Environment, Inc.

LARRY E. O'BRIAN
FOUNDER

STEVAN L. O'BRIAN
PRESIDENT

7985 VANCE DRIVE, SUITE 205A
ARVADA, COLORADO 80003
303-423-7297
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June 20, 2012

Mr. Eric Scott
Division of Reclamation, Mining & Safety
1313 Sherman St., #215
Denver, CO 80215

Dear Eric;

RE: L.G. Everist, Inc.
Fort Lupton Sand and Gravel, Permit # M-1999-120
Adequacy Response #1

On behalf of our client L.G. Everist, Inc., I will respond to your May 30, 2012 adequacy review letter as needed in the order and number format presented in that document.

Exhibit C - Pre-Mining and Mining Plan Maps (Rule 6.4.3)

One or more maps may be necessary to legibly portray the following information:

(b) the name and location of all creeks, roads, buildings, oil and gas wells and lines, and power and communication lines on the area of affected land and within two hundred (200) feet of all boundaries of such area; While the overall quality of the maps submitted is very good, they contain so much information as to be a bit difficult to read - especially in black and white. Please present the Structure/ROW information on a separate map that correlates with the Structure/Utility and ROW information included in Exhibit - S.

The third map exhibit in the C-map series is titled **MAP EXHIBIT C-2 STRUCTURES**. The Affected Land/Permit boundary line, roads and water features have been left on the map for reference. I re-scaled the map in the hopes it will be easier to read. Each structure owner was given an alpha label to save map space and then the alpha label was attached to the structure on the map where appropriate.

Exhibit E - Reclamation Plan (Rule 6.4.5)

D.R.M.S. has considered the tiered reclamation proposed by the operator regarding the above statement. DRMS also understands the desire to clarify what state will constitute fully reclaimed for release of mined cells for the post mining land use of municipal water storage. DRMS will consider the completed cells reclaimed for release as developed water storage when the following conditions are met:

1 All bank sloping must be completed to the stated 3:1 slopes or flatter.

2 All areas that are above the high water line, and are not graveled access roadways, must have the required depth of topsoil fully replaced and prepped for seeding.

3 All top-soiled areas will be seeded with the seed mix described in AM-02, and effective weed control measures must be implemented until the cell is released from the permit area. However, establishment of full revegetation will not be required for release if "reasonable assurance" that development for the approved post mining land use will continue (such as a completed sales contract between the operator and the party that will be taking over the development of the water storage cells or other similar documentation) can be provided.

This corresponds fairly closely with the second option presented in the AM02 submittal, but a notarized letter from the final owner tied to their development schedule is not required for release if the previous conditions have been met.

Your description above is more eloquent then my attempt and describes what we intended in Option 2. However, Option 1 was proposed to save the cost for topsoiling and seeding the above-water area if they are just going to be disturbed during reservoir development shortly after seeding. At $914.95+ per acre this could be a substantial waste of financial resources that would serve no purpose especially if seeding was completed just prior to development beginning. For example, L.G. Everist, Inc. has completed items 1 and 2 on the list above and are waiting for the planting window to open, but Aurora wants to start reservoir development before that happens. According to item 3, the seed has to be planted before the Division will release the site. This will either delay Aurora (not likely to happen) or cause Everist to incur an unnecessary expense to get the site released that serves no purpose. Therefore, we would like to keep the option available of not topsoiling and seeding areas if/when Aurora wants to immediately start development (within 3-6 months).

Topsoiling - specify anticipated minimum depth or range of depths for those areas where topsoil will be replaced. Although depth of available topsoil was stated as 6-12 inches across the permit area, and there will certainly be a surplus of this material, it was never specified what the minimum depth or range of thickness would be replaced on the areas to be revegetated. Given the previous conditions, DRMS suggests a minimum topsoil replacement of 8 inches or a range of 8-12 inches.

The term "growth medium" rather then "topsoil" probably better fits the upper 6 to 12 inches of material across the site. You are correct in that there will be adequate growth medium for the above-water areas. The practice at the mine is to retain enough material from the stripped areas to reclaim any area disturbed that remains above the water table. The remaining dirt is sold. For the record L.G. Everist proposes replacing a minimum of 6 to a maximum of 10 inches, averaging 8 inches, of growth medium on the areas to be revegetated.

Exhibit G - Water Information (Rule 6.4.7)

DRMS agrees that groundwater issues are often complex interactions between a variety of factors; however, deviations from standard DRMS practice (such as the 2-foot trigger levels) must be based on defensible groundwater monitoring data and not speculation and/or circumstantial factors. The narrative provided also refers to wells such as "monitoring wells 9 and 10" but Figure G-2 does not identify any wells with these names. Please provide an updated Figure G-2 that

depicts all existing and proposed monitoring well locations for this site with identifiers that correspond to the data collected from them. Well construction diagrams and a summary of historical data should also be provided for existing monitoring wells. When are the new monitoring wells going to be installed?

Attached is a revised Figure G-2 which shows the location of all the piezometers in use at the mine and a sketch of the typical construction diagram for the wells as installed. The aerial photo date for the G-2 map is June 2010.

We agree that groundwater issues are often complex interactions between a variety of factors especially at this site. One example is with MW09 (narrative called this "monitoring well 9") that is located ≈1500 feet north of our closest slurry wall, in which the water level has gone from -7.35' to -19.42' or a 12.07 foot drop from 5/2004 to 6/2012. This was not caused by the shadow effect of the slurry wall, but rather from the dewatering done at the mining sites to the west. (Please note that this change has not impacted our neighbors or our shallow irrigation well north of the Blue Ribbon Stage.)

In 2005, the Division approved a mitigation plan and trigger point for the existing mine area. We propose keeping the approved a 2.0 foot trigger point until such time as we have had time to analyze the data collected more thoroughly to determine if the 2 foot change is appropriate for this site. While there have been some level changes above the current 2 foot limit, those events appear to be a result of seasonal changes rather than indicative of change related to the installation of the slurry walls.

