COLORADO
Division of Water Resources
Department of Natural Resources

January 18, 2022

Mr. Andy Rodriguez, P.E.
Civil Resources, LLC
323 Fifth Street
P.O. Box 680
Frederick, CO 80530

Re: Poudre Pits Aggregate Mine Substitute Water Supply Plan (WDID 0302519)
La Poudre Aggregate Mine, DRMS Permit M-1983-090 (WDID 0303010, Plan ID 3218)
North La Poudre Aggregate Mine, DRMS Permit M-2000-144 (WDID 0303011, Plan ID 4585)
Section 19, T6N, R67W, 6th P.M.
Water Division 1, Water District 3, Weld County

Approval Period: January 1, 2022 through December 31, 2022
Contact Phone Number for Mr. Rodriguez: 303-833-1416 ext. 202; andy@civilresources.com

Dear Mr. Rodriguez:

We have reviewed your letter dated October 6, 2021 requesting renewal of the above referenced substitute water supply plan ("SWSP") in accordance with section 37-90-137(11), C.R.S. This SWSP is requested to cover depletions caused by sand and gravel mining operations at two sites along the Cache la Poudre River operated by Bestway Concrete & Aggregates ("Bestway" or "Applicant"). The required fee of $514 (2 × $257) has been submitted (receipt nos. 10015959 and 10015960).

Plan Operation

The following table lists the sites that are included in this combined replacement plan:

Table A - Combined Replacement Plan Sites

Site Name	DRMS Permit No.	WDID	Well Permit No.	Location	Exposed Surface Area (post-12/31/80) (acres)
La Poudre Aggregate Mine	M-1983-090	0303010	61571-F	19-T6N-R67W	19.67
North La Poudre Aggregate Mine	M-2000-144	0303011	62037-F	19-T6N-R67W	8.98

The La Poudre site consists of three separate cells designated as the West Lake, Middle Lake, and East Lake. An additional parcel in the northwest corner of Section 19, known as the Lee Parcel, was amended into the mining permit boundary in December 2017. The Lee Parcel has been mined out and was backilled during the 2021 plan period. There is no remaining exposed groundwater at the Lee Parcel. No mining of aggregate is proposed to occur at either the La Poudre or North La Poudre sites during this plan period.

Depletions

Evaporation and Operational Losses

During this SWSP period, consumptive use at the La Poudre and North La Poudre Pits will consist of evaporation losses and water used for dust control. The depletions for each site are shown in the following table:

Table B – 2022 Site Depletions (acre-feet)[a]

Site Name		Evaporation Losses	Groundwater Lost in Mined Product	Groundwater Consumed in Concrete Batching	Dust Control	Total Depletions	Total Lagged Depletions
La Poudre	West	9.12	0	0	2.20	11.32	11.8
	Middle	3.66	0	0	0	3.66	3.66
	East	34.29	0	0	0	34.29	34.29
North La Poudre		18.22	0	0	0	18.22	18.3
Total		65.29	0	0[b]	2.20	67.49	68.05

[a] Depletions shown do not include those from past or projected dewatering operations at the sites.
[b] Water for concrete batching is supplied from municipal taps.

For the purposes of this SWSP, depletions are assumed to impact the Cache la Poudre River perpendicular to the point of depletions, which is considered to be the centroid of the exposed surface area at each site. Evaporative depletions for each site were calculated using a gross annual evaporation of 38.5 inches, with a credit of 9.78 inches for effective precipitation (based on an average annual precipitation of 13.97 inches for the Windsor weather station). The West Site includes a 3.81-acre Wildlife Pond; the Middle Lake contains a 1.53-acre pond; and the East Lake contains a 14.33-acre pond. The North La Poudre site contains a 2.78-acre pond and a 6.2-acre pond. The attached Figure 1 shows the location of each of these exposed groundwater features.

Operational losses at the La Poudre and North La Poudre sites will consist of 2.20 acre-feet of groundwater used for dust control purposes. The Applicant anticipates that there will be no mining of aggregate during this plan period. Water used for dust control purposes will be pumped from the West Lake within the La Poudre site. Operational activities at the site will include concrete batching, but no groundwater is anticipated to be used for this purpose as two domestic water taps are currently enough to supply the estimated water requirements for the projected 105,000 cubic yards of concrete. Depletions from the La Poudre and North La Poudre pits will impact the Cache la Poudre River upstream of the Whitney Irrigation Ditch (WDID 0300930).

The Alluvial Water Accounting System (AWAS), which uses the Glover method, was used to determine the lagged depletions to the Cache la Poudre River from past (since 1990) and projected evaporation and operational losses at each site. The following parameters were used in the model with the alluvial aquifer boundary condition: the distance (X) from the centroid of the exposed groundwater surface to the river; the width (W) of the aquifer on the side of the river where the pit is located; the transmissivity (T); and the specific yield (S). The Glover parameters used for each pit site are shown in the table below.

