Overview

Unless specifically discussed below, the methods described and approved in the original Reclamation Plan will remain unchanged. This will remain a dry mining operation. All of the map exhibits have been labeled North area and South area for easier review. When referring to a map exhibit it is inferred that both should be reviewed. **EXHIBITS C - CURRENT CONDITIONS MAP** show the current permit area and the area being added to the permit.

The current post mining land uses are listed as developed water storage surrounded by access roads, gravel surface areas and revegetated areas. The following information makes change to the reclamation around the reservoirs. The plan is to reduce the resoiling and revegetating. Instead of revegetating to the water line, a gravel surface will be created from the mine setbacks to the top of slope around the reservoirs. Resoiling and revegetation will be done from the tops of slope to the highwater line, except on bank armoring areas where no cover will be placed on the armoring. A gravel access road will be placed around the reservoir. Including the slopes into the reservoirs there are three areas that will need revegetation, The scale house triangle in Parker-Panowicz, the area south of and around the Sandstead Reservoir and Deep Lake. All other disturbed areas will have a gravel surface. More detail is provided in the following Reclamation Plan text and a typical cross section showing this is provided on the **EXHIBIT F - RECLAMATION MAP.**

As with the currently permitted mine area, the new properties will be reclaimed as lined water storage reservoirs. Each of the additional properties will either be sealed with a slurry wall or clay liner. Prior to mining, two of the phases will have groundwater drains installed in conjunction with the installation of the liner – proposed locations are shown on **MAP EXHIBIT F - RECLAMATION PLAN MAP.** In the Northwest Phase it will be along the west side and in the Parker #4 phase it will be along the south side. Information on the engineering design and drain configuration will be available for review in the Technical Revisions filed prior to mining beginning in each phase.

The applicant proposes to bond each phase prior to mining and to determine the type of lining prior to posting a bond for that phase. Please refer to **TABLE E-1 RECLAMATION TIMETABLE** for information on each Phase of Reclamation.

Reclamation Plan

Currently, the undisturbed and amendment areas of the mine site are primarily irrigated agricultural land. The area is broken into 6 different use areas. Please refer to the **VEGETATION MAP** in **EXHIBIT I/J - SOILS AND VEGETATION** for the location of each area described. The current uses are, mining operations area; non-irrigated pasture; irrigated crop areas; ditch & river corridors & wetland area, oil/gas operations areas and high capacity gas pipeline ROW's. The agricultural uses will continue as mining progresses until an area is taken out of agricultural production

and prepped for mining. There is no native vegetation present on the agricultural areas because of the intensive agricultural practices that have taken place on the land. In most cases the oil/gas operations areas have little vegetation and the high pressure gasline ROW's have been farmed for many years and vegetation cover on those areas is consistent with farmed areas. The narrow band along Little Dry Creek/Slate Ditch and the Meadow Island Lupton Bottoms ditches have been constantly disturbed by ditch maintenance leaving only the river corridor, that will not be disturbed, with vegetation that may be considered native. The typical vegetation descriptions that have been submitted in **EXHIBITS I & J - SOILS AND VEGETATION** in previous permitting packets will match these agricultural uses as the crops rotate throughout the years.

The **EXHIBIT F - RECLAMATION PLAN MAP** shows a cross section sketch of the proposed sloping plan and reclamation activities that will surround reservoirs in this plan.

Under the contract with City of Aurora for the water storage reservoirs, the applicant has to turn over to Aurora, for continued development, any reservoirs that have been significantly reclaimed. It has been agreed that this condition will exist once a reservoir liner has been certified by the Division of Water Resources, sloped, the surround gravel surface is complete. The change to graveling the band between the setbacks and the tops of slope into the reservoirs (or armored areas) eliminates the concerns that during Aurora's development, any revegetated areas would be disturbed, destroying any grass planted.

Where mining will take place within 400 feet of the river, a setback of 300 feet on the north area and 250 feet on the south area will be maintained. At which point the slope into the reservoir will be backfilled and sloped. In these areas no more the 500 feet will need backfilling nor will it be left open for more than 12 months. Where needed armoring will begin as soon as bank sloping is complete on each 500-ft section. This will also ensure, that if mining ceases before the resource is exhausted, only a minor amount of work would have to be done to finish reclamation on the disturbed area

Armoring in the Northeast Phases #1 and #3 will progress with sloping, so approximately 2,000 feet will need to be completed at any time. No armoring will be done in the Parker #4 phase on the south area since there is armoring on the river bank anywhere the river is within 400 feet of the area to be mined. The **BANK ARMORING PLAN** is in the **APPENDIX** and explains how and where the armoring will be placed.

LGE will be working with the Town of Ft. Lupton for directions on Flood Plain development. This facility is not in an Urban Area, not near public land, or facilities where public safety is a concern so, inlet/outlet structures for private reservoirs are not needed. There are no plans to install Inlets or Outlets for the reservoirs. Those will be the responsibility of the reservoir developers.

The following approved seed mix will be used to seed areas where reclamation calls for revegetation. This mix will place

approximately 41.2 seeds per pound per sq-ft as prescribed by the NRCS planting guidelines.

