Financial Assurance Cost Estimate

for

Permanente Quarry

State Mine ID # 91-43-0004

Submitted to:

Santa Clara County
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Prepared for:

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1.0 INTRODUCTION

1.1 Purpose

Under the California Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code Section 2719 *et seq.*), all surface mining operations are required to have an annually updated financial assurance estimate (FACE) approved by their Lead Agency, reflecting the cost of reclaiming the site. For purposes of this estimate, Santa Clara County is recognized as a Lead Agency through the adoption of local Zoning Ordinance, Title 8, Chapter 88-11, as certified SMARA compliant by the State of California.

1.2 Location

Permanente Quarry (Quarry) is a limestone and aggregate mining operation located in the unincorporated foothills of Santa Clara County, west of the city of Cupertino. The Quarry is situated approximately 3.0 miles southwest of the intersection of Interstate 280 and Highway 85. Site access is provided via Stevens Creek Boulevard and Foothill Expressway, continuing to the western terminus of Permanente Road.

1.3 Background

Limestone quarrying operations started at this site prior to the County's implementation of zoning in the area, thus making the mine a vested operation. SMARA requires all mine operators, including those with vested rights, to prepare a Reclamation Plan. The County approved the initial reclamation plan for the Quarry in March 1985. In June of 2012 a Reclamation Plan Amendment (RPA) was approved for the quarry and provides reclamation standards and strategies for lands impacted by the mining operation over the next 20 years. In total the RPA covers an area of 1,238.6 acres, with approximately 600 acres of the RPA Area existing as buffer that is not to be disturbed from mining. The remaining 639.6 acres referred to in the document as the RPA Footprint is subject to disturbance from mining operations.

Current operations at the site include a quarry cut-face with a series of benches and multiple material storage areas. The overall slope gradient of the benched quarry face is to be 1H:1V (horizontal: vertical), while the overburden fill slopes will be reclaimed at a maximum overall slope inclination between 2.5H:1V to 2.6H:1V. Reclamation at the Quarry is conducted on an annual basis for areas at final grade and not subject to further disturbance. In 2012, reclamation work commenced in the Permanente Creek Reclamation Area (PCRA), the installation of BMP's and hydroseeding was completed in Subareas 4, 5 and 6. Current grading activities are taking place in Phase 1A of the approved mine plan.

The majority of the 639.6 acre RPA footprint is found in a fully disturbed condition with little evidence of vegetative cover. An exception to this includes areas where reclamation has begun or areas that have naturally revegetated. Vegetation types within the quarry area include ruderal slopes, oak, chaparral and disturbed lands. The proposed end use for the quarry after reclamation is complete is open space. This FACE addresses all disturbed lands at the Quarry and reclamation costs are based off the 2012 approved RPA. Reclamation items at the Quarry that are

addressed in the approved RPA and incorporated in this FACE include: EMSA reclamation, backfilling the Main Pit to buttress past instabilities, Permanente Creek restoration, reclaiming the exploration areas on the south side of Permanente Creek, reclaiming the rock plant site and other mining related disturbance. In total, approximately 590 acres are currently disturbed at the Quarry.

Lehigh Southwest Cement Company, Inc. currently operates the mine and assumed the associated liability of reclaiming the site after the cessation of mining.

1.4 Methodology

This estimate utilizes the following resources:

- Reclamation Plan Amendment (RPA), Approved June 2012
- Existing geotechnical reports and studies
- Means Site Work & Landscape Cost Data
- Department of Industrial Relations, Prevailing Wage Determinations
- Caltrans, Labor Surcharge & Equipment Rental Rates (4/1/13-3/31/14)
- Caterpillar Handbook, Edition 37
- Cost estimate from Freeduln Hydroseeding
- Conveyor equipment cost from Aggregate Machinery Specialists
- Interviews with Lehigh personnel
- Pacific Coast Seed Company
- Personal experience of the estimator
- June 2012 RPA Final Conditions of Approval
- Dumpster rental quote from CDR Dumpster Rental, San Jose, CA
- Scrap steel quote from Alco Metals, San Jose, CA

This reclamation estimate provides anticipated costs for direct and indirect expenses that would be faced by the responsible party. Based on the requirements of the approved reclamation plan the following elements represent the direct costs of reclamation:

1. Removal of equipment, disposal of structures, and disposal of miscellaneous rubbish
2. Site grading
3. Backfilling the Main Pit
4. PCRA Reclamation
5. Revegetation
6. Revegetation Monitoring and Maintenance

The following elements represent the indirect costs of reclamation:

1. Supervision
2. Profit and Overhead
3. Contingencies
4. Mobilization

Taken together, the Direct and Indirect reclamation costs identify the total cost for reclamation. Finally, Lead Agency administrative costs (2%) are added to the total cost of reclamation to determine the overall financial assurance requirement.

