TETRA TECH

February 25, 2025

Patrick Lennberg
Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

RE: Transmittal of Technical Revision 4 for Holcim-WCR, Inc., Wattenberg Lakes Mine, File No. M-2004-051, 112c Permit

Dear Mr. Lennberg:

This letter is presented on behalf of Holcim-WCR, Inc. (Holcim) to provide materials supporting Technical Revision 4 (TR-4) which is proposed for the DRMS 112c Permit for the Wattenberg Lakes Mine (File No. M-2004-051). This TR-4 submittal provides DRMS with the updated pages that reflect changes to previous submittals related to this permit including Amendment 1 (AM-1) and TR-3, based on the following:

- Change from on-site wetland mitigation to off-site wetland mitigation via a mitigation bank.
- Change from post-mining vegetation of constructed wetland to upland.

With this change in the reclamation plan, the final post-mining land use of Developed Water Resources will not be altered nor will there be changes to the current, approved mining plan and areas to be mined (i.e., no additional extraction will take place).

Holcim's original permit with the U.S. Army Corps of Engineers (Corps) included a plan to conduct on-site Permittee-Responsible Mitigation. However, this took a different direction on July 18, 2023 when the Corps issued to Holcim a Notice of Non-Compliance letter for non-compliance of the Holcim permit under Corps File No. NWO-2000-80189-DEN, Wattenberg Lakes Aggregate Mining, Weld County, CO. The non-compliance was the result of additional impacts to areas on the north side of the Struck Pond, thus requiring additional mitigation. Also, the mitigation plan in the original permit needed to be revised to bring it into compliance with the Compensatory Mitigation Rule (Corps and EPA 2008) which clarified how to provide compensatory mitigation for unavoidable impacts to the nation's wetlands and streams in a way that enables "the agencies to promote greater consistency, predictability and ecological success of mitigation projects under the Clean Water Act." The 2008 Rule changes where and how mitigation is to be completed but maintains requirements on when mitigation is required. Further, the 2008 Rule requires consideration of the likelihood of success, risk, uncertainty, and temporal loss. Note that wetlands previously established at Wattenberg Lakes (e.g., those associated with Huett Ditch) that meet the original mitigation monitoring requirements will remain.

To resolve the non-compliance issue, Holcim submitted a request for permit modification. The "Revised Compensatory Mitigation Plan" (ERO 2023a), attached to the revised Exhibit E, provides justification and details for the permit modification to address the non-compliance issue. The Revised Compensatory Mitigation Plan provides information on how Holcim and the City of Westminster (the primary landowner) are addressing compensatory mitigation for the Wattenberg Lakes site and how the mitigation complies with the 2008 Rule and Colorado Mitigation Procedures (Corps 2020). Additional supporting information on the design modifications related to the Corps permit is provided in the Letter from ERO to the Corps on Wattenberg Lakes Aggregate Mining Design Modifications (ERO 2023b), also attached to the revised Exhibit E. As noted in the Revised Compensatory Mitigation Plan (ERO 2023a), the preference hierarchy for mitigation options is as follows:

1. Mitigation bank credits
2. In-lieu fee program credits
3. Permittee-responsible mitigation conducted under a watershed approach
4. Permittee-responsible, on-site, and in-kind mitigation
5. Permittee-responsible, off-site, and out-of-kind mitigation

In general, the required compensatory mitigation should be within the same watershed as the impact site and should be located where it is most likely to successfully replace lost functions and services (33 CFR 332.3[b][1]).

For the Wattenberg Lakes Mine site, the preferred option of mitigation bank credits (off-site compensatory mitigation) was selected for implementation under the Revised Compensatory Mitigation Plan. Purchasing credits from a Corps-approved mitigation bank was determined to comply with Corps requirements because the purchase is practicable (Holcim is financially able to purchase available mitigation credits), is capable of compensating for aquatic resource functions that would be lost, and is the environmentally preferable mitigation option.

The Corps accepted the Revised Compensatory Mitigation Plan and a permit amendment was issued by the Corps on May 8, 2024. The Corps determined that the non-compliance action was resolved through the purchase of bank credits.

The following exhibits are updated in this TR-4 submittal to reflect the changes noted above:

- Exhibit C (Mining Plan Maps): Map C-1 is revised to remove cottonwood replacement, consistent with the accepted change in wetland mitigation and the amended Corps permit for the site (see ERO [2023b]).
- Exhibit D (Mining Plan):
    - Page 1 is revised to say: “Holcim has amended the U.S. Army Corps of Engineers (USACE or Corps) permit to cover off-site wetland mitigation required to satisfy USACE 404 requirements.”
    - Page 1 is revised to update the volume of overburden and growth medium materials at a total of 950,000 cubic yards.
    - Page 2 is revised to say: “Area 1 and Area 2 will be mined and excess fill (placed previously in the western part of the footprint) removed and placed in areas where fill is required to achieve the reclamation grades. Also, in areas outside Area 1 and Area 2, minor earthmoving and grading will take place to establish reclamation grades for the reclaimed uses as presented in Exhibits E and F.”
- Exhibit E (Reclamation Plan): An introduction is added to this exhibit to summarize the key changes to the reclamation plan in TR-4, followed by the revised reclamation plan.
- Exhibit F (Reclamation Plan Maps): This exhibit is revised to reflect the reclamation change of TR-4.
- Exhibit G (Water Information): A revised cover page is provided that summarizes the reclamation plan change which does not require revision to Exhibit G because on-site wetland mitigation was not discussed in the most recent AM1 version (April 2024) of Exhibit G.
- Exhibit J (Vegetation): Page 1 is revised to say: “Reclamation will involve establishing a mixture of lined open water reservoirs and upland habitats consisting of native vegetation.”
- Exhibit L (Reclamation Cost): This exhibit is revised to remove on-site wetland reclamation. Note that the cost for off-site wetland mitigation has already been paid by Holcim and, therefore, is not included in the reclamation cost estimate. The estimated reclamation cost is increased in TR-4 because of the increased amount of fill required to achieve reclamation grades for upland vegetation.

Thank you for your consideration. Please let me know if you have any questions or need additional information.

Sincerely,

TETRA TECH

Fred Charles, Ph.D., P.E.
Senior Engineering Manager

cc: Wyatt Webster, Holcim-WCR, Inc.

References cited in cover letter:

ERO Resources Corporation (ERO). 2023a. Wattenberg Lakes Gravel Mining, Revised Compensatory Mitigation Plan, Weld County, Colorado. Prepared for Holcim-WCR, Inc. October.

ERO Resources Corporation (ERO). 2023b. Wattenberg Lakes Aggregate Mining Design Modifications – Letter, Weld County, Colorado. U.S. Army Corps of Engineers (Corps) File No. NWO-2000-80189-DEN. November 9.

