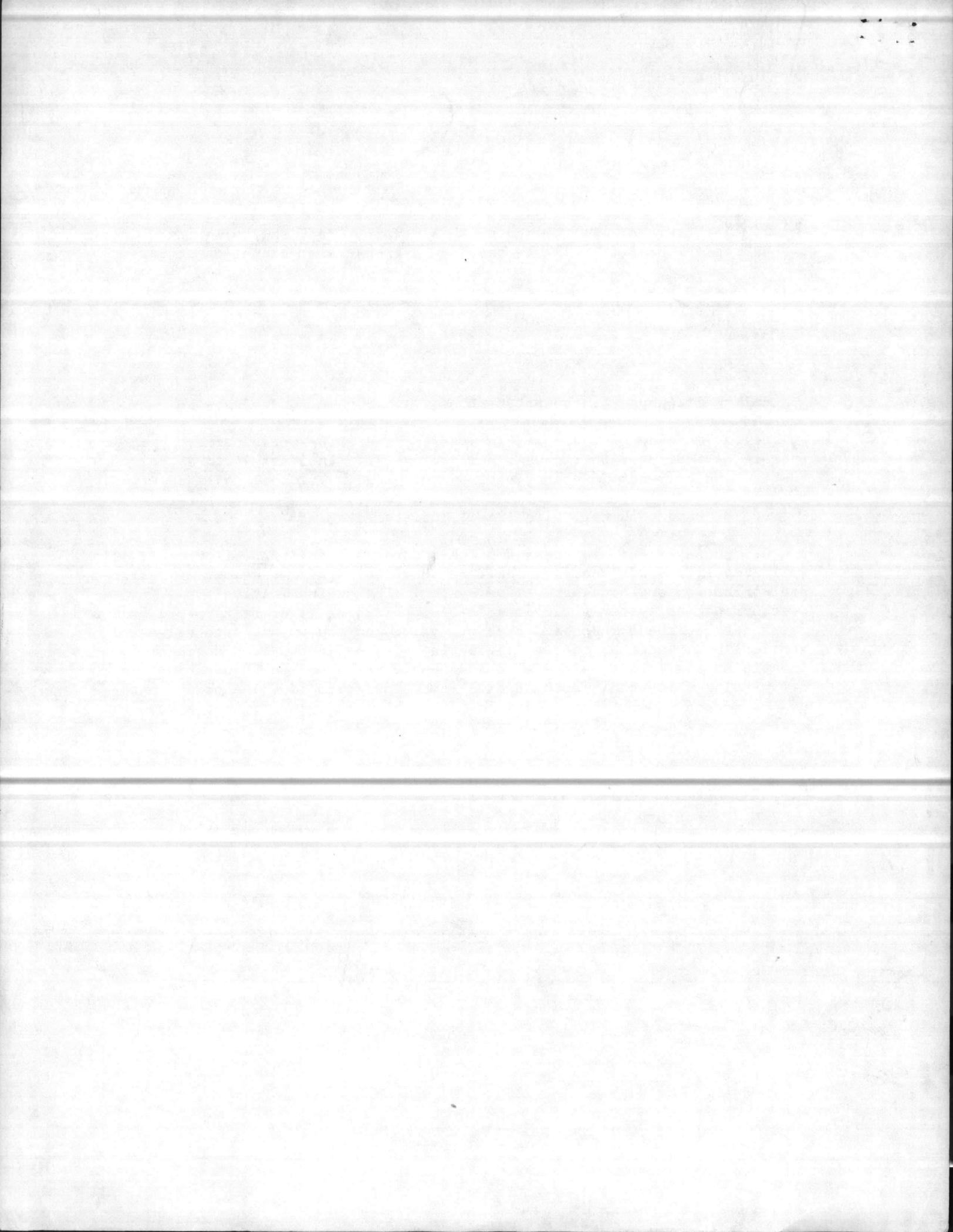
6. MATERIALS AND EQUIPMENT:

6.1 Well pumps, finish water pumps,....

6.1.1 Pumping Conditions: In line 4, delete the period after "pump" and insert "as indicated in the well pump schedule." In lines 4 and 5, delete sentence which reads in part "Total dynamic head.....the completed wells."

6.1.3 Pump columns.....In line 1, delete "seamless".

6.1.5 Bearings: To the end of this paragraph add the following: "All well pump line shaft bearings shall be provided with a manufacturer designed prelubrication and postlubrication system. The prelubrication/postlubrication system shall consist of lubricating water being piped from a point between the 6-inch back pressure valve and the 6-inch gate valve in vertical pipe section, to the lubricating opening in the pump discharge head. The piping shall be provided with a solenoid valve and an adjustable time delay relay which shall automatically open the solenoid valve prior to the pump starting and automatically close the solenoid valve after the pump stops."



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SOLOMAT CORPORATION
GLENBROOK INDUSTRIAL PARK
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STAMFORD, CT 06906

TELEPHONE: 203-348-9700

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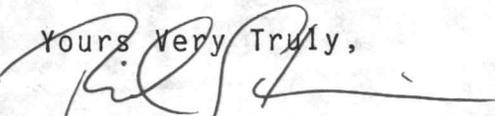
Measure	Air Velocity	2 to 8000 ft/min
Measure	Relative Humidity	0 to 100 %RH
Measure	Temperature	-310 to 2200 deg.F
Measure	RPM	40 to 16000 RPM

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