Table C – Glover Parameters (Evaporative/Operational Losses)

Site Name		X (ft)	W (ft)	T (gpd/ft)	S
La Poudre	West	512	4,800	50,000	0.20
	Middle	399	4,800	50,000	0.20
	East	626	4,800	50,000	0.20
North La Poudre		2,500	4,800	50,000	0.20

The lagged evaporative and operational depletions for 2022 will total 68.05 acre-feet for the La Poudre and North La Poudre sites.

Dewatering

Dewatering has occurred at each pit over varying intervals from 1995 through 2020. The Wildlife Lake is the only portion of either site that is proposed to be actively dewatered during this SWSP period. In the past, it was assumed that the pits were dewatered at a rate of 500 gpm with all water released directly to the river. These assumptions have been revised to reflect the historic average dewatering rate of 100 gpm where the majority (75%) of the water was recharged in the adjacent pits with only 25% discharged directly to the river. This is based on a reevaluation of historic operations by the operator's consultant and a December 20, 2012 letter from Mark Johnson, Compliance Manager with Bestway Concrete & Aggregates as well as submitted pump specifications and data showing the 100 gpm is a more accurate estimate than the previously accepted 500 gpm. Mark Johnson described the recharge operation as occurring simultaneously with dewatering in that the operator would discharge the water into an adjacent, previously mined, cell. Once the cell being recharged exceeded its hydraulic capacity the water would then be diverted directly to the river.

Dewatering operations at the La Poudre Pit occurred from January 1995 through December 2002, and during October and November of 2014. As stated above, 75% of the water was recharged in the adjacent pits with 25% discharged directly to the river. The Lee Parcel was dewatered between April 2018 and June 2021 at an average rate of 212 gallons per minute with one-third (33.3%) of the dewatering water delivered to recharge in the West Lake and two-thirds (66.6%) delivered directly to the river.

At the North La Poudre site, dewatering operations occurred from September 2002 through March 2003 and recommenced from April 2012 through July 2014. The 2012 dewatering was not metered therefore no recharge credit was given. Instead, all 2012 dewatering was assumed to be discharged directly to the river creating no lagged accretions. The operator installed meters at this site by January 2013 and starting January 2013 the actual meter readings are used in the dewatering analysis. Dewatering that occurred from January 2013 through November 2013 and March 2014 through July 2014 was returned directly to the river through an unnamed slough located above the Whitney Ditch.

In the past, lagged depletions resulting from dewatering at the sites were calculated using AWAS with the infinite aquifer boundary condition. The following parameters were used in the model: the distance (X) from the centroid of the exposed groundwater surface to the river; the

transmissivity (T); and the specific yield (S). The Glover parameters used for each pit are shown in Table D below.

Table D – Glover Parameters (Dewatering)

Site Name	X (ft)	T (gpd/ft)	S
La Poudre	1,500	50,000	0.20
North La Poudre	2,500	50,000	0.20

Beginning with the 2019 plan year, you began to lag dewatering depletions using the alluvial aquifer boundary condition, consistent with the methodology and aquifer width (W) parameter for lagging operational depletions, which is believed to be more appropriate given the close proximity of the pits to the Cache la Poudre River. In order to ensure that this change in methodology does not result in unreplaced depletions to the river, you have proposed to continue lagging dewatering depletions resulting from dewatering that occurred in 2018 and earlier using the infinite aquifer boundary condition, and to lag depletions resulting from dewatering that occurred in 2019 and later using the alluvial aquifer boundary condition. Because the remaining depletions resulting from dewatering prior to 2019 as calculated using the infinite aquifer method lag out for a long time period in relatively small quantities, you have proposed to "wrap" the lagged depletions remaining after 2028, which represent less than 10% of the total volume pumped for dewatering purposes, and redistribute and replace these depletions during the time period of 2019 through 2028. Depletions resulting from post-2019 dewatering are not proposed to be wrapped at this time.

Based on discussions with the mine operator, dewatering during 2022 is projected to occur at the Wildlife Pond portion of the La Poudre site at a rate of 181 gpm. All the water will be delivered directly to the river, and there will be no recharge moving forward. Actual monthly meter readings must be used to determine the true dewatering rate, and to determine how much water was directly returned to the river.

Table E below summarizes the impacts past and projected dewatering operations at each pit will have on the stream system during this SWSP period of January 1, 2022 through December 31, 2022, as calculated using the methodologies and assumptions described above.