U.S. Army Corps of Engineers (Corps). 2020. Colorado Mitigation Procedures (COMP), Version 2.0. Albuquerque, Omaha, and Sacramento Districts. https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14682

U.S. Army Corps of Engineers (Corps). 2008. Compensatory Mitigation Rule. 73 Federal Register 19670 [April 10, 2008]. https://www.epa.gov/sites/default/files/2015-07/documents/general_requirements.pdf

EXHIBIT C – PRE-MINING AND MINING PLAN MAP(S) OF AFFECTED LANDS

This submittal replaces the Exhibit C-1 map, submitted in April 2024 as part of Amendment 1, Wattenberg Lakes DRMS Permit No. M-2004-051.

EXISTING WETLANDS
CULVERT
HUETT SEEP/ DITCH
APPROXIMATE LOCATION OF PUMP STATION
CULVERT
EXISTING CONVEYOR CROSSING (BRIDGE) OVER THE SOUTH PLATTE RIVER
SPILLWAY
RIVERBANK STABILIZATION
US HWY 85
SOUTH PLATTE RIVER
EXISTING NON-JURISDICTIONAL WETLANDS
PERMANENT ACCESS ROAD
WCR 4 1/2
TWO PRODUCING OIL WELLS
MAINTAIN CURRENT ROAD/ACCESS TO 2 OIL WELLS (INCLUDES 20 FT BUFFER FROM EDGE OF ACCESS)
TEMPORARY ACCESS ROAD
EXISTING WETLANDS
POND 3
MAX NWL EL. 4928.0
WCR 23 1/2
40-FT EXCLUSION FOR PIPELINE (CITY OF WESTMINSTER)
TEMPORARY STOCKPILE APPROX LOCATION
TEMPORARY ACCESS ROAD
AVAILABLE GROWTH MEDIUM TO BE SEGREGATED AND PLACED IN TEMPORARY STOCKPILE
EXISTING WETLANDS
EXISTING WETLANDS
HUETT SEEP/ DITCH
EXISTING CONVEYOR
CONVEYOR TO BE CONSTRUCTED
PERMANENT ACCESS ROAD
BRIGHTON DITCH
AREA 1 TO BE MINED
POND 1 (STRUCK POND)
EXISTING CONVEYOR TO BE REMOVED PRIOR TO EARTHWORK IN THIS AREA
SLURRY WALL (EXISTING)
PERMANENT ACCESS ROAD
EXISTING CONVEYOR
SLOPE PROTECTION
IN POND 1 AREA, LIMIT OF MINING TO BE AT LEAST 40 FT FROM PERMIT BOUNDARY AND EDGE OF ROAD
TEMPORARY STOCKPILE APPROX LOCATION
AREA 2 TO BE MINED
SLURRY WALL TO BE INSTALLED AS PART OF RECLAMATION PLAN
EXCAVATE MATERIALS IN THIS AREA (TEMPORARILY PLACED DURING PREVIOUS MINING) AND USE WHERE FILL IS REQUIRED FOR RECLAMATION
CONVEYOR TO BE CONSTRUCTED
WCR 2 3/4
BASED ON THIS PROPERTY OWNED BY HOLCIM UNDER SPECIAL WARRANTY DEED, THIS ACCESS WILL BE USED AS NEEDED AND IN ACCORDANCE WITH EXISTING AGREEMENTS.
MAIN ACCESS TO MINE SITE
WCR 23 1/2
PRIOR TO CONSTRUCTING SLURRY WALL, PLACE FILL ON SOUTH SIDE OF POND 1 TO CREATE 50-FT. OFFSET FROM TOP OF POND SLOPE TO EDGE OF COUNTY ROAD
EXISTING CONVEYOR

LEGEND

- WELL LOCATION APPROXIMATE
- PERMIT BOUNDARY APPROXIMATE
- EXISTING WETLANDS

0 150' 300' 600'
SCALE: 1" = 300'

AREA TO BE MINED= 6.2 ACRES
TOTAL PERMIT AREA (AFFECTED AREA) = 420.8 ACRES

CERTIFICATION:

THIS MAP WAS PREPARED BY TETRA TECH IN COOPERATION WITH HOLCIM - WCR, INC. HOLCIM - WCR, INC. WILL KEEP THE DIVISION OF RECLAMATION, MINING, AND SAFETY INFORMED OF ANY CHANGES TO THE MINING OR RECLAMATION PLANS THROUGH ANNUAL REPORTS AND FILE TECHNICAL REVISIONS OR AMENDMENT APPLICATIONS AS NECESSARY THROUGHOUT THE LIFE OF THE MINE.

Frederick Lee Charles 2/25/2025

FREDERICK LEE CHARLES, PE DATE

TETRA TECH
www.tetratech.com
351 Coffman Street, Suite 200
Longmont, Colorado 80501
Phone: (720) 864-4507

MARK	DATE	DESCRIPTION	BY
1	5/10/23	INITIAL SUBMITTAL	FLC
2	5/30/23	INCOMPLETENESS RESPONSE	FLC
3	3/22/24	REVISION AND ADEQUACY RESPONSE	FLC
4	2/25/25	TECHNICAL REVISION 4 SUBMITTAL	FLC

HOLCIM - WCR, INC.
WATTENBERG LAKES

EXHIBIT C
PRE-MINING/ MINING PLAN MAP

PROJ: 117-7110001
DESN:
DRWN:
CHKD:

C-1

Bar Measures 1 inch, otherwise drawing not to scale

2/27/2025 3:39:47 PM - O:\PROJECTS\LONGMONT\7110\117-7110001\CAD\SHEETFILES\WATTENBERG RECLAMATIONEX-C PRE-MINING PLAN MAP.DWG - HART, GRACE

EXHIBIT D – MINING PLAN

1.0 GENERAL

The Wattenberg Lakes Mine property is located within unincorporated Weld County on land owned by the City of Westminster and Holcim. The geographic coordinates of the main entrance area are 40° 00’ 40.82” North, 104° 50’ 21.43” West. Sand and gravel will be the primary product produced from a small portion of the Wattenberg Lakes site. The principal intended use for the sand and gravel is for construction aggregates.

Agricultural and mining uses surround the property, with residential uses extending farther from the site including the community of Wattenberg north of the property. Some of the Baurer Pit permit (M-2020-058) area overlaps existing Pond 1 within the Wattenberg Lakes permit area; an acreage reduction will be requested for the Baurer Permit after the Wattenberg Lakes amendment is approved. The majority of the site is immediately west of the South Platte River between Weld County Road (WCR) 2 and WCR 6. Although a small northeastern section of the property straddles the South Platte River, the mining operation will not disturb the river. Mining was completed previously for most of the property, with only a small amount of additional mining planned (6.2 acres) to create the area required to complete Pond 1 (also known as the Struck Pond).

The primary changes in the current DRMS permit amendment mining plan compared with the 2004 DRMS permit mining plan include the following (changes to the reclamation plan are noted in Exhibit E):

- Mining has been completed in most of the permit area, with only a minimal amount of mining planned in two small areas in the Pond 1 (Struck Pond) area; Area 1 (see Exhibit C) was not previously included in the 2004 mining plan.
- The Huett Seep/Ditch was re-routed immediately east of Pond 3 as part of the activities permitted in 2004.
- A decreased area of mining occurred in the west boundary area of Pond 3, resulting in a straightened western pond boundary and a decrease in the disturbance during mining compared with the 2004 permit.