Since 2004, L.G. Everist, Inc. has installed 46 piezometers (aka Monitoring wells) around the mine. Piezometers 1 thru 14 started in 2004. Piezometers 15 thru 19 were installed and monitoring started in April 2006. The most recent were installed in January 2012 so we have 6 months of data on these wells. Eight of the new wells, 35, 36, 38, 39, 40, 41, 43, and 44 were placed within the slurry wall areas to be used during certification and will not be used to monitor groundwater levels around the mine. Some of the older piezometers have been removed or damaged during slurry wall installation and are no longer used. These wells are not shown on the map. The monitoring information we have collected has not been analyzed and is in raw form.

We will provide a summary of historical data as soon as we have completed preparation of a summary per your request. We propose doing this since the amount of data is too large and confusing to be useful without some kind of analysis. Yearly review of the data collected to date has not yielded information that would trigger mitigation and from what we have determined much of the variations are counter to what the groundwater study indicated should happen. For example, Monitoring Well #2 (MW02), located on the southwest corner of the Meadows South Lake, is up gradient of the slurry wall. The groundwater study indicates that groundwater mounding would be a problem here, but since 2004 the water table has dropped as low as 16.39 feet below surface to as high as 4.17 feet below. This is range of 0.02' above to 12.20' below the first depth measured before the slurry wall was installed. Until we can explain these types of fluctuations we can not predict a fair trigger point for the mine. L.G. Everist will submit a

summary of the monitoring data with an appropriate trigger level commitment in the form of a Technical Revision to the Division by August 15, 2012. The Technical Revision will be needed since it is likely an adjustment of the trigger point will be necessary.

> This site is anticipated to, for all practical purposes; seal off approximately one mile of alluvial groundwater access to the west bank of the South Platte River. Relying on existing seasonal surface water diversions to maintain groundwater levels at current elevations is not an acceptable solution, especially as the depths of these diversions relative to the existing ground surface has not been provided. The Division will require substantial monitoring of groundwater levels along the south, west and north borders of the site and a proposal to mitigate any groundwater mounding/shadowing observed - including detailed corrective measures such as the installation of control structures such as French drains/sumps. Please provide the Division with a more specific proposal to monitor and maintain the prevailing hydraulic conditions based on historical data for the site.

The monitoring and mitigation plans in place at this time will serve the mine since it covers the surrounding lands around the existing mines. Any changes to the ground water table until mining enters the new areas will only impact land and wells owned by L.G. Everist. This gives us time to collect additional data for the areas around the mine and determine if some form of mitigation will be needed to protect off-site properties.

Attached is a copy of pages 6 and 7[1] from the adequacy response prepared by Wright Water Engineers in 2005 and a copy of a 1/25/2005 letter from L.G. Everist, Inc., outlining the existing mitigation trigger. These pages provide the necessary information regarding the currently approved plan and if more information is needed the complete Wright Water report is in the Division's file.

L.G. Everist will continue to collect data as mining progresses, adding to the historical data collected. We do not expect mining to enter the Blue Ribbon Stage or those stages south of the Meadows and Vincent Stages for at least 10 years. This will give us time to observe what impacts the existing slurry walled area is having on the groundwater table on the up gradient side to the south and the down gradient side on the north. The southern-most slurry wall in the Meadows phases will be ≈2700 feet north of the closest adjoining property owner so any mounding that may occur will be confined to the mine area.

EXHIBIT H - Wildlife Information (Rule 6.4.8):

> See comment letter included from Colorado Parks and Wildlife dated April 15, 2012.

We wish to thank Mr. Rogstad for the time the Division took to review and comment on out proposed amendment. I will comment on some of the items he raised in the order presented.

South Platte River corridor - Review of the maps shows that we propose maintaining a minimum 200 foot mining set-back from the river in the existing permit areas and for the new

[1] Source Wright Water Engineers, Inc response to D.R.M.S. Adequacy Review January 3, 2005

areas as well. Generally, the mining setback is outside the cottonwood riparian corridor. No trees will be replaced as part of the reclamation plan.

Little Dry Creek (LDC) corridor et al - The minimum setbacks along these water courses was established at 25 feet in the existing applications and we are committed to the same distance in the amendment areas. Design and layout of the reservoirs and mining areas was designed to protect the LDC vegetation corridor. In many areas agricultural practice by previous owners pushed the fields closer than 50 feet to LDC. L.G. Everist, Inc. is committed to not disturb any wetlands associated with LDC or the South Platte River. We have an agreement with the Lupton Ditch Company to protect their structure.

Preble's Meadow Mouse comment - In 2004, during the last amendment the US Fish and Wildlife service determined that this general area was not habitat for the Preble's Meadow Jumping Mouse[2]. All of the amendment area where mining will be done has been intensively farmed for many years leaving little or no native vegetation where the ute ladies tresses orchid could be.

The seed mix proposed is appropriate for the end uses projected for the site. A weed control plan is in place to manage noxious weeds.

Thank you for the tips on cleaning equipment.

Exhibit L - Reclamation Costs (Rule 6.4.12)

The bond calculation is currently under review. Please provide the perimeter distance and average depths for all cell slurry walls currently installed. You may also provide corresponding invoices for this work to substantiate actual unit costs. DRMS will also need the depth of topsoil to be replaced over the expected 132 acres that will require revegetation, and an estimate of the average push distance for that material. DRMS agrees that a phased bonding approach is appropriate for this site, however, the operator must commit to notifying DRMS **IN ADVANCE** of performing activities that will significantly impact the required bond for the site, such as installation of slurry walls, exposing more than 1500 feet of unreclaimed mining face, and disturbing any currently undisturbed areas of the permit. Other relevant information such as SEO approval of installed slurry walls or clay liners should also be transmitted as appropriate.

Attached is a Reclamation Cost Estimate providing the information you requested. As we discussed I have shown the distances and depths of the slurry walls that are complete or will be installed this summer (through October-2012), but do not have water exposed in them at this time. I have included the surface area disturbed during construction of each one.

Exhibit S - Permanent Man-made Structures (Rule 6.4.19)

DRMS acknowledges that all surrounding structure owners have been notified and provided with a damage waiver agreement – with the exception of Welco Ventures whose notification appears to have been returned as undeliverable. As required by Rule 6.4.19, Please provide sufficient information to demonstrate that the stability of any structures located within two hundred (200) feet

[2] Source September 2004 Amendment submittal pages 17 thru 24

of the affected land will not be adversely affected for structures for which signed agreements have not been received at this time.

