RECLAMATION

Managing Water in the West

TR-2013-02

Travel to Davis Dam

Dates of Travel: January 21-26, 2013

U.S. Department of the Interior
Bureau of Reclamation
Technical Service Center
Hydraulic Investigations and Laboratory Services Group
Denver, Colorado

BUREAU OF RECLAMATION
Technical Service Center
Denver, Colorado

TRAVEL REPORT

Code: 86-68460 Date: February 11, 2013

To: Manager, Hydraulic Investigations and Laboratory Services Group

From: Josh Mortensen

Subject: Travel to Davis Dam for installation of turbulence field test equipment (2nd iteration) during unit 2 outage.

1. Travel period: 21 January 2013 – 26 January 2013

2. Places or offices visited: Davis Dam and Lake Mead

3. Purpose of trip: Install turbulence field test equipment on the cooling line of unit 2 that feeds the generator thrust bearing during a scheduled outage. This was done in preparation for additional field testing of generated pipe turbulence as a proactive mussel control. This testing will be performed on level 2 of the power plant near the intake of the plant's cooling water system where there is an abundance of mussel veligers and where there is no air inside the pipes.

4. Synopsis of trip: On Monday, January 21st Josh Mortensen and Jimmy Hastings (both 86-68460) arrived in Laughlin, NV. Josh traveled by air to Las Vegas and Jimmy drove the work truck with supplies. About 7:00 am on Tuesday the 22nd they met with Vince Lammers at the power plant to review work to be completed and the JHA. Afterword they began unloading equipment and preparing for the test setup installation. After seeing the arrangement of the 3-inch cooling line to the thrust bearing, they decided to change the test piping by installing an extended single test pipe to serve as both control and treatment pipes rather than two separate installations on the existing system (Figure 1). This change simplified installation and reduced the amount of required pipe fittings.

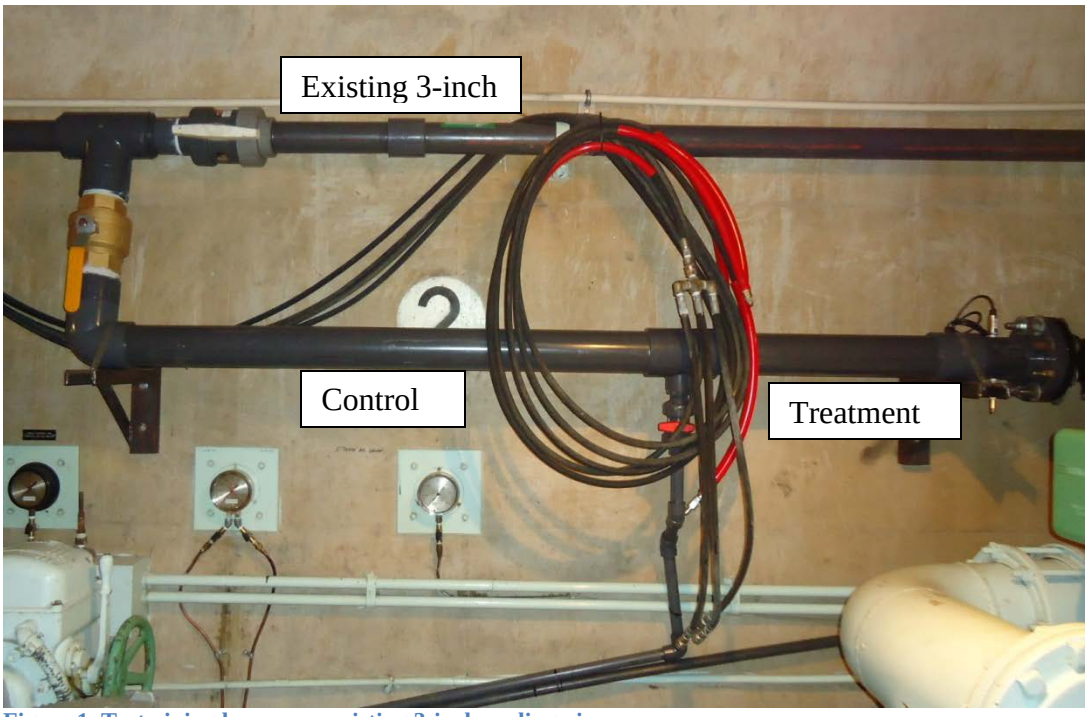

Figure 1 Test piping bypass on existing 3-inch cooling pipe.

On Wednesday the 23rd Leonard Willett met briefly with Josh at Davis to assess the test installation. He suggested that a treatment sample be collected several pipe diameters downstream to help verify settlement results. Per his suggestion a tap and bio-cooler were installed on the 3rd level of the plant (Figure 2) which is located at least 15 pipe diameters downstream of the turbulence treatment.

Figure 2 Tap on 3-inch cooling pipe several pipe diameters downstream from treatment and bio-cooler on the 3rd level.

Thursday and Friday morning were spent installing the water supply to the pumps, cleaning up, and verifying there were no leaks in the test piping or existing 3-inch cooling pipe. Josh and Jimmy checked out of the plant about noon on Friday the 25th and travelled to Lake Mead where they picked up some equipment that needed to be returned to Denver for other projects. Jimmy flew back to Denver from Las Vegas on Friday afternoon and Josh drove the work truck, returning on Saturday the 26th.

5. Conclusions: The main test piping installation required during the unit outage was completed. All newly installed valves were set so that thrust bearing cooling water will bypass the test piping when the unit is returned to service.

TSC researchers plan return to Davis in late February to complete the installation of the pump supply and straining system as well as provide 8-inch blind flanges to be installed on old setup in the cooling water gallery. They will then begin test system startup and troubleshoot any mechanical issues that arise.

6. Action correspondence initiated or required: None

7. Client feedback received: N/A

cc:
Leonard Willett (LCD-8200)
Miguel Rocha (86-69000)
Joseph Kubitschek (86-68460)
Sherri Pucherelli (86-68220)
Vince Lammers (LCD-D11)
John Sorace (LCD-D20)

bc: N/A

SIGNATURES AND SURNAMES FOR:

Travel to: Davis Dam, Bull Head City, AZ

Dates of Travel: January 21 – 26, 2013

Names and Codes of Travelers: Josh Mortensen & Jimmy Hastings, 86-68460

Travelers:

Joshua D. Mortensen 2/6/13

Joshua D. Mortensen — Date
Hydraulic Investigations and Laboratory Services Group

Peer Review by:

1/30/13

Bryan J. Heiner — Date
Hydraulic Investigations and Laboratory Services Group

Noted and Dated by:

Robert F. Einhellig 2/6/13

Robert F. Einhellig, Manager — Date
Hydraulic Investigations and Laboratory Services Group