The total DRMS permit amendment area covers 420.8 acres. The permit boundary and affected area are the same for this amendment. Within the site, 6.2 acres of the land will be mined as shown for Area 1 (3.2 acres) and Area 2 (3.0 acres) in Exhibit C, Map C-1; the remaining areas will be used for temporary earthwork and other material movement (minor grading) as part of reclamation activities. Area 1 and Area 2 are planned for mining concurrently.

In June and August 2022, a survey was conducted within the permit area for wetlands and other waters of the U.S.; the delineation report is included in the vegetation exhibit (Attachment J-1) and wetlands are shown in Exhibit C, Map C-1. Holcim has amended the U.S. Army Corps of Engineers (USACE or Corps) permit to cover off-site wetland mitigation required to satisfy USACE 404 requirements. The proposed plan does not include mining in areas with existing wetlands.

The saleable aggregate material to be removed from Area 1 and Area 2 will amount to approximately 158,000 cubic yards (221,000 tons at 1.4 ton/cy), based on exploratory logs from the previous investigation for adjacent Pond 3. The overburden and growth medium materials excavated as part of the mining operation, along with overburden previously placed in the west half of Pond 1 (Struck Pond), will total approximately 950,000 cubic yards. Overburden and growth medium will be stockpiled for use as backfill and reclamation within the permit area; excess overburden will be hauled off site for other uses.

Based on routine groundwater elevation monitoring in the Wattenberg Lakes site, Area 1 and Area 2 groundwater is typically expected at approximately 2 ft below ground surface but can be less than 1 ft during seasonal highs. Additional information on groundwater at the site is presented in Exhibit G (Water Information).

2.0 PHASING AND METHODS OF MINING

2.1 Phasing

Holcim anticipates conducting operations under this DRMS permit amendment in three phases for a total duration of 18 months, with mining of Area 1 and Area 2 planned for only 2 months of that duration and the other activities as part of reclamation (discussed in Exhibit E). The three phases are:

1. Phase 1 – Concurrent activities (10 months)
    a. Grade/fill to achieve side slopes of 3H:1V (horizontal:vertical)
    b. Build up south edge of existing Pond 1 on south side to create 50-ft buffer from top of pond slope to edge of county road
    c. Mine areas 1 and 2 with post-mining pond depth of 42 ft
    d. Place fill in other parts of the site to achieve reclamation grades
2. Phase 2 – Construct slurry wall and perimeter drain (2 months)
3. Phase 3 – General earthwork on western side of footprint (excess fill to be used for backfill as needed in other parts of the site) (6 months)

In Phase 1, prior to or while initiating mining in Area 1 and Area 2, the Pond 1 side slopes will be graded to the base of the pond at a 3H:1V slope. Also, excess fill from the western portion of the Pond 1 footprint area will be used to build up the southern perimeter of Pond 1 to create a 50-ft offset from the edge of county road to the top of the pond embankment. Area 1 and Area 2 will be mined and excess fill (placed previously in the western part of the footprint) removed and placed in areas where fill is required to achieve the reclamation grades. Also, in areas outside Area 1 and Area 2, minor earthmoving and grading will take place to establish reclamation grades for the reclaimed uses as presented in Exhibits E and F.

In Phase 2, the slurry wall and perimeter drain will be constructed around the perimeter of the final footprint of Pond 1. Design specifications for the slurry walls and quality control procedures used during construction will ensure that the reservoirs meet State Engineer's Office (SEO) performance standards. Specific specifications and quality control procedures will be provided to the Division for review prior to construction of the slurry walls.

After construction of these reclamation features, Phase 3 general earthwork will take place on the western side of the Pond 1 area and excess fill not used in this area will be used to achieve reclamation grades in other parts of the site.

2.2 Equipment

The aggregate material will be recovered using equipment and facilities typical for sand and gravel mining operations. The equipment and facilities may include, but not be limited to, a conveyor system from the mining area to the Holcim's Platte Valley Plant; additional, portable, temporary processing equipment on an as needed basis for screening, crushing, and washing; earth-moving equipment including dozers, loaders, scrapers, excavators, dragline, dredge, compactors, and field conveyors; and an employee/storage trailer and fueling/lubricating station. Dewatering pumps and generators and watering trucks will be also used as needed.

2.3 Mining Process

The typical mining process for Area 1 and Area 2 will involve stripping growth medium and overburden with scrapers, to expose the aggregate product below, and stockpiling these materials in the temporary stockpile areas identified in Exhibit C. Mining of the aggregate will progress down to the underlying claystone bedrock. The bedrock material is rippable and, when necessary, will be excavated and used for reclamation.

Overburden found on the site will be used to fill in the reclamation slopes and for minor grading and fill needed in other areas as part of reclamation. Overburden and growth medium reserved for reclamation will be vegetated and stabilized in accordance with Rule 3.1.9(1). All soil and overburden material will be used for reclamation, so long-term stockpiling of these materials is not anticipated. The mining areas will be reclaimed using soil, overburden, process fines, and other inert materials from on-site. If materials from off-site are used, Holcim will

provide the Division with the appropriate notices and affidavit in accordance with Rule 3.1.5(9).

During mining and prior to reclamation, the mine walls will be nearly vertical at a 0.5H:1V slope. The aggregate material will be temporarily stockpiled or placed directly onto a conveyor system for transport. The conveyor system will transport the material to be processed at an existing DRMS permitted mining site (Permit Number M-89-120) immediately east of the property (Holcim's Platte Valley Plant). The conveyor will cross the South Platte River within the permit boundary before entering the adjacent mining site as illustrated on the Pre-Mining/Mining Plan Map (Exhibit C). Alternatively, if needed, a limited amount of material may be processed on-site with portable and temporary screening, crushing, and/or washing equipment.

Once backfilling and grading has been completed in an area, the top of the slope and the side slopes above the anticipated reservoir water level will be seeded as soon as practicable (in first available seeding season).

Prior to and during removal of the materials in Area 1 and Area 2, a dewatering system will be operated using the current pump system that is on site. If additional capacity is needed, the pump system will be upgraded. Dewatering trenches will be excavated around the perimeter of each pond and pumps will be used to remove the water that drains from the deposit and surrounding alluvium into the trench. The water removed during dewatering will be used for dust control at the site or piped to the nearby unlined Stillwater Ski Lake (owned by Holcim) or to permitted outfall 8 at the South Platte River. Stormwater that falls within the mine areas will drain internally and will also be removed through dewatering operations. There will not be uncontrolled releases of surface water and sediment from mining areas.

Water associated with the site will be used for dust control operations during use of the roads and for stockpiles and berms. The water used to limit dust emissions will be applied using a water truck with capacity of 2,500 or 4,000 gallons. As noted above, water for dust control will come from the dewatering process.

No explosives will be used to mine the site.

3.0 STOCKPILES

Growth medium and overburden in the Area 1 and Area 2 mining area will be stripped with scrapers or a dozer and placed separately in temporary stockpiles to the north and west of the mining area. The growth medium will be segregated and stored separately (see Exhibit C-1 map) to the north of Pond 1 and the overburden material will be temporarily stored to the north and west of the mining area, as required by Rule 3.1.9(1). The stockpiles will have an average height of 8 feet tall; they will have maximum 3H:1V side slopes. The overburden stockpiles will be used for backfilling and reclamation where needed on the site. No excess overburden is anticipated for this site.