Welco Ventures was a ROW holder named on the Blue Ribbon property title deed for a gasline ROW crossing the property in the same locations as the Duke Energy pipeline is now. We assume Welco sold their ROW to Duke Energy. Duke Energy signed the damage waiver on 3/2/12.

A slope stability analysis was prepared by Tetra Tech on 8/31/04 based on mining the slope from 1.3:1 to 1.5:1 and the Division suggested there could be communication problems between the permit and the actual practices by the mine personal. To avoid this we changed the mining method so the mining face slope will be mined at a rate of near vertical to ½:1 slope and changed the fixed setback from the property line or structure to allow for installation of slurry walls. The setback from the permit/affected lands line to the outer edge of the slurry wall is a minimum of 20 feet; the slurry wall is 3 feet wide and the mining setback is 25 feet from the center of the slurry wall to the dig line. This will leave a 46.5 foot setback from the property line to the dig line. Please review the attached sketch plat which shows the related slopes and depths discussed in this text.

In Mr. Sorenson's adequacy response letter dated 12/31/2004, he responded to the Tetra Tech letter and suggested using a friction angle of 35° (1.43:1) was more appropriate for calculating the safety factor. In lieu of redoing the report L.G. Everist choose to obtain structure agreements from the structure owners around the 2004 amendment area. In the new area we have structures where waivers have not been obtained yet. So in lieu of that we have prepared a slope stability analysis using Mr. Sorenson's suggested friction angle factor. This analysis uses a worst case scenario so that if the setback is adequate to protect the structure in that case, then it will be adequate for structures farther away. In this case the closest structure is the fence along the north side of the Vincent West Stage and the Sandstead property on the west side of the mine. The deepest point from surface to shale is 38 feet is used in the calculations. Please review the attached **Geotechnical Stability Exhibit** for details.

In conclusion, the analysis shows that the 46 foot setback is more than adequate to protect any structures not owned by L.G. Everist within 200 feet of the permit line having a safety factor of 1.22. This safety factor along with the plan to begin backfilling against the mining face as mining progresses will eliminate the likelihood that a slope failure would occur that might impact any structure.

Any letters from other commenting agencies/entities received by the Division to date have been included with this correspondence for you to review.

Office of Archaeology & Historic Preservation - We will follow their suggestions if human remains are found.

Office of the State Engineer - L.G. Everist, Inc. understands the requirement for dust control water.

LIST OF ATTACHMENTS TO THIS RESPONSE:

Exhibit C2 - Structures Map
Typical construction diagram
Copy trigger letter (2005)
Monitoring well map (G-2)
Geotechnical Stability Exhibit
Copy mitigation plan (2005)

I hope these responses have addressed the adequacy questions you had. I will place a copy of this packet with the Weld County Clerks' office as required. If you have any questions please call me.

Sincerely,
Environment, Inc

Stevan L. O'Brian
President

cc L.G. Everist, Inc.
Weld County Clerk
file

enclosures

LEGEND

- PERMIT BOUNDARY/ AFFECTED LANDS
- 200 FOOT LIMIT
- T — COMMUNICATION LINES
- OHE — OVERHEAD ELECTRIC LINES
- E — UNDER GROUND ELECTRIC LINES
- FENCE
- FO — FIBER OPTIC LINES
- S — AS BUILT SLURRY WALL
- G — GAS LINES
- FENCE
- ROW LINES
- ROADS (EXISTING GRAVEL)
- PAVED ROADS
- OIL/GAS WELLS
- GAS WELLS
- W LGE-881WBC-73' — WATER WELL
- BUILDINGS
- RIVER
- CREEK/DITCH
- IRRIGATION DITCH
- EXCLUSION AREA

N

150 0 300 600

SCALE 1" = 300'

ENCANA ENERGY GAS WELL/PUMP UNIT MURATA 4-19J

ENCANNA OIL & GAS TANKS AND GAS FACILITIES

LGE- 6639-28'

LGE-259389-MW

LUPTON BOTTOMS DITCH

IRRIGATION WATER RETURN FLOW CANAL

WELD COUNTY ROAD 18

COUNTY ROAD 18

LGE-259391-MW

LGE-259389-MW

AS-BUILT LOCATION OF SLURRY WALL PER INFO GIVEN BY TETRA TECH RMC

TOP OPERATING TANKS AND GAS FACILITIES

DODGE-158009-550'

LGE-157913-33'

LGE-66274-F-UK

LGE-142715-38'

KP KAUFFMAN GAS WELL/PUMP UNIT 1415 CORP. UNIT F-1

TOP OPERATING GAS WELL/PUMP UNIT SCHNEIDER #1

LITTLE DRY CREEK/SLATE DITCH

AS-BUILT LOCATION OF HILL/OAKLEY PIT SLURRY WALL

HILL-156312F-34'

LGE-202995-37'

LGE-259392-MW

AURORA-282792MH-75'

AS-BUILT LOCATION OF SLURRY WALL PER INFO GIVEN BY TETRA TECH RMC

LGE-66273-F-UK

TOP OPERATING GAS WELL/PUMP UNIT COUNTER 1-4D

AS-BUILT LOCATION OF HILL/OAKLEY & FT. LUPTON PIT SLURRY WALL

LGE-259383-MW

LGE-4234F-28'

AURORA-4R436MH-75'

KP KAUFFMAN TANKS AND GAS FACILITIES

KP KAUFFMAN GAS WELL/PUMP UNIT 1415 CORP. UNIT D-1

AS-BUILT LOCATION OF SLURRY WALL PER INFO GIVEN BY TETRA TECH RMC

AS-BUILT LOCATION OF SLURRY WALL PER INFO GIVEN BY TETRA TECH RMC

KP KAUFFMAN GAS WELL 1415 CORP. UNIT E-1

TOP OPERATING GAS WELL/PUMP UNIT F.B. SCHNEIDER #4

TOP OPERATING GAS WELL/PUMP UNIT DITA #1

TOP OPERATING GAS WELL/PUMP UNIT DITA #1-A (AKA - DITA #2)

KP KAUFFMAN TANKS AND GAS FACILITIES

LGE-6627A-UK

AURORA-11082FR-45'

LGE-832-R-41'