APPROVED SEED MIX

Species	Lbs. PLS/Acre
Western Wheatgrass (Aribba)	**5.00**
Big Bluestem (Champ)	2.50
Blue Grama (Hachita)	**0.60**
Switchgrass (Blackwell)	1.75
TOTALS	9.85

The reclamation timetable shows the types and amount of land use in each Phase when reclamation is complete. Approximately 12.2% of the area in the permit will not be disturbed by mining, either because it is setbacks around well facilities, gaslines ROW's, along the ditches or areas too small to mine that will be kept in their natural state.

As mining progresses, the perimeter slopes will be backfilled and graded at or near 3h to 1v as discussed in the **MINING PLAN.** This will insure that when mining ceases only a minor amount of work will have to be done to finish reclamation in the disturbed area. The placement of the temporary soil stockpiles around the setback/perimeter of the mined area would be there if needed. Since the area between the liner, the water line and/or top of the armoring will be a graveled surface area, no resoiling will be needed. The graveled surface will mean the above-water-line areas simply have to be shaped and graded.

We expect to salvage sufficient topsoil to meet reclamation requirements. Of the 809.0 acres ± in the permit area, only 42.1 acres ± or approximately 5.7% will need resoiling and revegetated and remaining above water gravel surface will cover 146.5 acres or 18.1% of the area to be reclaimed. The remaining area will be reservoir area, covered with water or undisturbed area.

Observations at the site show that topsoil on the property has a salvageable depth of 6 to 12 inches, averaging 8 inches except in isolated locations. There appears to be more than adequate soils to meet the demand for this site. Setback areas will not be stripped, and the disturbed areas inside the setbacks will not be resoiled. Gravel surface maintenance roads will be built around each reservoir and left around each gas/oil well where no seeding or resoiling will take place. This will provide room around each well or reservoir to service it as needed by the well or reservoir owners.

Some inert fill (as defined in Colorado Department Public Health and Environment regulations) may be imported for recycling and resale or in rare cases for reclamation purposes. On-site generated inert material will be used for bank sloping, buried in bank areas around the lakes or will be recycled/sold. An inert fill Notice and Affidavit are included in the Appendix for this mine.

Existing soils in place have been capable of producing a fairly dense cover of irrigated crops and dryland grasses and should be suitable for use when revegetating the areas where

seeding will be done. These areas will be returned to at least their present vegetative condition when reclamation is complete. Under normal conditions, the operator will strive for a 30 to 40 percent cover rate on the revegetated areas when reclamation is complete.

Under normal weather conditions, an adequate moisture reserve will be present for establishment of the proposed seed mixture. No irrigation will be used during reclamation since the plan is to establish a vegetation cover that is not dependent on irrigation to survive.

Optional Reclamation Plan.

We are submitting two options for final configuration of the reservoir areas as well.

Option A – The reservoir configurations for Option A are show on the large **EXHIBIT F - RECLAMATION PLAN MAP .**

Option B – The inset map shows the reservoir configurations under Option B.

The methods used to reclaim the reservoirs will be the same for both options. The difference may be an increase/decrease in the volume of developed water storage and an increase/decrease in the amount of graveling and revegetation necessary.

We do not know when the Mining Option B or the Reclamation Option B or some part(s) of either or both will be implemented, but we are including these optional plans to increase the flexibility of this permit and account for the inevitable changes when mining the site. Whenever any part(s) of the Option B plans become feasible, we will file a Technical Revision(s) to the Division to provide revised Mining and/or Reclamation Map(s) that will show the changes. The Technical Revision(s) will discuss any changes needed to implement the optional changes, including a discussion on changes in disturbed areas, slurry wall lengths and revegetated areas.

Deep Lake Option

Mining has ended in Deep Lake and it will not be lined. The area around the existing lake will be graded, shaped and revegetated. The town of Ft. Lupton will receive this property once it is reclaimed and will assume responsibility for a water augmentation plan.

RECLAMATION PERFORMANCE STANDARDS

The property will be mined in compliance with the Reclamation Performance Standards of Rule 6. Grading will be performed to create a final topography that is compatible with the intended final land use. The slopes will vary depending on the final use proposed in a particular area, reservoirs or grassed areas; the remainder of the area will retain its present drainage pattern. The **RECLAMATION PLAN MAP** shows how the area will be reclaimed.

The pit will be reclaimed so that a suitable grade for drainage exists, all surface runoff will be directed into the reservoirs created by mining. Settling ponds may be silted in from wash water, this type of backfilling tends to firm up and stabilize during the first 18 months after being placed.

All grading will be done in a manner to control erosion and to protect areas outside the affected land from slides or other damage. Backfilling and grading will be completed as soon as feasible after mining is completed in a given area. There are no drill or auger holes on the land. Maximum slopes will be within the limits set forth in the Rules and Regulations of the Board and will be capable of being traversed by machinery.

