Existing Conditions.

The methods described and approved in the original mining and reclamation plans for the Fort Lupton Sand and Gravel Mine (FLS&G) 1999 permit, and the 2012 amendment applications will remain unchanged unless discussed in this text. The Mining Plan described in the 2004 amendment will continue be used with the only change being the direction of mining. The other change is that mining will continue to the north into the newly added areas before moving to the southern end of the permit area.

The future intent is to eventually remove the southern area from this permit into a new application that is being prepared. Map Exhibits C–Current Conditions, C–1–Mining Plan, C–2–Structures and F–Reclamation Plan have been provided in this packet.

In the 2012 amendment, LGE combined the Fort Lupton Sand and Gravel Mine (M–1999–120) with the Lupton Meadows Reservoir (M–2002–104) and added 7 parcels north, south and west of the existing mines. From that time until 2023 the mining Phases in the middle of the permit area have been mined and reclaimed. The area that has been released has created a 2–part mine as shown on the maps.

The two (2) new areas to the permit boundary will increase the permit area by approximately 202.26 acres ±. **EXHIBIT C - CURRENT CONDITIONS MAP** shows the area being added to the permit and will reflect any changes to the Mining and Reclamation Plan in the existing area. There is very little change to the south area reclamation plan for the existing area except some of the oil and gas facilities have been removed which will allow for an expansion of some of the future reservoirs shapes.

Nineteen of the twenty mined areas shown on the maps will be slurry wall lined and developed as a series of water storage reservoirs ranging from 10.26 to 70.00 acres ±. The exceptions are the Deep Lake Phase that will be reclaimed as a pond and the southern end of the Sandstead Phase that will be backfilled with fines 2 feet above ground water and revegetated. The north end of the Sandstead Phase may become a lined reservoir. **TABLE D-1 - MINING TIMETABLE** on Page 9 is a list of the mining phases that will be referred to in the following text. This timetable has been updated to reflect changes to existing Phases. **EXHIBIT B - VICINITY MAP** shows the parcels that will be added while the Mining and Reclamation Plan Maps show how the site will be developed.

The total number of phases added to the Fort Lupton Sand & Gravel Mine is four and the new area will add approximately 7–15 years to the life to the mine. It is estimated by adding the new area, along with remaining reserves, that the life of the mine will be from 15 to 25 more years. This life span is subject to fluctuation depending on market conditions.

The current bond for Ft. Lupton S&G is $2,002,400.00. The bonds include surety for 20,134 feet of slurry wall and construction of 16,650 feet of bank sloping. At this time the applicant has a contract with the City of Aurora to develop 5 water storage reservoirs on the northern parcels of the property. This includes 256.59 acres of the existing permit area, south of Weld County Road 18. The Sandstead Phase, the new north areas as well as the southern area, will be marketed by L.G. Everist, Inc. as they are developed.

The areas being added have been used primarily as agricultural land. The Northwest Phase is broken into 3 use areas, farm yard with a house, wetland/creek area and agricultural production. The house will be removed prior to mining. Mining will take place on the yard and agricultural area in this Phase. The Northeast Phases are mostly grass land with 2 irrigation ditches crossing the site and a small farm yard near the northwest corner. LGE will maintain 50 foot setbacks along the diagonal ditch corridor that has the Meadow Island #1 and the east lateral of the Lupton Bottoms Ditch. If practical, the north/south leg of the Lupton Bottoms ditch will be moved to the east side of Northeast Phase #3 so it can be combined with Northeast Phase #2 as show in **Option B.**

The applicant will bond the amended property in phases, and wishes to retain the option to seal each reservoir with either a slurry wall or a compacted liner, until just prior to bonding that particular phase. At the current time, slurry walls have been constructed around the active mining areas and the reservoir slopes are built by backfilling and grading or are in the process of being completed. **TABLE D-1 - MINING TIMETABLE** has a current list of all certified liners or lined areas being tested.

