

26 September 2006

MEMORANDUM

From: Manager

To: Board of Trustees

Subj: MANAGER REPORT AND MINUTES FOR THE KNICKERBOCKER LAKE INTAKE  
CONSTRUCTION MEETING 12 SEPTEMBER 2006

**MINUTES FOR 12 SEPTEMBER 2006 KNICKERBOCKER LAKE INTAKE  
CONSTRUCTION MEETING**

The Board of Trustees convened at 1400 hrs. In attendance Trustee Pinkham (Chair), Trustee Curtis (Treasurer), Administrative Manager (AM) Bob Raudenbush and Manager Jon "Ziggy" Ziegler. Guest: Mr. Jeff Preble P.E., Wright-Pierce Engineering (WP); Mr. Conrad McAllister, United States Department of Agriculture, Rural Development (RD); Mr. Mark McPheters, T. Buck Construction; Mr. Jake Draku, Electrical Installations Inc (EII). Absent: Trustee MacPhee (Vice Chair), Trustee Carter (Clerk), Trustee Marston.

1. The meeting was called to order at 1000 hr. Trustee Pinkham recognized Mr. Preble to Update the board on the progress of the Knickerbocker Intake Project and approve the most recent pay-request.
2. **Update on Pump Station Work**
  - A. Building - Work during the month of September has focused on completing the equipment connections and installing wiring and controls to the various pieces of equipment. In addition, control and SCADA updates have been completed.
  - B. Site Work - The security fence installation at the pump station has been completed
  - C. Equipment Start-Up - Testing has been completed on the vacuum prime system; the pump and variable frequency drive (VFD) control, and the plug valve. Some operator training has been completed with these portions of the system. Additional training will be provided once the system is ready for start-up
3. **Remaining Work Schedule**
  - A. Radio Communications - A problem has been discovered with the radio communications between the Knickerbocker Pump Station and the Treatment Facility. A direct line of sight is not achievable with the radio antennae mounted on the roof of the pump station due to the hill behind the pump station. A temporary 40-foot tower was tested at the site which was able to establish a signal to the tank at Mt. Pisgah but not directly to the treatment facility. Additional testing will be completed on September 21<sup>st</sup>, in cooperation with the Boothbay Harbor Fire Department to determine what height is needed to obtain direct communications to the treatment facility. Once the height is established with the testing, a new tower will need to be installed at the site to establish communications. The district noted that they understood the new tower in back of

the treatment facility was intended to provide communications to the Knickerbocker Pump Station. WP stated that towers were needed at both facilities and the tower at Knickerbocker was omitted from the plans. The district informed WP that they had been led by WP representatives that the tower on the treatment plant, already paid for by the district, would suffice. The manager pointed out that WP's path study was in error and it was the district's position that any further cost to establish proper telemetry would not be paid for by the district. Because of the lack of communication with the pump station the district would have no choice but to delay substantial completion. The manager noted "as the pump station sits it is just hardware of no value to the district".

- B. Access Road - Following completion of work at the pump station, the access road will be re-graded. Culverts damaged during construction have been replaced.
- C. Start-Up and Testing - Start up and testing of the pump station will be completed as soon as radio communications are established between the pump station and the treatment facility.
- D. Addressing Punch List Items - A punch list was developed after the construction meeting. The items from the punch list will be added to the list of items distributed by the District prior to the meeting.

#### 4. Construction Issues

- A. Punch List - WP reviewed the punch list items developed by the District as listed in their email memo of September 15<sup>th</sup>. These items are repeated below:
  - 1. The telemetry screen located within the master computer in the treatment plant needs the screen entitled "System Overview" updated to include the Kickerbocker Pump Station. EII indicated this would be completed after the construction meeting.
  - 2. The raw water hydrant located adjacent to the pump station needs to be painted raw water green. The second hydrant installed by Adams Pond, painting is the responsibility of the district.
  - 3. Wendell's Way needs to be finish graded as per drawings C-6. The land owner has requested the upland side be loamed and seeded per the drawing and the down hill side, adjacent to house be loamed and seeded only as needed. T Buck will be talking with Reny Construction regarding finishing this work.
  - 4. Complete removal of erosion control materials and area cleanup (Exception trees which are the district's responsibility)
  - 5. Electrical wires in the control room?? What do they go to and when will they be installed?
  - 6. Security panel needs to be installed. Security panel will be delivered this week to allow installation.

