



## **Exhibit E: Reclamation Plan**

The post mining land use in the existing reclamation plan that was approved in 1997 is allotted for "industrial usage." We do not intend to change the post mining land use nor change any of the approved reclamation plan. All guidelines created within the approved plan from 1997 shall continue to be adhered to.

Leftover material generated from processing operations within the property will continue to be utilized for reclamation. As well as the vast amount of overburden the pit produces. The existing reclamation plan is working and has worked well since it was approved and it is not our intention to rewrite the plan.

Throughout the process of applying for this amendment to the mining operation, we have become overwhelmingly compelled to revisit the existing reclamation plan and attempt to explain how we are currently working the process in our best efforts to comply with the existing approved plan from 1997.

For starters, the majority of the reclamation we have to accomplish at the site is occurring naturally as a part of the mining process. The pit floor is to "be leveled and a 6"-12" plate of pit run material will be left" as stated in the 97' documents. We have discovered that our equipment cannot run on the material left in the floor of the pit as we are mining. It is too soft/loose. The equipment struggles to navigate back and forth from the harvested face to the processing facility. As a result of this, we are forced to remove the unsuitable material and replace it with pit run as we proceed with mining operations to bridge anything underneath in an effort to create a stable running platform. Thereby, "reclaiming" the pit floor. So, in compliance with Rule 6.4.5(2)(e), 6.4.5(2)(e)(i), 6.4.5(2)(e)(ii), & 6.4.5(2)(e)(iii), "reclamation" is occurring continuously as we harvest. The size & location of the area depends on the day and how much we are able to harvest and where we are at the face at the current time. It is continuously occurring in a running bond fashion; similar to the mining operation.

In regards to the backslopes on the North & West boundaries of the permitted area, we were under the impression when we purchased the property that the North East section of the property had been mined out and reclaimed. Meaning the backslopes that existed were basically completed. Upon taking over the operation of the pit, we soon discovered that the previous operator had high-graded select materials and left an abundant amount of harvestable material in the backslopes they told us were reclaimed. We chose to re-screen the material in the area in an effort to remove any harvestable products from it. We elect to run our operation as efficient/effective as possible and still do not understand why the previous operation left certain products within the material.

We are going on our 10<sup>th</sup> year of operating the pit and are still working on re-screening all the material left behind by the previous operator. It has proven to be a slow and difficult process. The material is terribly contaminated with previously spoiled products and doesn't screen very



well. However, we still feel it is the best stewardship of the land to get everything out of the material while we have the property permitted. Unfortunately, this has delayed our original timeline for completing the backslope reclamation in the North & North East quadrant of the pit. However, we are still diligently working on it and hope to have the harvestable material in the North Eastern quadrant removed in the next 2-5 years and will backslope the permit boundary as soon as the material is removed for reclamation compliance.

In regard to reclamation of the wash plant, we intend to set the plant up as a "portable operation." We do not plan on taking the plant elsewhere at any point in time, however we will set it up on blocks; similar to the way a portable operation would be. This would allow it to be brought back down and pulled away with a semi-tractor if need be.

The other added components will be stackers/conveyors for material discharge handling and a surge bin. These will be atypical; nothing out of the ordinary. We plan on installing a belt to feed the wash plant from the surge bin. Another set of belt systems for the sand, one for the 1/4" x 1/2" rock, as well as the 1/2" x 3/4" clean rock. There will be nine conveyor belts total within the entire wash plant set up. All of which will be positioned on either legs or concrete cribbing blocks.

We will be adding a pond to create a location to discharge the reject material generated from the washing procedure. The process-water pond will be one pond linked together with a series of earthen dikes to allow reject material the opportunity to settle out of the water. We will pull clean water back off the furthest away location in the pond and recycle it back through the wash plant for processing. Allowing us the privilege to recycle & re-use as much of the water as possible. Thereby creating a closed loop recycling system. The pond will be located to the North of the wash plant and lay on the property in a South-West to North-East fashion.

The pond is approximately 200' long, 250' wide, and roughly 10' deep. However, the full depth is achieved by berm height. We excavated a hole approximately 5' deep from the grade of the quarry floor. The material we pulled out of the hole was used to create a berm around the perimeter of the pond on the North side thereby adding height to the overall depth of the pond. The berm height is approximately 5' above the grade of the quarry floor. The South side depth is naturally created due to the existing contours of the land. It is sort of dug into the bank.

When the time comes to fill the pond in, the way we have created the berm around the perimeter allows us the privilege of simply pushing the berm in. The material around the perimeter is the same material that was pulled from the excavated hole to create the pond, so simply shoving it back into the open hole will be a quick and easy process. No material will need to be hauled in from other locations for fill. A dozer should be able to support itself and have the pond filled in approximately two days or less.