At any given time, mining and reclamation may be occurring in one or more bonded phases to accommodate blending of materials and relocation of the processing plant and settling ponds. There will be times when reclamation is being completed in one phase while mining begins in another phase. Mining will progress from the existing permit area into the Northeast Phases then move to the Northwest Phase leaving the Ft Lupton West Phase as the last area to be mined. The arrows on the **EXHIBIT C-1 - MINING PLAN MAP** show how mining will progress through the mine area at this time. The order of mining in the south area will start on the west side and mine to the east jumping from Phase to Phase. The last area to be mined will be the future Plant Site area, see Exhibit C-1 –Mining Plan Map.

Optional Mining and Reclamation Plans.

Due to the constantly expanding and changing development nature of the oil and gas and other utility operations in this area, L.G. Everist is submitting these Optional Mining and Reclamation Plans with this amendment to guarantee the flexibility to make changes to mining areas and reservoir shapes throughout the life of the mine. During the current run of mining and reclamation we have seen many changes to the Oil and Gas(O&G) facilities that are reflected on the current version of the maps and mining areas. We continue to stay abreast of, and in contact with, the oil and gas and utility companies about future structure and easement changes, including plans to relocate some of their facilities, plans to remove some of the older wells and facilities, and plans for oil and gas companies to add new structures as their permitting allows.

For example, between 2012 and 2024 many of the wells and facilities on the south area have been removed and the reservoir areas adjusted to show those changes. Many additional changes are expected in the future similar to this example.

As mining progresses through the mine and into a new area it may be to our advantage – or we may be required by law to allow oil and gas companies or ditch companies to exercise their rights – to

revise the shapes of the reservoirs due to changes to their facilities, gaslines, wells or drilling pads or ditches. These changes may affect reservoir shapes, combine or split reservoirs, add or subtract oil and gas operations areas, gas lines, easements, etc.

Therefore, we are presenting these optional plans to cover the possibilities with the understanding that the mining and reclamation methods will remain unchanged, but the configurations and areas of the mined and reclaimed areas may change.

Optional Mining Plan.

Option A – The mining areas shown on the large map on **EXHIBIT C-1 MINING PLAN MAP** is Option A. This option shows the most conservative (and current) mining plan and it assumes no further changes to the location of ditches, oil and gas wells, gas lines or facilities before mining ends.

Option B – The smaller map inset in the upper corner is Option B and is a more optimistic plan showing removal or relocation of numerous wells, gaslines and facilities to allow removal of more gravel and increase the amount of water storage on the site. For Option B, the South Area remains as originally planned in 2012 but the new north area may have the ditch moved between Northeast Phases #2 and #3 to create one large reservoir.

Mining Methods overview

The working face will be mined near vertical to maximize removal of material from the mine. At the widest point, the longest working face will be approximately 1,700 feet long. If mining ended prematurely, this slope will be reclaimed using a cut/fill sloping method instead of backfilling. As mining reaches a setback limit, backfilling will commence within 3 to 6 months maximum so as to leave a 3:1 slope along the mine exterior, oil and gas facilities and the ditches. No more than 2,000 linear feet of side slope highwall area will need backfilling at any-one-time. This can be done because we plan to start backfill sloping whenever a new area is stripped so the material only has to be handled once.

The mining setbacks will vary from 15 to 275 feet from the permit boundaries, structures and river as allowed by each use agreement of geotechnical analysis for said structures. No mining will be done in the setback areas but they may be disturbed as mining and reclamation progresses thru a phase. For example, around oil/gas wells we will maintain an eighty (80) foot radius around each well head when mining, but leave a 150 foot radius when reclamation is complete. **EXHIBIT C-1 - MINING PLAN MAP** shows how this will look.

Around the rest of the mine, the setback line will be to the outer edge of the slurry wall or the top of the excavation limits. The temporary topsoil stockpiles placed within the setbacks will also limit noise and visual impacts to off site areas. In some cases, the setbacks will be used as a place for roads to access the mine exterior, ditches and access for the oil and gas facilities. The setback areas will be reclaimed if disturbed.