The growth medium stockpile will be protected from wind and water erosion by vegetative cover (see the Seed Mix for Upland Areas found in Exhibit E). Also, overburden stockpiles reserved for reclamation will be vegetated and stabilized in accordance with Rule 3.1.9(1). The stockpiles will be broadcast seeded and incorporated into the weed control program. Weed control consists of chemical treatments as needed in the applicable fall and spring seasons.

4.0 COMMODITIES TO BE MINED

The primary commodity to be mined will be aggregate. Holcim will supply local, county, and state governments, as well as private industry with aggregate from this facility.

5.0 OFFSETS

The mining area will be subject to setbacks to prevent disturbance of road and utility rights-of-way and undisturbed wetland areas. Holcim will maintain a 200-foot minimum setback from the South Platte River. In the Pond 1 area, the limit of mining will be at least 40 feet from the proposed permit boundary or edge of county roads (see the Pre-Mining/Mining Plan Map, Exhibit C). In all other areas, a minimum 25-foot setback will be maintained from the permit boundary. Setbacks from man-made structures not owned by Holcim or the City of Westminster

will be established at twice the pit depth unless an agreement is obtained from the property owner or engineering slope stability analyses performed.

Items owned by Holcim or the City of Westminster located within the proposed permit boundary, such as roads, fences, water wells and associated pumps, and structures including a house and outbuildings, may be removed or relocated during the mining process. There are additional structures on the site not owned by Holcim or the City of Westminster (see the Pre-Mining/Mining Plan Map, Exhibit C). The structures in the overall site include oil and gas wells and associated facilities and power transmission lines. Mining and reclamation activities will avoid these structures (see Exhibit S, Permanent Man-Made Structures within 200 Feet of the Affected Land).

Prior to mining under the 2004 permit, there were oil and gas wells and flowlines in parts of the site, but none of these remain in the small areas to be mined and where grading for reclamation is planned. Previously, a well located within the Pond 1 footprint (within mining Area 1) was plugged and abandoned, thus allowing the full area of Pond 1 to be constructed for water storage.

6.0 ROADS AND CONVEYORS

Preparation for mining will include constructing 15-ft-wide gravel access roads as needed. Most of these gravel roads are included in the permitted acreage and will be removed and reclaimed after mining. However, a new gravel access road will be constructed in the north end of the site by the current landowner, independent of mining, to allow permanent access from WCR 4 ½ to the western side of Pond 3 (see Map C-1).

All the aggregate material will be transported via conveyor from the mining area to Holcim's Platte Valley Plant to the east for processing. The conveyor is set on concrete blocks or frames. The main conveyor line comes from the south and currently crosses the Pond 1 area (will be relocated to go around the west side of Pond 1 area), then continues along the north side of Pond 1 following its current alignment to the east side of the permit area. The conveyor will continue to be operated for future permitted mining in areas to the south of the Wattenberg permit area.

A 10.5-ft wide existing road that currently connects to WCR 2 ¾ will be utilized to provide street access to this site. The location of this existing road is shown on Exhibit C, Pre-Mining Plan.

EXHIBIT E – RECLAMATION PLAN

The revised reclamation plan is provided in this exhibit to reflect the change from on-site to off-site wetland mitigation. As discussed in the cover letter for this Technical Revision (TR-4), to resolve a non-compliance issue Holcim submitted a request for permit modification. The "Revised Compensatory Mitigation Plan" (ERO 2023a), attached to this revised reclamation plan, provides justification and details for the permit modification to address the non-compliance issue and to comply with the Compensatory Mitigation Rule (Corps and EPA 2008) and Colorado Mitigation Procedures (Corps 2020).

For the Wattenberg Lakes Mine site, the preferred option of mitigation bank credits (off-site compensatory mitigation) was selected for implementation under the Revised Compensatory Mitigation Plan. Purchasing credits from a Corps-approved mitigation bank was determined to comply with Corps requirements because the purchase is practicable (Holcim is financially able to purchase available mitigation credits), is capable of compensating for aquatic resource functions that would be lost, and is the environmentally preferable mitigation option. The Corps accepted the Revised Compensatory Mitigation Plan and a permit amendment was issued by the Corps on May 8, 2024. The Corps determined that the non-compliance action was resolved through the purchase of bank credits.

In general, those areas where on-site wetland mitigation was previously planned will now be reclaimed to upland vegetation. Included in this change to upland vegetation is the 10-acre cottonwood replacement area in the southeast part of the permit area that was part of the original Corps-approved on-site wetland mitigation plan as also presented in DRMS Permit Amendment AM1. With the change to off-site mitigation as discussed in the cover letter for this TR-4 submittal, cottonwood replacement was no longer required by the Corps as it is addressed as part of the bank credit purchase. Details on the amendment for the Section 404 Individual Permit are presented in the November 9, 2023 Letter from ERO to the Corps on Wattenberg Lakes Aggregate Mining Design Modifications (ERO 2023b) which is attached to this revised reclamation plan. The contents of this letter were accepted by the Corps as part of the recent Corps permit amendment.

1.0 GENERAL

Area 1 and Area 2 will be mined and reclaimed as part of the development of Pond 1 (Struck Pond) that the landowner, the City of Westminster, will own and use for water storage. Pond 3, previously reclaimed through construction of the slurry wall, will also be used by the City of Westminster for water storage; please see Technical Revision (TR) 1 for slurry wall technical specifications and construction completion report (12/18/2014), approved by DMRS (1/8/2015). Other un-reclaimed but previously mined areas within the permit boundary will also be reclaimed through backfilling, as needed, and minor grading. The Operator estimates 175,000 to 200,000 cubic yards are needed to backfill the northwest wetland, northwest pond, southeast pond, and miscellaneous areas (see Exhibit F-1, Map F-1). As part of the backfilling operations, these areas will be graded to promote upland vegetation after which plantings and ground covers will be established to restore and enhance all areas disturbed by current or previous mining activities. Note that fill material for backfilling these areas will come from the existing on-site source in the western half of the expanded Pond 1 footprint, along with materials from mining of Areas 1 and 2.

The primary changes in the current DRMS permit amendment reclamation plan compared with the 2004 DRMS permit reclamation plan include the following (changes to the mining plan are noted in Exhibit D):

- Pond 1, now called the Struck Pond, has an expanded footprint to the west of the originally planned pond and slightly north as well; this adjustment to the north results in an addition to the affected area covered under the 2004 permit, thus requiring this amendment.
- Pond 2, identified in 2004 in the west-northwest part of the permit area, is planned for vegetation establishment with part of the area to remain dedicated for access to two remaining producing oil wells; the non-jurisdictional wetland in this area will be backfilled.

- The Pond 3 boundary along the west side was straightened during mining and a slurry wall was constructed around the revised pond perimeter.
- On-site wetland mitigation will not take place, as off-site mitigation will address the U.S Army Corps of Engineers (USACE) mitigation requirements; Holcim acquired wetland credits from the South Platte Mitigation Bank as shown in the attached letter.

