Lewicki & Associates
ENGINEERING | GEOLOGY | ENVIRONMENTAL

July 9, 2025

Colorado Division of Reclamation, Mining, and Safety
1313 Sherman St, Rm 215
Denver, CO 80203

RE: Kattenburg Pit M-2004-017
Technical Revision – Updates to Mining and Reclamation Plans
Adequacy 2 Response

Ms. Reilley

Attached is a response to your second adequacy review of TR02 for the Kattenburg Pit. Each section is addressed and revised maps and exhibits are included as necessary. Adequacy items addressed previously have been omitted for clarity

Regards,

Ben Langenfeld, P.E.
Lewicki & Associates, PLLC
(720) 842-5321, ex. 1
benl@lewicki.biz

Rule 6.4.4 Exhibit D Mining Plan

Depth of the gravel deposit is identified in the Description of Deposit section of Exhibit D.

Rule 6.4.7 Exhibit G Water Information

Exhibit G has been revised with substantial additional information to address the adequacy questions listed. The additional information specifically addresses why groundwater monitoring is not necessary at the Kattenburg Pit. Well elevations are shown on appropriate figures. Underlying aquifers are addressed. Lack of material saturation is discussed. Potentiometric surfaces are addressed. The likely spring located to the southwest of the site is addressed. Wright Water Engineers addresses all water consumption in the substitute water supply plan (SWSP). Long term water supply is addressed.

Appendix G-2 has been added to the permit to contain the SWSP and gravel well permit (89564-F, replacing 88710-F) for the 0.1 acre groundwater exposure. All gravel is assumed to be mined above the water table, since the groundwater pond (0.1-acres) is maintained below the working floor throughout the mine life. This eliminates the need to track whether gravel is mined below the groundwater table or not.

Gravel well 89564-F is considered constructed by DWR. Well 88710-F is defunct as it has been replaced by the new well.

Inherent to the usage of SWSPs to supply water use at a gravel pit is that they must be renewed at each expiration date. United will renew the SWSP when it expires in 2026.

Attachments

Exhibit D – Mining Plan

Exhibit G – Water Information

EXHIBIT D MINING PLAN

1. General Mining Plan

The mining operation is located in Grand County approximately 1.25 miles east of Granby, Colorado on 38.65 acres north of the Fraser River and east of County Road 60. The property boundary has been surveyed and the permit area will be surveyed prior to any site disturbance.

1.1. Mining Method

Mining will be conducted using excavators, trucks, and bulldozers. Crushing and screening may take place on the site. Mining is proceeding principally vertically, working downward into the deposit. Full mining extents are shown on Map C-2. Map C-3 shows cross sections of the site.

1.2. Equipment List and Usage

Mining operations utilize:

- Two to three front-end loaders for material handling
- Motor graders for road maintenance
- Bulldozers for stripping and grading
- Tractor trailers and tandem-axle end dumps
- Articulated haul trucks for material movement
- Water trucks for dust control
- Portable screening plants (wet and dry)
- Portable conveyors and crushers
- Fuel storage (including spill kits)

1.3. Slope Specifications

All mining faces will maintain specific slope requirements throughout operations. During active mining, working faces may be maintained at 0.5H:1V. Interim slopes within the mining area may be maintained at 2H:1V, but at no more than 750-feet of length and no more than 20-ft of height. The final reclaimed slopes will be graded to a maximum gradient of 3H:1V to ensure long-term stability.

2. Description of the Deposit

The site contains a Pleistocene age, Slocum alluvial terrace deposit that averages 100+ feet deep across the property. The deposit consists of approximately 80% rock to 20% sand

composition with intermixed large boulders. The material is overlain by soil ranging from 0-8 inches, averaging 6 inches, with underlying clayey, sandy, loamy overburden of 24-60 inches depth. The deposit consists of colluvium and glacial till lying on top of Pierre Shale bedrock. The underlying shale beds strike at N87°W and dip 8° NE in the vicinity of the pit. Bedrock outcrops in the southwest corner of the property, where a spring occurs, at an approximate elevation of 8110 feet. Depths of gravel have been confirmed to an elevation of 8125 in the west-central part of the deposit and can be easily inferred to depths greater than the proposed ultimate pit depth.

All sand and gravel mined at the Kattenburg Pit will be used in the production of construction materials in the Grand County market.

3. Description of the Size of the Area to be Worked at Any One Time

The operation encompasses a total area of 38.65 acres, with 33.39 acres designated for active mining and 5.26 acres reserved for undisturbed setback areas. The maximum disturbed area at any time will be 33.39 acres.

3.1. Mining Sequence

Mining will begin in the central part of the property near the old mine where a plants such as crusher/screener will be established. Mining will then advance outward at an elevation intended to create a 20-foot face. The mining will progress into the hillside at this level until the exterior slope area is reached. Once the deposit has been mined at this starting elevation, mining will progress downward in 20-foot increments. In effect, the deposit will be mined in 20-ft tall slices from the top down. Figure D-1 shows a diagram of this sequence. The shape of the deposit is such that the maximum disturbance area, or the largest slice, will be at the bottom. This is near the end of the mine life and is the basis for the reclamation bond (Exhibit L).

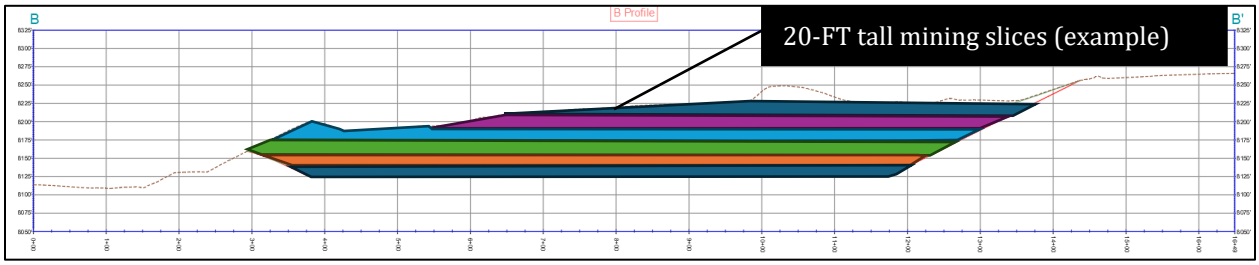

Figure D-1. Minin Sequence Diagram

4. Description of Water Management Procedures

4.1. Surface Water Controls

Stormwater management includes maintaining pit-ward attitude on all slopes and installing isolation ditches around the pit perimeter as shown on Map C-2. Sediment control basins are established on site, with comprehensive erosion control measures implemented for all disturbed areas.

Drainage patterns maintain natural flows where possible while implementing specific controls around stockpiles and operational areas. The groundwater exposure will be used as a stormwater pond for water management, with regular monitoring and maintenance of all water control structures.

4.2. Groundwater Management

Mining operations will expose approximately 0.1 acres of groundwater. This exposure is permitted under Substitute Water Supply Plan (SWSP) WDID 1407801. All groundwater management activities will be conducted in accordance with this permit's requirements and conditions. A gravel well permit will be maintained for the operation throughout its life. The groundwater exposure will always exist at the low point of the operation. Once mining has reached full depth, this exposure is expected to be at the southwest corner of the pit, at the lowest elevation of the operation.

4.3. Water Quality Procedures

Each pit serves as a sediment pond for operations. All interior pit slopes will be maintained with a pit-ward attitude so that there will be no drainage off the affected land. No water will be discharged from the pit without a National Pollutant Discharge Elimination System (NPDES) Permit that will address any discharges associated with the mining operation or Stormwater as required by law.

5. Mining Timetable

The total permit duration is planned for 10-15 years, of which 13 years will be mining. This is based on an average annual production of 250,000 tons per year. Market forces will determine the actual production level and thus this timetable is an estimate.

Table D-1 Mining Timetable

Stage	Description	Mining Time	
1	Establish access roads and facilities shown on Map C-2. Begin topsoil and overburden removal. Initiate mining.	4	Years
2	Advance mining down and southward while conducting concurrent reclamation. Processing and sales of materials from the site.	8	Years
3	Complete mining and finalize slopes for reclamation.	2	Years
Total		**14**	**Years**

The mining schedule is planned to minimize disturbance by reclaiming areas as additional mining is undertaken. Note: If large contracts are awarded to the site, production could increase to the permit maximum, thereby curtailing the life of the pit. On the other hand, if contracts are less than anticipated, the life of the pit could be extended. This table is based on a reasonable projection of average production rates.

The deposit thickness will lead to mining in 20-ft slices as through the deposit vertically.

6. Description of the Method of Handling Materials

Topsoil and overburden will be handled onsite. Both will be stripped, placed, and stockpiled as needed. Any topsoil or overburden stockpile that is to be in place longer than 180 days will be vegetated to prevent wind erosion.

6.1. Topsoil Management

Mining extraction begins with stripping and stockpiling topsoil separately from other materials. Materials are stored in designated areas shown on Map C-2 for future reclamation. Stockpiles planned for storage longer than one year receive temporary seeding for protection. An average 6-inches of topsoil will be stripped. The stripped topsoil will be placed directly on regraded slopes for reclamation as frequently as possible. An estimated 32,000 CY of topsoil will be stripped and replaced as part of mining and reclamation.

