



DAM SAFETY BRANCH **CONSTRUCTION COORDINATION MEMO**

Construction Project: Upper Beaver Brook
DAMID: 070103
Construction File No. C-0178B
Date: May 6, 2016
Subject: Pre-Construction Dam Safety Branch Coordination Information

The following information is provided as general guide for communication & coordination between the State Engineer's Office (SEO) Dam Safety Branch and the Project Engineer and Contractor. This document does not replace the Rules and Regulations for Dam Safety and Dam Construction (Rules) or constitute approval of the plans and specifications for construction or final acceptance of construction by the State Engineer. Additional contingencies or requirements may be associated with this project that are not addressed here and the Project Engineer and Contractor should refer to the approved construction documents.

I. Authority

- A. CRS 37-87-105: Approval of plans for reservoir – notice of modifications.
- B. CRS 37-87-107: Safety inspections – amount of water to be stored.

II. Approved Plans & Specifications

- A. A copy of the Approved Plans and Specifications must be on site at all times during construction
- B. If a significant change is necessary, it must be handled through a written Change Order, approved in advance by the State Engineer in accordance with Rule 9.1.8. Change Orders receive priority review by the State Engineer to avoid construction delays. If in doubt as to what constitutes "significant", contact the State Engineer's Office (SEO) to discuss the nature of the change.

III. Roles & Responsibilities

A. Owner's Project Engineer

- 1. Provide adequate inspection and testing to assure conformance with the approved plans and specifications.
- 2. Observe site conditions in accordance with the approved Construction Observation Plan to verify that assumptions made during the design process are valid.
- 3. Prepare Change Orders as necessary to accommodate changes in site conditions or unanticipated problems.
- 4. Provide an authoritative presence on-site to interpret the plans and specifications, make decisions, and to provide coordination and engineering judgment during construction.
- 5. Document the construction in accordance with Rule 10 (Attached):
 - a. The Project Engineer will provide periodic construction progress reports and prepare accurate "as-constructed" documents at the completion of the project.
 - b. The Project Engineer must certify the construction and file a final construction report including a description of design and construction changes at the end of the project.
The project will not be accepted as complete, and approval to store water will not be issued until the final construction documents are received and accepted by the State Engineer.
- 6. Serve as liaison with the State Engineer's Office. A list of SEO contacts, in the order in which they should be contacted, is presented as Attachment A.



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7. Bring in expertise as necessary to evaluate conditions encountered.
- B. Role of the State Engineer
1. Fulfill regulatory responsibility to assure the dam is safe.
 2. Assure compliance with the approved plans and specifications through periodic construction inspections, review of construction progress reports, and communication with the owner's engineer.
 3. Assess the need for Change Orders to the approved plans and specifications.
 4. Perform a final inspection at the completion of the project to verify that the construction has been completed as approved and to determine the safe storage level.
 5. The State Engineer's comments and/or instructions will be issued through the Project Engineer or owner, and not directly to the contractor.
 - a. If problems are encountered, they will be resolved with the Project Engineer.
 - b. The State Engineer will not generally enforce compliance with the approved plans and specifications. Rather, in the event of non-compliance, he will notify the owner and/or engineer and may withhold acceptance of the structure for storage of water.
- IV. Items Required by the State Engineer
- A. Prior to Construction
1. A Plan for Construction Observation must be submitted prior to construction in accordance with Rule 9.1.1.
 2. Construction of improvements shall not commence without approval of the observation plan by the State Engineer.
 3. Contractor's proposed work schedule.
 4. A water diversion plan is required prior to construction in accordance with Rule 5.10.2.
- B. Items Required by the State Engineer During Construction
1. Invitation to weekly progress meetings via conference call – MANDATORY
 2. Three week look-ahead schedule – UPDATED WEEKLY
 3. Construction progress reports submitted by the Project Engineer containing, at a minimum:
 - a. Description of construction, items worked on, problems encountered, construction progress, etc.
 - b. Frequency and distribution of progress reports – TBD at pre-con meeting
 - c. Records of test results, as determined during the pre-construction meeting.
 - d. Representative photos of work performed.
- C. Construction Inspection by the State Engineer
1. The Project Engineer must provide advance notice of certain important items of the construction, as shown in Attachment B.
 2. Inspections by the State Engineer will be periodic spot-checks of the work and do not replace inspections to be performed by the Project Engineer.
 3. A minimum of six or seven inspections are anticipated for this project, unless problems arise that warrant more frequent inspections.
 4. If problems arise, the SEO should be notified immediately, so an inspection can be performed and concurrence on the method of solution can be achieved.

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V. Site and Project Specific Concerns

- A. Careful blasting close to dam
- B. Quality grouting
- C. Quality concrete work
- D. Quarter round finish work
- E. Waterstop placement
- F. Controlling concrete curing to minimize cracking
- G. Maintaining ability to control reservoir during construction
- H.

VI. Construction Emergency Planning

- A. Notifications
 - 1. Emergency – 911
 - 2. Unusual Conditions, Rapidly Developing – State Engineer's Office – See Attachment A
 - 3. Unusual Conditions, Slowly Developing – Dam Owner
- B. Storm Event
 - 1. Water Diversion Plan – What level of risk is the contractor willing to take?

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ATTACHMENT A – PROJECT CONTACT LIST

STATE ENGINEER'S OFFICE – DAM SAFETY BRANCH			
Contact	Office Phone	Cell Phone	Email
Jeremy Franz Design Review Engineer Denver, CO	303-866-3581 x8254	970-231-6990	Jeremy.Franz@state.co.us
Ryan Schoolmeesters Dam Safety Engineer Denver, CO	303-866-3581 X8284	303-842-1424	Ryan.Schoolmeesters@state.co.us
Bill McCormick Chief, Dam Safety Branch Salida, CO	719-530-5536	719-338-6124	Bill.McCormick@state.co.us
Jason Smith Water District 7 Water Commissioner		720-220-4262	Jason.Smith2@state.co.us

DAM OWNER – LOOKOUT MOUNTAIN WATER DISTRICT			
Contact	Office Phone	Cell Phone	Email
Dean Snyder Board Project Rep			Dsnyder6@comcast.net
Christina Shea Board Secretary			cshea@blacklockintegrated.services
Mark Cleveland Treatment Technologies			mark@treatmenttech.net
Jeremy Wheeler Treatment Technologies			Jeremy@treatmenttech.net

ENGINEER – GEI			
Contact	Office Phone	Cell Phone	Email
Chad Masching GEI	303-264-1088	303-875-2083	cmasching@geiconsultants.com
Tom Daigle RPR			tdaigle@geiconsultants.com

CONTRACTOR – SEMA CONSTRUCTION			
Contact	Office Phone	Cell Phone	Email
Charlie Bisbee			cbisbee@semaconstruction.com
			tseale@semaconstruction.com

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ATTACHMENT B - LIST OF ITEMS TO BE INSPECTED BY THE STATE ENGINEER'S OFFICE:

1. Blasting
2. Grouting
3. Prepared spillway foundation
4. First labyrinth base slab pour
5. Labyrinth test pour
6. Spillway Filter/Drain foundation
7. Substantial completion inspection to develop punchlist.
8. Final inspection of the completed work.