



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of Environmental
Conservation**

DIVISION OF ENVIRONMENTAL HEALTH
Drinking Water Program

555 Cordova Street
Anchorage, Alaska 99501
Main: 907.269.6064

May 16, 2017

Cyrus Randelia P.E.
KAE, Inc.
PO Box 91970
Anchorage, AK 99509-1970

File: 2611.07_DW Manokotak Heights Water System
PWSID: 260090
Class: Community
Source: Groundwater

Re: Manokotak "Old Village" Water System; Well OMPW7B
Approval to Construct

Dear Mr. Randelia:

On August 23, 2016, this office received engineering plans and supporting material as part of your request for approval to construct wellhead improvements and transmission piping that brings Well OMPW7B online to provide additional raw water for the Manokotak "Old Village" Public Drinking Water System, identified by PWSID 260090. Additional information was submitted on April 7, 2017 in support of a determination that this well should be classified as Groundwater. Based upon all available information this well has been classified as Groundwater that is highly vulnerable to contamination. As such, filtration and disinfection is not required at this time, however future evidence of contamination, such as positive coliform bacteria tests, would cause the Drinking Water Program to re-evaluate this determination.

This letter issues Conditional Approval to Construct the proposed modifications as described in the engineering submittal, and also issues separation distance waivers allowing an 8-inch PVC sewer main to be located approximately 140 feet southeast of Well OMPW7B and a raw water transmission line to run parallel to a gravity sewer main for approximately 176 feet in 2nd Street, near the intersection of C Street, as well as crossing below multiple sewer mains and private sewer lines.

Conditional Approval to Construct

The submitted engineering plans and supporting information have been reviewed and are approved in accordance with Alaska Drinking Water Regulations (18 AAC 80). The enclosed Construction and Operation Certificate, with the construction approval section completed, constitutes a written approval. Issuance of this approval is contingent upon compliance with the conditions listed below:

1. Bentonite water-stops or trench-dams shall be installed at Station 16+50 and 17+50 in order to stop surface water from flowing down the trench towards the well-head.
2. After completion of construction a pump test shall be completed, and the results of that pump test shall be used to describe maximum pumping rate parameters that will protect the well screen from being exposed to air. Immediately after completion of this pump test raw water samples shall be collected and analyzed by a certified lab for Total Coliform Bacteria, Inorganic Chemicals (not including Asbestos), Nitrate, Nitrite, Volatile Organic Chemicals and Secondary Contaminants.

3. The water plant operator shall be trained to document the total volume produced from each well on a monthly basis, and flow meters or pump run time meters shall be installed to enable the operator to track individual well production volumes.
4. The well drop pipe and transmission line shall be constructed in such a manner that when the well is idle, a minimum pressure of 20 psi is maintained in the raw water transmission line.

Deviations from approved plans which affect capacity, flow, pressure, operation, compliance, and materials of major system components (particularly any components which do not meet ANSI/NSF Standard 61), must be approved by the Drinking Water Program prior to their construction or implementation.

Any changes, constructed or natural, that affect the conditions to which this approval was granted will void this approval. This does not imply the granting of additional authorizations, nor obligate any federal, state, or local regulatory body to grant required authorizations.

Interim Approval to Operate Requirements

As part of the submittal requesting Interim Approval to Operate, please provide:

1. Verification that construction of the modifications to the water system have been completed under the direction of a professional engineer licensed to practice in the state of Alaska and in accordance with the DEC approved engineering plans and specifications;
2. Verification that potable water piping and appurtenances in the Water Treatment Plant that have been affected by construction have been flushed, disinfected, and sampled for total coliform in accordance with AWWA Standards C651 and C653. Provide the location in the system where each sample was taken, the time and date of each sample, and the results for each sample;
3. Well pump test results along with proposed operating parameters to avoid excessive drawdown of Well OMPW7B;
4. Raw water test results as described in Item 2 of the Construction Approval conditions; and
5. Verification that the raw water transmission main maintains a minimum pressure of 20 psi when the well pump is idle.