6.2. Overburden Handling

Overburden is removed using scrapers and dozers, maintaining separate stockpiles from topsoil. The material is stored for use in concurrent and final reclamation activities. Roughly 24-60 inches of overburden will be stripped during mining. The exact thickness will vary by location. Overburden will be placed in mined out areas for reclamation grading as frequently as possible. An estimated 160,00 CY of overburden will be stripped and backfilled as part of mining and reclamation.

6.3. Hazardous Materials Management

The only hazardous materials stored onsite during operations will be fuel and equipment oils. All fuel tanks will have secondary containment. Some are double walled, others will be located within bermed or lined areas that have over 110% of the volume of the largest stored tank. If fuel is stored on the site a small containment berm will be placed around the fueling facility to keep any spills contained. The size of the berm will be engineered to contain the amount of fuel stored in the area. Spill kits will be maintained in the fuel storage area including sufficient absorbent material for spills. The site will maintain Spill Prevention, Control, and Countermeasure plan (SPCC Plan) for fuel and oil storage. Fuel storage location(s) are identified on Map C-2.

No acid or toxic forming materials will be mined our processed as part of the operation.

7. Water Information, Rights and Augmentation

All water rights issues such as availability of water for this operation, consumption rates, dust control, etc. is presented in Exhibit G - Water Information.

8. Description of Wildlife Protection Measures

The site is used by various wildlife species. Measures to protect wildlife include limiting disturbance areas to the minimum necessary and concurrent reclamation of mined areas. The Division of Wildlife letter in Exhibit H was prepared at our request to identify potential wildlife issues. Our planning takes this into account and the report does not raise issues regarding endangered or threatened species.

EXHIBIT G WATER INFORMATION

1. General

The Kattenburg Pit's lies north of the Fraser River by roughly 0.5 miles. It is located on a dryland terrace that lacks any surface water features. It is outside of the FEMA mapped floodplain in this area. Groundwater is located at a variety of depths below the ground. Well records in the area show groundwater depths of 1-feet deep, 57-feet deep, and 180-feet deep.

2. Water Quality Protection

The primary concerns surrounding water quality protection at the Kattenburg Pit are the potential impacts to the surface and groundwater from sediment, hydraulic fluids, and diesel fuel. Sediment will be controlled through the use of stormwater retention within the disturbance area through the life of the mine. The site will be graded in a manner that maintains all surficial flows within the disturbed area, in turn containing all sediment and unwanted discharges from leaving the site. Stormwater berms will be constructed at the edge of mining to prevent sediment discharges in the Fraser River. Hydraulic fluids and diesel fuels will be contained within vehicles that follow best practices of maintenance; these practices include regular inspections of vehicles, hydraulic lines, and any other potential spill sources. Diesel fuel or other oils will not be stored on-site.

Any surface water discharges from the site will be sampled in accordance with the NPDES discharge permit. All discharge will be via the approved Outfall, the proposed location of which is shown on Map C-3.

Table G-1. Surface Water Discharge Monitoring Requirements in NPDES Discharge Permit

Parameter	Monitoring Frequency	Sample Type
Flow	Instantaneous, Monthly	In-situ
pH	2x/month	Grab
Total Suspended Solids	2x/month	Grab
Oil and Grease Visual	2x/month	Visual
Oil and Grease	Contingent on visibility of oil and grease	Grab
Total Flow	Instantaneous, Monthly	Calculated
Selenium, Potentially Dissolved	2x/month	Grab
Total Dissolved Solids	Quarterly	Grab

Note: these are the anticipated analytes based on operator experience at similar sites. CDPHE may issue different sampling requirements with the permit.

3. Floodplain

The site has not been mapped for flood potential by the Federal Emergency Management Agency. Based on upstream data, the areas surrounding the drainage are likely within the 100-year floodplain of the Fraser River, but not within the floodway.

4. Wetlands

The National Wetlands Inventory aerial-based mapping indicates the presence of wetlands within the permit area. These wetlands are mostly in the existing drainage and will not be disturbed, aside from wetlands crossings for access. A USACE Wetlands Permit will be obtained prior to any wetlands disturbances. Exhibit C and F maps show the NWI mapped wetlands.

5. Aquifers

The alluvial aquifer of the Fraser River is present near the site to the south. However, the sand and gravel deposit present on the site terminates to the south and east, disconnecting it from

the broader alluvial aquifer of the Fraser River. Underlaying it is a shale bedrock, that some area groundwater wells draw water from. See the groundwater discussion sections for more information.

6. Surface Water

The mining operation will impact surface water in the area through the stormwater runoff that enters the site. Map G-1 shows the drainage patterns and how they are affected throughout the life of the mine. The maps include information on the drainage basins currently, during mining, and post reclamation. The primary concern for surface water protection at the site is preventing the discharge of sediment, oil, and/or hydraulic fluids from the operation areas. Oils and hydraulic fluids are stored on site following the standard best management practices. These practices include the use of secondary containment at fluid storage and transfer points, spill kits, and employee training regarding safe handling practices. Sediment is trapped onsite using controls and best management practices by directing and controlling surface water runoff that enters the disturbed areas. More information on sediment and surface water control is provided below.

6.1. Surface Water Handling

In the pre-mine condition the site drained naturally to the southwest towards the Fraser River. During mining, runoff will be collected along the stormwater control berm in the southwest end of the site and routed to the groundwater exposure for infiltration. Upon reclamation, the site will drain to the southwest and to the Fraser again.

6.2. Disturbed Area Runoff

During all stages of mining, there is enough water storage capacity to contain the 5-year and 100-year 24-hour storm events and prevent erosion from surface water discharge. The expected rainfall from these events at the Kattenburg Pit is provided in Table G-2 below.

The peak runoff was generated from these values for the various drainage basins during all stages of mining. Pre-mine, mining, and reclamation conditions are delineated on maps C-1, C-2, F-1. The discharge volumes from these storm events are calculated in Appendix G-1 at the end of this exhibit. Table G-3 summarizes the runoff volumes and storage volumes for each drainage. All drainage calculations were made using the Rational Method identified in the Mile High Flood Control District.

Table G-2. Drainage Calculations

Drainage Basin 1					
Site Condition	Area (ac)	Runoff Coefficient	100-Yr 24-Hr Runoff (ac-ft)	Peak Flow Rate (cfs)*	Detention Capacity (ac-ft)***
Base	39.33	0.2	0.436	45.25	0
Mine		0.6	4.403	23.68	66.8
Reclamation		0.25	0.436	9.87	0

* The discharge flow rate is calculated from the peak discharge of the 100-Yr 24-Hr storm event using the Rational Method.

**Discharge flow rate is variable and controlled during mining as all discharges are pumped from the pit
***Detention Capacity calculated in CAD as the surface volume available between the pit floor and the top of the stormwater control berm.

7. Groundwater

Groundwater has been encountered in the pit at a depth of 25-feet below the original ground level. A nearby well (87599-F) shows groundwater at a depth of 1-foot, near the airport to the west. Said well has a collar elevation at least 100-ft below the Kattenburg Pit. A 57-foot deep groundwater value is located in well 22403, which is northeast of the pit. This well is a domestic supply well installed in 1964 and may not be an accurate representation of the gravel aquifer passing through the area. The other nearest well (to the east), 264287, has a water level of 180-feet. However, Well 264287 is installed in the shale below the local sand and gravel deposit and is thus not an accurate representation of groundwater in the sand and gravel that is being mined. Figure G-1 shows the neighboring and nearby wells based on Colo. Div. of Water Resources records. Well 89564-F is the gravel well for the water exposure at Kattenburg.

The sand and gravel deposit that Kattenburg is mining daylights to the south and west sides of the site. As such, there are no wells to the south in the same alluvium. Based on the surrounding well data and the geologic/topographic conditions of the site, it is clear that the groundwater at the Kattenburg Pit is in a perched aquifer that exists between the uphill irrigation infiltration and the downstream springs immediately southwest of the pit. The water level in the sand and gravel likely varies with the irrigation season; no potentiometric surface can be assumed or established. The level of saturation is unknown. The spring location coincides with the road ditch, creating a wet area as shown on Figure G-1. The spring has not been field located and no flowrate is known. Its co-location with the road side ditch makes location of the exact spring problematic. Figure G-2 shows a cross section concept of the groundwater conditions at the Kattenburg Pit.

Since the groundwater at Kattenburg is fed by irrigation infiltration and then readily drains out through a spring, this groundwater cannot be reliably studied. Given the limited scope and supply of the groundwater at Kattenburg, a groundwater monitoring plan is both impractical and

ultimately unnecessary. As such, no groundwater monitoring plan will be conducted at the Kattenburg Pit.