Table E – Summary of Dewatering Impacts (acre-feet)

	Pre-2019 Pumping (infinite aquifer method)			Post-2019 Pumping (alluvial aquifer method)			
Site Name	Lagged Accretions	Lagged Depletions	Wrapped Depletions	Direct Returns	Lagged Accretions	Lagged Depletions	Net Balance
North La Poudre	1.48[a]	-4.15	-3.97	N/A	N/A	N/A	-6.64
La Poudre	2.66	-6.89	-3.83	292.8	18.46	-297.05	6.15
Total	4.14	-11.04	-7.80	292.8	18.46	-297.05	**-0.49**

[a] Excludes accretions from any dewatering recharge that may have occurred in 2012

The combined lagged dewatering depletions, accretions from the stated recharge, and direct delivery to the river from dewatering operations create a net deficit to the river in the amount of 0.49 acre-feet. With the stated combined lagged evaporative and operational depletions of 68.05

acre-feet, the total net depletion owed to the river for this SWSP approval period is 68.54 acre-feet. See attached Table 4 for the monthly distribution of depletions and accretions.

Replacements

The proposed source of replacement water under this SWSP is water leased from the Central Colorado Water Conservancy District.

The Applicant has obtained a lease with the Ground Water Management Subdistrict of the Central Colorado Water Conservancy District ("Central") for 68.55 acre-feet of Central's fully consumable storage and direct flow water rights in the Cache la Poudre basin. The term of the lease is January 1, 2022 through December 31, 2022. A copy of the signed lease, dated January 11, 2022, is attached. Central has water in storage in Siebring Reservoir (WDID 0303803), 83rd Avenue Reservoir (WDID 0303408), and La Poudre Reservoir (WDID 0303377). Siebring Reservoir and 83rd Avenue Reservoir are located in Section 31, Township 6 North, Range 66 West of the 6th P.M. La Poudre Reservoir is located within the boundaries of the La Poudre Aggregate Mine (M-1983-090) in Section 19, Township 6 North, Range 67 West of the 6th P.M. If the Whitney Ditch or B.H. Eaton Ditch are sweeping the river, Central lease water from La Poudre Reservoir can be used to cover the depletions from the La Poudre and North La Poudre Pits, but the Central lease water from Siebring Reservoir and 83rd Avenue Reservoir cannot.

Conveyance loss for delivery of the augmentation water referenced above is subject to assessment and modification as determined by the division engineer.

Long-Term Augmentation

In accordance with the letter dated April 30, 2010 (copy attached) from the Colorado Division of Reclamation, Mining, and Safety ("DRMS"), all sand and gravel mining operators must comply with the requirements of the Colorado Reclamation Act and the Mineral Rules and Regulations for the protection of water resources. The April 30, 2010 letter from DRMS requires that you provide information to DRMS to demonstrate you can replace long term injurious stream depletions that result from mining related exposure of groundwater.

For any gravel pit whose reclamation includes unlined ponds, a plan of augmentation approved by the water court must be obtained to cover the long term evaporative depletions. Until an augmentation plan is obtained the operator may post a sufficient bond to backfill or line the site thereby eliminating any long term augmentation requirements, or permanently dedicate shares that will be used in an augmentation plan to the pit. For any gravel pit whose reclamation includes lining or backfilling of the pit, bonds must be posted that can be used to complete the reclamation plan should the operator walk away from the site. The North La Poudre and La Poudre pits have been bonded through DRMS and are in compliance with the April 2010 DRMS letter (approach #1 and #3). A summary of each pit's status regarding their long term augmentation and bonding held through DRMS is shown on the following table:

Table F – Final Reclamation Summary

Site Name	DRMS Permit No.	Proposed Final Reclamation	Bond Amount	Comments
North La Poudre	M-2000-144	Unlined Ponds	$1,158,430	Operator increased reclamation liability bond on 4/22/2013 to comply with DRMS requirements for exposed groundwater on site. Operator increased reclamation liability bond on 7/26/2017 in response to the increased acreage approved in amendment AM01.
La Poudre	M-1983-090	Lined and Unlined Ponds	$1,506,000	Operator increased reclamation liability bond on 5/3/2013 to comply with DRMS requirements for exposed groundwater on site. Operator increased reclamation liability bond on 12/17/2017 in response to the increased acreage approved in amendment AM02.