All refuse will be hauled away or disposed of in a manner that will control unsightliness and protect the drainage system from pollution. There are no acid-forming or toxic materials involved in this operation. The minimal amounts of petroleum products stored at the site will be stored as prescribed by applicable laws. The storage tanks will be surrounded by a berm or secondary containment such as storing the tank in a larger metal container adequate to retain any fluid should a tank rupture. In addition, there is adequate absorbent materials on site to contain any spills that would occur.

The operator does not expect prevailing hydrologic conditions to be disturbed. L.G. Everist, Inc. will comply with applicable Colorado water laws and regulations (as the operator understands them) governing injury to existing water rights in order to minimize any disturbance, which might occur to the prevailing hydrologic balance of the affected land and surrounding areas and to the quality of water in surface and ground-water systems both during and after the mining operation and during reclamation. In addition, the operator expects to comply with applicable Federal and Colorado water quality laws and regulations. Any water used in the operation of the processing plants and gravel pit will come from water owned by L.G. Everist, Inc. or purchased from an outside agency suitable for that use. **EXHIBIT G - WATER** contains specific information concerning impacts and uses of water at this mining operation.

This is not a dredge facility, so there are no temporary siltation structures involved in this operation and no mining will be done within the confines of the river. If a U.S. Army Corps of Engineers Permit is required for mining in waters of the U.S., it will be obtained prior to disturbing those areas. Settling ponds will be constructed on the site to collect and recycle water from the washing operation. There will be no earthen dams on the mined area.

The mining and reclamation plans consider existing wildlife use of the site and final reclamation will enhance the area for continued wildlife use. However, creation and management of wildlife habitat is not a specific part of the reclamation plan.

Topsoil in the area is good quality and deep enough to salvage what is needed for reclamation. When topsoil is removed to reach the mineral deposit, it will be segregated and stockpiled. If the topsoil piles remain undisturbed for more than 180

days, the approved seed mix will be planted on the piles or other means will be employed to preserve the topsoil from wind and water erosion. This will keep it free of contaminants so that it remains useful for sustaining vegetation when reclamation begins. The stockpiles will be located in areas where disturbances by ongoing mining operations will be at a minimum, i.e. along set-backs on the pit perimeter. The topsoil will be handled as little as possible until it is replaced onto areas where needed for reclamation. We will take measures necessary to insure the stability of the replaced topsoil on graded slopes and ensuring that it is spread as evenly as possible. Fertilizer and other soil amendments will be used, only if needed, in accordance with NRCS recommendations.

Reclamation will begin once enough area has been opened so that any reclamation completed will not be disturbed as mining progresses. This may take one or more years depending on economic conditions and the amount of material mined. By the time mining is completed 75 to 90% of the total mined land will be reclaimed. As mining ends in each reservoir area, only backfilling, grading and shaping of the final mined slopes, bank armoring if needed, graveling the surface as needed. Where needed, the proposed seed mix will be planted during the next planting season after resoiling is completed. The area will be monitored for success of revegetation until accepted by the Division for release. If revegetation failures occur prior to release, an analysis of the site will be made and the area will be revegetated again as necessary.

Reclamation Timetable

The numbers presented below represent our estimate of the various area of disturbance in the mine area. They may change as the actual mining progresses through the site.

Table E-1: Reclamation Phases (7-2025)

Phases	Years	ACRES ±					
		TOTAL	LAKE AREA	GRAVEL SURFACES	REVEGE-TATION	ROAD	MISC. (DITCHES, UNDIS-TURBED AREAS, ETC.)
Fort Lupton Sand and Gravel - North Area							
Parker-Panowicz	3-5	43.51	20.45	9.49	6.28	5.97	2.99
Swingle North	3-5	42.02	29.53	6.86	2.46	1.35	3.33
Fort Lupton West	3-5	47.81	41.39	3.47	2.45	1.54	0.29
Swingle South	3-5	67.45	48.70	12.48	1.39	1.77	4.85
Sandstead	3-5	50.05	10.35	0.00	32.94	2.11	4.65
Blue Ribbon	3-5	55.55	37.04	7.69	2.64	1.54	8.17
Deep Lake	3-5	7.90	3.62	0.00	3.98	0.00	0.30
South Area							
Funakoshi	3-5	42.97	26.77	4.23	1.79	1.25	10.18
Parker #1	3-5	43.17	20.31	4.86	1.97	1.13	16.04
Adams-Parker	3-5	72.92	47.84	14.76	4.05	3.55	6.27
Parker #2	3-5	33.27	24.77	3.98	2.12	10.22	2.40
Parker #3	3-5	43.12	29.21	8.08	2.58	2.08	3.25
Parker #4	3-5	56.94	43.43	7.92	0.20	1.68	3.60
New areas							
Northeast #1	3-5	70.87	53.26	8.98	2.48	1.97	5.73
Northeast #2	3-5	67.00	49.45	6.42	7.02	1.84	4.11
Northeast #3	3-5	12.12	3.81	2.58	0.99	0.70	4.33
Northwest	3-5	52.33	22.44	6.10	5.03	1.56	18.76
Totals		809.00	512.37	107.90	80.37	40.26	99.25