The following information is a recap of the methods currently used at the mine and will continue to be used as mining progresses through the areas added by this amendment. This mine will be operated as a dry-mine. Slurry walls will be constructed to the

Division of Water Resources specifications around the perimeter of each additional mine area prior to commencement of mining in the new phases. This isolates each mining area from the surrounding ground-water table and allows for dry-mining of each mine area. However, if a slurry wall is not feasible, the Applicant will utilize a compacted liner to seal the reservoir areas for the end use as water storage. Design of the liner will follow the Division of Water Resources Guidelines also. Slurry wall design documents were submitted and deemed adequate to the Division in 1999. Slurry walls installed using this design, have been constructed successfully on the 5 lined areas currently completed (and the 6 already released from the permit).

Prior to mining the phases, a groundwater drain will be installed along the west side of the Northwest phase (AKA Heins West) and along the south side of the Parker #4 phase (AKA Southern Complex). The approximate locations of both proposed drains are shown on the Mining and Reclamation Plan maps. The drains will be installed in conjunction with the liner installation in that section of the phase. A Technical Revision will be filed containing an engineering design and drain configuration for each drain prior to mining activities starting in the 2 phases affected.

Additional monitoring wells have been installed along the western, eastern, and northern sides of the new areas in the amendment area. Ground water monitoring, and ground water quality testing plans are included in **EXHIBIT G - WATER** for the amendment areas.

Prior to mining moving into those areas just north of WCR 14.5, the Plant Site will be moved to the Parker #4 Phase in the southern area, adjacent to the access road that now serves the agricultural areas.

Mining operations within each new phase area will include topsoil and overburden stripping, and excavation of dewatering trenches, and settling ponds. Raw materials will be excavated with excavators, front-end loaders, scrapers and/or bulldozers. As areas are cleared and stripped, previously mined slopes will receive backfill material to establish the permanent design side slopes. A conveyor is used to transport the raw material from the areas north of WCR 18 to the Plant Site in the existing mine. Explosives will not be used at this operation.

The reservoir access roads will be placed in the 25 foot wide setback between the slurry wall and the top of the slope into the reservoir. The disturbed areas from the setback line to the top of bank armoring, will be left as a gravel surface instead of being resoiled and seeded. The slope area between the top of slope and highwater line will be resoiled and revegetated. Adequate amounts of the stripped topsoil and overburden will be stockpiled for later use in reclamation in the areas that will be seeded. Topsoil and overburden stripped from subsequent mine areas may be placed directly on the seed bed in previous mine areas so it only has to be handled once and the disturbed areas will be concurrently reclaimed. The exact location of topsoil and overburden piles are unknown at this time, so we have shown the approximate location on **EXHIBIT C-1 - MINE PLAN MAPS.**

Mining within each phase will begin once topsoil and overburden has been removed from that phase area. Excavated materials (pit run) will be removed via front-end loaders, or excavators and may be

loaded onto a field conveyor and transported back to the processing plant, or loaded into off-road haul trucks for transport to the plant site. Mined slopes will range from near vertical to 0.5:1, or as required by the Slope Stability Analysis and Setback Agreements (see **EXHIBIT S - STRUCTURES** from the 2004 submittal (included in this packet).

As soon as mining limits have been reached in one phase area, reclamation of the pit edges within that phase area will begin. This will allow for concurrent backfilling of the pit perimeter with previously stripped overburden and/or material stripped from the next phase area to be mined. Access roads built during slurry wall construction and mining will be left as access roads around the reservoirs or for access to oil and gas wells on the site.

Slurry walls have been installed around Swingle North, Swingle South, Ft. Lupton West, Parker-Panowicz and the Blue Ribbon Phases. Testing is complete and certified for all but Blue Ribbon and Swingle South. A slurry wall is planned for the small lake on the north end of Sandstead. We anticipate slurry wall construction will begin soon after permit approval on the Northeast Phases.

