

January 30, 2019

Michael Cunningham
Division of Reclamation, Mining and Safety
Department of Natural Resources
1313 Sherman St., Room 215
Denver, Colorado 80203

**RE: Need for a Mined Land Reclamation Board Permit, Gross Reservoir
Expansion Investigative Quarry**

Dear Mr. Cunningham:

Denver Water is seeking a determination regarding the need for a Mined Land Reclamation Board Permit. Denver Water previously submitted a “Is it Mining” determination request in 2015 regarding the planned production quarry to support the Gross Reservoir Expansion Project. DRMS determined that the planned activity would not be considered mining based on the information presented by Denver Water at that time. As part of the production quarry design process Denver Water intends to complete an Investigative Quarry to produce a small amount of aggregate for geotechnical testing. Denver Water believes the Investigative Quarry effort would not require a permit based on the following considerations: the Investigative Quarry excavation is relatively small (~12,000 cubic yards total), located entirely on Denver Water property; the extracted bedrock material will be processed into aggregate and only be used for geotechnical testing; and the Investigative Quarry is within the expanded reservoir footprint and will be submerged by the new reservoir. This letter provides information regarding the expansion of Gross Reservoir and addresses the questions from the DRMS “Is It Mining” form.

Project Background and Description

Gross Reservoir is owned and operated by Denver Water for water supply storage. Denver Water generates power as an ancillary benefit to water supply operations at Gross Reservoir. The Federal Energy Regulatory Commission (FERC) authorizes the Gross Reservoir Hydroelectric Project under License No. 2035-006. The license authorizes operation and maintenance of the hydroelectric project, which includes the dam, reservoir, powerhouse, all structures, fixtures, equipment and facilities used to operate or maintain the project. The project and the lands for the project are included by the FERC license “Project Boundary”, including U.S. Forest Service Lands. Expansion of the dam, for purposes of increasing water supply storage requires an amendment to Denver Water’s FERC license. The amended license

would authorize the expanded and new facilities and construction associated with the project within the expanded Project Boundary.

The Gross Dam Investigative Quarry, which is the subject of this letter, is within the Project Boundary, on Denver Water property, and will be authorized and regulated as part of the amended FERC license. In addition, a U.S. Army Corps of Engineering's 404 permit was issued for the project in 2017, which considered, analyzed, and authorized the production quarry to support the construction of the project. The Investigative Quarry is located within the footprint of the planned production quarry.

Answers to "Is It Mining" Form

1. Legal Description – Gross Dam Raise Borrow Quarry: Section 19; Township 1S, Range 71; Boulder County; Located about 5 miles east of Pinecliff, Colorado.
2. The investigation area is located on Denver Water property within the new reservoir footprint and will be inundated by the expanded reservoir. Extracted material will be used to make aggregate for geotechnical testing.
3. The operations will primarily extract granodiorite and quartz monzonite material from rock outcroppings and/or excavated areas.
4. The material will be extracted with common drilling and blasting techniques (2 blasts anticipated) supported by typical construction equipment such as drilling rigs, excavators, front end loaders, and haul trucks.
5. Extracted material will be processed onsite into aggregate which will undergo geotechnical testing with 5-10 yards of finished aggregate material being exported for additional offsite geotechnical testing. The investigation site is located on Denver Water property and within the new reservoir inundation area.
6. The extracted material will be processed onsite into aggregate for geotechnical testing.
7. Most material will remain onsite and within the FERC Project Boundary. A small portion of finished aggregate (5-10 yards) will be hauled offsite to CTL Thompson, INC. in Denver, CO for additional geotechnical testing.
8. The proposed investigation area is approximately 3 acres.
9. The investigation excavation could reach depths of up to 60 feet.
10. The investigation will excavate approximately 8,500 yards of overburden and 3,000 yards of aggregate for geotechnical testing.
11. The material extraction will require the use of explosives (anticipate 2 blasts).
12. Based on available data and geotechnical drilling, the investigation excavation will not expose tributary groundwater.
13. The sole purpose of the Investigative Quarry is to create concrete aggregate for geotechnical technical testing. No compensation will be received by Denver Water in relationship to the development of the Investigative Quarry.
14. The entire project, including the Investigative Quarry will be regulated through two federal actions, the U.S. Army Corps of Engineers (Corps) 404 permit and the FERC License Amendment

15. process. The Corps' Final Environmental Impact Statement (FEIS) was released in April 2014, and details proposed practices and techniques to restore the site after completion of the project. The practices and techniques presented as reclamation options include regrading, revegetation, rock sculpting, and rock staining for exposed areas above the high-water line. The FERC License Amendment will also govern how the quarry area is reclaimed and restored.
16. As discussed, Denver Water is in the process of obtaining permits from the FERC for the proposed activities. A U.S. Army Corps of Engineering's 404 permit has been issued for the project which includes the production quarry. The Investigative Quarry is located within the footprint of the Production Quarry.
17. The City of Arvada is participating in the funding of this project. Denver Water is providing or managing the planning, design, and construction of the project.
18. Post construction land use activities will change as the area will be inundated by the new reservoir. The new land use activities will be authorized through the federal actions described in item 14.
19. Equipment used to extract and process the borrow quarry material include hydraulic rock drills, pneumatic rock drills, compressors, excavators, dozers, loaders, off highway haul trucks, water trucks, primary crushers, secondary crushers, screens, washers, and conveyors.