2.0 ESTIMATED DIRECT COST OF RECLAMATION

2.1 Removal of Processing Plant and Equipment

Plant removal involves demolishing and transporting the Rock Plant including conveyors, crushers, screens, wash plants, scales, and miscellaneous structures to an offsite location. This also includes the removal of the overland conveyor that extends from the Main Pit to the Cement Plant. In addition to demolition and removal of these structures, all foundations must be demolished and removed, and compacted surfaces must be ripped to prepare the site for revegetation. Scrap steel will be taken to Alco Metals in San Jose for recycling while other non-recyclable materials will be put into roll-off dumpsters provided by CDR Dumpster Rental and hauled to off-site. It is estimated that approximately 1,000 tons of steel will be removed from the site. Alco Metal located in San Jose will pay $240 per ton of scrap steel when delivered to their yard. Therefore, $240,000 will be deducted from the total plant and equipment removal costs.

Overland Conveyors:

Mined rock is hauled from the Main Pit to the primary crusher located on the south side of the Main Pit. This material is crushed and transported to the cement plant and/or rock plant via an overland conveyor. The overland conveyor extends for a distance of approximately 8,900 feet and includes a primary crusher, two crusher foundations, transfer points, secondary crushing, interim stockpiles and a tunnel. Removal of the overland conveyor will require demolition of the steel structures and foundations, removal of conveyor belts and loading onto trucks for delivery to a salvage yard. Clean-up of miscellaneous rubbish and preparation of access roads for revegetation will be the final steps in this process.

In 2013 the primary crusher was relocated east to allow for ongoing pit expansion of the north quarry. The machinery and conveyor system was relocated to the new location, however the old concrete foundation for the crusher remains. Costs below account for demolishing and removing the concrete foundation for the crusher at the new location as well as the old location.

This task involves a CAT 330 Hydraulic Excavator, with a La Bounty Shear attachment, and CAT 330 Hydraulic Excavator, with a grappling attachment, to cut and load manageable sized sections onto an over-the-road truck to haul to Alco Scrap Metal in San Jose for recycling. Also included in this task is the demolition and removal of the concrete footings and foundations using a CAT 330 excavator equipped with a NPK H 12 rock hammer. It is estimated that approximately 1,500 CY of concrete will need to be demolished and removed from the site. Demolished concrete materials will be transported off-site to a recycling facility. It is estimated that each truckload will have a capacity of 17 yd^3 and each load will take approximately 1.5 hours to complete

Equipment	Each	Rate	Hours	Total
Cat 330 w/ Steel Shear	1	$232.48	45	$10,462
Cat 330 w/ Grapple	1	$178.10	60	$10,686
Cat 966 E Front-End Loader	1	$144.48	60	$8,669
Cat 330 w/ Breaker	1	$185.35	24	$4,448
Cat 320 w/2.2 cy bucket	1	$84.15	36	$3,029
Grove RT-635 40t Crane	1	$94.14	60	$5,648
Truck w/low bed trailer	1	$87.11	70	$6,098
Truck w/Semi-End Dump	1	$88.70	36	$3,193
Truck w/Semi-End Dump (Concrete)	5	$88.70	134	$11,886
Welding Truck	1	$56.88	60	$3,413
Pick up	2	$21.43	120	$2,572
Total Equipment Cost				**$70,104**

Labor	Each	Rate	Hours	Total
Excavator Operator	3	$63.17	165	$10,423
Loader Operator	1	$61.79	60	$3,707
Crane Operator	1	$63.17	60	$3,790
Low Bed Driver	1	$52.16	70	$3,651
Semi-End Dump Driver	1	$51.21	170	$8,706
Welder	2	$47.87	120	$5,744
Laborer	2	$46.92	120	$5,630
Foreman	1	$63.17	60	$3,790
Total Labor Cost				**$45,441**

Miscellaneous Expense	Each	Rate	Total
Roll-Off 20 CY Trash Containers	5	$575	$2,875
Concrete Recycling Fees	89	$80	$7,120
Total Miscellaneous Expenses			**$9,995**