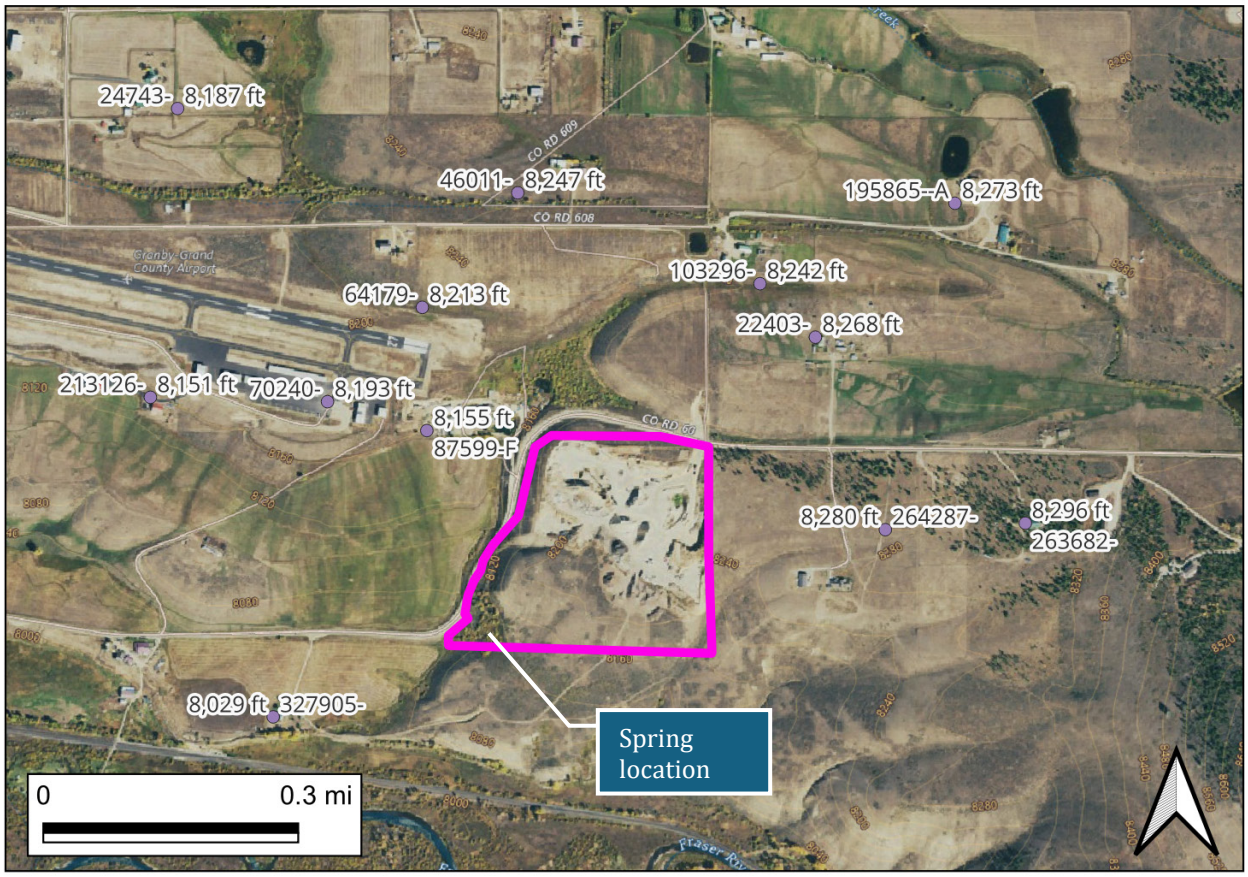

Figure G-1. Neighboring Wells

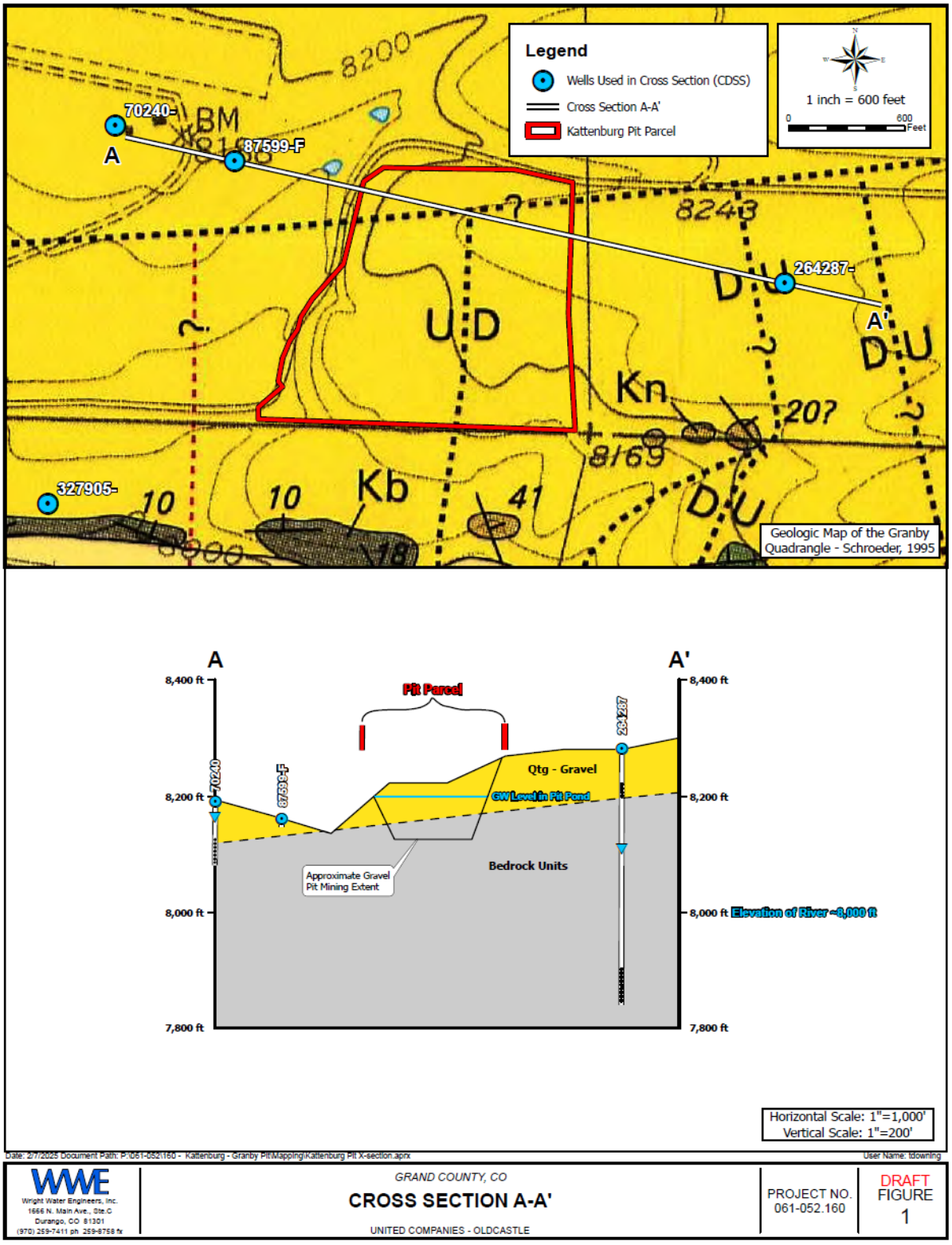

Figure G-2. Groundwater Cross Section

7.1. Groundwater – Mining

Given the groundwater information from the nearby wells, the encountering of groundwater in the pit, and how the gravel deposit being mined daylights at the southwest end of the property, it is theorized that groundwater encountered in the pit will drop as mining continues. The lack of groundwater consistently found in the sand and gravel of surrounding wells at the same elevation as the deposit being mined indicates that the water found in the pit is likely to be infiltrated surface water that has not yet flowed out of the deposit daylight to the southwest. However, since this is only a theory, the permittee has secured a gravel well permit to cover 0.1 acre of groundwater exposure at the mine.

As mining progresses downward, the 0.1 acre groundwater exposure will be maintained as a low point for groundwater and surface water. Any springs or seeps that develop within the mining area will be routed to this 0.1-acre pond to ensure that the groundwater continues to flow to the southwest. By facilitating this groundwater movement through the pit, around mining activity, the groundwater that has flowed through this geology prior to mining will continue to flow to its natural spring location to the southwest.

7.2. Groundwater – Reclamation

Upon reclamation, when the reclaimed mine floor daylights to the southwest, all surface water will flow offsite in the same manner as the pre-mine condition. Any groundwater exposure that remains at that point will be backfilled, but no permanent groundwater exposure is anticipated.

It is anticipated that the irrigation infiltration sourced groundwater at the Kattenburg Pit will either continue to discharge from a spring southwest of the site, or a new spring may develop in the reclaimed highwall. This highwall spring is likely to occur if the whole sand and gravel deposit is successfully mined. The daylighting floor of the reclaimed condition of the mine will ensure that even if the spring moves to the reclaimed highwalls northeast of its pre-mine location, the water it discharges will still flow offsite to the southwest.

8. Water Related Permits

The permittee will maintain all necessary water related permits. This will include a stormwater discharge permit with CDPHE Water Quality Control Division and a gravel well permit with the Colo. Div. of Water Resources. The approved substitute water supply plan (SWSP) and gravel well permit application are attached as Appendix G-2

9. Water Consumption and Source

Water usage is from a combination of groundwater evaporation, aggregate production, and dust suppression. The total is estimated at 3.94 acre-ft of water a year. This water usage will be supplied via a water contract with the Middle Park Water Conservancy District for 4 acre-ft a

year. Water consumption will cease with reclamation, therefore permanent augmentation water is not needed.

