STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

Inspection Report for Boettcher Limestone Quarry, M-1977-348

Comaniciu - DNR, Ioana <ioana.comaniciu@state.co.us> Mon, Jun 18, 2018 at 3:01 PM
To: Matthew Sares <matt.sares@state.co.us>
Cc: amy.eschberger@state.co.us, Robert Hillegas - CDPHE <robert.hillegas@state.co.us>

Hello Matt,

Thank you for providing the inspection report for the Boettcher Limestone Quarry. Holcim (US) Inc. was trying to correct the problem back in 2015 when a groundwater seepage evaluation was conducted and although neither a clay liner, nor slurry wall were installed at the site, Holcim at that time determined that due to low permeability material in the surrounding rocks, any ground water seepage into the ponds is below the State Engineer's allowable leakage rates as referenced in the August 1999 State Engineer Guidelines for Lining Criteria for Gravel Pits. Based on the data provided by Holcim on September 21, 2015 we certified that pond 2, B and C at the site have achieved the design standard for ground water seepage for lined reservoirs in accordance with the 1999 SEO Guidelines (see attached approval letter and a map showing the location of Pond 2, B and C). Since that time Holcim has been submitting monthly reports/accounting spreadsheets to DWR. We had a meeting with Holcim, the Division Office and the water commissioner last year in December to discuss the results of the monitoring program. Based on the data provided by Holcim we all agreed that the monitoring program to date has provided sufficient data to confirm that an augmentation plan is required for the ground water exposed at the site. Given that, I believe Holcim discontinued monitoring the ground water seepage at the site, and my understanding is that Holcim was in the process of applying for an augmentation plan. Let me know if you have any other questions.

Best Regards,
Ioana

Ioana Comaniciu, P.E.
Water Resources Engineer

COLORADO
Division of Water Resources
Department of Natural Resources

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[Quoted text hidden]

2 attachments

Liner Certification.pdf
161K

Map (Pond No. 2, B and C).pdf
1714K

COLORADO
Division of Water Resources
Department of Natural Resources

1313 Sherman Street, Room 821
Denver, CO 80203

September 21, 2015

Michael B. Toelle
Holcim (US) Inc.
3500 State Hwy 120
Florence, CO 81226
Transmission via email: mike.toelle@holcim.com

RE: BOETTCHER LIMESTONE QUARRY GROUNDWATER SEEPAGE EVALUATION
POND NOS. 2, B AND C (WDID 0303328)
SECTIONS 5, 8, AND 17-T8N-R69W, WATER DIVISION 1, WATER DISTRICT 3

Dear Mr. Toelle:

The purpose of this letter is to approve the groundwater seepage evaluation requested for Pond Nos. 2, B and C (as shown on the attached map) located within the Boettcher Limestone Quarry. Pond Nos. 2, B and C are located in Sections 5, 8 and 17, Township 8 North, Range 69 West of the 6th P.M., and were originally part of the Boettcher Limestone Quarry (DRMS M1977-348) (WDID 0303043). Although, neither a clay liner, nor slurry wall was installed at Pond Nos. 2, B and C, Holcim (US) Inc. (Holcim) believes that due to low permeability material in the surrounding rocks, any ground water seepage into the ponds is below the State Engineer's allowable leakage rates as referenced in the August 1999 State Engineer Guidelines for Lining Criteria for Gravel Pits (1999 SEO Guidelines). According to the 2011 State Engineer General Administration Guidelines for Reservoirs (2011 SEO Guidelines), rock quarries in low permeability material can be tested in accordance with the 1999 SEO Guidelines. At the request of Holcim, Golder Associates, Inc. (Golder) performed a 90-day liner test separately for each pond with Pond B occurring first, followed by Pond C and then Pond 2. The purpose of the tests was to assess whether the volume of ground water seeping into the ponds exceeds the State Engineer's allowable leakage rates referenced in the 1999 SEO Guidelines. The tests were conducted between August 8, 2013 and February 28, 2015. A site inspection was performed by the SEO on August 27, 2015 to review site conditions and discuss the tests results.