Based on our understanding of the rules and regulations, our planned activities are exempt and do not require a Mined Land Reclamation Permit based on the fact that all material extracted from the site will be used for geotechnical testing, with 5-10 yards of finished aggregate being exported for additional offsite geotechnical testing. The Investigative Quarry was designed with stable slopes and will be located within the new reservoir inundation area, thus requiring minimal to no reclamation. Denver Water appreciates the Divisions willingness to discuss the project and provide a determination as to our planned activities. Please contact me at 720-979-9579, or jeff.martin@denverwater.org, with any questions or comments.

Sincerely,



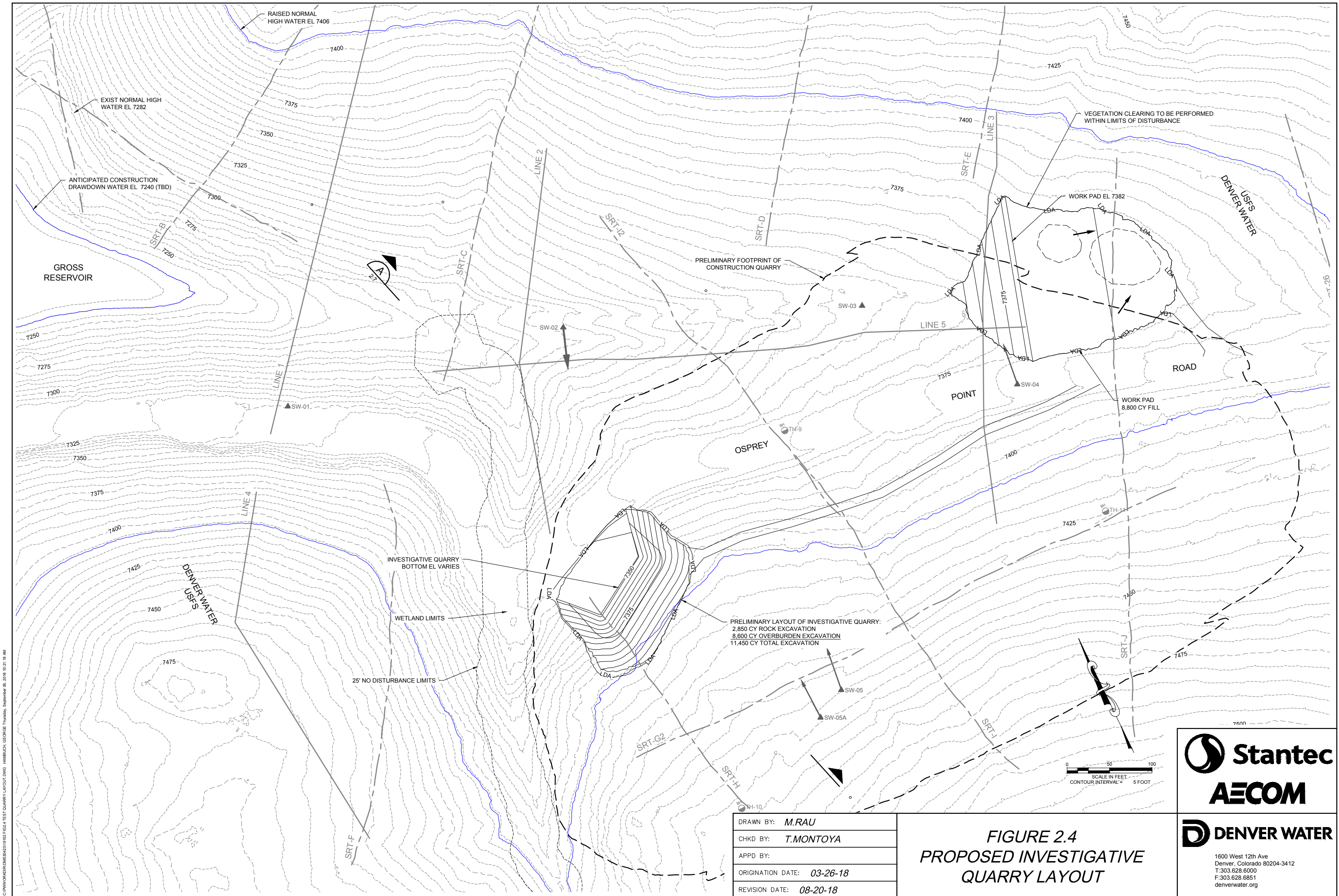
Jeff Martin, P.E.

Gross Reservoir Expansion - Program Manager
Denver Water Department

Enclosures:

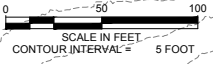
Proposed Investigative Quarry Layout

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| DRAWN BY: | M.RAU |
| CHKD BY: | T.MONTOYA |
| APPD BY: | |
| ORIGINATION DATE: | 03-26-18 |
| REVISION DATE: | 08-20-18 |

FIGURE 2.4
PROPOSED INVESTIGATIVE
QUARRY LAYOUT



Stantec

AECOM

DENVER WATER

1600 West 12th Ave
Denver, Colorado 80204-3412
T:303.628.6000
F:303.628.6851
denverwater.org