Rock Plant Removal:

The rock plant is a fully integrated rock processing facility. Equipment at the processing plant includes:

- Approximately 3,400' of conveyors with attendant structural supports
- Approximately 7,000' of 36" conveyor belting
- Maintenance, control, and office buildings (approximately 18,000 square feet)
- 1,700 l.f. of conveyor tunnel
- 6 bag houses
- 850,000-gallon water tank
- 10,000-gallon water tank
- 4,000-gallon water tank
- 2,000-gallon above ground diesel tank

- Miscellaneous Electrical Panels
- 2 crushers
- 7 vibrating screens
- 35,000 S.F. of concrete foundations (assume 12" thickness)
- 4,500 L.F. of 2" water mains.
- 2 truck scales
- 2 belt presses
- 4 compressors
- Office and storage trailers
- Sand Screw

Removal of the rock plant will be accomplished in similar fashion to removal of the overland conveyor. The steel structures will be cut into manageable pieces with an excavator mounted with a steel shear, with pieces placed on an over-the-road truck for removal to a scrap yard. However, the processing plant also includes screens, crushers, wash plant, support buildings, and scales. This equipment will be dismantled in the most efficient manner possible, which may include shearing, cutting using a cutting torch, or simply unbolting the equipment from the support structures prior to demolition. Five (5) separate tunnels that total approximately 1,700' in length connect the various surge piles with different processing circuits. These tunnels will need to be excavated to remove the corrugated culvert pipe supports.

Concrete foundations will be demolished using a rock breaker attachment on an excavator and a front end loader. It is estimated that approximately 2,200 CY of concrete will need to be demolished and removed from the site. Demolished concrete materials will be transported off-site to a recycling facility. It is estimated that each truckload will have a capacity of 17 yd^3 and each load will take approximately 1.5 hours to complete.

Equipment	Each	Rate	Hours	Total
Cat 330 w/ Steel Shear	1	$232.48	48	$11,159
Cat 330 w/ Grapple	1	$178.10	48	$8,549
Cat 966 E Front-End Loader	1	$144.48	48	$6,935
Cat 330 w/ Breaker	1	$185.35	80	$14,828
Cat 320 w/2.2 cy bucket	1	$84.15	40	$3,366
Grove RT-635 40t Crane	1	$94.14	48	$4,519
Truck w/low bed trailer	1	$87.11	48	$4,181
Truck w/Semi-End Dump	1	$88.70	48	$4,258
Truck w/Semi-End Dump (Concrete)	5	$88.70	200	$17,740
Welding Truck	1	$56.88	60	$3,413
Pick up	2	$21.43	80	$1,714
Total Equipment Cost				**$80,662**

Labor	Each	Rate	Hours	Total
Excavator Operator	4	$63.17	216	$13,645
Loader Operator	1	$61.79	48	$2,966
Crane Operator	1	$63.17	48	$3,032
Low Bed Driver	1	$52.16	48	$2,504
Semi-End Dump Driver	1	$51.21	48	$2,458
Semi-End Dump Driver (Concrete)	5	$51.21	200	$10,242
Welder	2	$47.87	120	$5,744
Laborer	2	$46.92	96	$4,504
Foreman	1	$63.17	80	$5,054
Total Labor Cost				**$50,149**

Miscellaneous Expense	Each	Rate	Total
Roll-Off 20 CY Trash Containers	10	$575	$5,750
Concrete Recycling Fees	130	$80	$10,400
Total Miscellaneous Expenses			**$16,150**

Mobile Equipment Removal:

Aside from the processing plant facilities, other equipment used at the site includes the following:

- 5 CAT 988 Wheel Loaders
- 1 CAT 963 Loader
- 1 CAT 824C Wheel Tractor
- 4 CAT 992 Wheel Loaders
- 1 CAT 216 Skid Steer
- 2 CAT 226 Skid Steer Loaders
- 1 Bobcat 743 Skid Steer
- 1 CAT 16G Motor Grader
- 2 CAT D10T Bulldozers
- 1 Nobel R80 Forklift
- 1 CAT 824 C Rubber Tired Dozer
- 2 CAT 773 Mining Truck
- 2 CAT 777 Mining Trucks
- 3 CAT 740 Mining Trucks
- 1 Euclid R35 Mining Truck
- 1 Driltech DK45 Drill
- 1 Miller 600D Welder
- 1 CAT IT14 Loader
- 1 Ingersol-Rand WL 440 Loader
- 1 JLG Aerial Lift
- 9 Allmand 695 Lite portable light towers
- 1 Guzzler Sump Pump
- 2 Water Trucks

