STATE OF COLORADO

Ebert - DNR, Jared <jared.ebert@state.co.us>

Pit 29, M-1980-183, Inspection Report

Joshua Oliver <joliver@brannan1.com> Mon, Apr 22, 2019 at 4:29 PM
To: "Ebert - DNR, Jared" <jared.ebert@state.co.us>

Jared,

Please see the attached letter and exhibits regarding the reclamation plan for Pit 29.

Thank you,

Joshua Oliver

Environmental Manager

BRANNAN Companies

joliver@brannan1.com

O: 303.853.5159 |M: 303.472.1736 |F: 303.853.5233

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From: Ebert - DNR, Jared [mailto:jared.ebert@state.co.us]
Sent: Wednesday, April 17, 2019 12:09 PM
To: Joshua Oliver
Subject: Pit 29, M-1980-183, Inspection Report

Hello Josh,

Attached is the inspection report from last weeks on-site meeting.

Please let me know if you have any questions,

Jared

--

Jared Ebert

Environmental Protection Specialist III

[Quoted text hidden]

Brannan Letter to DRMS re Inspection 4-22-19.pdf
1811K

BRANNAN
Companies

April 22, 2019
Colorado Division of Reclamation, Mining and Safety
1313 Sherman St. Room 215
Denver, CO 80203

Re: M-1980-183 April 12, 2019 Inspection Response

Mr. Ebert,

Thank you for your inspection report. In reviewing it, Brannan noted what appears to be a misunderstanding of the approved reclamation plan for the Pit 29 (M-1980-183) site as detailed in Exhibit E and Exhibit F of AM-01 from 2004 (attached).

Around the time of AM-01, there were plans to construct an embankment above the original ground surface around the boundaries of Reservoir I and Reservoir II to increase the reservoir storage.

This would've created a jurisdictional dam and the rip-rap as noted on Exhibit F of AM-01 (at Figure F-2) was intended to prevent erosion of the compacted soils used for the above-grade embankment/dam. Specifically, Figure F-2 calls for rip-rap "FROM TOP OF BANK TO ORIGINAL GROUND SURFACE" only; no rip-rap is required below the original ground surface.

The embankments above the original ground surface were never constructed and there are no plans to construct them. That option under the approved reclamation plan is not being pursued. The top of the banks around the two reservoirs is, and will remain, the original ground surface. As a result, no rip-rap is required for either reservoir under the approved reclamation plan and, in turn, no technical revision to that plan is necessary if rip-rap is not added to those reservoirs.

As noted in your report, we will work with the reservoir operator (Bromley) to complete the required earthwork necessary to regrade the affected pit slopes in Mining Area II so they comply with the 3H:1V ratio, as approved in AM-01.

Finally, Brannan will revegetate the area around the reservoir in Mining Area I with the approved seed mixture defined in the permit, and will work with the reservoir operator (Bromley) to revegetate the area the reservoir in Mining Area II once the slopes for that reservoir have been regraded to specifications.

2500 East Brannan Way | Denver | CO 80229 | 303.534.1231 Tel | 303.534.1236 Fax
www.brannan1.com

Please let me know if you have any questions. In the meantime, Brannan will follow up with requesting surety reduction for completed reclamation work.

Sincerely,

Joshua Oliver
Environmental Manager
Brannan Sand and Gravel Company, L.L.C.
(303) 472-1736
joliver@brannan1.com

