

ENGEU (25 Sep 56)

3rd Ind

SUBJECT: Testing of POL Valves as Specified in MCEB 55-54 dated 26 October 1955 and in Purchase Description "Valves, Plug, Lubricated, and Lift-Plug, Non-Lubricated, Cast Iron and Steel" dated 10 June 1954

Office of the Chief of Engineers, Washington 25, D. C. 5 November 1956

TO:

Division Engineer, North Pacific Division, Portland, Oregon

1. Relaxation of the test requirements specified in the purchase description for plug valves is not considered advisable by the Chief of Engineers. Past experience has indicated that plug valves procured under the available military specification and API Standard 6D will not meet the requirements for military construction use. Therefore, the referenced purchase description was prepared by Engineer Research and Development Laboratories to include performance required by theater of operations as well as military construction. Each supplier listed on the referenced MCEB has knowledge of the test requirements of the purchase description and has facilities available for testing the valves as required. All valves procured under this purchase description will be tested as required except under conditions specified by paragraph 2.c. of reference 1.b. of 1st Indorsement.

2. The comments contained in paragraph 2 of 1st indorsement regarding a waiver for the non-factory-standard tests are not concurred in by the Chief of Engineers. The comments below correspond to those of paragraph 2 of 1st indorsement.

a. The Rockwell Manufacturing Company, manufacturer of the Nordstrom valve, has facilities to test with solvent as required by the purchase description.

b. Normal body test and seat test conducted in the factory for commercial use are not satisfactory for military construction use. Tests conducted at ERDL have indicated that valves tested with water will hold the normal test pressures as required by API 6D, but will leak under these normal test pressures with solvent. This is the reason for testing with solvent at the higher test pressure required by the purchase description.

c. No comment.

d. No comment.

e. The Chief of Engineers is aware that valves supplied for commercial use are not subjected to the cycling test specified in paragraph 4.3.2.5 of the purchase description. The 2000 cycle figure was selected because previous tests on valves indicated that failure usually occurs before 2000 cycles. Failure is usually caused by poor machining of the plug or galling of the metals. The 2000 cycle test is required on only one valve

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of the same size for the production test model. The purchase description does not require the cycle test for each valve on the production run.

3. Although the cost of testing the valves as required by the purchase description appears to be high, it is considered funds will be well spent especially at an installation such as the Alaska area, where best performance is most desirable.

FOR THE CHIEF OF ENGINEERS:

PAUL D. TROKLER  
Colonel, Corps of Engineers  
Asst for Engineering and Contracts  
Military Construction

NPDGB  
NPD 600.13 (Haines POL) 1 Addnl Fac

4th Ind

13 Nov 56

Office, Div Engr, NPD, CE, 210 Custom House, Portland 9, Oreg.

TO: District Engineer, Alaska District, Anchorage, Alaska

Forwarded for your information and compliance.

FOR THE DIVISION ENGINEER:

ROY W. SCHEUFELE  
Executive Assistant

NPDGB (25 Sep 56 - NPD to NPA) 2d Ind  
NPD 600.13 (Haines) Alaska 1 POL Gen  
SUBJECT: Testing of POL Valves as Specified in MCEB 55-54 dated  
26 October 1955 and in Purchase Description "Valves, Plug,  
Lubricated, and Lift-Plug, Non-Lubricated, Cast Iron and Steel"  
dated 10 June 1954

Office, Div Engr, NPD, CE, 210 Custom House, Portland 9, Ore., 24 Oct 56

TO: Chief of Engineers, Department of the Army, Washington 25, D. C.

1. The suggestions in the preceding 1st Indorsement are in general concurred in by this office. Correspondence with you regarding the possibility of reducing the stringency of the purchase description requirements for the subject valves has been written. Instructions to date require conformance with the purchase description and MCEB 55-54 as now written.

2. The increased lead time occasioned by the required tests was not cited in the previous correspondence. The problem is now posed by NPA as seriously affecting Alaska construction schedules.

3. Relaxation of the test requirements for purchase of subject valves is requested in light of the handicap of extremely short construction season and remoteness from suppliers.

FOR THE DIVISION ENGINEER;

RICHARD F. EBBS  
Colonel, Corps of Engineers  
Assistant Division Engineer

NPDGB

18.4  
25 Sep 56  
J.A.

SUBJECT: Testing of POL Valves as Specified in MCEB 55-54 dated 26 October 1955 and in Purchase Description "Valves, Plug, Lubricated, and Lift-Plug, Non-Lubricated, Cast Iron and Steel" dated 10 June 1954

TO: District Engineer  
Alaska District  
Anchorage, Alaska

1. Reference is made to message ALSVP-N 1009 from SBRO.
2. Regarding the referenced message, recent informal discussion of the procurement of valves for the proposed Haines Pipeline filtering and water-separating installation pointed up the need for waiving certain test requirements of the subject purchase description. Avoidance of the delays occasioned by the required inspections and tests was envisioned. Latest available information indicates that this project will be delayed until next construction season. Waiver of valve test or inspection requirements should not be necessary. This project as well as all other Alaska POL jobs will therefore comply with the criteria set forth in the subject purchase description and applicable MCE Bulletins.
3. During the above-noted discussion it was explained that Alaska construction is handicapped to some extent by the stringent test and inspection requirements. Due to the remoteness of the installation area and the short construction season, the time spent in testing makes for extra long procurement lead time.
4. If you will forward to this office information on the effects of the present test requirements on construction under Alaska conditions, the material will be forwarded to OCE for instructions.