Final Approval to Operate Requirements

Final approval to operate should be requested within one year of receiving interim approval to operate. As part of your request for Final Approval to Operate, you will be required to provide the following:

1. Record Drawings, detailing new construction, signed and sealed by an engineer licensed in Alaska, showing the project was constructed to meet minimum regulatory requirements; and
2. Provide documentation that the operations and maintenance (O&M) manuals for all components of the water system have been completed and provided to the operator prior to system start-up. The O&M manual should include a description of basic O&M needs including:
 - a. Chemicals and spare parts of critical system components;
 - b. Replacement and maintenance schedules;
 - c. Periodic cleaning requirements, including the expected resulting down time; and
 - d. Instructions and procedures for all chemical and treatment additive dosing; monitoring and adjustments.

Limitations & Administrative Appeals Process:

Approval of plans is not approval of omissions or oversights by this office nor non-compliance with any regulation and does not guarantee correctness of functional design nor waive the owner's responsibility for continued compliance with state, federal, and local regulations. Any person who disagrees with this decision may request by mail, e-mail, or facsimile an appeal in accordance with 18 AAC 15.185 and 15.195-15.340. Informal review requests must be delivered to the Division Director within 15 days of receipt of this decision. Adjudicatory hearing requests must be delivered to the Commissioner within 30 days, otherwise the right to appeal is waived. Visit www.dec.state.ak.us/commish/ReviewGuidance.htm for more information.

If you have any questions regarding this plan review please do not hesitate to contact me at 269-6064 or daniel.reichardt@alaska.gov.

Sincerely,



Daniel Reichardt, PE
Engineer I, DEC

Enclosures: Public Water System Construction and Operation Certificate

cc: Nancy George
City Administrator
P.O. Box 170
Manokotak, AK 99628

George Wilson, PE, DEC/VSW, email w/ enclosure
Ms. Carrie Thissen, EPS, DEC, email w/ enclosure



**State of Alaska Department of Environmental Conservation
Drinking Water Program
PUBLIC WATER SYSTEM
CONSTRUCTION AND OPERATION CERTIFICATE**



Approvals listed below are for compliance with the requirements of the State of Alaska Drinking Water Regulations 18 AAC 80. Any approvals granted do not imply or grant any other federal, state or local authorizations that may be required.

Water System Name: Manokotak "Old Village" Drinking Water System **PWSID:** 260090

Water Source: Groundwater **Classification:** Community

System Wide Approval **Modification Approval**

Project Description:

This project installs a raw water transmission line, well pump, wellhead improvements and water treatment plant improvements to bring Well OMPW7B on line as a supplementary source.

A. APPROVAL TO CONSTRUCT

Plans submitted in accordance with 18 AAC 80.205 by Cyrus Rndelia, PE have been received and are

approved as submitted conditionally approved; see attached letter

Daniel A. Reichardt, PE

Engineer I, DEC
(Title)

May 16, 2017
(Date of Approval)

If applicant fails to construct, alter, install, or modify the system within two years of the date of approval to construct, approval is void, and plans must be resubmitted for Department review and approval (as per 18 AAC 80.215 (a)).

Approved Change Order

Change (contract order number or description): _____

(Reviewing Engineer) _____ (Title) _____ (Date of Approval)

B. APPROVAL TO OPERATE

This section must be completed and signed by the Department before any water is made available for public use.

Interim Approval to Operate:

This interim approval to operate expires on _____ *It is illegal to operate a public water system beyond the expiration date without **Final Approval to Operate** from the Department.*

(Reviewing Engineer) _____ (Title) _____ (Date of Approval)

Interim Approval Extension:

This interim approval to operate has been extended to _____.

(Reviewing Engineer) _____ (Title) _____ (Date of Approval)

Final Approval to Operate

Record drawings and other documents submitted to the Department, or an inspection by the Department, has confirmed that the public water system was constructed in substantial conformance to 18 AAC 80.

(Reviewing Engineer) _____ (Title) _____ (Date of Approval)