All water is sourced from approved vendors and sources that meet regulatory requirements.

Appendix G-2 SWSP & Gravel Well Permit

WWE
Wright Water Engineers, Inc.
818 Colorado Avenue, Suite 307, P.O. Box 219
Glenwood Springs, Colorado 81602
(970) 945-7755 TEL
(970) 945-9210 FAX
www.wrightwater.com
e-mail: pfoster@wrightwater.com

April 15, 2024

Via Email: megan.sullivan@state.co.us

Ms. Megan Sullivan
Colorado Division of Water Resources
1313 Sherman Street, Suite 818
Denver, CO 80203

RE: Kattenburg Gravel Pit Substitute Water Supply Plan Renewal Request

Dear Ms. Sullivan:

Wright Water Engineers, Inc. (WWE), on behalf of Oldcastle Southwest Group, Inc. d/b/a United Companies (United), is requesting a renewal of the Substitute Water Supply Plan (SWSP) for the Kattenburg Gravel Pit. The Kattenburg Gravel Pit SWSP was previously approved by the Colorado Division of Water Resources (DWR) pursuant to C.R.S. §37-90-137(11) for a one-year SWSP with an approval period of June 7, 2023, through May 31, 2024. United would like to request the renewal as a two-year SWSP. The Kattenburg Gravel Pit is located near Granby, Colorado in Grand County.

The requested approval period for this SWSP renewal request is for two years, June 1, 2024, through May 31, 2026. A payment for $257 accompanies this SWSP renewal request.

Very truly yours,

WRIGHT WATER ENGINEERS, INC.

By 

Peter R. Foster, P.E.
Vice-President

cc: Tyra Bartuska, Environmental Specialist, United Companies

Attachment: Kattenburg Gravel Pit Substitute Water Supply Plan

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APPENDICES

Kattenburg Gravel Pit Substitute Water Supply Plan

1.0 INTRODUCTION

The Kattenburg Gravel Pit, owned and operated by United Companies, Inc. (United), is located in Section 33, Township 2 North, Range 76 West of the Sixth Principal Meridian in Grand County, Colorado on land owned by Oldcastle SW Group, Inc. (see Figure 1). United has obtained a permit from the Division of Reclamation Mining and Safety (DRMS) for the proposed gravel operation (Permit No. M-2004-017). The previous Kattenburg Pit SWSP approval letter, hereafter referred to as the 2023 – 2024 SWSP, is included as Appendix A. United also holds a well permit for the gravel pit (Permit No. 88169-F) and a permit to construct a production well on-site (Permit No. 88170-F), both included in Appendix B. Finally, United holds a contract with the Middle Park Water Conservancy District (MPWCD) for 4.0 acre-feet (AF) to offset potential out-of-priority depletions associated with this SWSP, included in Appendix A.

Wright Water Engineers, Inc. (WWE) is pleased to provide the engineering analysis for a Two-Year SWSP request for the proposed mining operation.

2.0 PROJECT DESCRIPTION

United will continue to mine the Kattenburg Gravel Pit during the requested SWSP period. United has not encountered groundwater during mining processes to date. Well Permit No. 88169-F allows for up to 0.1 acres of groundwater exposure. If exposed groundwater at the site exceeds 0.1 acres, United will apply to amend the well permit.

Additionally, United may elect to wash some or all of the mined gravel and may use water on-site and off-site for dust control purposes. However, United has not yet constructed the water supply well on-site for gravel washing and dust control water. United may elect to construct the well on-site during the requested SWSP plan period. This SWSP request covers depletions associated with the operation of the future well.

Prior to the construction of the well, United will use water purchased from legal suppliers to support gravel washing or dust control needs.

3.0 WATER DEMANDS AND DEPLETIONS

Water depletions at the Kattenburg Gravel Pit will result from evaporation, dust suppression, and aggregate production.

3.1 Pit Pond Evaporation

During the requested approval period, United anticipates exposing a maximum of 0.1 acres of groundwater. United has not yet exposed groundwater at the site as shown on Figure 1.

The gross annual evaporation for the Pit is equal to 35 inches per the NOAA Technical Report NWS 33. The average precipitation for the nearby Grand Lake 6 SSW climate station is 13.99 inches per year. The calculated net water evaporation rate, accounting for effective precipitation and icing, is equal to 25.24 inches per year. Assuming and exposed groundwater surface area of 0.1 acres, annual evaporative depletions are equal to 0.21 AF (see Table 1, Column 6).

3.2 Aggregate Production

United plans to produce 150,000 tons of aggregate per year during the requested plan period. To date, United has not exposed groundwater at the site during mining and thus material is being produced above the groundwater table. However, for the purposes of this SWSP, United assumes that all gravel will be washed. According to the DWR, aggregate production water depletions for gravel mined above the groundwater table and subsequently washed are two percent of the produced material weight. Therefore, aggregate production depletions during each year of the requested approval period are 0.21 AF (see Table 1, Column 7).

3.3 Dust Suppression

United anticipates using 1.5 AF annually during the requested plan period for dust suppression (see Table 1, Column 9). Water used for dust suppression is assumed to be 100 percent consumptive and may be used on-site or off-site.

3.5 Lagged Water Depletions

To determine the lagged effect of gravel operations on the nearby Fraser River, WWE developed a unit response function (URF) in accordance with the parameters outlined in the approved 2023 – 2024 SWSP (see Appendix A). The parameters used are listed below:

- Transmissivity: 35,000 gallons per day per foot (gpd/ft)
- Specific Yield: 0.2
- Distance to Stream (X): 2,300 feet
- Aquifer Width (W): 2,800 feet

Monthly lagged depletions are shown in Column 11 of Table 1. Additionally, the URF and lagged depletions analysis can be found in Appendix C.

3.6 Out-of-Priority Lagged Depletions

For the purposes of this SWSP request, WWE assumes that all lagged depletions are out-of-priority.

4.0 REPLACEMENT WATER SUPPLY

United currently holds a contract in the amount of 4 AF from MPWCD for replacement water supplies available from Windy Gap Reservoir, Wolford Mountain Reservoir, and Sunset Ridge Pond in the event of a downstream call (see Appendix A). Water will primarily be released from Windy Gap Reservoir and Wolford Mountain Reservoir to offset out of priority depletions in the event of a call. Windy Gap Reservoir is an in-line reservoir located at the confluence of the Colorado River and Fraser River. Thus, no transit losses are assessed for water delivered from Windy Gap Reservoir. If water is delivered from Wolford Mountain Reservoir, located along Muddy Creek 8 miles upstream of its confluence with the Colorado River, WWE assumes a transit loss of 0.25% per mile in accordance with the 2023 – 2024 SWSP.

In the event of a call on the Fraser River by the Colorado Water Conservation Board's instream flow water right (ISF) from Crooked Creek to the confluence with the Colorado River, water will

be released from Sunset Ridge Pond which is located 9 miles upstream of the Pit. If water is delivered from Sunset Ridge Pond, WWE assumes a transit loss of 0.25% per mile in accordance with the 2023 – 2024 SWSP.

5.0 SUMMARY

United is requesting a renewal of the Kattenburg Pit SWSP as a two-year SWSP to cover industrial water depletions associated with the Kattenburg Gravel Pit. Total lagged water Depletions associated with the pit are estimated to be 3.94 AF annually (see Table 1, Columns 10 and 11). United has obtained a water contract with the MPWCD in the amount of 4.0 AF to prevent injury to the Fraser River and Colorado River.

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Tables

Table 1
Kattenburg Gravel Pit
Water Balance
United Companies

Assumptions			
Parameter	**Value**	**Unit**	**Source**
Evaporation Rate	35.0	in/yr	CDWR Gravel Pit SWSP Guidelines (2011)
Maximum Exposed Groundwater Area	0.1	acres	United Companies
Transit Loss Rate	0.25%	%/mile	Previous SWSP Request
Wolford Mountain Transit Distance	8	miles	
Sunset Ridge Transit Distance	9	miles	