River setback and Bank armoring

The only place the South Platte River is within 400 feet of the mining area is along the east sides of Northeast Phases #1 & #3 in the amendment area and along the east side for the Parker #4 Phase in the south area. Along these stretches the slurry wall will be installed at least 200 feet from the edge of the river bank. Along the South Platte River in Northeast Phases 1 and 3, mining will take place within 300 feet of the river bank and the bank slopes will be backfilled to 3:1. In the Parker #4 Phase the mining limit will be 70 feet west of the Lupton Bottoms Ditch and the bank will be rebuilt so the top of the slope into the reservoir area will be 250 feet from the top of the river bank. This will be done by backfilling from the ½h:1v mining face to the top-of-slope (TOS) line using shale and other quality-tested compactible material from the floor of the mined area.

On the working face of non river side banks no more than 1,700 feet of ½:1 cut/fill sloping and 2,000 feet of ½:1 backfill sloping in any one phase will be needed and no more than 2000 feet will need armoring. Armoring will be done, using the technique, and materials described in the **BANK ARMORING PLAN** in the **APPENDIX** of this application packet.

Water Diversions and Impoundments

The entire site will be graded in phases to direct storm-water runoff towards interior ditches and dewatering systems. A CDPS permit for the existing mine operations is in place from the Colorado Department of Public Health and Environment (CDPHE) for the current dewatering operations. This permit will be modified, if necessary, to accommodate the additional parcels.

As the slurry walls are installed, they will be constructed around the perimeter of each new phase prior to commencement of mining. This will seal off each individual phase area, and preventing infiltration of groundwater into the mining area. Once the initial groundwater quantities within each mine area are pumped out,

continued dewatering will not be required except on an as-needed basis after significant weather events.

Description of Overburden, Deposit and Underlying Stratum

Across the entire amendment area, approximately 3 feet of overburden (including approximately 6 to 18 inches of topsoil) will be removed from the mine areas and stockpiled for plant-growth material in surface reclamation or used as backfill for the pit slopes. An average thickness of approximately 33 feet of sand and gravel exists across the amendment area.

Mining Timetable

The continuing uncertainty of economic conditions in the construction materials industry precludes an accurate forecast of demand for materials during the life of the mine. This pit will be operated year-around by L.G. Everist, Inc., weather permitting. There may be periods up to 18 months or more when the demands for material are slow and no mining will take place, creating an "intermittent operation" situation. We therefore, can only estimate the mining timetable based on an average year and may expect a specific year to vary widely from the average.

Table D-1: Mining Phases (6-2025)

Phases	Years	ACRES ±			
		Total	Mined	Slurry wall length	Slurry wall status (certified date)
Fort Lupton Sand and Gravel - North Area					
Parker-Panowicz	1-2	43.51	20.60	3,540	2/5/14
Swingle North	1-2	42.02	31.88	5,220	11/30/22
Fort Lupton West	2-3	47.81	41.25	4,320	10/13/04
Swingle South	½-1	67.45	52.31	6,400	Pending
Sandstead	done	50.05	36.64	2,945	Proposed
Blue Ribbon	done	55.55	37.77	5,675	Pending
Deep Lake	done	7.90	5.75	0	NA
South Area					
Funakoshi	1-3	42.97	27.39	4,770	Proposed
Parker #1	1-2	43.17	22.17	4,230	Proposed
Adams-Parker	2-3	72.92	43.83	11,755	Proposed
Parker #2	1-3	33.27	26.83	4,545	Proposed
Parker #3	1-2	43.12	32.71	7,860	Proposed
Parker #4	2-3	56.94	44.24	6,235	Proposed
New areas					
Northeast #1	3-4	70.87	57.17	7,350	Proposed
Northeast #2	2-3	67.00	45.43	6,880	Proposed
Northeast #3	½-1	12.12	5.21	2,925	Proposed
Northwest	1-2	52.33	27.47	6,220	Proposed
Totals	19-34	809.00	558.65		