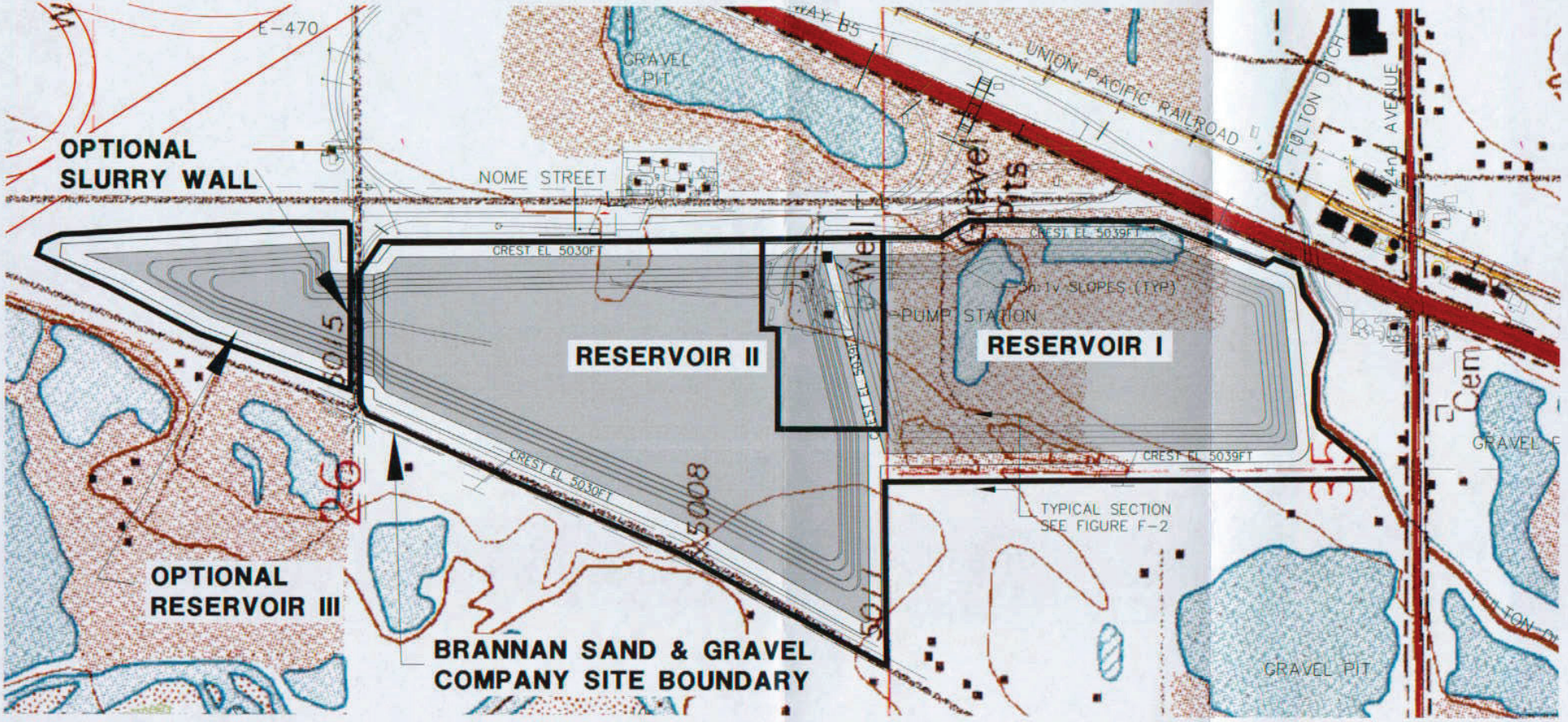
EXHIBIT E – RECLAMATION PLAN

The reclamation plan for the original permit application was for two lakes with residential and commercial development along the perimeter. The proposed reclamation plan is similar to the original plan except that the proposed reclaimed use will be for two or three water storage facilities and no developments. The only structure to be erected is a pump station located in the northeastern portion of the property. The reclaimed use will serve as a domestic water storage facility. Similar reclaimed uses have been implemented for gravel pits along the South Platte River.

Reclamation of the site will occur in two phases as shown on the Reclamation Plan Figure F-1. The first phase will be reclamation of Reservoir I, followed by the reclamation of Reservoir II in the second phase several years later. Reclamation of each phase will occur over an approximate 3 to 6 month period after the area has been mined to completion. The affected lands will be reclaimed by removing mining equipment and facilities, re-grading the pit walls, distributing topsoil, tilling and drill seeding the disturbed areas and constructing the pump station and pipeline. The pit walls of the reservoirs will be reclaimed similar to the original permit application. In general, this consists of 3:1 slopes, riprap shore stabilization from original ground surface to the reservoir crest, topsoil distribution and dry land seeding on disturbed areas outside the reservoirs. The two reservoirs will consist of approximately 3,595 acre-feet of storage covering approximately 120 acres. Some interior roadways, in addition to an access road around the crest of the reservoirs, are needed to provide access to the reservoirs and the pump house for operations and maintenance. Surface runoff up gradient of the site is limited by the Fulton Ditch, which intercepts flows and by Highway 85, which cuts of the natural drainage flow from entering the site. Any surface drainage tributary to the reservoirs will be permitted to drain naturally into the reservoirs.