Conditions of Approval

I hereby approve the proposed substitute water supply plan in accordance with section 37-90-137(11), C.R.S., subject to the following conditions:

1. This plan shall be valid for the period of January 1, 2022 through December 31, 2022 unless otherwise revoked or superseded by decree. If this plan will not be made absolute by a water court action by the plan's expiration date, a renewal request must be submitted to this office with the statutory fee of $257 for each DRMS site, and with all necessary leases and other supporting documentation, no later than November 1, 2022. If a renewal request is received after the expiration date of this plan, it may be considered a request for a new SWSP, in which case a $1,593 filing fee will apply.
2. Well permit no. 61571-F was obtained for the La Poudre Pit in accordance with sections 37-90-137(2) and (11), C.R.S. This permit allows for up to 33.3 acres of exposed groundwater and allows for operational losses from the mining of aggregate, production of concrete, and dust control. The water use projected in this SWSP is within the permit's limits.
3. Well permit no. 78235-F was obtained for the North La Poudre Pit in accordance with sections 37-90-137(2) and (11), C.R.S. This permit allows for evaporation, dewatering, and operational losses from the mining of aggregate, production of concrete, and dust control. The water use projected in this SWSP is within the permit's limits.
4. The total surface area of the groundwater exposed at each of the pits shall not exceed those values listed in Table A of this approval. Should the total surface area exposed exceed those amounts, the Applicant is required to immediately file an amendment with this office.
5. The total amount of groundwater to be appropriated from each of the pits shall not exceed the values listed in Table B of this approval.
6. Total consumption at the La Poudre and North La Poudre Pits must not exceed these aforementioned amounts unless an amendment is made to this plan.
7. Approval of this plan is for the purposes stated herein. Any additional uses of this water must first be approved by this office.
8. All pumping for dust control shall be measured in a manner acceptable to the division engineer.

9. All releases of replacement water must be sufficient to cover all out-of-priority depletions in time, place, and amount and must be made under the direction and/or the approval of the water commissioner. The attached Table 4 provides a proposed schedule of replacement. The release of replacement water may be aggregated to maximize beneficial use. The water commissioner and/or the division engineer shall determine the rate and timing of an aggregated release.

10. The Division of Water Resources will not be responsible for any enforcement or administration of third party agreements that are not included in a decree of the water court.

11. The replacement water which is the subject of this plan cannot be sold or leased to any other entity. As a condition of subsequent renewals of this substitute water supply plan, the replacement water must be appurtenant to this site until a plan for augmentation is obtained. A copy of this approval letter should be recorded with the county clerk and recorder. All replacement water must be concurrent with depletions in quantity, timing, and location.

12. The name, address, and phone number of the contact person who will be responsible for the operation and accounting of this plan must be provided on the accounting forms submitted to the division engineer and the water commissioner.

13. Conveyance loss for delivery of augmentation water is subject to assessment and modification as determined by the division engineer.

14. The Applicant shall provide daily accounting (including, but not limited to diversions, depletions, replacement sources, and river calls) on a monthly basis. The accounting must be uploaded to the CDSS Online Reporting Tool (https://dwr.state.co.us/Tools/reporting) within 30 days of the end of the month for which the accounting applies . Instructions for using the tool are available on the Division of Water Resources website on the "Services" → "Data & Information" page under the heading of Online Data Submittal. Accounting and reporting procedures are subject to approval and modification by the division engineer. Accounting forms need to identify the WDID number for each structure operating under this SWSP. Additional information regarding accounting requirements can be found in the attached Administration Protocol *"Augmentation Plan Accounting, Division One - South Platte River"*. **NOTE:** Monthly accounting, even during the winter non-irrigation season, is required.

15. If reclamation of the mine site produces a permanent water surface exposing groundwater to evaporation, an application for a plan for augmentation must be filed with the Division 1 Water Court at least three years prior to the completion of mining to include, but not be limited to, long-term evaporation losses. If a lined pond results after reclamation, replacement of lagged depletions shall continue until there is no longer an effect on stream flow. Granting of this plan does not imply approval by this office of any such court application(s).

16. Dewatering operations produce delayed depletions to the stream system. This SWSP includes the lagged depletions associated with the cessation of dewatering at the North La Poudre Pit. These lagged depletions are partially offset with dewatering accretions from active dewatering at the La Poudre Pit (Wildlife Pond). Once dewatering at the La Poudre Pit ceases, the delayed dewatering depletions must continue to be replaced until there is no longer an effect on stream flow. A totalizing flow meter is required on all dewatering discharge in order for the operator to claim any accretion credits.

17. To assure that depletions from groundwater evaporation do not occur in the unforeseen event, or events, that would lead to the abandonment of the pit, the Applicant has obtained a bond in the amount of $1,506,000 for La Poudre Pit and a bond for $1,158,430 for North La Poudre Pit through the DRMS, which includes the cost of backfilling the ponds.
18. In accordance with amendments to section 25-8-202(7), C.R.S., and "Senate Bill 89-181 Rules and Regulations" adopted on February 4, 1992, the State Engineer shall determine whether the substitute supply is of a quality to meet requirements of use to which the senior appropriation receiving the substitute supply has normally been put. As such, water quality data or analyses may be requested at any time to determine if the requirement of use of the senior appropriator is met.
19. The State Engineer may revoke this SWSP or add additional restrictions to its operation if at any time the State Engineer determines that injury to other vested water rights has occurred or will occur as a result of the operation of this SWSP. Should this SWSP expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation, all excavation of product from below the water table, and all other use of water at the pit, must cease immediately.
20. The decision of the state engineer shall have no precedential or evidentiary force, shall not create any presumptions, shift the burden of proof, or serve as a defense in any pending water court case or any other legal action that may be initiated concerning this plan. This decision shall not bind the state engineer to act in a similar manner in any other applications involving other plans, or in any proposed renewal of this plan, and shall not imply concurrence with any findings of fact or conclusions of law contained herein, or with the engineering methodologies used by the Applicant.