LGE-259386-MW

AS-BUILT LOCATION OF SLURRY WALL PER INFO GIVEN BY TETRA TECH RMC

LGE-259384-MW

KP KAUFFMAN OIL/GAS WELL & PUMP UNIT EWING 23-30

LUPTON BOTTOM DITCH

KP KAUFFMAN GAS WELL VINCENT UNIT #2

LGE-881WBC-73'

KP KAUFFMAN GAS WELL/PUMP UNIT VINCENT UNIT #1

ANADARKO TANKS AND GAS FACILITIES

ENCANA ENERGY GAS WELL EWING 13-30

SOUTH PLATTE RIVER

RMEC-58544F-46'

LITTLE DRY CREEK/SLATE DITCH

ANADARKO GAS WELL HG MIXON GU #2

AS-BUILT LOCATION OF SLURRY WALL

KP KAUFFMAN OIL/GAS WELL & PUMP UNIT HARRY EWING "C" NO 1

LUPTON BOTTOMS DITCH

RMEC-58541F-54'

LGE-259382-MW

ENCANA ENGERGY GAS WELL HARRY EWING #1

TOP OPERATING GAS WELL/PUMP UNIT HITCHINGS # 1

LGE-14779A-16'

LGE-

FOUNDATION ENERGY MANAGEMENT GAS WELL/PUMP UNIT VINCENT UNIT #1

KP KAUFFMAN OIL/GAS WELL & PUMP UNIT SHANNON 24-30

ANADARKO GAS WELL HIME 15-25A

TOP OPERATING OIL WELL/PUMP UNIT EWING # 2

ANADARKO GAS WELL CAMPBELL 16-25

FOUNDATION ENERGY TANKS AND GAS FACILITIES

KP KAUFFMAN TANKS AND GAS FACILITIES

ENCANA OIL & GAS TANKS AND GAS FACILITIES

RANKIN

RANKIN-148826-300'

RMEC-58430F-52'

AS-BUILT LOCATION OF SLURRY WALL

LGE-259380-MW

LGE-259381-MW

NOBLE ENERGY GAS WELL GNB V 36-1

NOBLE ENERGY GAS WELL GNB W 31-4

LGE-183741A-40'

NOBEL ENERGY GAS WELL GNB W 31-3

K.P. KAUFFMAN GAS WELL/PUMP UNIT SAM FUNAKOSHI A-2

ANADARKO GAS WELL SAM FUNAKOSHI GU #1

ANADARKO TANKS AND GAS FACILITIES

NOBLE ENERGY TANKS AND GAS FACILITIES

LUPTON BOTTOMS DITCH

LITTLE DRY CREEK/SLATE DITCH

LUPTON BOTTOMS DITCH

SOUTH PLATTE RIVER

LGE-187790-660'

NOBLE ENERGY GAS WELL GNB W 31-6

NOBLE ENERGY GAS WELL GNB W 31-5J

BONITA-198087-A-40'

FOUNDATION ENERGY TANKS AND GAS FACILITIES

LGE-12884R-31'

FOUNDATION ENERGY MANAGEMENT OIL/GAS WELL & PUMP UNIT FUNAKOSHI #2

NOBLE ENERGY GAS WELL GNB V 36-8

LGE-2266881-10

COUNTY ROAD 23

COUNTY ROAD 14.5

COUNTY ROAD 14.5

FOUNDATION ENERGY TANKS AND GAS FACILITIES

MAN MADE STRUCTURES ON AND WITHIN 200 FEET OF PERMIT BOUNDARY

A. Oil and Gas Structures

(A) Encana Oil & Gas (USA) Inc.
3 Gas well - Murata 4-19J,Harry Ewing #1, Ewing 13-30 flowline, 2 separators, 1-12' tanks, 10' tank

(B) Nobel Energy Inc.
6 wells and flowlines, GNB 31-6, GNB 31-3, GNB 31-5J, GNB 1-4, GNB 36-8, GNB 36-1, 5-separators, 3-tanks, vault

(C) Top Operating Company
6 wells and flowlines Dita #1A, Dita #1, Counter 1-40, Schneider #1, Schneider #4, Hitching #1, 2 - 12' tanks, concrete tank, separator

(D) K.P. Kauffman Company, Inc.
7 wells, 1415 Corp Unit "F", Vincent #1, Vincent #2, Ewing #1, Ewing 123-30, Shannon 24-30, Funakoshi A2; 7 flowlines, 4-pump units, 4-12' Tanks, 8' concrete tank, tin buildings, 5 - separators, gas burner, wire fences, oval tank.

(E) Foundation Energy Management
2 gas wells, Funakoshi #1, Amaco-Ewing #1; 2 pump units, flowline, 4-12' tanks, 2 separators

(F) Anadarko
3 gas wellsSam Funakoshi gas unit #1, Mixon #2, 1415 Corp GU "D"; 3 Flowlines, 3-12' tanks, 8' concrete tank, 2-10' tanks, 2 burners, misc. Gaslines, separator

(G) Duke Energy Field Services, Inc. & Associated Natural Gas
2-natural gaslines

(H) Colorado Interstate Gas & Western Pipelines
8-natural gaslines

(I) Panhandle Eastern Pipeline CO. (AKA Anadarko)
2-Natural gasline

(J) DCP Midstream LLC
6-natural gasline

(K) KN Energy
2-natural gasline

(L) Welco Ventures
natural gasline

B. Utilities

(M) United Power
powerlines all sides & across permit areas

(N) Xcel Energy
2-natural gaslines

(O) Century Link (Qwest)
communication lines around/across permit area

(P) Level # Communications
2-underground fiber optic lines

(Q) Rocky Mountain Energy Center LLC
3-water wells

C. Public Improvements

(R) Weld County Roads/Rights-of Way
WCR's 14.5, 18, 25, 23.5

D. Irrigation Ditches

(S) Lupton Bottom Ditch
Main line, East lateral bridges, misc. concrete headgates

E. Residences, Outbuildings Etc.

(T) Dean & Linda Sandstead
woven wire fence, water well

(U) City Of Thornton
wire fences

(V) Freddy & Lisa Dodge
House, Garage, Fences, corrals, 2-sheds, Water Well

(W) Darrell & Nelva Bearson
3 - strand wire fence, House, 2-sheds

(X) Gomer & Julane Hill Living Trust
House, buildings, Water well

(Y) City of Aurora
slurry wall lined reservoir, Water well

(Z) Ms. Penny Rankin
30' Road ROW, House, 2-3 wire fences, wood bridge over ditch 5- outbuildings, Water well