To calculate the cost of this operation, we referred to data provided to us from 2016 in our Technical Revision #1. In 2016, the operating cost of a D-8 dozer was \$169.91/hr. We do not know what the current operating costs is today, but used a 10% inflation increase and came up with \$186.90/hr. The average push distance is approximately 100'. And the material consistency



is the same as well as the unit weight. Therefore-  $16\text{hrs.} \times \$186.90 = \$2,990.40$  to complete the operation. A mobilization fee can be assessed at \$1,000.00. For a total of \$3,990.40 as a reclamation cost.

In the closest location to the wash plant, we will create the initial discharge into the pond off the wash plant. This area will generate all of the reject off the wash plant and will be where we “clean” out the pond on a regular basis. The earthen material will be pulled from the pond with an excavator and hauled to the existing reclamation areas within the property via haul truck. Here the material will have the opportunity to fully dry out. We are not planning on using any flocculants of any kind.

Taking the existing reclamation plan into consideration, we intend to keep all the reject material within the confinements of the existing disturbed area. At the moment, there is a hole in the North East corner of the gravel pit we intend to begin discarding waste material from the wash plant. The material will be discarded here for a short period of time. We are currently mining from the East to the West. At our face, we have met our Northern border and are working on getting the material harvested at the time of this document. We intend to have the marketable rock out of the area in the next couple of months. Once we have the area cleared out, we intend to start discarding the waste material from the wash plant here. The space is larger and will give us the opportunity to have plenty of room to store the material as it dries out. As soon as it is manageable, we will use it as backfill in the areas needing reclamation around the pit. The primary areas are in the slopes surrounding the pit floor.

In regard to the amount of material previously allocated for reclamation purposes, we are going to be cutting into the amount set aside, but still have more than enough to completely reclaim the property; and then some. There are a couple different ways to calculate the amount of reclamation material we are going to need for the property. And a couple of different ways to calculate what we have left. The simplest way, in our opinion, is to look at it as a whole. Using rough numbers, we have approximately 48 acres left to mine. Of that 48 acres, our total max excavation depth is 40 feet down. When you calculate the cubic yard volume on that area, we get 3,097,600cy of material. If you break down the same 40 feet we have approximately 25 feet of overburden or “waste material.” Which leaves approximately 15 feet of marketable product. From a simple perspective, we have 1,936,000cy of overburden/waste material and 1,161,600cy of marketable material. Which leaves 774,400cy of excess overburden material.

To further investigate what is needed for reclamation, we calculated the bare minimum needed for following the existing reclamation plan. If we calculate just enough to backfill the highwalls along the perimeter with a 2:1 slope and the 12 inches of pit run in the quarry floor, we come up with approximately 500,000cy +/- of material needed over the 48acre area we have at our pit. So, it goes without saying, we have more than enough material to adequately reclaim the site. In some places we are going to have to “fatten” our slopes and or grow space to get rid of the rest.

Attached in Exhibit F is the Reclamation Plan Map. We took the liberty of coming up with an idea to use more overburden on the property to get rid of some of it. As you will note, we sketched a “flat” spot at the top of the reclaimed slope. (highlighted in blue on the map) This



idea came to us after we calculated all the material quantities in the paragraphs above. The thought derived here was that we could “fatten” these areas as needed to gobble up material to help balance out some of the excess of material we are planning on having left at the end of the life of the mine. We did not calculate the quantities of material we plan on using up in this situation, but rather use it as a solution to disperse excess overburden as needed throughout the remainder of the life of the mine.

We feel this idea is a solution to a potential problem. We are of the opinion that we are not changing the reclamation plan by executing this idea. We still plan on back sloping all the necessary places as well as plating the floor for future industrial use. We simply want to have the ability to take privilege out of this idea for the slope areas if we feel it is necessary in the future given we believe we will have excess overburden. To reiterate, we believe we will be looking for places to put overburden and waste materials generated from processing.

In addition to this, we also have the material we have already pulled from the pit in “bank.” To correlate, the 5-acre parcel on the West side of the property we are asking to annex to the existing permitted area has approximately 250,000cy of material on it as of now.

As stated in the mining plan, we are going to add a few concrete structures to the wash plant operation for various reasons to make the operation more successful. There will be a slab for the wash plant to sit on. This slab is 25’ x 75’ x 12”. The control van slab is 18’6” x 38’ x 12”. And the ramp walls to feed the surge bin are 18’3” x 45’3” x 13’ tall. The walls are 3 sided with backfill up the center to create a ramp for access to the surge bin. We intend to keep these structures for post mining land use. We believe we can utilize them for future operations once mining has ceased. The ramp will be useful for loading out trucks and the concrete pads can double for material storage and/or for structures to sit on.