Golder's report dated April 15, 2015 provides the liner summary and the 90-day leak test results for each pond. The test data provided indicates that ground water seepage into the Pond Nos. 2, B and C is below the design standard referenced in the 1999 SEO Guidelines. **Meeting the design standard requires that during operation of Pond Nos. 2, B and C, all water inflows and outflows for the lined areas must be accounted for on a monthly basis.**

In the event that the average daily unregulated ground water inflow to the ponds exceeds the Performance Standard referenced in the 1999 SEO Guidelines for two consecutive months, as evidenced by the accounting specified in the preceding paragraph, Holcim or their successor and the SEO shall begin to consult regarding the probable cause of the unregulated ground water inflow, and the appropriate actions to be taken in response thereto. If the State or Division Engineer and Holcim or their successor cannot reach an agreement on the

appropriate actions to reduce the unregulated groundwater inflow to less than the Performance Standard within nine (9) months of the beginning of the consultations, the State or Division Engineer shall provide written notice to Holcim or their successor to correct this problem. Holcim or their successor shall have two (2) years from the date of such written notice to modify the pond or ponds to achieve an inflow less than the Performance Standard. If satisfactory modifications are not completed within the two year period, the State or Division Engineer may declare one or more of the ponds a well requiring a well permit and Water Court approved augmentation plan or State Engineer approved substitute water supply plan.

The inflow and outflow accounting referenced above shall begin to happen on a 48 hour basis following two consecutive months that the Performance Standard is exceeded and shall continue until Holcim or their successor has demonstrated that at least the Performance Standard has been met.

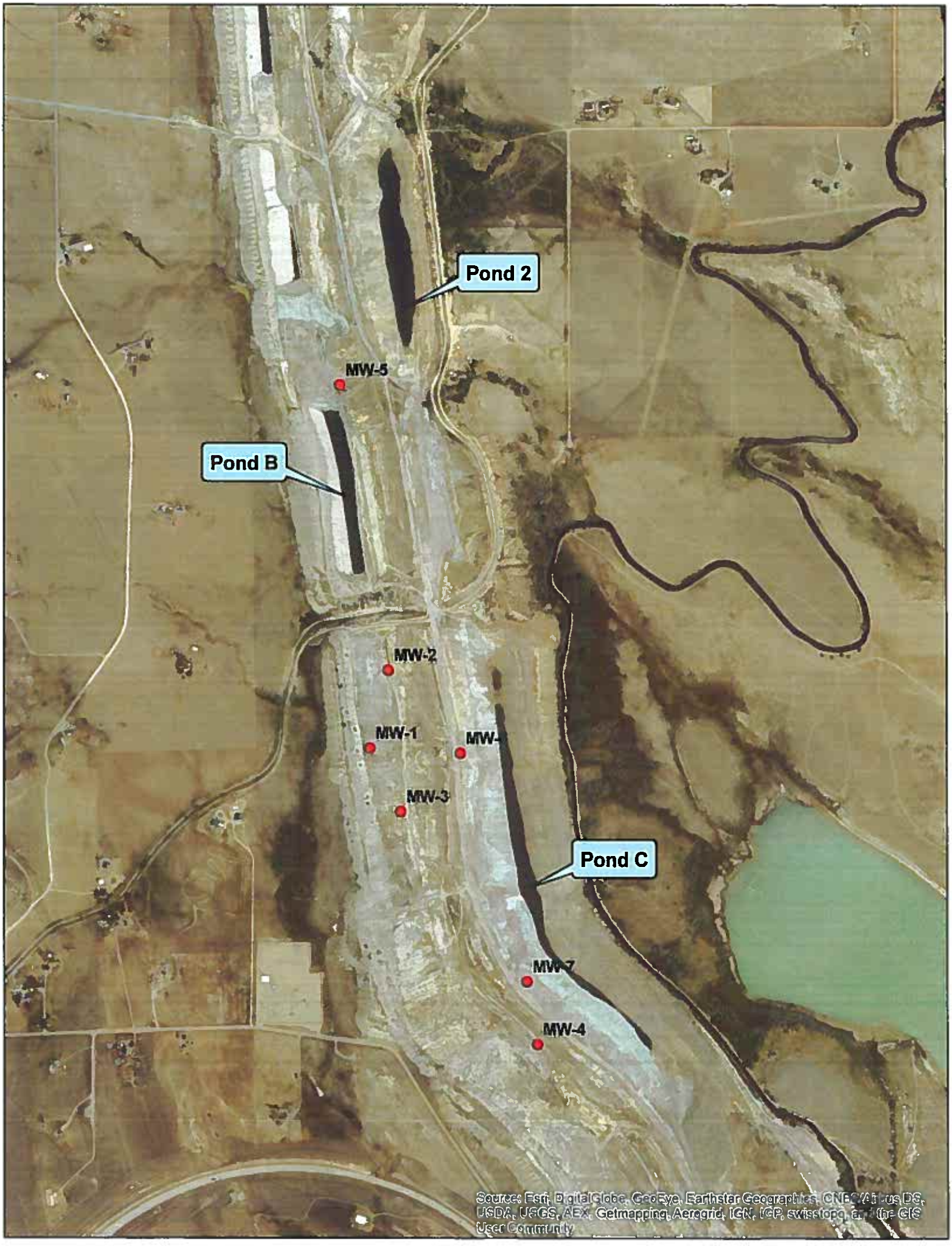
This approval certifies that Pond Nos. 2, B and C have achieved the design standard for ground water seepage for lined reservoirs in accordance with the 1999 SEO Guidelines. Water shall not be impounded in Pond Nos. 2, B and C except pursuant to lawful diversions allowed by statute or decree. At all other times, Holcim or their successor has the responsibility to ensure that all inflow of water into the ponds from any source, including precipitation and ground water inflows is removed to prevent any out-of-priority storage of water or secure a Water Court approved augmentation plan or State Engineer approved substitute water supply plan to replace such out-of-priority storage. Prior to ANY use of this site, Holcim or their successor will need to coordinate with Mark Simpson, District 3 Water Commissioner, to review operations, measurement structures, and accounting.