(AA) Ms. Martha Inouye
Block Barn, wood corals, 4 strand wire fence

(BB) Ms. Anna Verbeek
4 strand wire fence

(CC) Ms. Lynda Stanek
pipe fence

(DD) Bonita Douglas
house, garage, 3- sheds, woven wire fence, water well

(EE) Crystal M. Gutierrez
House, fence, 3- barns

(FF) Ms. Joyce Johnson
2 - wire fences

(GG) Roger & Judy Patterson
building, house, fences

Parts of Section 19, 30 & 31, T-2-N, R-66-W and Parts of Sections 25 & 36, T-2-N, R-67-W of the 6th P.M., County Of Weld, State Of Colorado

Map Exhibit C-2 -Structures Map

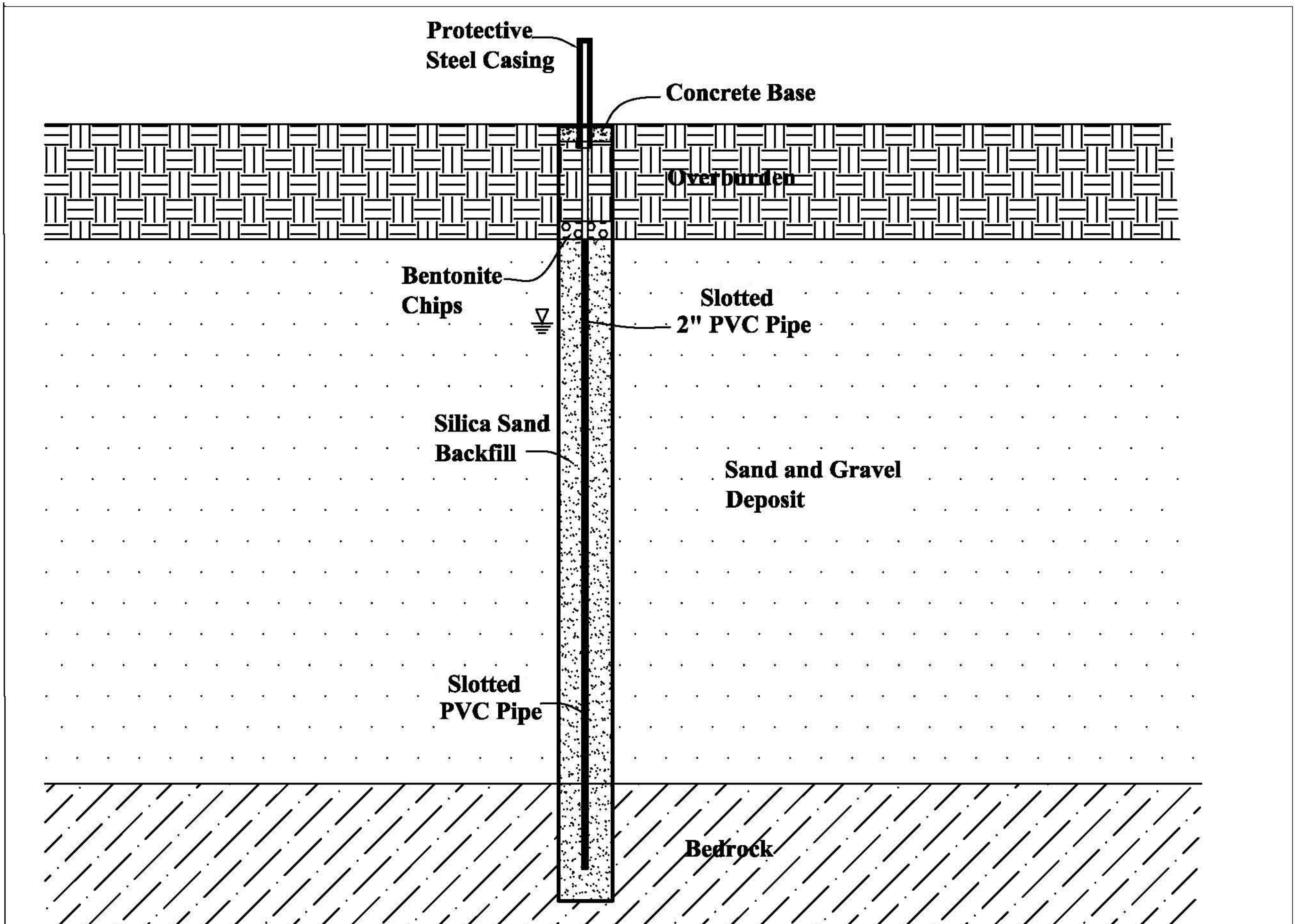
PREPARED BY: ENVIRONMENT, INC.
7985 VANCE DR., # 205A
ARVADA, CO 80003
(303) 423-7297
Environment_inc@outdrs.net

AMENDMENT FOR
FORT LUPTON SAND AND GRAVEL
PERMIT # M-1999-120

REVISIONS:	DATE:
ORIGINAL PERMIT	12/1999
AMENDMENT - ADDED 641.64 ACRES	01/2012

L.G. Everist, Inc.
7321 East 88th Avenue | Henderson, Colorado 80640
phone: (303) 287-4656 | fax: (303) 289-1348

CHECKED BY: INITIALS
DRAWN BY: ENV/SLO
SCALE: 1" = 300'
FILE NAME: FLSG-C2-Map
DATE: 6/11/2012



REV. #	BY	DATE	DESCRIPTION
A	-	-	-
B			

DRAWN BY: NSN
DATE: 3/2010
SCALE: NA
CAD FILE:

L.G. Everist, Inc.
Aggregate Producers
[illegible] Ave, Suite [illegible]
Henderson, CO, [illegible]
[illegible]

Fort Lupton Sand and Gravel

Typical Monitoring Well Installation

L.G. EVERIST, INC.