If you have any questions concerning this approval, please contact Javier Vargas-Johnson in Denver at (303) 866-3581 or Michael Hein in Greeley at (970) 352-8712.

Sincerely,

for Jeff Deatherage, P.E.
Chief of Water Supply

Attachments: Figure 1
Table 4
2022 Central Lease
April 2010 DRMS Letter
Administration Protocol *"Augmentation Plan Accounting, Division One – South Platte River"*

Cc: Michael Hein, Lead Assistant Division Engineer, Michael.Hein@state.co.us
1809 56th Avenue, Greeley CO 80634, (970) 352-8712

Mark Simpson, Water Commissioner, Water District 3, Mark.Simpson@state.co.us

Louis Flink, Tabulation/Diversion Records Coordinator, Louis.Flink@state.co.us

Dawn Ewing, Accounting Coordinator, Dawn.Ewing@state.co.us

Eric C. Scott, Division of Reclamation, Mining and Safety, eric.scott@state.co.us

NORTH

0 500 1000

(IN FEET)

CIVIL RESOURCES, LLC

BESTWAY CONCRETE & AGGREGATE
LA POUDRE PITS
2022 SWSP RENEWAL

DATE:	FIGURE:	GENERAL LOCATION MAP-2021 AERIAL PHOTO
10/2021	1	

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North La Poudre & La Poudre

Table 4

2022 SWSP Operational Losses and Supplies - La Poudre Pits

(all values in acre-feet)

Month	(1) Lagged Pit Pit Depletions	(2) De-water Credit/Depletion	(3) Total Lagged Losses	(4) % Call	(5) Net River Impact Before Lease	(6) Lease	(7) Lease Aurora WDID 0802593 includes 51 miles of loss at .5%/mile	(8) Excess Credit From Shores WDID 0502522 .5%/mile	(9) Net River Impact After Lease
January	-3.75	0.70	-3.05	100%	-3.05	3.05			0.0
February	-3.73	0.48	-3.25	100%	-3.25	3.25			0.0
March	-3.90	0.36	-3.54	100%	-3.54	3.54			0.0
April	-4.79	0.19	-4.60	100%	-4.60	4.60			0.0
May	-5.60	0.06	-5.54	100%	-5.54	5.54			0.0
June	-7.01	-0.09	-7.10	100%	-7.10	7.10			0.0
July	-8.25	-0.15	-8.40	100%	-8.40	8.40			0.0
August	-8.52	-0.26	-8.78	100%	-8.78	8.78			0.0
September	-7.45	-0.34	-7.79	100%	-7.79	7.79			0.0
October	-6.21	-0.41	-6.62	100%	-6.62	6.62			0.0
November	-4.85	-0.48	-5.33	100%	-5.33	5.33			0.0
December	-4.02	-0.54	-4.56	100%	-4.56	4.56			0.0
Total	-68.08	-0.47	-68.55		-68.55	68.55	0.00	0.00	0.00

(1) Lagged Evaporative and operational losses from Table 1 Column (16) and Table 2 Column (24)

(2) De-water depletions/credits from Table 3

(3) Sum of Total Pit Depletions and De-water Credit/Depletion

(4) Call for accounting purposes.

(5) Equals Columns (3) times the active call.

(6) Lease

(7) Aurora Lease, use 75.4% loss (51 miles @ 5%/mile).

(8) Shores excess, use 83.4% loss (33 miles @ 5%/mile).

(9) Equals Column 3 times 4 times the active call plus Column (6) - (8).