Month	Depletions											Replacements					Water Balance
	% of Annual Evaporation	Gross Monthly Evaporation	Gross Average Precipitation	Average Maximum Temperature	Net Evap. Rate	Evaporative Depletions	Mined Product	Gravel Washing Water Use	Dust Control Water Use	Total Depletions	Total Lagged Depletions	Wolford Mountain Release	Wolford Mountain Credit	Windy Gap Release/Credit	Sunset Ridge Release	Sunset Ridge Credit	
	(%)	(inches)	(inches)	(°F)	(inches)	(acre-feet)	(tons)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**
Jan	1%	0.35	1.02	27.1	0.00	0.00	0	0.00	0.00	0.00	0.37	0.00	0.00	0.37	0.00	0.00	0.00
Feb	3%	1.05	0.80	31.0	0.00	0.00	0	0.00	0.00	0.00	0.36	0.00	0.00	0.36	0.00	0.00	0.00
Mar	6%	2.10	0.96	38.2	1.43	0.01	0	0.00	0.00	0.01	0.34	0.00	0.00	0.34	0.00	0.00	0.00
Apr	9%	3.15	1.18	47.8	2.32	0.02	7,500	0.11	0.08	0.21	0.32	0.00	0.00	0.32	0.00	0.00	0.00
May	13%	4.38	1.41	59.2	3.39	0.03	18,750	0.28	0.19	0.49	0.30	0.00	0.00	0.30	0.00	0.00	0.00
Jun	16%	5.43	1.29	69.3	4.52	0.04	22,500	0.33	0.23	0.60	0.29	0.00	0.00	0.29	0.00	0.00	0.00
Jul	16%	5.60	1.56	74.9	4.51	0.04	26,250	0.39	0.26	0.68	0.29	0.00	0.00	0.29	0.00	0.00	0.00
Aug	13%	4.55	1.66	72.9	3.39	0.03	26,250	0.39	0.26	0.67	0.30	0.00	0.00	0.30	0.00	0.00	0.00
Sep	11%	3.85	1.29	66.3	2.95	0.02	22,500	0.33	0.23	0.59	0.32	0.00	0.00	0.32	0.00	0.00	0.00
Oct	8%	2.63	0.94	55.4	1.97	0.02	18,750	0.28	0.19	0.48	0.34	0.00	0.00	0.34	0.00	0.00	0.00
Nov	4%	1.40	0.90	39.3	0.77	0.01	7,500	0.11	0.08	0.20	0.36	0.00	0.00	0.36	0.00	0.00	0.00
Dec	2%	0.53	0.98	29.4	0.00	0.00	0	0.00	0.00	0.00	0.37	0.00	0.00	0.37	0.00	0.00	0.00
Total	**100%**	**35.00**	**13.99**	**-**	**25.24**	**0.21**	**150,000**	**2.21**	**1.52**	**3.94**	**3.94**	**0.00**	**0.00**	**3.94**	**0.00**	**0.00**	**0.00**

Column Notes:

(1) Percent of annual evaporation rates for elevations that are above 6,500 feet, as per the CDWR's Gravel Pit Substitute Water Supply Plan (SWSP) Guidelines.
(2) Column (1) * Open Water Evaporation Rate (35 inches/year).
(3) The gross average precipitation at the Grand Lake 6 SSW Climate Station (data obtained from Western Regional Climate Center). Values are from 07/2022 - 06/2023.
(4) The average maximum temperature at the Grand Lake 6 SSW Climate Station (data obtained from Western Regional Climate Center). Values are from 07/2022 - 06/2023.
(5) Column (2) - (Column (3) * 70%). Note that there is no evaporation if the temperature in Column (4) is less than 32 degrees F.
(6) (Column (5) / 12) * Exposed Area (0.1 acres). Division of Column (5) by 12 is to convert the value to feet.
(7) The anticipated mined tonnage at the gravel pit.
(8) Column (7) * 2000 * 2% / (62.41 * 43,560). Per the CDWR's Gravel Pit SWSP Guidelines, 2% is lost when gravel is mined above the groundwater table and subsequently washed.
(9) The anticipated amount of water used for dust control use at the gravel pit.
(10) Column (6) + Column (8) + Column (9)
(11) Lagged depletions.
(12) Releases from Wolford Mountain.
(13) Column (12) * [1 - Transit Loss Rate (0.25% per mile) * Wolford Mountain Transit Distance (8 miles)].
(14) Releases from Windy Gap
(15) Releases from Sunset Ridge
(16) Column (15) * [1 - Transit Loss Rate (0.25% per mile) * Sunset Ridge Transit Distance (9 miles)].
(17) Column (13) + Column (14) + Column (16) - Column (11)

Figures

Date: 3/28/2024 Document Path: P:\061-052\160 - Kattenberg - Granby Pit\SWSP\2024 SWSP\Figures\Mapping\Kattenburg Pit SWSP\Kattenburg Pit SWSP.aprx

User Name: mjhatakia

WWE
Wright Water Engineers, Inc.
1666 N. Main Ave., Ste.C
Durango, CO 81301
(970) 259-7411 ph 259-8758 fx

GRAND COUNTY, COLORADO

KATTENBURG PIT SWSP - OVERVIEW MAP

UNITED COMPANIES - OLDCASTLE

PROJECT NO. 061-052.160

FIGURE 1

Appendices

Appendix A
2023 – 2024 SWSP Approval

COLORADO
Division of Water Resources
Department of Natural Resources

June 7, 2023

Mr. Jared Dains, P.E.
Applegate Group, Inc.
1490 W. 121st Avenue, Suite 100
Denver, CO 80234

Re: Kattenburg Pit Substitute Water Supply Plan, DRMS File No. M-2004-017
SE/4 of the SE/4 of Section 33, Twp. 2 North, Rng. 76 West, 6th P.M.
Water Division 5, Water District 51, Grand County
SWSP ID 9382, WDID 1407801

Approval Period: June 7, 2023 through May 31, 2024
Contact Information for Mr. Dains: 303-452-6611; *jareddains@applegategroup.com*

Dear Mr. Dains:

We have reviewed your June 30, 2022 letter and your amendment to that letter dated January 26, 2023, requesting approval of a substitute water supply plan ("SWSP") in accordance with Section 37-90-137(11), C.R.S., for a sand and gravel pit on behalf of United Companies, ("United" or "Applicant"). The mine is permitted with the Division of Reclamation, Mining, and Safety under File No. M-2004-017. The required initial application fee of $1,593 has been received and given receipt no. 10022384.

SWSP OPERATION

This SWSP seeks to replace depletions resulting from mining operations at the Kattenburg Pit, a sand and gravel mining pit located east of the Town of Granby in the SE¼ SE¼ Section 33, Township 2 North, Range 76 West in Grand County, Colorado (Figure 1). The majority of mining at the pit is expected to occur above the water table; however, a small portion of mining is expected to occur below the water table, resulting in the exposure of a small amount of groundwater to evaporation. The area of exposed groundwater is estimated to be approximately 0.1 acre. A drilled well is also proposed to be constructed on the mining site and used to supply water for the mining operations. Water from both the excavated pond and the proposed drilled well will be used to wash the mined material and to perform dust control operations around the site. The evaporation of groundwater and other operational uses of groundwater will result in depletions to the Fraser River, a tributary of the Colorado River.

In accordance with the letter dated April 30, 2010 (copy attached) from the Colorado Division of Reclamation, Mining, and Safety, 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.

In accordance with approach no. 1, you have indicated that a bond has been obtained for $140,000 through DRMS to assure that depletions from groundwater evaporation do not occur in the unforeseen event or events that would lead to the abandonment of the gravel pit. In addition, the Kattenburg Pit will be regraded to a final configuration described in the DRMS permit, with the constructed pond backfilled and reclaimed once mining is complete, thus eliminating any long-term injurious stream depletions related to exposure of groundwater.

The currently approved mining permit through the Division of Reclamation, Mining, and Safety (DRMS) does not contemplate exposed groundwater at the Kattenburg Pit. A technical revision to the DRMS permit to recognize such groundwater exposure must be obtained by United. A solution to address potential long-term evaporative depletions resulting from possible permanent exposure of groundwater at the site will be identified at the time the DRMS permit is modified. The existing bond is expected to be sufficient to cover backfilling of the exposed groundwater.

DEPLETIONS

The anticipated net depletions for this plan are 3.92 acre-feet per year. Evaporative loss will occur from exposed groundwater at the Kattenburg Pit. The exposed groundwater area at the site is expected to be no more than 0.1 acre during the requested approval period. Gross annual evaporation in the area is approximately 35 inches according to NOAA Technical Report NWS 33. After accounting for a historical consumptive use credit (calculated as 70% of gross monthly precipitation) that is allowed pursuant to C.R.S. §37-80-120(5) and §37-92-305(12)(a), and after accounting for periods when the exposed groundwater is expected to be iced over, the net annual evaporation is estimated to be 25.24 inches. This results in a net evaporative loss of approximately 0.21 acre-feet per year.

United anticipates mining up to 150,000 tons of product during the requested plan period. For material mined above the groundwater table, no product moisture loss is assumed if the material is not washed, but a 2% moisture content by weight is charged if the material is washed. For any material mined below the groundwater table, a 4% moisture content by weight is charged, whether the material is washed or not. The total water retained in the mined product is estimated to be 2.21 acre-feet per year. The Applicant must separately track the amount of material mined above the groundwater table versus the amount of material mined below the groundwater table.

United anticipates withdrawing 1.5 acre-feet per year for dust control use on the mining site. Evaporation and all operational water is assumed to be fully consumed. No dewatering of groundwater is anticipated at the site.

The total anticipated consumptive use at the Kattenburg Pit during the requested approval period is estimated to be 3.92 acre-feet as shown in Table 1. Due to the location of the Kattenburg Pit mining operation, stream depletions resulting from evaporation off the exposed groundwater and pumping of water from the drilled well, do not instantaneously affect the Fraser River but instead result in

lagged depletions. A Glover lagging model was constructed for the exposed groundwater using the following lagging parameters:

- Distance from pit to stream (X) = 2,300 feet (measured from pit centroid to stream)
- Aquifer Transmissivity (T) = 12,000 gallons per day per foot (per Geological Survey Water-Supply Paper 1809-G "Ground-Water Resources of North Park and Middle Park Colorado - A Reconnaissance)
- Specific Yield (S) = 0.2 (assumed)
- Aquifer Width (W) = 2,800 feet (measured from river to edge of pit through pit centroid)

After review of the proposed parameters by the Division of Water Resources' Hydrogeology group, the following parameters are approved for use in this SWSP:

Evaporation from exposed groundwater:	Drilled well:
T = 12,000 gal/day/ft	T = 12,000 gal/day/ft
s = 0.2	s = 0.2
X = 2,300 ft*	X = 1,200 ft*
W = 3,800 ft	W = 3,700 ft

*Need to adjust the distance from the Fraser River to the structure based on the as-built location.