Rock Solid Since 1876
dba Andesite Rock Company

MOUNTAIN DIVISION OFFICE
7321 E. 88TH AVENUE • SUITE 200
HENDERSON, COLORADO 80640
303-287-9606
FAX 303-289-1348

CORPORATE OFFICE
300 S. PHILLIPS AVE. • SUITE 200
P.O. BOX 5829
SIOUX FALLS, SD 57117-5829
PHONE 605-334-5000
FAX 605-334-3656

January 25, 2005

Ms. Kate Pickford
Environmental Protection Specialist
Division of Minerals and Geology
1313 Sherman St., Room 215
Denver, Colorado 80203

Via Mail and Facsimile (303-832-8106)

RE: L. G. Everist, Inc. (LGE), Fort Lupton Sand and Gravel Mine, DMG #M-1999-120; Third Adequacy Review Response Letter

Dear Ms. Pickford:

We have received the Third Adequacy Review, dated January 24, 2005. Thank you for getting back to us so quickly. We accept the Division's requirement and commit as follows:

Exhibit G - Water Information

Commit to measures to be taken if trigger point is reached

> If any one of the following trigger criteria are reached, then the trigger point has been met: groundwater level drops 2 feet below the 3 month average for groundwater; a compliant is received; or vegetation is stressed. If any one or combination of these conditions occurs, LGE commits to starting the assessment/investigation of the situation immediately to identify the cause(s), and also commits to immediate implementation of appropriate temporary or permanent mitigation measures as required.

We hope with this additional commitment, that LGE has addressed all of the Division's concerns, and that the Division can now recommend approval.

Thank you for all your work and guidance. Feel free to contact me at 303-286-2247 (office), or 303-514-2778 (cell) with any questions.

Sincerely,

Lynn Mayer
Regulatory Manager

cc: Dennis Fields, L. G. Everist, Inc.
Jim Sittner, L. G. Everist, Inc.
Maureen Jacoby, Banks and Gesso
Dave Mehan, Wright Water Engineers
Kim Ogle, Weld County Planning
Weld County Clerk to the Board
Ross Bachofer

PHOTO DATE 11/2010

FIGURE G-2 (REVISED)
MONITERING WELL LOCATIONS

L.G. EVERIST, INC - FORT LUPTON S&G

GEOTECHNICAL STABILITY EXHIBIT

This information is presented to address the plan to mine within 200 feet of the structures listed in Exhibit S. The mine depth closest to any structure where no waiver agreement has been obtained is 38 feet. As mining will occur within the slurry wall lined areas the areas will be dewatered first and then mined dry. The closest structure for which there is no damage agreement is the fence line along the north side of the Vincent West Stage and the Sandstead property. In this area the setback from the permit/affected lands line to the outer edge of the slurry wall is 20 feet; the slurry wall is 3 feet wide and the mining setback is 25 feet from the center of the slurry wall to the dig line. This will leave a 46.5 foot setback from the property line to the dig line. The following information is presented using these distances to determine the safety factors that show there would be no impacts to structures within 46 feet of the areas to be mined. See attached sketch plat.

As mining approaches the perimeter of a Stage a 25 foot mining setback will be staked from the center of the slurry wall to establish the mining limit. This will leave an undisturbed section of gravel at least 46.5 feet wide along the reservoir boundaries. The mine face will progress to this line and expand along it until backfilling begins by placing compacted fill material against the mined face. The limited length of the face, the lack of water pressure and the backfilling plan assure the ½:1 face will remain stable until backfill material can be placed against it.

In 2004, Mr. Alan Sorenson reviewed a Slope Stability Report prepared for the mine by Tetra Tech. He suggested that a more appropriate friction angle of 35 degrees should be used, when non-site-specific information was available than the angle Tetra Tech used. So for this analysis the 35° angle is used to calculate the safety factor. The suggested number falls into the parameters listed in ***Rock Slopes: Design, Excavation and Stabilization, Publication No. FHWA-TS-89-045, Table 1 - Typical Soil and Rock Properties*** for Sand and Gravel, uniform grain size.

The material in the mine wall will be in-place sand and gravel and assumed to be cohesionless and having an assumed friction angle (Φ) of 35° (≈1.43:1). Using this information we have calculated the factors shown in the following table using the formula $FS = \tan\Phi \div \tan\theta$, where θ is the slope angle from the toe of the cut to the closest structure (permit line).

Slope Evaluated	Calculated slope angle θ	Factor of Safety for Φ=35°
Proposed slope (½:1)	62.84°	0.36
Slope from toe to closest structure	29.94°(1)	1.22

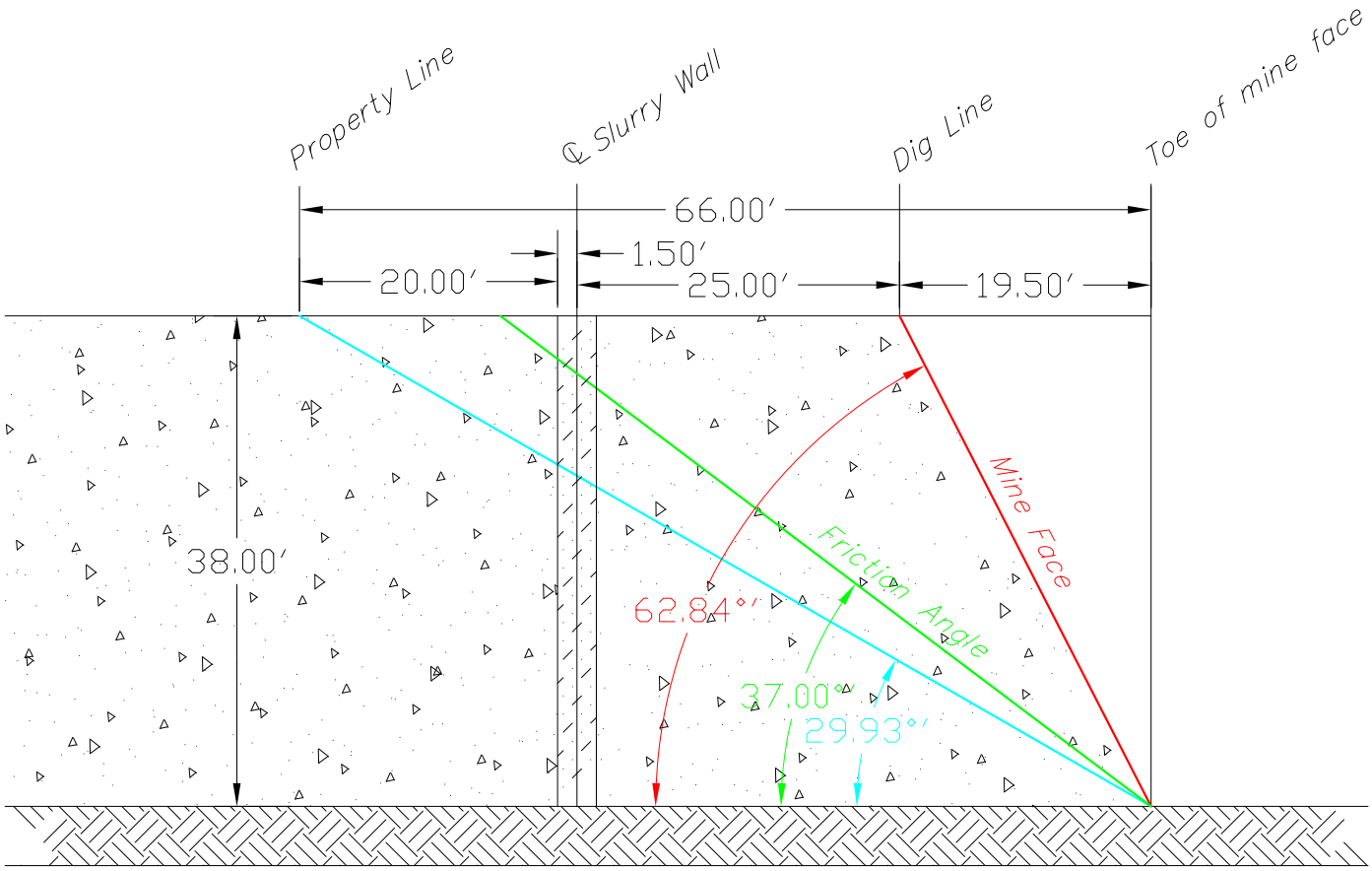
(1) 29.94° angle is calculated from 38 feet slope height and 66 feet horizontal from the toe of mine face to the permit line