Key considerations for preparing this reclamation plan include the following:

- All wetlands on the site were located and delineated in June and August 2022. Existing wetlands will be avoided to the extent feasible during mining, earthmoving, and reclamation activities. The existing non-jurisdictional wetland in the north-northwest part of the permit area will be backfilled as part of this Reclamation Plan.
- Maintenance activities on the site will also include a comprehensive Weed Management Plan to limit the spread of invasive species into the areas where vegetation is establishing.
- The Pond 1 (Struck Pond) reservoir will be isolated from the surrounding alluvial aquifer by constructing a slurry wall; a perimeter drain will also be constructed to minimize impacts of the slurry wall on groundwater flow through this area.
- Multiple groundwater monitoring wells are located within the permit area and will continue to be monitored before, during, and after the mining and reclamation are completed. The wells will be used to monitor effects from mining and provide information for mitigation of potential impacts on groundwater levels and riparian vegetation, as necessary. See Exhibit G for more information.

2.0 RECLAMATION OVERVIEW

As discussed in the Mining Plan (Exhibit D), Holcim anticipates conducting operations under this DRMS permit amendment in three phases for a total duration of 18 months, with mining of Area 1 and Area 2 planned for only 2 months of that duration (in Phase 1 only). The reclamation activities in these three phases will occur concurrently (for Phase 1) or within nine months after completion of Phase 1 (for Phases 2 and 3). Reclamation will focus on constructing the pond liner/slurry wall and also general backfilling and earthwork leading up to planting and seeding to establish vegetation in the disturbed areas. Reclamation, including regrading and seeding, will be completed within 2 to 5 years following initiation of these remaining reclamation activities. The three phases are:

1. Phase 1 – Concurrent activities (10 months)
    a. Grade/fill to achieve side slopes of 3:1
    b. Build up south edge of existing Pond 1 on south side to create 50-ft buffer from top of pond slope to the edge of county road
    c. Mine areas 1 and 2 with post-mining pond depth of 42 ft
    d. Place fill in other parts of the site to achieve reclamation grades
2. Phase 2 – Construct slurry wall and perimeter drain (2 months)
3. Phase 3 – General earthwork on western side of footprint (excess fill to be used for backfill as needed in other parts of the site) (6 months)

Each area will be reclaimed using soil, overburden, process fines, and other inert materials from on-site. However, if materials from off-site are used, the applicant will provide the Division with the appropriate notices and affidavit in accordance with Rule 3.1.5(9). There will not be known toxic or hazardous materials in the backfill material. Additionally, no acid-forming or toxic materials will be used during mining and it is unlikely they will be encountered in the mining. The mining will not leave high walls on the property. There will be no auger holes, adits, or shafts left on the property.

Reclamation quantities and costs are summarized in Exhibit L.

3.0 POST-MINING LAND USE

The post-mining land use, as proposed in this Reclamation Plan consists of water storage ponds surrounded by vegetation. In this area of Weld County, mining and developed water storage are predominant land uses along the South Platte River. Therefore, the proposed post-mining land use is compatible with surrounding land uses.

The area within the proposed permit boundary will consist of two reservoirs, reservoir shorelines, backfilled vegetation establishment areas, permanent access and county roads, and other reclaimed or otherwise undisturbed land. The following areas will comprise the final land use:

Reclamation and Post-Mining Land Use Areas	Area (acres)
Reservoirs – Ponds 1 and 3	176.3
Access roads (reclaimed)	1.1
Misc. disturbed areas (reclaimed)	56.7
Areas that are undisturbed, previously disturbed and reclaimed, or access and county roads (permanent)	186.7
TOTAL	420.8

Some roads inside the proposed permit boundary will not be reclaimed but will remain for accessing and maintaining the reservoirs, vegetation establishment areas, and oil wells. The existing vehicle access road over the southern end of the Huett Seep/Ditch will remain. Unimproved roads around all reservoirs will also remain.

Conveyor systems and bridges will be removed under reclamation planned for Tucson South and are not covered under the Wattenberg reclamation activities. Roads within the Wattenberg permit area that are not necessary for future access and other disturbed areas in the permit area will be reclaimed with vegetative cover to stabilize the soil and minimize erosion.

4.0 RECLAMATION MEASURES – MATERIAL HANDLING

Site reclamation measures are illustrated in Exhibit F. Reclamation of the site will include development of two water storage reservoirs (total of 176.3 acres), and vegetation establishment on access roads to be reclaimed and miscellaneous disturbed areas (total of 57.8 acres). Areas not mined nor disturbed by other site operations (outside of the 2004 permit and planned activities) will not be subject to reclamation under this plan; these areas cover a total of 186.7 acres.

The mining and backfilling operations will create the rough topography for the Pond 1 reservoir shoreline; the backfilling in this area will be done to provide stabilized shorelines around the reservoir and to minimize erosion. Fill material will also be placed in the existing northwest (non-jurisdictional) wetland, northwest pond, southeast pond, and miscellaneous areas outside the Pond 1 work area; the Operator estimates 175,000 to 200,000 cubic yards of fill material are needed to backfill these areas (see Exhibit F, Map F-1). Most of the fill material will consist of native bedrock claystone and overburden and will be obtained primarily from the currently backfilled area in the western half of the Pond 1 footprint, with some fill material also from mining of Area 1 and Area 2. Approximately 950,000 cubic yards of fill material are available, most of which will be used as part of Pond 1 construction. Minor grading to reclamation grades will take place in all areas subject to reclamation. Scrapers will be used to place the backfilled material. For Pond 1, using scrapers to layer the lifts at a maximum 3:1 slope ensures a stable configuration.

Growth medium will be spread to a depth of approximately 6 inches over the surface of all areas to be revegetated.

5.0 WATER STORAGE RESERVOIRS

As noted above, the reclamation includes construction of the slurry wall and perimeter drain around the perimeter of the final footprint of Pond 1. Design specifications for the slurry walls and quality control procedures used during construction will ensure that the reservoirs meet State Engineer's Office (SEO) performance standards. Specific specifications and quality control procedures will be provided to the Division for review prior to construction of the slurry walls.

The bottom of Pond 1 will coincide with the existing, relatively impermeable claystone bedrock. The slurry wall will also separate the pond from the surrounding alluvial aquifer. The slurry wall will be keyed into the bedrock material and extend upward through the entire length of the saturated alluvium.

All reservoir slopes left by the mining operation will be reclaimed to at least 3H:1V final grade; slopes above the post-mine high water level will be 3:1 and slopes below the post-mine high water level will be no steeper than 3:1. Reclamation of the side slopes will take place concurrent with mining of Area 1 and Area 2. Scrapers will be used to place bedrock claystone and overburden material along the reservoir perimeters to achieve the final grade. Final reclamation by capping with growth medium and re-vegetating above the expected reservoir water level will follow backfilling operations closely to minimize the amount of disturbance at any one time.