Assuming a call year-round affecting this reach of the Fraser River, the lagged stream depletions are equal to the augmentation requirement that require replacement to prevent injury to senior water rights. Typically, the call on the Fraser River emanates far downstream on the Colorado River at the Shoshone Power Plant and/or at the Grand Valley Canal, but in certain limited circumstances the Colorado Water Conservation Board ("CWCB") can place a call for its instream flow right ("ISF") on the Fraser River located between the confluence with Crooked Creek and the confluence with the Colorado River and/or its instream flow right on the Colorado River located between the Windy Gap point of diversion and the confluence with the Williams Fork River.

REPLACEMENT

As identified in the SWSP request, United has entered into a short-term contract (copy of lease attached) with Middle Park Water Conservancy District ("MPWCD") for up to 4 acre-feet of replacement water that will primarily be released from either Wolford Mountain Reservoir or Windy Gap Reservoir. It should be noted that MPWCD's Windy Gap water is actually stored and released out of Granby Reservoir. When releases are made from Wolford Mountain Reservoir, an estimated transit loss at the rate of 0.25% per mile will be assessed.

MPWCD will also make water in Sunset Ridge Pond available to United in the event CWCB has placed a call on its ISF on the Fraser River. Sunset Ridge Pond is located adjacent to the Fraser River near Tabernash approximately 9 miles upstream of the Kattenburg Pit. When releases are made from Sunset Ridge Pond, an estimated transit loss at the rate of 0.25% per mile will be assessed.

The SWSP request goes on to state, "As indicated in the letter, MPWCD will also make water in Sunset Ridge Pond available to United in the certain rare circumstances when the CWCB has placed a call on its instream flow right on the Fraser River." According to the June 7, 2022 letter from MPWCD:

> *"In the event of a call on the Fraser River upstream of these sources, water may be released from MPWCD supplies in Sunset Ridge Pond, only to the extent needed to meet such call on behalf of Applicant. MPWCD makes no guarantees that water will be available for release from Sunset Ridge Pond, nor that the water released from any sources listed above will be suitable for Applicant's uses. In the event of a shortage of supplies in Sunset Ridge Pond, MPWCD will prioritize releases on behalf of existing permanent MPWCD contractees before any releases will be made pursuant to this short-term request...It is the Applicant's responsibility to ensure that this short-term contract will be acceptable to the Division Engineer to prevent injury to other water rights holders. Furthermore, the Applicant will be responsible for ensuring that the releases associated with this request are satisfactory to the Division Engineer."*

It should be noted that there is a considerable likelihood that Granby Reservoir spills this year, which would potentially result in a limited or non-existent supply of Windy Gap water stored in Granby Reservoir for MPWCD to release for its contractees. If that were the case, MPWCD would have to rely on its local supplies, including Sunset Ridge Pond, to satisfy its existing permanent contractees, which would be prioritized over United's short-term contract for replacement water.

Based on this year's snowpack and streamflow conditions, it appears unlikely that the Fraser River ISF will call this year; however, there is a greater likelihood that the Colorado River ISF below Windy Gap will place a call, since shortages to the Colorado River ISF are influenced more by the amount/frequency of any monsoon precipitation events that occur this year, and are less influenced by the past season's snowpack levels.

Due to the potential unavailability of local replacement water, the Division Engineer's Office would consider hauling water from a legal supplier to be an acceptable source of replacement water for the purposes of replacing out-of-priority depletions during times of call when MPWCD is unable to provide a local replacement supply under United's short-term contract. At times when MPWCD is unable to provide a local replacement supply to replace all out-of-priority depletions under United's short-term contract, United is required to provide an alternate source of legal replacement water (through hauling or other sources) to ensure all out-of-priority depletions are replaced in time, location, and amount. Any alternate source of replacement water must first be approved by the Division Engineer.

As shown in Table 1, the lease secured from MPWCD is expected to be sufficient to fully offset the projected depletions during the entire requested approval period. United will track actual exposed groundwater area, on-site aggregate production, and water use for dust control. The resulting consumptive use will be lagged to the Fraser River to determine actual depletions. Releases will be coordinated with MPWCD. An accounting form tracking actual depletions and replacements will be prepared and submitted to the Division of Water Resources on a monthly basis.

CONDITIONS OF APPROVAL

This SWSP is hereby approved pursuant to Section 37-90-137(11), C.R.S., subject to the following conditions:

1. This SWSP shall be valid June 7, 2023 through May 31, 2024, unless otherwise revoked or superseded by decree. If this SWSP will not be made absolute by a water court action by the SWSP expiration date, a renewal request must be submitted to this office with the statutory fee (currently $257) no later than **March 1, 2024**. If a renewal request is received after the expiration of this SWSP, it may be considered a request for a new SWSP, in which case the $1,593 filing fee will apply.

2. A well permit must be obtained in accordance with §37-90-137(2), C.R.S., and this SWSP for the groundwater depletions associated with evaporation from the pit pond and for the drilled well. The provisions of §37-90-137(2), C.R.S., prohibit the issuance of a permit for a well to be located within 600 feet of any existing well, unless the State Engineer finds that circumstances so warrant after a hearing in accordance with the procedural rules in 2CCR402-5. The hearing will be waived if you are able to obtain statements from the owners of all wells within 600 feet, verifying that they have no objection to your use of the proposed well. Permit applications with receipt nos. 10023367 for the pond well permit and 10026197 for the drilled well have been received and will be acted on subsequent to issuance of this SWSP.

3. The total surface area of the groundwater exposed at the Kattenburg Pit site must not exceed 0.1 acre, which results in a maximum evaporative annual loss of 0.21 acre-feet.

4. The annual water used for dust control at the Kattenburg Pit site shall not exceed 1.5 acre-feet, the total product mined at the Kattenburg Pit site shall not exceed 150,000 tons per year (which results in 2.21 acre-feet of water lost with the mined aggregate).

5. Total consumption at the Kattenburg Pit site must not exceed these aforementioned amounts unless an amendment is first made to this SWSP.

6. Approval of this SWSP is for the purposes and amounts stated herein. Additional uses and/or consumption of the water that is subject to this SWSP will be allowed only if a new SWSP is approved for those additional uses and/or amounts.

7. All water use from the pond and the drilled well for dust control and material washing purposes shall be measured in a manner acceptable to the division engineer.

8. The replacement water that is the subject of this SWSP cannot be sold or leased to any other entity. As a condition of subsequent renewals of this SWSP, the replacement water must be appurtenant to this site until a plan for augmentation is obtained. All replacement water must be concurrent with depletions in quantity, timing, and locations.

9. In the event MPWCD is unable to provide a local replacement supply of water under United's short-term contract that adequately replaces out-of-priority depletions above the call, United

is required to provide an alternate source of legal replacement water (through hauling or other sources) to ensure all out-of-priority depletions are replaced in time, location, and amount. Any alternate source of replacement water must first be approved by the Division Engineer prior to use pursuant to this SWSP.

10. The Applicant must replace all out-of-priority depletions resulting from operation under this SWSP, including those lagged depletions that occur to the stream after the expiration date of this SWSP.

11. Conveyance loss for delivery of augmentation water *to the Colorado River or the Fraser River* is subject to assessment and modification as determined by the Division Engineer.

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 with the accounting forms submitted to the division engineer and water commissioner.

13. The Applicant must provide adequate accounting (including, but not limited to diversions, depletions, and river calls) on a monthly basis. **The accounting must be submitted to the Division Engineer via the online submittal tool.** Please contact *James Kellogg (james.kellogg@state.co.us)* to set up an account with the subject line "Kattenburg Pit SWSP". Accounting must be submitted within 10 days after the end of the month for which the accounting applies. Accounting and reporting procedures are subject to approval and modification by the Division Engineer.

14. **To ensure that depletions from ground water evaporation do not occur in the unforeseen event or events that would lead to the abandonment of the pit, a bond has been obtained for $140,000 through DRMS for reclamation of the pit. In addition, the Kattenburg Pit is proposed to be regraded to a final configuration described in the DRMS permit, with the constructed pond backfilled and reclaimed, once mining is complete, thus eliminating any long-term injurious stream depletions related to exposure of groundwater.**

15. 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 use of water under this SWSP must cease immediately.

16. In accordance with amendments to §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 senior appropriators. As such, water quality data or analysis may be requested at any time to determine if the water quality is appropriate for downstream water users.

17. 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.

Should you have any questions regarding this SWSP, please contact James Kellogg, Augmentation Plan Coordinator, in Glenwood Springs at (970) 945-5665, or Mike Bender in Denver at (303) 866-3581.