WATER LEASE AGREEMENT
Windsor Aggregate Mines

THIS AGREEMENT made and entered into this 11th day of Jan, 2022, by and between the Groundwater Management Subdistrict (GMS) of the Central Colorado Water Conservancy District, hereinafter referred to as "Lessor", and Burnco Colorado LLC, hereinafter referred to as "Lessee"

WITNESSETH:

WHEREAS, Lessor has storage and direct flow water rights in the Cache la Poudre basin. Lessee has a Substitute Water Supply Plan (SWSP) filed with the State Engineer pursuant to 37-92-308(4) C.R.S.
WHEREAS, Lessor desires to lease to Lessee **68.55** acre feet and Lessee desires to lease the same.
NOW, THEREFORE, in consideration of the mutual covenants and promises of the parties hereto, it is agreed as follows:

1. Lessor shall lease **68.55** acre feet to Lessee for use in Lessee's SWSP.
2. The parties agree that the volume of water to be leased under this agreement totals **68.55** acre feet for delivery January through December 2022. Parties agree to the monthly delivery schedule as follows:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
3.05	3.25	3.54	4.60	5.54	7.10	8.40	8.78	7.79	6.62	5.33	4.56	68.55

3. Lessee shall pay lessor a total of **$44,557.5 ($650/AF· 68.55 AF)** due upon signing.
4. Parties agree that this Agreement is for the water delivery of **68.55** acre feet from January through December 2022 and shall immediately terminate December 31st, 2022.
5. This Agreement represents the complete agreement of the parties and no oral modification shall be recognized. Any amendments or additions to the Agreement shall be made in writing and shall be signed by the parties hereto.
6. This agreement is binding upon the parties.
7. Burnco Colorado LLC may not assign or transfer this agreement to another party.

WITNESS WHEREOF, Lessor and Lessee have caused this Water Lease Agreement to be executed.

Dated the day and year first executed above.

Randy W. Ray, CCWCD Executive Director

Burnco Colorado LLC
Colorado General Manager

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106

COLORADO DIVISION OF RECLAMATION MINING & SAFETY

April 30, 2010

Lafarge West, Inc.
10170 Church Ranch Way, Ste. 200
Westminister, CO 800210000

RE: Mining Operations with Exposed Ground water

To Whom It May Concern:

The Division of Reclamation Mining and Safety is responsible for ensuring that Sand and Gravel mining operators comply with the requirements of the Colorado Land Reclamation Act for the Extraction of Construction Materials (Act) and the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials (Rules). Among these requirements are provisions for the protection of water resources. The Act requires that reclamation plans must ensure minimization of disturbances to the prevailing hydrologic balance, including disturbances to the quantity of water in the area affected by mining and in the surrounding areas. § 34-32.5-116(4)(h). Rule 3.1.6(1)(a) requires compliance with Colorado water laws and regulations governing injury to existing water rights both during and after mining. Permits must specify how the permittee will comply with applicable Colorado water laws and regulations governing injury to existing water right rights. Rule 6.3.3(j); Rule 6.4.5(2)(c). After an extensive review, the Division determined that several operators may not have appropriate permit conditions to address certain reclamation liabilities arising from impacts to water resources.

In September 2009 the Division of Water Resources (DWR) updated its Guidelines for Sand and Gravel Pits. These guidelines provide guidance on achieving compliance with state law regarding replacement of depletions from sand and gravel mining, thus the guidelines provide a benchmark for the protection of hydrologic balance required under the Act and Rules. As noted in the Guidelines, sand and gravel operations which expose groundwater without complying with state law create a reclamation liability by impacting available groundwater.

State law requires that any person exposing ground water must obtain a well permit from the SEO pursuant to § 37-90-137(11). Because exposed groundwater results in out-of-priority water depletions, operations which expose ground water must also eventually obtain a water-court approved augmentation plan. Currently, several operators do not have either an augmentation plan or bonding to provide an alternative method to mitigate injurious stream depletions that result from mining-related exposure of ground water. The Division has a statutory duty to ensure that lands affected by mining are reclaimed in a manner that complies with state law and to ensure that operators have sufficient bonding to achieve reclamation. In order to assist operators in achieving compliance with these requirements, the Division proposes that, by April 30, 2011, operators should contact the Division and agree upon a plan for achieving compliance.

The Division has identified four approaches for operators:

1. File a financial warranty that will ensure backfilling of the pit to cover the exposed ground water to a depth of two feet above the static ground water level or,

2. Obtain a court approved augmentation plan prior to exposing ground water or,

3. File a financial warranty to cover the cost of installing a clay liner or slurry wall that meets the Division of Water Resources requirements for preventing ground water exposure or,

4. Obtain approval from the Division of Water Resources that acknowledges compliance with the SEO's requirements pursuant to § 37-90-137(11).

The Division will work with operators on an individual basis as they move to implement one of these plans. It is likely that options 1 and 3 will require the submittal of a technical revision or an amendment to the existing permit depending on the nature of the current mining and reclamation plan and the proposed changes. Increased financial warranties, as a result of these modifications, may be posted in a phased manner not to exceed three years. Amendments or revisions currently under review will be required to be approved by April 30, 2011 and may use the phased financial warranty approach described above. New applications going forward or presently under review by the Division will be required to meet the requirements of one of the options 1-4 at the time of application approval. Failure of affected operators to initiate contact with the Division and gain compliance as described above could result in an enforcement action being issued by the Division.