During reclamation activities, inlet and outlet works for Pond 1 will be installed. The inlet works will be constructed to provide water from the Brighton Ditch along the west side of the site. Outlet works will be designed and constructed by the City of Westminster, the user of the reservoir for water storage. The design specifications and plans for the facilities will be provided to the Division prior to construction.

6.0 SURFACE WATER AND GROUNDWATER

Overburden and mine materials will be inert and impacts to local surface water or groundwater quality are not anticipated to occur because of mining activities. Holcim will comply with all applicable Colorado water laws and all applicable Federal and State water quality laws and regulations and appropriate storm water management and erosion control to protect the adjacent South Platte River and riparian vegetation.

7.0 WILDLIFE

The area covered by this reclamation plan was formerly used for mining or general agriculture. There is significant habitat for many wildlife species along the river corridor which is outside our permit boundary. Please see Exhibit H (Wildlife Information) for more information.

While the reclamation plan does not propose to create wildlife habitat, all activities will be planned considering the safety and protection of wildlife on the property. Some species may be temporarily displaced by the mining and reclamation activities, but these species are expected to re-establish with no difficulty after the reclamation has been completed. The creation of the lakes may create additional opportunities for aquatic birds, mammals, and fish.

8.0 GROWTH MEDIUM

Surface soils in the proposed mine and reclamation areas are predominantly Altvan loam, Aquolls and Aquents, and Dacono clay. All suitable soil material will be salvaged for use as growth medium. Up to 6 inches of surface soil on the property, where disturbance is planned, is expected to be usable as growth medium for reclamation. This layer includes the root zone of grasses and crops, which will be stripped and stockpiled separately.

The growth medium will be segregated and stored separately from the overburden material as required by Rule 3.1.9(1). Sufficient growth medium will be stockpiled to reclaim all disturbed areas. The mine plan map depicts the location and configuration of the berms. The berms will be protected from wind and water erosion by vegetative cover if in place for more than 180 days and will be vegetated depending on the seeding “window” parameters for dryland grass, which are typically between September and April.

Based on the mining and reclamation phasing and schedule, the growth medium is not expected to remain stockpiled for more than 1 to 2 years. If the stockpile remains for more than one growing season, it will be seeded with a fast-growing vegetative cover to prevent erosion. Where required for reclamation, growth medium will be placed to a depth of approximately 6 inches.

9.0 REVEGETATION

As mining and backfilling operations are completed, areas for reclamation will be graded and shaped for revegetation. Runoff or excess water from adjacent areas will not be allowed to flow over slopes being graded and seeded. Following placement of growth media, seeding and planting will be performed according to NRCS recommended practices. All disturbed areas will be revegetated as part of the reclamation process. The following revegetation procedures are anticipated but may be modified as conditions dictate:

- Grass seed will typically be planted in unfrozen soil between October 1 and April 30.
- Grass seed will be planted with a grass drill, or where necessary, with a broadcast seeder.
- The proposed seed mixes and application rates in pounds of pure live seed per acre are listed below.
- Weed control practices will be implemented as required.

For disturbed areas, the reclamation plan includes revegetating with an appropriate seed mix to minimize erosion and reestablish natural terrain. The grass mixture was selected as long lasting and regenerating. The ground surface will be fine graded prior to seeding. Reservoir side slopes below the anticipated water line will not be seeded.

Grass seed will be planted with a drill equipped with depth bands and press wheels. The seeded areas will then be covered with straw mulch at a rate of 2,000 pounds per acre. The straw will be crimped into the soil to control erosion until the grass becomes established. As an alternative, hydroseeding and hydromulching may be used to apply seed (at double the drill rate) and mulch. The following seed mixture, from the 2004 permit, is planned:

Common Name	Scientific Name	Variety	% of Mix	PLS Application Rate (lbs/ac)
Sideoats Grama	Bouteloua curtipendia	Vaughn	30.0%	1.35
Switchgrass	Panicum virgatum	Grenville	11.0%	0.5
Blue Grama	Bouteloua gracilis	Lovington	6.5%	0.3
Western Wheatgrass	Agropyron smithii	Barton	52.5%	2.4
Total lbs/ac			100%	4.55

Notes:

1. Pure Live Seed pounds per acre; rates shown are for drill seeding; double rates for broadcast seeding.
2. All seeded areas will be mulched with 1 ton of certified weed free straw per acre. Mulch shall be applied within 24 hours of seeding and crimped in place.

10.0 WEED MANAGEMENT PLAN

A weed management program will be undertaken to control noxious and invasive plant species and to replace those species with appropriate non-invasive vegetation. State-listed noxious weeds will be controlled, and reseeding and irrigation will occur as needed to establish self-sustaining desirable vegetation. As an example, Canada thistle (*Cirsium arvense*) and leafy spurge (*Euphorbia esula*) will be treated by a combination of mowing at regular intervals and herbicides used at the appropriate times and applications levels.

11.0 REFERENCES

ERO Resources Corporation (ERO). 2023a. Wattenberg Lakes Gravel Mining, Revised Compensatory Mitigation Plan, Weld County, Colorado. Prepared for Holcim-WCR, Inc. October.

ERO Resources Corporation (ERO). 2023b. Wattenberg Lakes Aggregate Mining Design Modifications – Letter, Weld County, Colorado. U.S. Army Corps of Engineers (Corps) File No. NWO-2000-80189-DEN. November 9.

U.S. Army Corps of Engineers (Corps). 2020. Colorado Mitigation Procedures (COMP), Version 2.0. Albuquerque, Omaha, and Sacramento Districts. https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14682

U.S. Army Corps of Engineers (Corps). 2008. Compensatory Mitigation Rule. 73 Federal Register 19670 [April 10, 2008]. https://www.epa.gov/sites/default/files/2015-07/documents/general_requirements.pdf

EXHIBIT F – RECLAMATION PLAN MAP

This submittal replaces Exhibit F, submitted in April 2024 as part of Amendment 1, Wattenberg Lakes DRMS Permit No. M-2004-051.

NORTHWEST WETLAND: FILL NON-JURISDICTIONAL WETLAND AND GRADE TO PROMOTE UPLAND VEGETATION

NORTHWEST POND: FILL POND AND GRADE TO PROMOTE UPLAND VEGETATION

PERMANENT ACCESS ROAD

WCR 4 1/2

TWO PRODUCING OIL WELLS

MAINTAIN CURRENT ROAD/ACCESS TO 2 OIL WELLS (INCLUDES 25 FT BUFFER FROM EDGE OF ACCESS)

TYPICAL GROUNDWATER ELEVATION (SEASONAL HIGH)

ACCESS ROAD TO BE REMOVED AND RECLAIMED

40-FT EXCLUSION FOR PIPELINE (CITY OF WESTMINSTER)

WCR 23 1/2

BACKFILL IN MISCELLANEOUS DISTURBED AREAS, AND GRADE TO PROMOTE UPLAND VEGETATION

GRADE THIS AREA TO PROMOTE NEAR-SURFACE GROUNDWATER DRAINAGE FROM THE POND 1 PERIMETER DRAIN OUTLET TOWARD THE NORTH-NORTHWEST

ACCESS ROAD TO REMAIN FOR FUTURE USE (NOT RECLAIMED)