Sincerely,

Jeff Deatherage, P.E.
Chief of Water Supply

Attachment: Figure 1, Table 1
WDWCD Contract
April 30, 2010 letter from the Colorado Division of Reclamation, Mining, and Safety

cc: James Kellogg, Augmentation Plan Coordinator, Division 5
Susan Avre, Water Commissioner, District 51
Division of Reclamation, Mining, and Safety

JD/GMB: Kattenburg Pit M-2004-017, 2023-24.docx

Date Saved: 1/25/2023 5:14:58 PM
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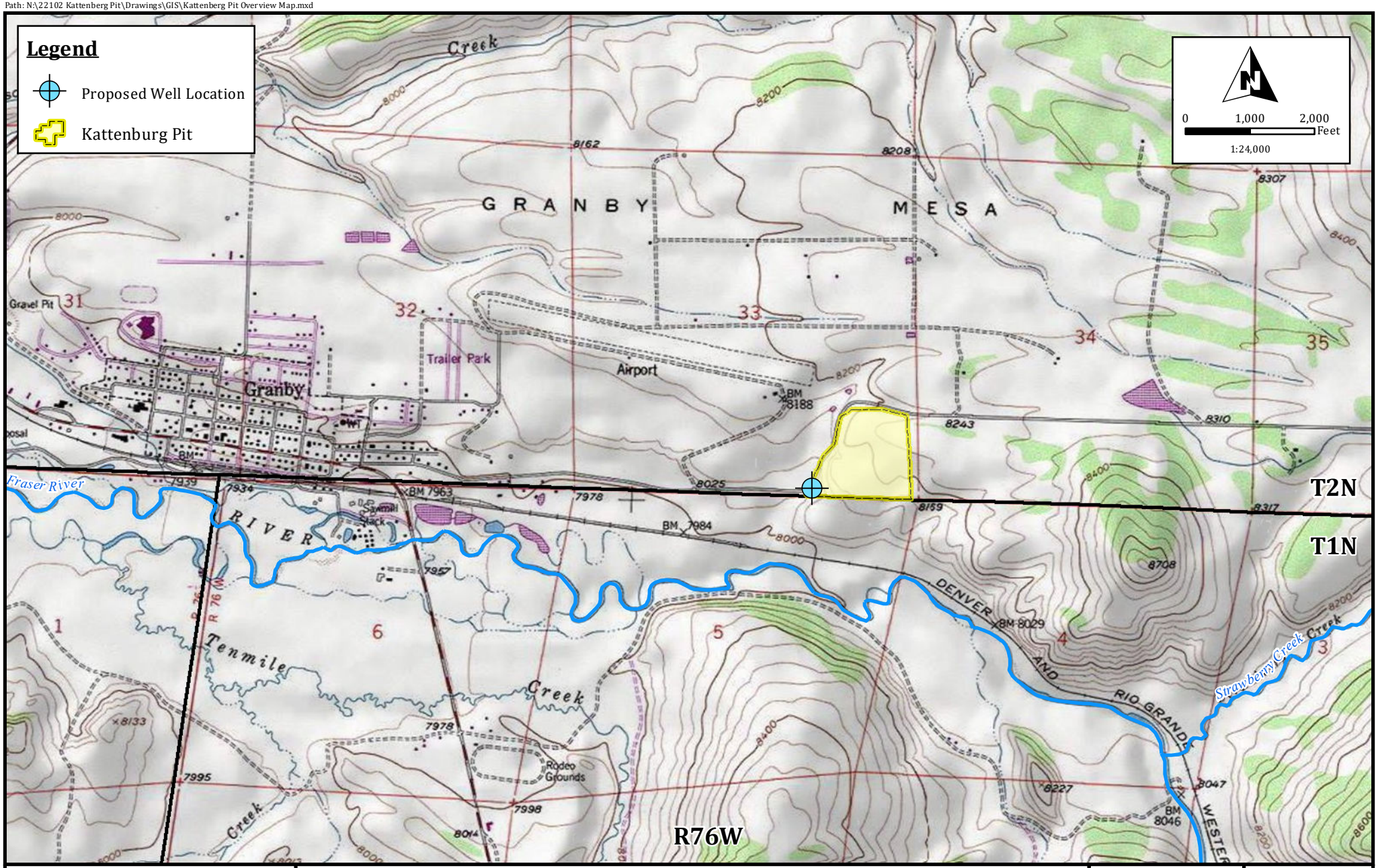

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KATTENBURG PIT SWSP

Overview Map

Date: 24 Jun 2022

Job #: 22-102

Drawn By: JMD

Figure: 1

Of: 1

Table 1

Kattenburg Pit Substitute Water Supply Plan

2023 Plan Year Water Balance

Date Revised: 1/26/2023

AG Job #: 22-102

All values in ac-ft unless noted

	Kattenburg Pit Depletions							Kattenburg Well Depletions					Replacements						
Month	% of Annual Evap (A)	Gross Monthly Evap [in] (B)	Gross Average Precip [in] (C)	Average Max Temp [°F] (D)	Water Evap Rate [in] (E)	Evaporative Losses (F)	Lagged Depletions (G)	Mined Product [tons] (H)	Water Lost in Mined Product (I)	Dust Control Water Use (J)	Total Water Use (K)	Lagged Depletions (L)	Wolford Mountain Release (M)	Wolford Mountain Credit (N)	Windy Gap Release / Credit (O)	Sunset Ridge Release (P)	Sunset Ridge Credit (Q)	Total Depletions (R)	Water Balance (S)
Mar-23	6.0%	2.10	0.96	38.2	1.43	0.01	0.02	0	0.00	0.00	0.00	0.00	0.0	0.00	0.02	0.0	0.00	0.02	0.00
Apr-23	9.0%	3.15	1.18	47.8	2.32	0.02	0.02	7,500	0.11	0.08	0.19	0.19	0.0	0.00	0.21	0.0	0.00	0.20	0.01
May-23	12.5%	4.38	1.41	59.2	3.39	0.03	0.02	18,750	0.28	0.19	0.46	0.46	0.0	0.00	0.49	0.0	0.00	0.48	0.01
Jun-23	15.5%	5.43	1.29	69.3	4.52	0.04	0.02	22,500	0.33	0.23	0.56	0.56	0.0	0.00	0.58	0.0	0.00	0.57	0.01
Jul-23	16.0%	5.60	1.56	74.9	4.51	0.04	0.02	26,250	0.39	0.26	0.65	0.65	0.0	0.00	0.68	0.0	0.00	0.66	0.02
Aug-23	13.0%	4.55	1.66	72.9	3.39	0.03	0.02	26,250	0.39	0.26	0.65	0.65	0.0	0.00	0.68	0.0	0.00	0.67	0.01
Sep-23	11.0%	3.85	1.29	66.3	2.95	0.02	0.02	22,500	0.33	0.23	0.56	0.56	0.0	0.00	0.59	0.0	0.00	0.57	0.02
Oct-23	7.5%	2.63	0.94	55.4	1.97	0.02	0.02	18,750	0.28	0.19	0.46	0.46	0.0	0.00	0.49	0.0	0.00	0.48	0.01
Nov-23	4.0%	1.40	0.90	39.3	0.77	0.01	0.02	7,500	0.11	0.08	0.19	0.19	0.0	0.00	0.21	0.0	0.00	0.20	0.01
Dec-23	1.5%	0.53	0.98	29.4	0.00	0.00	0.02	0	0.00	0.00	0.00	0.00	0.0	0.00	0.02	0.0	0.00	0.02	0.00
Jan-24	1.0%	0.35	1.02	27.1	0.00	0.00	0.02	0	0.00	0.00	0.00	0.00	0.0	0.00	0.02	0.0	0.00	0.02	0.00
Feb-24	3.0%	1.05	0.80	31.0	0.00	0.00	0.02	0	0.00	0.00	0.00	0.00	0.0	0.00	0.02	0.0	0.00	0.02	0.00
Total	100.0%	35.00	13.99	-	25.24	0.21	0.21	150,000	2.21	1.50	3.71	3.71	0.0	0.00	4.0	0.0	0.00	3.92	0.09

Notes:

(A) % of Annual Evap rates for elevations above 6,500 feet per the CDWR's Gravel Pit SWSP Guidelines
(B) = (A) * (Open Water Evaporation Rate)
(C) Gross average precipitation at the Grand Lake 6 SSW climate station per https://wrcc.dri.edu/summary/Climsmco.html
(D) Average maximum temperature at the Grand Lake 6 SSW climate station per https://wrcc.dri.edu/summary/Climsmco.html
(E) = (B) - (C) * 70%; no evaporation if (D) < 32°
(F) = (E) * (Exposed Area)
(G) = Lagged Evaporative depletions
(H) Anticipated mined tonnage at gravel pit
(I) = (H) * 2000 * (Water Lost in Mined Product) * 62.4 / 43,560
(J) Anticipated dust control use at gravel pit
(K) = (I) + (J)
(L) = Lagged Well depletions
(M) Wolford Mountain Releases
(N) = (M) * [1 - (Transit Loss Rate) * (Transit Distance)]
(O) Windy Gap Release
(P) Sunset Ridge Release
(Q) = (P) * [1 - (Transit Loss Rate) * (Transit Distance)]
(R) = (G) + (L)
(S) = (N) + (O) + (Q) - (R)