It is assumed that all of the equipment in the preceding list is in good repair and can be loaded directly onto a lowboy trailer and removed from the site. For purposes of this estimate, it is assumed that each piece of equipment will require 0.5 hour for loading, 1.0 hour to haul to a resale dealer in the San Jose area, including unloading, and 0.5 hour to return to the site. Approximately two (2) hours will be required to remove each piece of equipment from the site. At this time there are 45 pieces of equipment that must be removed from the site. Removing this equipment will require 32 loads. Of the total loads required to remove the equipment 19 of which will require special treatment as wide loads with pilot cars, permits and a 5 axle lowboy trailer. Estimated costs for equipment removal are shown below.

Cost Item	Quantity	Hours	Rate	Total
Trucking w/ Tractor and Lowboy Trailer (including operator)	13	26	$139.27	$3,621
Trucking w/ Tractor, 5-axle Lowboy Trailer & 2 pilot vehicles (including operators)	19	lump sum	$2,555	$48,545
Total Heavy Equipment Removal Cost				**$52,166**

Note: trucking costs include truck, trailer and driver

Total Cost for Removal of Plant Facilities and Heavy Equipment	**$324,667**
Total Value of Scrap Steel	**$240,000**
Net Cost for Removal of Plant Facilities and Heavy Equipment	**$84,667**

2.2 Site Reclamation

Site grading will stabilize slopes and prepare the site for revegetation in accordance with the 2012 approved RPA. This estimate's restoration scenario incorporates backfilling of the Main Pit to buttress past instabilities. To accomplish this, the West Materials Storage Area (WMSA) will be used as the primary source of backfill material, since mining byproducts (unused mined material) will not be available.

2.2.1 Backfilling of the North Quarry

Backfilling the North Quarry will involve transporting and placing fill materials. Based off site conditions in October of 2011, Chang Consulting estimated that approximately 28,500,000 Cubic Yards (CY) of material would be required to backfill the North Quarry to the elevations identified in the RPA. Total backfilling volumes were estimated by comparing topographic data in 2011 and the proposed reclamation contours identified in the RPA.

Since October 2011, Lehigh has continued to remove material from the North Quarry and has also began backfilling operations. Since the volume calculation in 2011, approximately 2,279,046 CY of material has been removed from the North Quarry and 2,203,674 CY of backfilling has been completed. The continued backfilling and mining activity at the site has nearly balanced out over the last two years, leaving the total backfill volume required to complete reclamation of the North Quarry at approximately 28,424,628 CY. Ample volumes of backfill currently exist at the West Material Storage

Area (WMSA). A conveyor will be utilized to transport approximately 28,424,628 CY of backfill material from the WMSA to the North Quarry.

The conveyor system will place material directly into the pit. To increase efficiency of the conveying system, portable conveyors will be moved around the WMSA as backfilling progresses. Two (2) D10 dozers will push overburden into a dozer trap that will feed the conveyor system. Oversized material will be reduced by a jaw crusher to six (6) inch minus prior to loading onto the conveyor. A D11 dozer will be utilized within the North Quarry to spread conveyed materials in the backfill area. Backfilling of the North Quarry will take approximately five (5) years, working two shifts per day, five days per week, on a year round basis.

Conveying Backfill Material:

To relocate approximately 28,424,628 CY of overburden from the WMSA to the North Quarry a conveyor system will be utilized. Material will be pushed directly from the WMSA into a feeder and onto the conveyor system. Oversized material will be reduced by a jaw crusher to six (6) inch minus prior to loading onto the conveyor.

Backfilling of the North Quarry will also include grading of approximately 6,700,000 CY of non-limestone material that has been identified as the "Main Slide". Materials originating from the Main Slide will be removed using a D 10 bull dozer. As the backfill elevation increases in the pit, Main Slide materials will be joined with this material. This will reduce push distances and allow a single dozer to complete removal of the Main Slide.