ACCESS ROAD TO REMAIN FOR FUTURE USE (NOT RECLAIMED)

PERIMETER DRAIN (TO BE INSTALLED)

POND 1 (STRUCK POND)

SLURRY WALL (EXISTING) SEE TR 1 FOR POND 3 SLURRY WALL TECHNICAL SPECIFICATIONS AND CONSTRUCTION COMPLETION REPORT (12/18/2014), APPROVED BY DRMS (1/8/2015)

50-FT BUFFER FROM TOP OF POND SLOPE TO ROAD EDGE

SLURRY WALL (TO BE INSTALLED)

ON-SITE SOURCE OF FILL MATERIAL WITH VOLUME OF 950,000 CY. APPROX. 175,000 TO 200,000 CY OF FILL VOLUME IS NEEDED FOR RECLAMATION OF THE NORTHWEST WETLAND, NORTHWEST POND, SOUTHEAST POND, AND MISCELLANEOUS AREAS, THE REST OF THE ON-SITE FILL MATERIAL, ALONG WITH MATERIAL FROM MINING AREAS 1 AND 2, WILL BE USED FOR CONSTRUCTION OF THE SHORELINE AREAS OF POND 1.

CONVEYOR

WCR 2 3/4

CONSTRUCT RECLAMATION SLOPE FOR POND 1 AND INCORPORATE RECOMMENDATIONS BASED ON GEOTECHNICAL ANALYSIS (SEE GEOTECHNICAL STABILITY EXHIBIT)

MAIN ACCESS TO MINE SITE

PRIOR TO CONSTRUCTING SLURRY WALL, PLACE FILL ON SOUTH SIDE OF POND 1 TO CREATE 50-FT. OFFSET FROM TOP OF POND SLOPE TO EDGE OF COUNTY ROAD

BASED ON THIS PROPERTY OWNED BY HOLCIM UNDER SPECIAL WARRANTY DEED, THIS ACCESS WILL BE USED AS NEEDED AND IN ACCORDANCE WITH EXISTING AGREEMENTS

PERMANENT ACCESS ROAD

POND 3 MAX NWL EL. 4928.0

CULVERT

HUETT SEEP/ DITCH

APPROXIMATE LOCATION OF PUMP STATION

CULVERT

SPILLWAY

EXISTING CONVEYOR CROSSING (BRIDGE) OVER THE SOUTH PLATTE RIVER

RIVERBANK STABILIZATION

EXISTING WETLANDS

SOUTH PLATTE RIVER

US HWY 85

SOUTHEAST POND: FILL POND AND GRADE TO PROMOTE UPLAND VEGETATION

EXISTING CONVEYOR

50-FT OFFSET FROM PERMIT BOUNDARY

CONVEYOR TO CONTINUE OPERATION AFTER RECLAMATION UNDER THE WATTENBERG PERMIT. RECLAMATION OF CONVEYOR IS COVERED UNDER THE TUCSON SOUTH MINE PERMIT.

HUETT SEEP/ DITCH

SLOPE PROTECTION

LEGEND

- WELL LOCATION APPROXIMATE
- PERMIT BOUNDARY APPROXIMATE
- AREAS TO BE FILLED AS PART OF RECLAMATION PROCESS
- EXISTING WETLANDS

0 150' 300' 600'

SCALE: 1" = 300'

N

POND 1 AREA (AT TOP OF SLOPE) = 51.7 ACRES
POND 3 AREA (AT TOP OF SLOPE) = 124.6 ACRES
ACCESS ROADS TO BE RECLAIMED = 1.1 ACRES
MISC. DISTURBED AREAS = 56.7 ACRES
AREAS THAT ARE UNDISTURBED, PREVIOUSLY DISTURBED AND RECLAIMED, OR ACCESS AND COUNTY ROADS (PERMANENT) = 186.7 ACRES
TOTAL PERMIT AREA (AFFECTED AREA) = 420.8 ACRES

CERTIFICATION:

THIS MAP WAS PREPARED BY TETRA TECH IN COOPERATION WITH HOLCIM - WCR, INC. HOLCIM - WCR, INC. WILL KEEP THE DIVISION OF RECLAMATION, MINING, AND SAFETY INFORMED OF ANY CHANGES TO THE MINING OR RECLAMATION PLANS THROUGH ANNUAL REPORTS AND FILE TECHNICAL REVISIONS OR AMENDMENT APPLICATIONS AS NECESSARY THROUGHOUT THE LIFE OF THE MINE.

FREDERICK LEE CHARLES, PE — 2/25/2025 DATE

TETRA TECH
www.tetratech.com
351 Coffman Street, Suite 200
Longmont, Colorado 80501
Phone: (720) 864-4507

MARK	DATE	DESCRIPTION	BY
1	5/10/23	INITIAL SUBMITTAL	FLC
2	5/30/23	INCOMPLETENESS RESPONSE	FLC
3	3/22/24	REVISION AND ADEQUACY RESPONSE	FLC
4	2/25/25	TECHNICAL REVISION 4 SUBMITTAL	FLC

HOLCIM - WCR, INC.
WATTENBERG LAKES

EXHIBIT F
RECLAMATION PLAN MAP

PROJ: 117-7110001
DESN:
DRWN:
CHKD:

F-1

Bar Measures 1 inch, otherwise drawing not to scale

2/27/2025 2:30:13 PM - O:\PROJECTS\LONGMONT\7110\117-7110001\CAD\MODEL\FILES\F-1 RECLAMATION PLAN MAP_BAK.DWG - HART, GRACE

EXHIBIT G – WATER INFORMATION

Please see the most recent version of Exhibit G which was submitted in April 2024 in response to adequacy review comments on Amendment 1. The April 2024 submittal does not discuss wetland mitigation, so no change to this exhibit is needed. However, the following text provides an explanation of the key changes to the permit through Technical Revision 4 (TR-4).

The revised reclamation plan as provided in Exhibit E reflects the change from on-site to off-site wetland mitigation. As discussed in the cover letter for this TR-4, to resolve a non-compliance issue Holcim submitted a request for permit modification. The "Revised Compensatory Mitigation Plan" (ERO 2023a), attached to the revised reclamation plan (Exhibit E), provides justification and details for the permit modification to address the non-compliance issue and to comply with the Compensatory Mitigation Rule (Corps and EPA 2008) and Colorado Mitigation Procedures (Corps 2020). Additional supporting information on the design modifications related to the Corps permit is provided in the Letter from ERO to the Corps on Wattenberg Lakes Aggregate Mining Design Modifications (ERO 2023b), also attached to the revised reclamation plan (Exhibit E). For the Wattenberg Lakes Mine site, the preferred option of mitigation bank credits (off-site compensatory mitigation) was selected for implementation under the Revised Compensatory Mitigation Plan. Purchasing credits from a Corps-approved mitigation bank complies with Corps requirements.

There will be no stream and/or wetland mitigation areas and no other restoration projects as part of DRMS Permit No. M-2004-051 that would fall under the jurisdiction of the Colorado Division of Water Resources (DWR) nor will there be injury to vested water rights when implementing the reclamation plan presented in TR-4. With this change in the reclamation plan, the final post-mining land use of Developed Water Resources will not be altered nor will there be changes to the mining plan presented in AM-1 and areas to be mined (no additional extraction will take place).