FOR THE DIVISION ENGINEER:

RICHARD F. EBBS  
Colonel, Corps of Engineers  
Executive Officer

NPAGD-M

1st Ind

(25 Sep 56 - NPD to DE Alas Dist)

SUBJECT: Testing of POL Valves as Specified in MCEB 55-54 dated 26 October 1955 and in Purchase Description "Valves, Plug, Lubricated, and Lift-Plug, Non-Lubricated, Cast Iron and Steel" dated 10 June 1954

Office, District Engineer, Alaska District, Corps of Engineers, U S Army, Anchorage, Alaska

TO: Division Engineer, North Pacific Division, Portland 9, Oregon

1. References:

- a. Purchase Description for Valves, Plug, Lubricated, and Lift-Plug, Non-Lubricated, Cast Iron and Steel, dated 10 June 1954.
- b. First Indorsement to letter from NPD to OCE dated 25 February 1955, subject: "Purchase Description for Valves, Plug, Lubricated, and Lift-Plug, Non-Lubricated, Cast Iron and Steel, dated 10 June 1954."
- c. Pages 5 and 6, Section IV, MCEB No. 55-54, 26 October 1955.
- d. Message ALSVP-N 1009 from SBRO to NPD dated 14 September 1956.

2. Content of all of above listed documents bear on problem referred to in basic. As requested, salient facts bearing upon a need to waive certain non-factory-standard tests are:

a. Nordstrom valves are tested approximately in accordance with the government purchase description as to production model requirements except tests are normally conducted with water in lieu of solvent. Factory is not set up to use solvent. Nordstrom representative requests approval to use water as test media.

b. Normal body test and seat test as conducted in the factory satisfy the requirements for these tests as specified in the purchase description.

c. Air under water test is conducted at the factory.

d. Torque test (operational test for smooth turning with full unbalanced pressure against the plug) is conducted as specified.

e. Cycling test specified in the purchase description is not in accordance with normal factory procedures. Nordstrom does conduct routing cycling tests, but at lesser number of cycles than specified in the purchase description. Manufacturer does not routinely test each valve at 2000 cycles.

NPAGD-M

1st Ind (Cont)

(25 Sep 56 - NPD to DE Alas Dist)

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(1) To perform an actual 2000 cycle test on an eight-inch size valve would require approximately 32 hours. Further, such a test would require three weeks of factory testing time and will require approximately a minimum of 45 days total elapsed time for special factory set-up and for necessary coordination.

(2) The additional cost to the government, based upon actual cost to the manufacturer for conducting the special tests is \$4.11 minimum per test hour. Based upon a 32 hour test period for one only eight-inch size valve, the total additional cost to the government for such tests will be \$131.52.

3. On a POL construction job requiring the installation of many valves and in many sizes, the economic impact of test costs would be severe. For example, on a factory shipment the eight-inch size Nordstrom Fig 1989 lists for \$560.00 and a 34% and 10% discount applies. The cost to the contractor would therefore be \$560.00 - \$190.40 - \$19.04 - \$350.56. This same valve as specified in the purchase description would cost the contractor an additional \$131.52 for the special tests. The total costs for the specially tested valve would therefore be \$482.08. The added costs for the special tests alone would therefore increase the cost of the valve by  $(\$131.52 \div \$350.56) \times 100 = 37.52\%$ . Should complete total accomplishment of special tests be required by higher authority, the indicated increase in construction costs would cause much added concern over the resulting reduction in amount of military POL construction that could be placed with any given sum of money.

4. Further, in Alaska, concern arises over the added time required to perform the special tests. Many contracts awarded in the early spring are for completion in the fall. POL construction included in such jobs would be adversely affected by the added 45 days elapsed time at the factory required to conduct the special tests.

5. Based upon scheduling of POL components in individual two or three year jobs, the added 45 days elapsed time may or may not adversely affect the overall scheduling of the complete job. However, experience on POL construction in the past is that the using agencies have taken over for beneficial occupancy usable POL components in the contract before completion and transfer occurs for the total construction included in the complete contract.

NPAGD-M

1st Ind (Cont)

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6. Examples of recent POL construction jobs where the test requirements for lubricated plug valves have caused serious six month delays, increased costs to the contractor, and air shipments at significant increases in contract costs are:

a. Construction of POL Storage Tanks and Unloading Dock Facilities, Kenai (Schedule A)

Invitation No: Eng-95-507-55-53  
Contract No: DA-95-507-eng-787  
Directive No: Appr 2068 Voucher No. 1  
Kenai-52-MCA-adv-53-MCA  
USARAL Directive No. 9  
Contractor: Morrison-Knudsen, Inc.

b. AC&W - Schedules C and D, Kotzebue and Fort Yukon

Invitation No: Eng-95-507-55-63  
Contract No: DA-95-507-eng-803  
Alaska AC&W-54  
ACRP-AF-53  
Directive No. 8  
Contractor: Manson-Osberg Company

7. Excessive costs for material, combined with delays in delivery, is of considerable concern to this office. It is requested that the above information be reviewed and, if at all possible, our test requirements for valves be modified to conform with the factory setup and facilities of the manufacturer.

cc SBRO  
Attn: Shop Dwg Sec

P. V. KIEFFER, JR.  
Colonel, CE  
District Engineer