



COLORADO
Department of Public
Health & Environment

Mr. Jay Brown
Thornton, LLC
2503 Crawford Avenue, #102
Evanston, Illinois 60201

Sent via email to jaylon7@gmail.com; john@quantumwaterco.com;
shelly@quantumwaterco.com; steve@quantumwaterco.com;

August 31, 2021

**RE: Thornton, LLC - Phase II modification proposal approval for offsite area OFS-4
File - EPA ID # COR000212639**

Dear Mr. Brown:

Thank you for Quantum Water & Environment (Quantum)'s August 27, 2021 email on behalf of Thornton, LLC and Jay Brown (collectively, Thornton, LLC). The Colorado Department of Public Health and Environment's Hazardous Materials and Waste Management Division (CDPHE) approves of Thornton LLC's proposal to modify Phase II of off-site BOS-100 injections, consolidating OFS-4, OFS-5, and OFS-6 into one new area to the northwest of Corona Village Condominiums, new OFS-4 (as shown on the attached figure). This revised Phase II proposal includes, but is not limited to 10-foot BOS-100 injection point spacing, 77 injection points in three rows, use of the pre-drill method, and 2-foot vertical injection intervals. Thornton, LLC will inject the same amount of BOS-100 as originally calculated and planned for Phase II. By October 15, 2021, Thornton, LLC will inject 14,000 lbs of BOS-100 between these 77 injection points based on Alpine and RPI formula calculations, and in accordance with prior CDPHE approvals and applicable regulations.

CDPHE is approving the consolidation of three Phase II injection areas (OFS-4, OFS-5, and OFS-6) into one injection area (new OFS-4) that targets the center of Thornton Shopping Center's offsite groundwater plume. CDPHE is approving this modification to accommodate Thornton, LLC's concerns about the proximity of the previously-approved injection sites to the Corona Village Condominiums and various utility lines and rights-of-way. In addition, previous offsite access agreements with third parties had to be renegotiated by the new environmental consultant, Quantum, delaying Phase II injections. CDPHE requires a revised Stipulation be filed with the court noting the extension and these changes to Phase II polygons.

Because the new OFS-4 polygon is differently shaped, there is no immediately downgradient monitoring well that will help monitor groundwater flowing through this new OFS-4 area. Therefore, **CDPHE requires installation of a new groundwater monitoring well approximately 100 feet southeast of the center of new OFS-4**, as shown on the attached **Figure 1**. This new monitoring shall help measure groundwater quality and treatment performance, and is distinct from the (4) new monitoring wells that are already required by the court order. This well constitutes a fifth monitoring well that must be installed by **September 30, 2021**.



As discussed between Thornton, LLC and AGO attorneys, Thornton, LLC is granted an extension until **October 15, 2021** to completed Phase II injections of the 14,000 lbs of BOS-100 in new OFS-4. Emily Splitek shall contact Becky Almon to memorialize these Phase II changes before the court.

CDPHE declines to prematurely evaluate the effectiveness of Phase II or agree to how long these off-site BOS-100 injections may be effective. Ultimately, CDPHE will review treatment effectiveness based on monitoring data, and other lines of evidence. Thornton, LLC shall monitor the effectiveness of Phase II and Phase I BOS-100 treatments to OFS-1, -2, -3, and new OFS-4, and report initial analyses of groundwater data and treatments' effectiveness to CDPHE by **December 17, 2021**. Under the current court order, the deadline is November 1, 2021. Due to the extension for completion of Phase II injections, additional time to prepare this report is warranted.

As always, CDPHE reserves the right to require additional investigation, monitoring, and corrective action. CDPHE notes source area remediation and site boundary control are essential next steps that will prevent groundwater contamination from flowing off-site. Thornton, LLC is bound to perform the in-effect Corrective Action Plan unless and until otherwise proposed by Thornton, LLC and approved or approved with modifications by CDPHE.

Please let us know if you have any questions about this letter. Thank you.

Sincerely,

Lindsay Murl
Environmental Protection Specialist
Corrective Action Unit
Colorado Department of Public Health and Environment

ecc: Rebecca Almon, Ireland Stapleton
John Dellaport, Quantum
Shelly Hoover, Quantum
Steve Hoffman, Quantum
Brian Hlavacek, Tri-County Health
Katie Keefe, Adams County
Chad Howell, City of Thornton
Robert Beierle, CDPHE
Laura Dixon, CDPHE
Emily Splitek, Colorado AGO
HMWMD Records



Figure 1. New Monitoring Well Location



LEGEND

- Existing Monitoring Well - PCE Groundwater Concentration (ug/L, 10/20/2020)
- Groundwater Flow Direction
- Injection Area
- Planned BOS100 Injection Sites (77 Point Locations) (10-ft Spacing)

N

Note: Not a survey map. Every effort has been made to ensure the accuracy of the data provided. This map is for reference only and should not be used for surveying purposes.

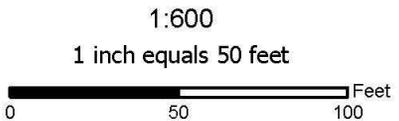
Figure XX

Projection: CO StatePlane Central
 Datum: NAD83 (2011)
 Job Number: 412E-21
 Prepared By: CJD
 Checked By: JCD
 Date: August 24, 2021

Sources:
 R3 - Figure 9 - BOS 100 Treatment Areas,
 ESRI Basemaps

**Proposed Phase II OFS-04 Injection Area
 Thornton, Colorado**

Phase II Environmental Site Assessment



QUANTUM
 WATER & ENVIRONMENT

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