References

ERO Resources Corporation (ERO). 2023a. Wattenberg Lakes Gravel Mining, Revised Compensatory Mitigation Plan, Weld County, Colorado. Prepared for Holcim-WCR, Inc. October.

ERO Resources Corporation (ERO). 2023b. Wattenberg Lakes Aggregate Mining Design Modifications – Letter, Weld County, Colorado. U.S. Army Corps of Engineers (Corps) File No. NWO-2000-80189-DEN. November 9.

U.S. Army Corps of Engineers (Corps). 2020. Colorado Mitigation Procedures (COMP), Version 2.0. Albuquerque, Omaha, and Sacramento Districts. https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14682

U.S. Army Corps of Engineers (Corps). 2008. Compensatory Mitigation Rule. 73 Federal Register 19670 [April 10, 2008]. https://www.epa.gov/sites/default/files/2015-07/documents/general_requirements.pdf

EXHIBIT J – VEGETATION INFORMATION

This revised exhibit replaces the exhibit that was submitted in April 2024 as part of Amendment 1, Wattenberg Lakes DRMS Permit No. M-2004-051.

Prior to mining under the 2004 DRMS Permit, the Wattenberg Lakes site was a working ranch used primarily for livestock grazing with some areas cultivated for tree production and other crops. The site contained a mixture of open water, riparian, wetland, and upland habitats consisting of native vegetation. Cattail marsh, wet meadow, and stands of willow and mature cottonwoods were all found on the site. Native grasses including wheat grasses, switchgrass (*Panicum virgatum*), blue grama (*Bouteloua gracilis*), and buffalograss (*Bouteloua dactyloides*) tended to dominate soils found in upland areas. Trees best suited for these upland soils include Rocky Mountain juniper (*Juniperus scopulorum*), eastern redcedar (*Juniperus virginiana*), ponderosa pine (*Pinus ponderosa*), Siberian elm (*Ulmus pumila*), Russian olive (*Elaeagnus angustifolia*), and hackberry (*Celtis*). The shrubs best suited are skunkbush (*Rhus trilobata*), sumac (*Rhus*), lilac (*Syringa*), Siberian peashrub (*Caragana arborescens*), and American plum (*Prunus americana*).

Current vegetation information, obtained from a wetland survey for the site completed by ERO in June and August 2022, is presented in the Wetland Delineation Report produced from that survey (attached to this exhibit). The project area primarily consists of disturbed uplands dominated by kochia (Bassia scoparia), Canada thistle (*Cirsium arvense*), smooth brome (*Bromus inermis*), and foxtail barley (*Hordeum jubatum*), with patches of sandbar willow (*Salix exigua*) and plains cottonwood (*Populus deltoides*). Gravel pits of various sizes occur in the project area, with some containing open water and others that are dry. Wetlands are present throughout the project area, with the majority having established in the gravel mining cells. The Huett Ditch generally traverses the project area from south to north through the east side of the project area, before turning west at the north boundary; this seep/ditch consists primarily of narrowleaf cattail (*Typha angustifolia*) wetlands. Fringe wetlands are also located along the banks of the South Platte River. Most wetlands in the project area are dominated by pale smartweed (*Persicaria lapathifolia*), narrowleaf cattail, broadleaf cattail (*Typha latifolia*), and cosmopolitan bulrush (*Schoenoplectus maritimus*).

Reclamation will involve establishing a mixture of lined open water reservoirs and upland habitats consisting of native vegetation.

EXHIBIT L – RECLAMATION COSTS

This revised exhibit replaces the reclamation costs exhibit submitted in April 2024 as part of Amendment 1, Wattenberg Lakes DRMS Permit No. M-2004-051.

The entirety of operations covered under this permit amendment, including the small amount of mining required along with reclamation of all disturbed areas, are estimated for reclamation costs. The table below represents the estimated cost for DRMS to reclaim the Wattenberg Lakes mine.

WATTENBERG DRMS PERMIT AMENDMENT – RECLAMATION COSTS

ITEM	UNIT	UNIT COST	# OF UNITS	TOTAL COST
Earthmoving and Revegetation				
Excavation & hauling of remaining material (overburden and growth medium)	Cubic Yards	$3.25	900,000	$2,925,000
Earthwork to build up the south side of Pond 1 (to achieve offset from road)	Cubic Yards	$5.00	21,300	$106,500
Backfill placement/grading to achieve reclamation grades	Cubic Yards	$5.00	200,000	$1,000,000
Rip/grade access road to be reclaimed (after done hauling)	Acre	$2,445	1.1	$2,690
Growth medium placement/rough grading	Cubic Yards	$2.30	56,100	$129,030
Fine grading	Acre	$3,800	69.6	$264,480
Upland seeding	Acre	$3,115	22.9	$71,334
Mulching	Acre	$2,100	69.6	$146,160
Weed control	Acre	$160	7.0	$1,120
Dewatering and Pond 1 Development				
Dewatering, northwest existing unnamed pond and Pond 1	Lump Sum	$30,000	1	$30,000
Design, construction, and related tasks for slurry wall/underdrain installation - Pond 1	Lump Sum[1]	$3,704,750	1	$3,704,750
Reclamation slope grading - Pond 1	Acre	$1,000	11.8	$11,800
Reservoir bottom grading - Pond 1	Lump Sum	$10,000	1	$10,000
TOTAL DIRECT RECLAMATION COSTS				***$8,402,863***
Overhead & Profit				
Public Liability Insurance			0.0155	$130,244
Contractor Performance Bond			0.0155	$130,244
Contractor Profit			0.1000	$840,286
DRMS Project Administration Expense			0.0500	$420,143
TOTAL INDIRECT RECLAMATION COST				***$1,520,918***
TOTAL PERFORMANCE BOND AMOUNT				**$9,923,781**

[1] A detailed breakdown is provided in the following table.

DETAILED BREAKDOWN OF SLURRY WALL/UNDERDRAIN COST

ITEM	UNIT	UNIT COST	# OF UNITS	TOTAL COST
Slurry Wall Estimated Cost				
Mobilization/Demobilization Slurry Wall Sub.	Lump Sum	$375,000	1	$375,000
Construct Slurry Wall Work Platform	Cubic Yards	$2.75	30,000	$82,500
Supplemental Fines Material	Cubic Yards	$2.75	27,000	$74,250
Slurry Wall Const. (6400'x40')	Square Ft	$8.95	230,000	$2,058,500
Keyway Construction (10'Wx5'D)	Cubic Yards	$4.50	18,000	$81,000
Mounding Underdrain Pipe	Feet	$75	6,000	$450,000
90-Day Leak Test	Lump Sum	$155,000	1	$155,000
Geotechnical Investigation	Lump Sum	$63,500	1	$63,500
Slurry Wall/Underdrain Engineering Design	Lump Sum	$365,000	1	$365,000
TOTAL FOR SLURRY WALL				**$3,704,750**