

RECLAMATION

Managing Water in the West

TR-2014-03

Travel to Davis Dam

Travel to Davis Dam to startup the turbulence research system for 2014 field testing of the turbulence mussel control system.

Date(s) of Travel: April 21 - 24, 2014



**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: 85-846000

Date: April 30, 2014

To: Manager, Hydraulic Investigations and Laboratory Services Group

From: Josh Mortensen, Hydraulic Engineer

Subject: Travel to Davis Dam to startup the turbulence research system for 2014 field testing of the turbulence mussel control system.

1. Travel period: 21 April – 24 April 2014

2. Places or offices visited: Davis Dam

3. Purpose of trip: Startup the turbulence test system for turbulence mussel control research at Davis Dam.

4. Synopsis of trip: Josh Mortensen arrived at Davis Dam on Monday April 21st to begin work on the turbulence test system. He worked there through Thursday April 24th, returning to Denver Thursday evening. System startup tasks that were accomplished through the week include:

- Installed self-cleaning strainer on the jet pump supply system
- Activated Remote Terminal Unit #1 (RTU) for pipe pressure data logging and automation of the self-cleaning strainer system
- Installed and activated RTU #2 to log pump pressures and automation of treatment bio-box emergency shutoff valve
- Installed and activated an ultrasonic flow meter on the main 4-inch test pipe to log pipe flow
- Calibrated jet pumps using pump pressure and flow to estimate jet nozzle velocities
- Started up jet pumps, monitored system performance for 24 hours, and left the system running upon departure

A severe leak was discovered in pump #5 upon startup. Josh took it to the pump manufacturer mechanic in Las Vegas on his way home and will pick it up on his next trip in May. Also, programming problems prevented the treatment bio-box emergency shutoff from being fully automated. The valve was left in manual mode in the open position and will be re-programmed during Josh's return in May.

5. Conclusions: The turbulence test system was started up and left in operation. Sherri Pucherelli will return to Davis in early May to install mussel collection plates in the bio-box coolers and formally begin the biological testing. Josh will return to Davis in approximately 1 month to install jet pump #5, re-program the automation for the treatment bio-cooler emergency shutoff, download data logs, and perform system maintenance.

6. Action correspondence initiated or required: Before leaving Josh and John Sorace discussed the system emergency shutdown procedure, Davis personnel cleaning out the manual basket strainer twice per week, and the possibility of reducing the flow through the test pipe on the next trip.

7. Client feedback received: N/A

cc:

Leonard Willett (LCD-8200)

Vince Lammers (LCD-D11)

Sherri Pucherelli (86-68220)

Joe Kubitschek (86-68460)

Miguel Rocha (86-69000)

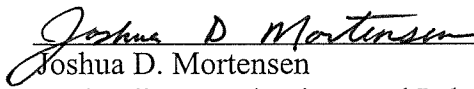
SIGNATURES AND SURNAMES FOR:

Travel to: Davis Dam, Bullhead City, AZ

Dates of Travel: 21 April – 24 April 2014


Names and Codes of Travelers: Josh Mortensen, 85-846000

Traveler:


Joshua D. Mortensen
Hydraulic Investigations and Laboratory Services Group


4/30/14
Date

Reviewed:


Tom Gill
Hydraulic Investigations and Laboratory Services Group

4/29/14
Date

Noted and Dated by:


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

4/30/14
Date