The water feed for the wash plant will come in from the North-East corner of the property. We intend on running a water line underground from the property corner to the wash plant. This line will be a 6” line. We are still working on figuring out the details in a pump size and demand on the plant for the amount of water we are going to need. It will be skid mounted and will be a one-unit all-inclusive kind of set up. Meaning that the entire thing can be picked up as one.

Regardless of the size, we believe the best solution for the reclamation of the line is to abandon it in place once washing activities have subsided. In the field of utility work, our organization is familiar with abandoning City water main lines in place. A common practice is to drain the lines, dig the ends up, terminate the pipe, and cap the ends with concrete and/or flow fill. In order to do this, an excavator and some concrete will be needed. We believe it should take an excavator approximately one hour to dig up one end. And about a half an hour to backfill it. For a total of three hours. We do not have an estimated cost per hour to operate an excavator, but we try to get \$220.00/ hour for our excavators on projects we bid.  $\$220.00 \times 3 \text{ hours} = \$660.00$ . An estimated 1/2cy of flow fill should be all that is needed for each end to cap. For a total of 1cy of flow fill to cap the ends. We currently sell flow fill for \$190.00/cy. A mobilization fee of \$1,000.00 can be assessed as well. For a total of \$1,850.00. ( $\$660.00 + \$190.00 + \$1,000.00$ ).



This practice will allow the backfill material to be buried underground and will not interfere with post mining land use. It will also allow the privilege of guaranteeing the land will not settle or create a void as the flow fill will flow into any and all cavities in and around the end of the pipe.

There is 1,700l.f. of 6" water line installed at the mine for the purposes of conveying water to the wash plant. We calculate there to be 17cy of volume quantity within the pipe. We hereby certify that the waterline material is clean and inert. Please see attached affidavit.

Please see "Exhibit C Pre Mining Map, Exhibit C-2, and Exhibit B-3, Exhibit C-1" for wash plant location, processing water pond location, and proposed water line location. As well as for the location of where the water line will come into the property on the North East corner from the Evraz ditch.

In regards to the 5 acres of land on the West side of the property that we stored overburden on and unintentionally went outside the permitted area; we intend to treat this land as the rest of the land under the existing reclamation plan. If the Division grants us the permission to add the affected area outside the permitted area into the permitted area, we will assume the land to be dealt with in the same manner as the rest of the gravel pit. Post mining land use will remain as "industrial." We do not intend to change or modify any portion of the existing operation currently occurring at the gravel pit.

The 5 acres area is currently being used as a storage area for the potential of using the material in the future for backfill/reclamation purposes. At the moment, our calculations determine that the pit has an abundant amount of excess material for reclamation purposes. We are of the view that at the current time, we are not going to need the material for reclamation of the property, but that could change in the future. We intend to leave the material where it is but will also use it to push back into the excavated area for reclamation purposes if need be. We are of the opinion that the material is a "reserve" at the moment. It is in reserve for the potential to possibly be used for reclamation/ backfill anywhere needed on the property. Or it could be left where it is and simply become a "knoll, small hill, or beauty berm" to be left as is. Slopes will be maintained at a 2:1 slope as stated in the original reclamation plan.

The most common weed in the permitted area is the tumble weed. (a.k.a Russian Thistle, Salsola Kali) Weeds shall be managed in a manner to the best of our ability. We will adhere to the following 3 programs for control: Eradicate, Contain, Suppress. The initial attempt is to detect & eradicate any and all weeds that may be present. The goal is to keep them from reproducing. So, every attempt will be made to eradicate them before they mature and seed out. Chemically spraying of the infant weed has been the best control measure for our application.

Should the weed mature and begin to reproduce, every attempt to contain the growth area will be made. If possible, the weed growth area will be burned. Thereby reducing the likelihood of seed spread. When burning is not an option and something different is needed, the weeds shall be pulled and removed. They will be transported to a designated safe area within the pit and burned there.



Suppression is the maintenance aspect of our program. We spray a local chemical agent on what we think may be areas where weeds may sprout in an attempt to keep them from coming up to begin with. Should we need to burn an area, we will then spray it with a local agent weed spray to suppress any future sprouting. Should an instance arise where weeds have overcome an area and we cannot burn it, or pull & contain them, we will then again spray the area to suppress it from growing larger and spreading.