A typical reclamation cross-section of the interior and exterior slopes and the slurry wall is shown on Figure F-2. A pump station will be located as shown on Figure F-1. This station will consist of a building, parking area, access road and pump equipment. Construction of these facilities will be process through the local jurisdictions and conform to their requirements including architectural, structural and building codes.

FIGURE F-1 - RECLAMATION PLAN



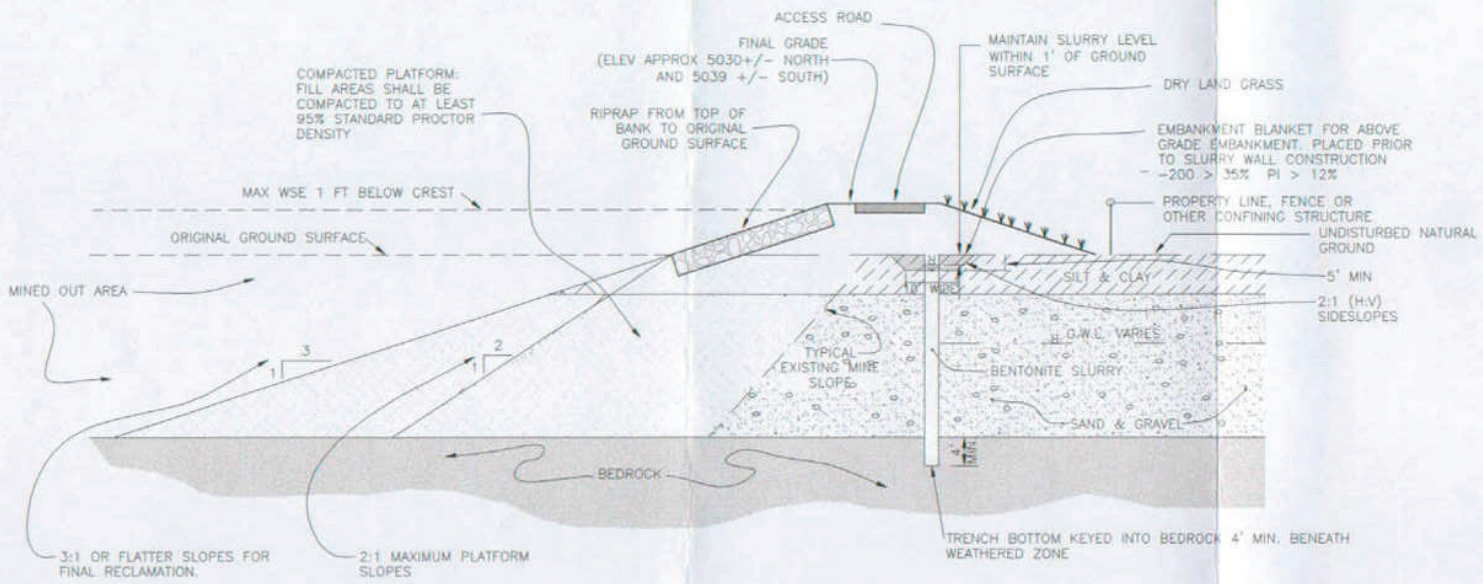
500 250 0 500 1000

SCALE: 1" = 500'

FIGURE F-1
BRANNAN SAND & GRAVEL CO
JOB NO. 14457.01
JULY 2003

J·R ENGINEERING
A Subsidiary of Westrian
6020 Greenwood Plaza Blvd • Englewood, CO 80111
303-740-9393 • Fax 303-721-9019 • www.jrengineering.com

FIGURE F-2 - TYPICAL RECLAMATION SECTION



TYPE L RIPRAP
15-IN 70-100% PASSING
12-IN 50-70% PASSING
9-IN 35-50% PASSING
3-IN 2-10% PASSING

TYPICAL RECLAMATION SECTION

SCALE: 1"=20' 0 10' 20'

NOTE 1) FINAL MINIMUM SETBACK FROM CENTERLINE OF SLURRY WALL TO TOP OF 3:1 (HORIZONTAL TO VERTICAL) RECLAMATION SLOPE = 30 FEET.

FIGURE F-2
BRANNAN SAND AND GRAVEL
JOB NO. 14457.01
JULY 2003

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