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SUBMITTAL COVER SHEET

1911- 2015 FEMA Flood Repairs – Project CIP 16-351C

Submittal #:084


Date:3/26/2020

Revision #: A

To:	Eduardo M. Moreno	From:	Josh Luebbert
	City of Thornton		American West Construction, LLC
	12450 Washington St. Suite 100		275 E. 64th Ave.
	Thornton, CO 80241		Denver, CO 80221

We are transmitting the following Submittal Package items for your review in accordance with the contract specifications.

Item #	Spec Section	Paragraph #	Description	Copies	Requested Return Date	Remarks
1	01 53 01		SEO Leak Test Approval Letter	1	ASAP	

Project Name: West Cooley Reservoirs – 2015 Flood Repairs		Engineer's Action (See Contract Documents)	
RJH Project No.: 16116	COT Project No.: 16-351C	Date Received: _____	Date Approved: _____
Submittal No. <u>084 A</u>		Definition	Initials & Date
Contract No. _____		A. Approved	
Spec. Section No. _____ Art. No. _____		B. Approved as Noted	
Contractor's Approval (See Contract Documents)		C. Returned for Review (resubmit)	
Contractor <u>American West Construction, LLC</u>		D. Not Approved (submit additional information)	
Approved by: <u>Josh Luebbert</u> 		E. Preliminary (submit additional information)	
Date: <u>3/24/20</u>		F. For Reference/Information Only	
(Do not send drawing to Engineer without Contractor's prior approval)		G. Distribution Copy (Previously Approved)	



March 26, 2020

MR. JOSH LUEBBERT
AMERICAN WEST CONSTRUCTION, LLC
275 E 64TH AVENUE
DENVER, CO 80221
TRANSMISSION VIA EMAIL: jluebbert@trustawc.com

RE: SLURRY WALL LINER APPROVAL
WEST COOLEY RESERVOIR SOUTH CELL (FORMERLY ARVADA RESERVOIR) AND
CENTRAL CELL (WDID 0203325)
FULTON LAKES PIT, DRMS NO. M-1999-034
NE1 /4, THE W1/2 OF THE NW1/4 , THE N1/2 OF THE SE1/4 AND THE NE1/4 OF
THE SW1/4 OF SECTION 17, T2S, R67W, SIXTH P.M.
WATER DIVISION 1, WATER DISTRICT 2

Dear Mr. Luebbert:

The purpose of this letter is to approve the lining of the South Cell and Central Cell of West Cooley Reservoir ("Reservoir"). The Reservoir is primarily located in the NE1/4, the W1/2 of the NW1/4, the N1/2 of the SE1/4 and the NE1/4 of the SW1/4 of Section 17, Township 2 South, Range 67 West of the 6th P.M., and was mined under the Fulton Lakes Pit (DRMS M-1999-034). The South Cell and Central Cell were lined with a soil bentonite slurry wall. The South Cell was previously tested and approved on December 19, 2002 as meeting the design standard and the Central Cell was previously tested and approved on June 9, 2006 as meeting the design standard. The slurry wall of the two cells was breached when the South Platte River flooded in September 2013 and again in 2015. Repair work to the slurry wall liner after the flooding in 2013 and 2015 was performed during 2019. The repairs ties into adjacent undisturbed slurry wall both laterally and vertically. The purpose of this test was to analyze the liner repair and re-verify the previously approved liner once again met the design standard. The test duration was modified to 64-days. The liner test commenced on December 17, 2019 and concluded on February 18, 2020. A site inspection was performed by our office on February 18, 2020 to review site conditions and discuss preliminary leak test data.

The Kilduff Underground Engineering, Inc. report dated February 25, 2020 (revised March 9, 2020) provides the liner summary and leak test results. The test data provided indicates that after the repair the South Cell and the Central Cell of West Cooley Reservoir have been lined to the design standard referenced in the August 1999 State Engineer Guidelines for Lining Criteria for Gravel Pits (1999 SEO Guidelines). **Meeting the design standard requires that during Reservoir operations all water inflows and outflows for the liner perimeter enclosed area be accounted for on a monthly basis.**



With this liner approval, the South Cell and Central Cell of West Cooley Reservoir West Cooley Reservoir are once again classified as lined cells in accordance with the 1999 SEO Guidelines. Water shall not be impounded in these cells except pursuant to lawful diversions allowed by statute or decree. At all other times, all inflow of water into the Reservoir from any source, including precipitation and ground water inflows shall be removed to prevent illegal storage of water. Prior to ANY use of this site, the owner or operator will need to coordinate with Jorge Vidal, Water Commissioner District 2, to review operations, measurement structures, stage-storage curves, and accounting.

Please contact me at 303-866-3581 x8246 or ioana.comaniciu@state.co.us if you have any questions.

Sincerely,



Ioana Comaniciu, P. E.
Water Resource Engineer

Ec: Jorge Vidal, Water Commissioner, District 2 (Jorge.Vidal@state.co.us)
Brent Schantz, River Operations Coordinator (Brent.Schantz@state.co.us)
Louis Flink, Diversion Records Coordinator (Louis.flink@state.co.us)
Brian Bushey, American West Construction, LLC (bbushey@trustawc.com)
Davis Agan and Shrey Arora, Kilduff Underground Engineering, Inc
(dagan@kilduffunderground.com and sarora@kilduffunderground.com)
WDID File (0203325)