If you have any questions, please contact Tony Waldron at 303-866-3567, extension 8150.

cc:

M2006064	Shields at Fossil Creek Mine			M1983031	Stromquist Pit
M1994002	Andrews S & G #5 (Burlington Pit)			M1974072	Chantala Pit
M2006018	North Bank Resources			M1985218	Rich Pit
M2006073	Sundance Sand and Gravel Resource			M1985206	Boone-Martin Pit
M2009082	Parsons Mine			M1995022	Andrews #2
M1977081	Greeley West Pit			M1990144	Boone-Fillmore Pit
M2003091	Duckworth Pit			M1997087	Hartman Pit
M2000113	Mamm Creek Sand & Gravel			M2001094	Shaw Pit
M2001090	River Valley Resource			M2002009	Beeman Pit #1
M2000016	Riverbend Operation			M1981307	Fountain Pit
M1979134	Powers Pit			M1977439	Home Office Mine
M1977036	Greeley 35th Ave Pit			M1979191	Three Bells Pit
M2000034	Reichert Pit			M1982182	Port of Entry Pit
M2001051	North Taft Hill Expansion Site			M2002081	Overland Ponds
M1974015	Lyons Pit			M1981088	McCoy Pit
M1974004	Specification Aggregates Quarry			M1982034	Miller Pit
M1987176	Hamm Pit			M1996082	Blair Mesa Pit
M1988042	Cottonwood Pit			M1980136	Chambers Pit
M1990112	State Pit			M1977098	Sievers Pit
M1979002	North Delta Pit	M1983013	Latham - Burkett Pit	M1974070	Nelson Pit
M1979159	Brose Pit	M1979097	East Rigden Pit	M2000002	Tanabe Pit
M1998014	Gypsum Ranch Pit	M1991035	Bluestone Pit	M1994045	Bluestone Pit
M1999088	Kyger Pit	M1986159	Courtner Pit	M1986079	M & G Pit
M1998075	Andrews #3 (Mock Pit)				

COLORADO
Division of Water Resources
Department of Natural Resources

ADMINISTRATION PROTOCOL
Augmentation Plan Accounting
Division One - South Platte River
Revised October, 2021

This protocol establishes the accounting and reporting process required to enable the division engineer's office to determine if depletions from all out-of-priority diversions are being replaced so as to prevent injury to vested water rights. The accounting must follow "cradle to grave" accounting practices that track exactly how the data are manipulated from raw data input (e.g., meter readings) to the resultant impact on the river. While this protocol is subordinate to any decreed language addressing specific accounting requirements, it generally addresses the minimum requirements of such accounting.

The accounting must use the standard convention where a depletion is shown as a negative value and an accretion or other replacement source is shown as a positive value. The difference of depletions and replacements will then result in either a negative or positive impact on the stream.

1. Accounting must be submitted electronically to the division engineer and water commissioner through the online data submittal portal at the following link on our website: https://dwr.state.co.us/Tools/reporting. If not already registered, you will need to create a new account through that link.

   Typically, submittals are due within 30 days of the end of the month for which the accounting is being submitted, unless decreed otherwise. Additional data or more frequent submittals may be required by the water commissioner if required for administration. Accounting submittals not submitted through the online data submittal portal or questions regarding accounting submittals may be emailed to dnr_Div1Accounting@state.co.us.

   The following naming convention must be used for all files submitted via email:
   "PlanWDID_YYMMDD"

   where: PlanWDID is the WDID assigned by the division engineer's office

   YYMMDD corresponds to the date the accounting is submitted.

   As an example, the assigned WDID for the former GASP plan was 0103333. If accounting using Excel® was submitted for that plan on May 15, 2004, the file name would be:
   "0103333_040515.xls"

2. The accounting must include a Contact & Plan Information tab, that includes the 7-digit WDID for the plan for augmentation/SWSP, the 4-digit SWSP ID (if applicable), and contact information (i.e., name, phone number, email address) for the augmentation plan accounting including:
   a. the owner(s) of each augmented structure
   b. the person responsible for submitting the accounting
   c. the plan administrator and/or the plan attorney.