7. Piping in the pump station needs to be labeled per OSHA standards "Raw Water" and "Air".
  8. Training needs to be provided to treatment plant operators and selected personnel, preferably after completion and 26 September 2006.
  9. The area where the T-Buck trailer was located needs to be leveled, cleaned up silt fence removed.
- B. Telemetry - As of now this is very much unsatisfactory. The radio telemetry plan, as shown on as *Radio Telemetry Figure* located on DWG1-1, 13 of 21, signed and stamped, shows the Knickerbocker Lake Pump Station (KLPS) transmitting and receiving information from the Kenniston Hill Standpipe. This, under current conditions is impossible. As of now the station is talking to the Mt. Pisgah Standpipe. This is unacceptable

During the construction phase of the *Kenniston Hill/East Boothbay Interconnection Project* the district was sold a 75-foot antenna tower because, although not necessary for the Kenniston Hill Standpipe (verified by EII at the time) it would be needed to talk to the KLPS. This is clearly not the case as of this moment.

On Thursday 21 September 2007 EII, with the help of the Boothbay Harbor Fire Department, will conduct a 75 foot elevation path study at the KLPS. Dependable readings from the Kenniston Hill Standpipe (90% or better) are ok. Readings from the plant with the same or greater dependability is optimal.

Naturally if a seventy five foot tower is deemed necessary, funding the construction will be a definite issue.

- C. Substantial Completion - The contract date for Substantial Completion is 14 September 2006 with Final Acceptance scheduled for 14 October 2006. A time extension will be required for installation of the radio tower at the site. It is expected that a month will be needed. A change order will need to be executed with T. Buck for the additional work associated with the radio communications. WP and District will work out a separate agreement regarding this omission from the construction documents.
- D. Pump Impeller - During testing of the pump through the hydrant installed adjacent to the raw water it appeared the pump was equipped with a larger impeller than what was approved by the shop drawings. WP explained that the smaller impeller would reduce the possibility of overloading the motor. The impeller supplied with the pump will be tested once flow is established to the raw water pump station. Overrides can be programmed into the VFD to prevent overloading the motor if necessary. T. Buck will have the correct impeller shipped to the site so it can be changed out if necessary after final testing is completed.
- E. Deletion of plantings at the Pump Station - The District wishes to have the plantings deleted from the contract. A credit of \$800 will be processed through a change order.

- F. Pressure Relief Valve Settings - The settings on the pressure relief valve will need to be adjusted per the memo from Dan Flaig on the controls. This will be added to the punch list.
  - G. Record Drawings - WP noted that record drawings for the project will be turned over to the District within one month of receiving the information from T. Buck.
- 5. Shop Drawings-** T-Buck should submit required Operation and Maintenance Manuals (O&M's) for the vacuum prime system as soon as possible.
- 6. Owner Issues** – See radio communication discussion above.
- 7. Contractor Issues** – None noted.
- 8. Rural Development Comments** – None noted.
- 9. Change Orders**
- A. Change order #4 covering the installation of additional wiring installed from the treatment plant to the raw water pump station was signed and distributed at the meeting. The total of this change order is \$2,982.00.
  - B. Change order #5 will include the modifications necessary to establish radio communications and the credit for deleting the plantings at the pump station.

**10. Payment Requisitions**

Rural Development Payment Application No. 9 was signed at the meeting covering the most recent invoices from Wright-Pierce, and T. Buck's application for payment No. 7. T-Buck's approved payment request was for \$45,842.73, and represents approximately 99% completion.

As discussed after last month's payment request, all current charges, except short term interest, on the project have been included under RD's portion of the application. This also includes the previous month's invoices from WP. A credit is shown on the District's portion of the payment application for these invoices. RD's total this month on PPR #9 totals \$50,955.22.

Lien waivers will be forthcoming from T. Buck and will be distributed via email as they come in.

A budget summary will be distributed at next month's meeting.

11. The meeting was adjourned at 1047 hr.

END OF CONSTRUCTION MEETING MINUTES

Respectfully Submitted,

Jonathan E. Ziegler, Manager