To optimize production from the dozers the conveyor system will be relocated as grading progresses; average push distances will be kept at approximately 300 feet. Throughout the backfilling operation, sections of conveyor will be relocated to reduce the need for additional conveyor to access all areas of the WMSA. During each phase of backfilling only one collection point for the dozers to push material to will be utilized. The system will be capable of shipping approximately 1,380 CY per hour over the conveyor. All equipment required to convey material from the WMSA to the North Quarry is included in the cost estimate from Aggregate Machinery Specialists included in Attachment 1. Generally the conveyor system is composed of three separate parts:

- Primary
- Conveyor
- Radial Stacker

The first equipment discussed in the proposal is the primary station, which includes a heavy duty 38" by 62" jaw crusher and a 62" by 42" vibrating grizzly feeder. The crusher and feeder come with all the add-ons necessary to operate the systems. The conveyor identified for the project is made up of four (4) 42" by 2,375' ground line channel conveyors. The conveyors come with all the belting, motors, pulleys and guards to operate the system. The last piece of equipment required to complete the conveyor system is the Radial Stacker. The stacker is a 30" by 190' portable TeleStacker conveyor, costs for the radial stacker include all accessories recommended in the quote provided in Attachment 1.

In addition to purchasing the system and installing it at the site there will be operation and maintenance costs to run the system while the backfill material is transported from the WMSA to the North Quarry. Costs for operation and maintenance have been included in the table below. These costs include all replacement parts and labor to operate the system over the approximate five (5) year period required to complete backfilling. It is assumed that the conveyor system will generate approximately 75% of the power to operate the conveyor. Remaining electrical power costs are included to address expected operating costs.

At the North Quarry once material is shipped over the conveyor system and generally distributed in the pit by the Radial Stacker, a D11 dozer will compact and push material around the dump site for final placement. The dozer will only be required to push approximately 1/4 of the material around the North Quarry because the Radial Stacker will distribute the majority of the backfill material. Costs in the table below include purchasing and operating the conveyor system as well as all mobile equipment and labor required to complete the backfilling operation. A detailed quote for the conveyor system machinery was provided by Aggregate Machinery Specialist included as Attachment 1.

Equipment	Each	Rate	Hours	Total
42" Conveyor System Over 10,000'	N/A	LS	N/A	$8,410,000
Cat D10N Dozers	3	$330.39	61,950	$20,467,661
Cat D11 Dozer	1	$513.57	7,600	$3,903,132
Water Truck	1	$44.22	6,890	$304,676
D 10 Dozer Operators	3	$61.79	61,950	$3,827,891
D 11 Dozer Operator	1	$61.79	7,600	$469,604
Water Truck Driver	1	$51.51	6,890	$354,904
Conveyor Operation/Maintenance	L.S./ Hour	$42.26	20,650	$872,669
Electricity	187 Kwh	$23.59	20,650	$487,134
Total Backfilling Costs				**$39,097,671**

Prior to operation of the conveyor system it will need to be installed at the site. Costs for initial installation of the conveyor and accessory equipment are included in the table below. Costs for removing the conveyor system are included in mobilization.

Equipment	Each	Rate	Hours	Total
Grove RT 525 Crane	1	$73.32	200	$14,664
Cat 938 G Loader	1	$104.49	200	$20,898
Cat 315L Excavator	1	$64.01	200	$12,802
Crane Operator	1	$63.17	200	$12,634
Pickup Truck	2	$21.43	400	$8,572
Excavator Operator	1	$63.17	200	$12,634
Loader Operator	1	$61.79	200	$12,358
Foreman	1	$63.17	200	$12,634
Laborers	2	$46.92	400	$18,768
Total Conveyor Installation Costs				**$125,964**

During operation of the conveyor system sections of the conveyor will need to be relocated as grading progress through the WMSA. Relocating the conveyor system will take approximately eight (8) hours to complete. Throughout the operation it is anticipated that relocating the system will need to be done about 10 times. Costs in the table below include all equipment and labor necessary to relocate sections of the portable conveyor.

Equipment	Each	Rate	Hours	Total
Cat 325L Excavator	1	$111.02	80	$8,882
Cat 988 Loader	1	$187.00	80	$14,960
Excavator Operator	1	$63.17	80	$5,054
Loader Operator	1	$61.79	80	$4,943
Laborers	2	$46.92	160	$7,507
Total Conveyor Relocation Costs				**$41,346**

Water is necessary for dust suppression for the pit back fill operations. The water will service the conveyor system and haul road dust suppression needs. Water is currently available at the existing crusher/conveyor. Extension of water to the backfill conveyor will require digging a trench and running a 4" water main, including pipe bedding over a 6,000' distance within the existing haul road that extends between the crusher and the west materials storage area. Means Site Work and Landscape Cost Data, 2012 and increases in CPI were used to estimate these costs.