As shown above, the safety factor for the closest structure is 1.22, so by reason as you move away from the mine face the greater the safety factor would be. Instead of risking a failure and for safety reasons, L.G. Everist, Inc. has chosen to use the method of slope stabilization described in the reclamation plan. The Tetra Tech report shows that the reconstructed reservoir slopes will be stable at the proposed 3:1 sloping rate.

L.G EVERIST, INC.
Fort Lupton Sand and Gravel

Permit # M-1999-120

Geotechnical Stability Exhibit



TYPICAL SECTION

JUN 14, 2012 – 12:26:25

L.G. Everist, Inc - Fort Lupton Sand and Gravel excerpt from Wright Water Engineers report of 2005

L.G. Everist, Inc.

TABLE 1

Water Wells North of LGE Ft. Lupton Pit in Potential Groundwater "Shadow"[1]

Permit No.	Owner	Use[2]	Yield (gpm)	Depth (ft)	SWL (ft)	Predicted % Reduction in Saturated Thickness	
						LGE Only	All Pits
6639	Blue Ribbon Nursery	I	1,200	28	6	11	16
6638	Hein	I	1,100	30	6	6	8
6637	Hein	I	1,200	29	10	7	11
185928	Bearson	D	15	53	15	5	7
181568	Hein	D	15	42	4	3	5

[1] See Drawings 4 and 5 for locations.
[2] I = Irrigation; D = Domestic.

Recommendations

1. **Continue monitoring.** It is recommended that LGE continue to measure groundwater in the existing monitoring wells (Drawing 1) throughout the life of the existing mine. Groundwater should also be monitored throughout the life of the expansion area, as discussed later in more detail.

   The data should be evaluated prior to any mining in the expansion area to determine the following:

   - Average growing season (May 15 through October 1) and non-growing season groundwater levels.
   - The range of growing versus non-growing season levels.

   Waiting until just prior to commencement of mining of the expansion area will allow for more data to be collected. Pre-mining data are appropriate since they represent "baseline" conditions without the expansion, during which there have been no reported effects. Precipitation and irrigation should be considered when analyzing the baseline groundwater data.

2. **"Trigger development."** It is recommended that a "trigger" be developed to determine impacts to groundwater from the LGE expansion. The trigger should be based on the data and consider natural groundwater fluctuations. The trigger should also require documentation of a complaint since implementation of mitigation measures, as subsequently discussed, is relatively expensive.

3. **Mitigation.** If the trigger is reached based on post-mining data, the following actions should be undertaken:

   - An evaluation of the data to confirm that LGE is responsible for the change should be completed.

   - Implementation of mitigation measures.

   Mitigation measures that could be implemented (not necessarily in the order listed) include:

   - **Construction of a pipe/drain to equalize groundwater levels.** Preliminary modeling and calculations indicate that it would be possible to construct a gravity drain or pipeline to equalize groundwater levels to mitigate impacts from the proposed expansion. Such a drain or pipe could be constructed along County Road 18, or between lined cells in the proposed amendment area, where it would convey water from the upgradient side of the operation to the downgradient side.

   - **Release of water in ditches/laterals.** Water could be released in ditches/laterals to provide irrigation, increase recharge, and/or raise groundwater levels.

   - **Well improvements.** Affected water wells could be deepened or modified to increase yield. Alternatively, new alluvial well(s) could be constructed to provide a new water supply.

   LGE should provide temporary replacement, if needed, while studies to determine fault are being conducted, or while mitigation measures are in the process of being implemented.

   The exact mitigation measure or combination of measures would be determined based on additional investigations and consultations with the affected party. Costs for implementation and maintenance of mitigation measures needed from LGE operations should be borne by LGE.

#9 Effects on stability of wells, wetlands, and cottonwood trees.

As described in the previous response and shown on Drawing 5, the cumulative impact study completed shows that the amendment area reduces groundwater levels by a maximum of 5 feet north of the pit. Potential impacts from this drawdown were addressed in #8. The following addresses potential impacts from mounding.

The impact study shows a rise in groundwater, or mounding, of 3 feet on the west side of the operation due to the proposed amendment.