3. All of the raw input data (i.e., meter readings, water pumped from wells, etc.) must be provided and organized in a single location, such as an "Input" worksheet, etc. The accounting must include the following input data listed below, as well as relevant WDIDs and permit numbers.

    a. Diversion data from flumes or weirs and unit of measurement.

    b. The required input data for each well is:
        i. the monthly flow meter reading as shown on the flow meter; date of the meter reading; flow meter multiplier (i.e., 0.001, 10, 1); units of volume (i.e., gallons or acre-feet); the meter serial number; correction factor, if any.
        ii. The total volume pumped, showing the calculations using the information in Item "i" above.
        iii. factors from the decree or SWSP that provide for the well consumptive use and depletions (i.e., presumptive depletion factor (PDF), water balance methodology, lagging parameters, etc.).
        iv. Any well permitted or decreed as an alternate point of diversion (APOD) to a surface water right must report pumping on a daily basis if any of the diversions during the month is claimed as being "in priority". (See Administration Protocol - APOD Wells for more details.)

    c. If applicable, data for each recharge structure must be included and comply with the appropriate decree(s) or SWSP Approval requirements and any applicable current statewide Administration Protocol. At a minimum the following should be reported in the accounting:
        i. 7-digit WDID and name of recharge structure
        ii. daily volume in AF diverted into the site;
        iii. monthly volume in AF released from the site;
        iv. monthly gross evaporative loss in AF;
        v. volume of water in AF remaining at the end of the month.

    d. The accounting must identify each source of replacement water actually delivered to the stream and how replacement water at that location offset the depletions. To demonstrate the water was actually delivered to the required location will require the following information:
        i. the name (water court case, lease, etc.) and WDID of the originating source of the replacement water, date released and volume of water released;
        ii. transit losses from point of release to point of depletion or use, if any, using stream loss factors approved by the water commissioner;
        iii. the volume of water actually delivered on a daily basis past any surface water diversion that was sweeping the river as corroborated by the water commissioner. (See Administration Protocol - Delivery of Water for more details on delivering water).

    For each source of replacement water that has been "changed" for use as a source of augmentation, such as changed reservoir shares, changed rights from a ditch, or credits from dry-up, etc., the following input information must be reported:
        i. the decreed volume of return flow obligation;
        ii. if not specified in the decree or SWSP, the location and timing of the owed return flow on the stream(s).

4. If required by the decree or SWSP, the accounting must include a monthly projection of the plan's operation at least through March 31 of the next calendar year, or as specified in the decree or SWSP.

5. The accounting submittal must include output associated with modeling showing monthly delayed depletions (from well pumping or return flow obligations) and/or accretions (from recharge).

6. All accounting must provide a net impact summary that shows a daily balance of the out-of-priority depletions, accretions from each recharge site, volume of replacement water actually delivered and the resultant net impact. If necessary, a net impact must be shown for each applicable river and reach.

   While modeling may use a monthly step function to determine the depletions from pumping and accretions from recharge, the monthly result must then be divided by the number of days in the month in order to simulate a daily impact, as water rights are administered on a daily and not monthly basis.

   The accounting should indicate that the replacement water is equal to the depletion(s) such that the daily net impact (using the simulated daily numbers from the modeling) is not negative, unless the water commissioner approves less frequent aggregation of replacements without injury to downstream water rights.

   In the instance that aggregation is allowed, replacement is needed only for days with out-of-priority depletions. For example, if a well is out-of-priority for 15 days during a month, replacement must be made only for the 15 days the well is out-of-priority. Likewise, any simulated daily accretions will only count toward replacing the depletion on the days the well is out-of-priority. The accretions that accrue to the river when the well is in priority cannot be applied to different days with out-of-priority depletions.

7. The basis for determining that the depletions are out-of-priority should be data from the Division of Water Resources' Administrative Calls & Analysis Tool (https://dwr.state.co.us/Tools/AdministrativeCalls/Active) and should be included in the accounting along with the relative steps in the determination of a structure being in or out of priority. The analysis may be done, unless otherwise limited by decree, for each well or groups of wells, provided the most junior water right associated with the group of wells is used as the reference water right for the group's out-of-priority status.

8. The accounting shall include all the required information for the month of the submittal in addition to the information submitted from previous months such that the information and monthly submittals are a cumulative report each month throughout the 12 month reporting period.

9. If a well is covered in multiple SWSPs or augmentation plans, the monthly meter readings must be the same in the accounting for each plan covering the subject well. The accounting for every plan covering the well shall state the proportionate and total pumping amount covered by each plan to assure all out-of-priority depletions are replaced.

10. The following additional accounting requirements apply when sources of replacement water are used in more than one plan.
    a. The entity providing replacement water to the stream is responsible for accounting for the total amount of replacement water and how much of the total went to each plan.
    b. The amount of replacement water claimed for a particular augmentation plan must match the amount in the accounting from the entity providing the replacement water to the stream.
    c. The amount of replacement water claimed for use by one or more water users shall not exceed the amount of replacement water physically and legally available. (See Administration Protocol – Use Of Unnamed Sources For Replacement for additional requirements concerning required notice and approval of sources of replacement not specifically described in a SWSP or augmentation plan).