Activity	Distance	$/foot	Total
Water Line Construction	6,000	$12.66	$75,960

Electrical power must be provided to power the conveyor system used to backfill the pit. Although the conveyor system will generate up to 75% of total power requirements, some power will be necessary for start up and continuous operations. Electrical power will be extended from the crusher/conveyor system used to transport materials from the pit to the cement and aggregate plants. This will require an extension of electrical lines for approximately 5,800 feet to the backfill conveyor system. It is assumed that the power poles can be spaced at 300' intervals. Over the 5,800' distance, 20 power poles will be necessary. The cost for extending power is estimated using Means Site Work and Landscape Cost Data, 2012 and increased by CPI to account for inflation. Power line extension is estimated on a per pole basis and includes all poles and wiring.

Activity	Poles	$/Pole	Total
Power Line Construction	20	$2,024	$40,480

2.2.2 Stockpile Relocation Costs

A stockpile located west of the Rock Plant that contains approximately 300,000 tons of crushed rock will be relocated to the North Quarry using a team of off-road haul-trucks traveling over the existing network of quarry roads. A Cat 992 front-end-loader will load the stockpiled material into the haul trucks while a water truck and grader will be utilized to maintain the road network and suppress dust. Equipment

production rates from the Caterpillar Handbook and individual site conditions dictate equipment needs for the job. Production rates in the Caterpillar Handbook are expressed in CY and not tons, therefore the volume of the stockpile has been converted to CY using a factor of 1.5 tons per CY. Using this conversion factor the stockpile volume is approximately 200,000 CY. All equipment rates and site characteristics used to develop equipment production rates for this particular application are included in the tables below:

Cat 777 Off-Road Haul-Truck Production Rates:

Fixed Time (min)	
Load Site Maneuvering	1.1
Dump Site Maneuvering	0.7
Loading W/992	3
Total Time (min)	**4.8**

Cat 777 Haul Truck Production Rates	Avg. (ft) Distance	Avg Grade (%)	Avg Time (min)	Round Trip Travel Time (min)	Total Trip Time (min)	777 D Capacity
Site Average Loaded	13,000	10	18	25.6	30.4	65 CY
Site Average Empty	13,000	10	7.6			

Front-End-Loader Production Rates:

Cat 992 C Front-End-Loader Production Rates	Bucket Capacity	Cycle Time (min)	Buckets Per Truckload	Total Time to Load a 777 D (min)
	15CY	0.6	5	3

To complete relocating the 200,000 CY of material a team of eight haul-trucks will be used to transport the material to the North Quarry. A Cat 992 front-end-loader will be used to load material into the haul trucks. Costs in the table below represent all labor and equipment needed to complete the task:

Item	Each	Rate/Hr	Hours	Total
Cat 992 C Front End Loader	1	$500.76	195	$97,648
Cat 777 D Haul Trucks	8	$282.01	195	$439,936
12H Blade	1	$90.37	98	$8,856
Water Truck	1	$80.02	195	$15,604
Haul Truck Driver	8	$52.16	195	$81,370
Water Truck Driver	1	$51.51	195	$10,044
Loader Operator	1	$61.79	195	$12,049
Blade Operator	1	$64.65	98	$6,336
Total Stockpile Relocation Costs				**$671,843**

2.2.3 Adding Organic Material to Backfilling

As recommended in the Attachment G -SES Reclamation Water Quality Report of the RPA, backfill is to be amended with organic matter while it is being placed in the North Quarry. It is estimated that approximately 63,000 tons of organic matter will be required to be mixed into the backfill material at the North Quarry. The source of the organic matter is to be from an off-site source. This estimate assumes that these materials would originate from an organic material from a supplier in Gilroy, Ca.

The organic material would be mixed into the backfill material during filling of the upper zones of the quarry within the pit; i.e., starting at elevation 935 to 960 ft amsl and up to approximately 985 ft amsl. Groundwater in the quarry is expected to stabilize at an elevation of between 985 and 990 ft amsl. The addition of organic material will occur during the placement of approximately 5,000,000 CY of backfill within the final 25 to 50 feet of fill in the quarry area near the end of Phase 2. Given the estimated production of the backfilling operation of 1,380 CY per hour it will take approximately 190 days of backfilling the North Quarry at elevations where Organic material is recommended.