Open Water Evaporation Rate =	35	inches/yr
Exposed Area =	0.1	acres
Mined Tonnage =	150,000	tons/yr
Water Lost in Mined Product =	2%	by weight
Dust Control Volume =	1.50	ac-ft/yr
Transit Loss Rate =	0.25%	per mile
Wolford Mountain Transit Distance =	8	miles
Sunset Ridge Transit Distance =	9	miles

MIDDLE PARK WATER CONSERVANCY DISTRICT

www.middleparkwcd.com
P.O. Box 145, Granby, CO 80446
(970)725-3460

June 7, 2022

Sent via Email to:

Oldcastle SW Group, Inc., dba United Companies
c/o Jared Dains, jareddains@applegategroup.com

Dear Mr. Dains,

This letter confirms that Oldcastle SW Group, Inc., dba United Companies' request for short-term augmentation water from Middle Park Water Conservancy District ("MPWCD") is approved in the amount of 4.0 acre-feet, for use in connection with the operation of the Kattenberg Gravel Pit located East of Granby. The water requested will be available, as set forth in further detail below, upon receipt of the fee of $4,000 ($1,000 per acre foot of water). A separate invoice for this amount will be provided by MPWCD. The term of this short-term contract is for one calendar year following receipt of payment in full.

As discussed at the regular meeting of the MPWCD Board of Directors on April 13, 2022, the water for this short-term request will be made available from Windy Gap or Wolford Mountain Reservoir supplies. In the event of a call on the Fraser River upstream of these sources, water may be released from MPWCD supplies in Sunset Ridge Pond, only to the extent needed to meet such call on behalf of Applicant. MPWCD makes no guarantees that water will be available for release from Sunset Ridge Pond, nor that the water released from any sources listed above will be suitable for Applicant's uses. In the event of a shortage of supplies in Sunset Ridge Pond, MPWCD will prioritize releases on behalf of existing permanent MPWCD contractees before any releases will be made pursuant to this short-term request. MPWCD acknowledges that the rate charged for this short-term request is higher than the typical rates charged for contracts that are limited to Windy Gap and Wolford Mountain supplies only. The higher rate is charged to account for additional administrative expenses involved with the potential release of water from Sunset Ridge Pond. In the event that no water is released on Applicant's behalf from Sunset Ridge Pond, MPWCD will refund to Applicant a total of $1,245.76, ($311.44 per acre foot, which is the difference between the $1,000/af charge set forth herein and $688.56/af, the 2023 rate for Wolford Mountain water). No refund or credit will be issued for any unused Windy Gap water stored in Granby Reservoir or water from Wolford Mountain remaining at the end of the one-year term of this request.

It is the Applicant's responsibility to ensure that this short-term contract will be acceptable to the Division Engineer to prevent injury to other water rights holders. Furthermore, the Applicant will be responsible for ensuring that the releases associated with this request are satisfactory to the

Division Engineer. Prior to the release of water pursuant to this request, the Applicant shall provide to Kristina Wynne at BBA Water Inc., a schedule of the estimated monthly depletion volumes to be augmented so that the appropriate releases can be made.

Please don't hesitate to let us know if you have any questions or if you need additional information at this time.

Take care,

Katie Randall
Associate Attorney, The Whitmer Law Firm, LLC

Cc: Kristina Wynne and Kent Whitmer

Appendix B
Kattenburg Pit and Production Well Permits

COLORADO
Division of Water Resources
Department of Natural Resources

WELL PERMIT NUMBER 89564-F
RECEIPT NUMBER 10037608

ORIGINAL PERMIT APPLICANT(S)

UNITED COMPANIES (TYRA BARTUSKA)

AUTHORIZED AGENT

WRIGHT WATER ENGINEERS (HOWE, JONAH)

WRIGHT WATER ENGINEERS INC (JOHNSON, CAROL)

APPROVED WELL LOCATION

Water Division: 5 Water District: 51
Designated Basin: N/A
Management District: N/A
County: GRAND
Parcel Name: N/A
Physical Address: N/A

SE 1/4 SE 1/4 Section 33 Township 2.0 N Range 76.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone:13, NAD83)

Easting: 422939.5 Northing: 4437616.2

PERMIT TO EXPOSE WATER IN A PIT

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT
CONDITIONS OF APPROVAL

1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

2) Pursuant to Rule 3.2 of the Rules and Regulations for Water Well Construction 2 CCR 402-2, these rules do not apply to excavations made for the purpose of obtaining or prospecting for minerals or to those wells subject to the jurisdiction of the Mined Land Reclamation Board. The construction of this well shall be in compliance with all applicable municipal, county, state, and federal regulations and standards. The well or hole must be constructed to prevent contamination of surface or ground water.

3) Approved pursuant to CRS 37-90-137 (2) and (11) for the construction and operation of a well (gravel pit pond) in accordance with the substitute water supply plan approved by the State Engineer on September 26, 2024, for the Kattenburg Pit, Division of Reclamation, Mining & Safety Permit Number M-2004-017. The well (pond) shall not be operated unless it is included in a substitute water supply plan approved by the State Engineer or a plan for augmentation approved by the Water Court. The water supply plan for this pit is currently valid through May 31, 2026, and if it is not extended or if a court decree is not entered for a plan for augmentation, diversion of groundwater from this well must cease immediately.

4) The use of groundwater from this well, in addition to evaporation, is limited to product moisture loss (washing mined material) and dust control. No other use of groundwater from this well is allowed unless a permit therefore is approved.

5) The total surface area of exposed groundwater at the site is limited to a maximum of 0.1 acre (which results in a maximum evaporative loss of 0.21 acre-foot per year), and may not exceed the amount covered under a water court approved plan for augmentation or substitute water supply plan approved by the State Engineer.

6) The annual amount of groundwater to be appropriated for operational purposes (water lost with the mined product and dust control) in combination with the Kattenburg Pit drilled well, shall not exceed 3.71 acre-feet or the amount covered under a water court approved plan for augmentation or substitute water supply plan approved by the State Engineer.

7) The owner shall mark the well (gravel pit pond) in a conspicuous place with well permit number(s) and court case number(s) as appropriate. The owner shall take necessary means and precautions to preserve these markings.

8) Applicants shall install and maintain at their expense necessary meters, gauges, or other measuring devices as required by the Division Engineer and shall report at reasonable times as required by the Division Engineer the readings of such meters, gauges or other measuring devices.

9) Pursuant to Rule 9.3.3 of the Water Well Construction Rules, groundwater ponds and gravel pit wells are exempt from the minimum well construction and location standards except for contamination considerations as stated in the Rule. The owner shall take necessary means and precautions to prevent contaminants from entering the groundwater pond or gravel pit well.

10) Pursuant to Rule 17.1.5 of the Water Well Construction Rules, the owner shall submit, after initiation of construction, site plan and cross section drawings showing the extent of intended excavation, the maximum depth of the pit or pond, the initial static water level, and the date of initial groundwater exposure to the atmosphere.

11) The boundaries of the gravel pit pond shall be more than 600 feet from any existing well, completed in the same aquifer, that is not owned by the applicant.

WELL PERMIT NUMBER 89564-F **RECEIPT NUMBER 10037608**

NOTE: By Order of the State Engineer, well permit no. 88169-F is expired.

Issued By JUSTINA MICKELSON

Date Issued: 10/10/2024

Expiration Date: 10/10/2025

Appendix C
Lagged Depletions Summary

Appendix C
Lagged Depletions Summary

URF for Kattenburg Pit			
Glover Assumptions			
Transmissivity =	35,000 gpd/ft		
Specific Yield =	0.2		
Distance to Stream (X) =	2,300 ft		
Aquifer Width (W) =	2,800 ft		
URF		**Inverted URF**	
Month	**URF**	**Month**	**URF**
1	6.2%	12	6.7%
2	6.6%	11	7.2%
3	8.6%	10	7.8%
4	9.9%	9	8.4%
5	10.2%	8	9.0%
6	10.0%	7	9.5%
7	9.5%	6	10.0%
8	9.0%	5	10.2%
9	8.4%	4	9.9%
10	7.8%	3	8.6%
11	7.2%	2	6.6%
12	6.7%	1	6.2%
Total	100.0%	**Total**	100.0%

General Notes:

(1) URF dveveloped using AWAS Software.

(2) Lagging analysis parameters obtained from previously approved SWSP.

Month	Depletions (AF)	Lagged Depletions (AF)
Jan	0.00	
Feb	0.00	
Mar	0.01	
Apr	0.21	
May	0.49	
Jun	0.60	
Jul	0.68	
Aug	0.67	
Sep	0.59	
Oct	0.48	
Nov	0.20	
Dec	0.00	
Jan	0.00	0.37
Feb	0.00	0.36
Mar	0.01	0.34
Apr	0.21	0.32
May	0.49	0.30
Jun	0.60	0.29
Jul	0.68	0.29
Aug	0.67	0.30
Sep	0.59	0.32
Oct	0.48	0.34
Nov	0.20	0.36
Dec	0.00	0.37
Total	**3.94**	**3.94**