This reclamation cost estimate in based on the assumption that no more then 155.00 acres will need some form of reclamation at any one time. Of this, 136.06 acres will need revegetation and resoiling and 18.05 acres is road area. The 79.0 acres Plant Site covers parts of 3 stages, the scale area and G&S Solutions plant areas are listed under the Stage where they are located. The table below contains all the data, for each area disturbed, used to calculate volumes and areas described in this estimate. The disturbed areas include, the plant site; slurry wall construction pads and staging areas; the above water areas around active mining areas, roads, stripped, partially mined or partially reclaimed areas. Between the two mines there are 2 certified slurry walls; 3 installed walls which are not certified and have exposed water; a 2 that will be installed by October 2012 but will not have exposed water. The slurry wall depths to bottom of keyway and as built lengths are shown in the table. The total potential water surface area in the 3 uncertified reservoirs areas is estimated to be 89.74 acres. In this estimate we would have to complete bank backfilling on 16,650 linear feet at 41.68 cyd/linear ft. The slurry wall platforms would only need grading and seeding as they were/are built using growth medium and fines from the mine area. The volume of concrete contained in the foundations of the scale and the processing plant is 125 yards.

A 627C Cat motor scraper or similar equipment will be used to resoil the area and a 140G Cat motor grader or similar equipment will be used to shape the seed bed, the resoiled areas and rip the plant site. A D8N Cat dozer or similar equipment will be used to reconstruct the compacted liner on the perimeter of the reservoirs.

We have included a factor of 20% for the Division to do remedial work on the completed liners if SEO certification is not accomplished. We also rounded the pumping time to the next day and used 72,300 gal/day as a transmissivity number to figure inflow from the aquifer. These figures are then used in the calculations for the bond amount. The tables below outlines the various areas of disturbance at that the time described above.

DATA		
EXPLANATION	QUANTITY	UNITS
Soil depth	8.00	Inches
Lake bank sloping construction	41.68	cy/Lft
Slurry wall installation cost	$3.00	sq-ft
Slurry wall bond factor	20%	
Bank slope construction time	267	days
Weed control costs	$5,000.00	Per year

DEWATERING DATA		
Description	**AMOUNT**	**UNITS**
Area 100% of lake depth	80.77	acres
maximum depth	25	feet
length of ½:1 slopes	16,650	feet
Unit volume of water on ½:1 slopes	156.25	cft/Lft
Gallon conversion factor	7.48	gal/cft
Transmissivity #	72,300	gal/day
Pump rate minimum	6,000	gpm
CALCULATED VOLUMES AND TIMES		
Slope water volumes		
½ :1 slope capacity	19,459,688	gal
100% depth	658,040,985	gal
Total pumping volume	677,500,673	gal
Pumping time		
Dewater lake	78.41	Days
Slope construction time	267.09	Days
Recharge factor for inflow during sloping time and Dewatering	2.89	Days
TOTAL PUMPING TIME*	**348.00**	**Days**

*NOTE: pumping time rounded to next full day

RECLAMATION ACTIVITY	AREA (UNITS AC., LFT, YDS OR PIECES)								
Stage	Meadows N & S	Meadows West	Parker Panowitz	Fort Lupton West	Swingle North	Swingle South	Vincent West	Stripped	TOTALS
RESOIL - GRADE & SHAPE (ac)	12.46	8.53	20.76	46.18	5.81	16.06	11.24	15.00	136.04
REVEGETATE (ac)	12.46	8.53	20.76	46.18	5.81	16.06	11.24	15.00	136.04
DEWATER (ac)	61.89	25.20	2.65						89.74
LAKE SLOPE CONSTRUCTION (Lft)	11,150	4,500	1,000						16,650
SLURRY WALL LENGTH (Lft)	9,001	6919	3450						19,370
SLURRY WALL DEPTH (ft)	37.9	32.0	39.6						
CONCRETE DEMOLITION (yds)	0	100	25						125
ROADS (ac)	4.00	2.58	1.98	1.63	2.58	3.58	1.70	0.00	18.05

ESTIMATED UNIT COSTS FOR RECLAMATION ITEMS:

		Unit Cost
1.	Revegetation includes grass seed mix and labor to drill	$250.00/AC.
2.	Re-spreading soil and/or growth media with **627-E Motor Scraper, Haul distance less than 900**	55.2¢/YD^3
3.	Rip seed bed in plant site, **140G motor grader**	$60.63/ac.
4.	Grade and shape seed beds, **140G motor grader**	$59.54/ac
5.	Pumping costs includes, full service rental of self contained pump, fuel, maintenance and servicing daily.	$166.67/day**
6.	Backfill side slopes, **D8N Dozer push distance less than 250 feet**	63.7¢/YD^3
7.	Slurry wall construction	$3.00 SQ-FT
8.	Slurry wall bonding factor	20%
9.	Demolition & on-site disposal	$7.00/Yd.
10.	Secondary Revegetation seeding only	$250.00/ac

RECLAMATION COSTS

1.	Revegetation, 136.06 ac @ $250.00/ac	$34,014.33
2.	Resoiling, 146,337 yd^3 x 1.12 @ 55.2¢/yd^3	90,471.89
3.	Rip plant site 79.00 ac @ $60.63/ac.	4,789.83
4.	Grading and shaping 136.06 ac. @ $59.54/ac	8,100.30
5.	Dewatering, 348 days @ $166.67/day	58,000.00
6.	Backfill and compact slopes, 693,972 yd^3 x 1.15 @ 63.7¢/yd^3	508,712.13
7.	Slurry contingency fee. 836,323.5 sq-ft @ ($3.00x20%)	501,794.10
8.	Demolition & on-site disposal 125 yds@ $7.00/Yd.	875.00
9.	Secondary revegetation 136.06 x 25% x $500.00/ac	8,503.58
10.	Weed control costs	5,000.00
	Net Total	$1,228,764.75
11.	Indirect costs	
	Mobilization	3,574.14
	Insurance, Bond, & Profit	166,128.99
	Administration costs	69,744.69
	TOTAL ESTIMATE	$1,468,212.59

RECOMMEND BOND BE SET AT $1,468,200.00

Equipment listed in this estimate is used for the calculations and similar types may be used in the actual reclamation activities at the mine.

Source of figured using, Cat Handbook #38 and rental costs from Means for 83% efficiency, for eastern Colorado

** Estimate for services from Rain for Rent, Ft. Lupton, CO (970) 535-4963