Please contact me at the number above or Dave Nettles in Greeley at 970-352-8712 if you have any questions.

Sincerely,

Ioana Comaniciu, P.E.
Water Resource Engineer

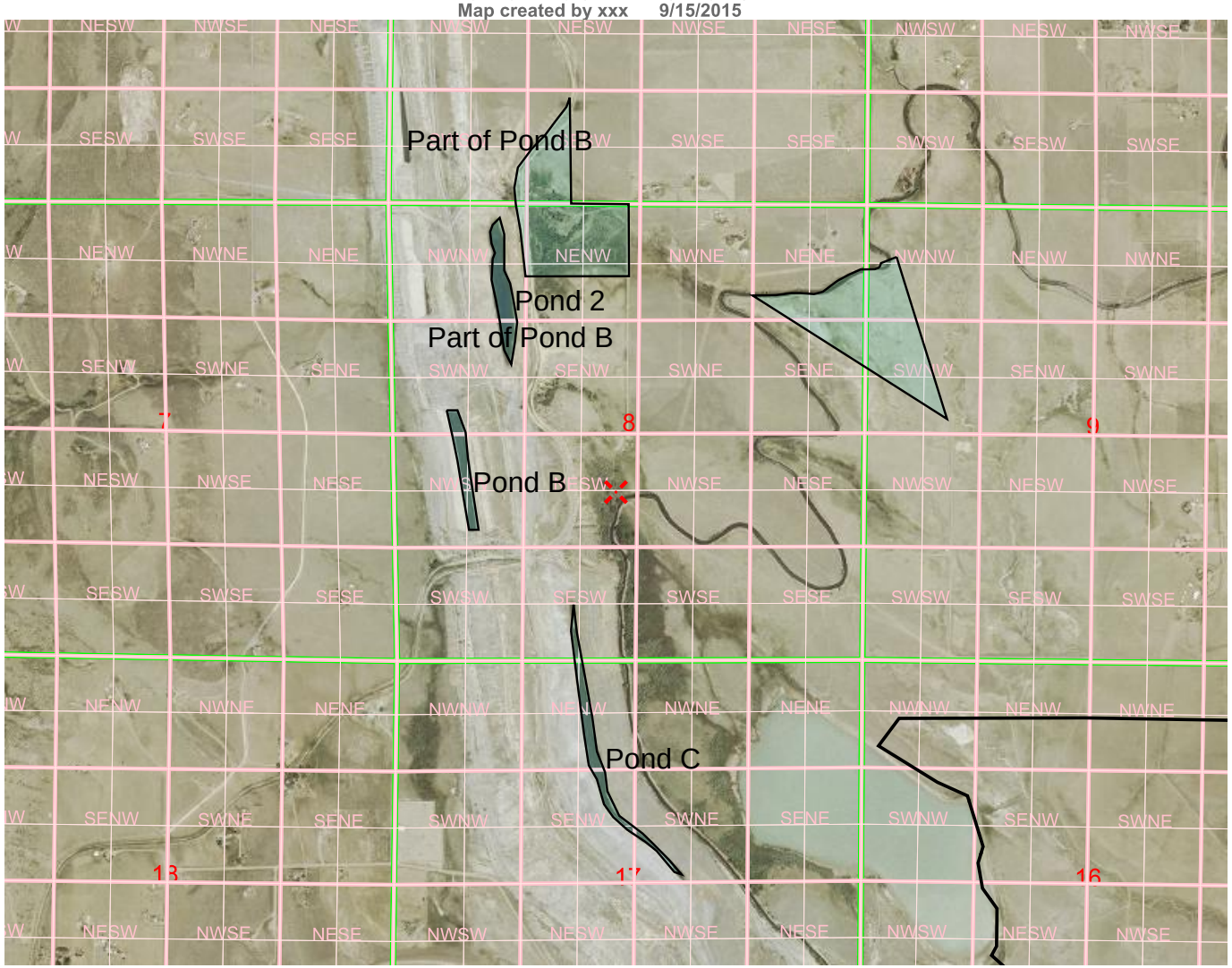
cc: Dave Nettles, Division Engineer, Water Division 1 (David.Nettles@state.co.us)
Mark Simpson, District 3 Water Commissioner (Mark.Simpson@state.co.us)
Louis Flink, Diversion Records Coordinator (Louis.Flink@state.co.us)
Eric Scott, DRMS (Eric.Scott@state.co.us)
WDID File (0303328 & 0303043)


Pond 2
MW-5
Pond B
MW-2
MW-1
MW-
MW-3
Pond C
MW-7
MW-4
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

QUICK ZOOM MENU

AQUAMAP
Colorado Division of Water Resources
Pond Nos 2 B and C

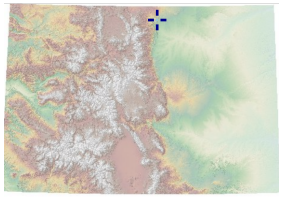
Map created by xxx 9/15/2015



Based on work developed at http://www.carto.net

Address location by Bing Maps
AquaMap Version 3.0.1 July 5, 2009

MAP NAVIGATION



Click to create PDF
UTM X, Zone 13: 490058
UTM Y, Zone 13: 4501871
Long: -105° 7' 3.5"
Lat: 40° 40' 3.5"
UTM and Geographic(LL) coordinates in NAD 83

DATA DISPLAY

- [x] Background — 2013 Aerials
- Low / High — Transparency
- [x] Counties
- [x] PLSS
- [ ] Roads
- [ ] Hydrography
- [ ] County Parcels (No Public Access)
- [ ] Towns
- [ ] Water Well Applica
- [x] DWR Parcels
- [x] EPA Well Notificati
- [ ] Oil/Gas Well Locati

More Data

LOCATION

Section	Township		Range		Meridian
8	8	N	69	W	Sixth

PLSS Locator | Quick Zoom | Spacing

PRINTING

Output Scale	Page Size	User
24,000	8.5x11	idc

Title: Pond Nos 2 B and C

Note: The well locations displayed on AquaMap are based on location information provided by well permit application forms and are only as accurate as the information provided. The actual physical locations of all wells have not been field verified and may vary from the location displayed. Refer to a copy of the original well permit file, available on the Division of Water Resources website, for well location details.

COLORADO DIVISION OF WATER RESOURCES
DEPARTMENT OF NATURAL RESOURCES

STATE OF COLORADO 1876