Trucks will deliver the material to the WMSA near the hopper for the portable conveyor system and a 938 loader will feed the material into the hopper. The 938 loader is capable of loading 420 cubic yards per hour into the hopper, however a production level much lower is assumed to account for mixing of organic material and backfill. To balance out the distribution of the organic material the loader will feed material into the hopper three times per day operating one hour at a time. Once loaded into the hopper the material will travel along the portable conveyor system to be transported to the North Quarry.

Equipment	Each	Rate	Hours	Total
Cat 938 Loader	1	$92.34	600	$55,404
Loader Operator	1	$61.79	600	$37,074
Organic Material*	63,000 (Tons)	$30.75	N/A	$1,937,250
Total Organic Material Mixing Costs				**$2,029,728**

**Costs for organic material include delivery*

2.2.4 Capping Site With Non-Limestone Material

Measures to protect surface water quality during reclamation activities consist of isolating runoff from limestone materials in the North Quarry backfill, WMSA, and EMSA. This will be accomplished during reclamation construction by covering reclaimed areas, and by construction of an effective surface drainage system. The recommended cover includes the placement of a 1-foot thick layer of run-of-mine non-limestone rock (i.e., greywacke, chert, and greenstone) over areas where limestone materials are used as general fill for reclamation. These areas are limited to 440 acres of the site and include the WMSA, EMSA and the North Quarry. The total area to receive capping material accounted for in the FACE is a conservative estimate and accounts for capping all surfaces within the WMSA, EMSA and North Quarry. Field investigation and testing performed by a geologist in the field will determine areas of the site to be capped with non-limestone material during reclamation. The FACE

assumes costs for capping the entire 440 acres, even though capping may not be required over the entire 440 acre area.

Preliminary analysis indicates that the WMSA has ample quantities of non-limestone material, which will meet the required 710,000 CY needed for capping. Drill borings and geologic investigation of the WMSA estimate that approximately 80% of the material in the WMSA is non-limestone material that is suitable for use as capping material. Stockpiled in the WMSA and ready for use as capping material, the non-limestone material will be identified by a geologist during backfilling and utilized for capping material. No additional processing or stockpiling of the material is required prior to use as capping material. Costs for finish grading of non-limestone capping material are accounted for in Section 2.2.5 Finish Reclamation.

Distribution of non-limestone material for capping will utilize a variety of equipment. A combination of dozers, scrapers, loaders and off-road haul trucks will be utilized to distribute the non-limestone capping material. Three separate areas require capping material and three separate equipment combinations will be utilized in order to maximize the efficiency of the equipment.

East Material Storage Area (EMSA) :

Material required for the EMSA is approximately 120,000 CY of non-limestone material. This material will be transported from the WMSA to the EMSA using 777D haul trucks. The average haul distance is approximately 12,000 feet one way. Material will be loaded into off-road haul trucks by a Cat 992 loader and transported to the EMSA for placement. Below are production estimates and assumptions utilized for the cost estimate:

Loaded-3.8 Min @ an average grade of -4%
Empty-3.8 Min @ an average grade of 4%
Total Travel Time-7.6
Loading and unloading-4.1 min
Loads/Hour- 5.1
Truck Capacity-72 CY
Production Per Truck Per Hour- 367 CY
Job Efficiency- 83%
Adjusted Production Per Hour- 305 CY
Total Time Required- 393 Hours

North Quarry:

Material required for the North Quarry is approximately 361,000 CY of non-limestone material. This material will be transported from the WMSA to the EMSA using 777D haul trucks. The average haul distance is approximately 4,000 feet one way. Material will be loaded into off-road haul trucks by a Cat 992 loader and transported to the North Quarry for placement. Production estimates and assumptions utilized for the cost estimate are listed below:

Loaded-1.4 Min @ an average grade of -4%
Empty-1.4 Min @ an average grade of 4%
Total Travel Time-2.8
Loading and unloading-4.1 min
Loads/Hour- 8.7
Truck Capacity-72 CY
Production Per Truck Per Hour- 626 CY
Job Efficiency- 83%
Adjusted Production Per Hour- 520 CY
Total Time Required- 694 Hours

West Material Storage Area (WMSA):

Material required for the WMSA is approximately 229,000 CY of non-limestone material. This material will be distributed around the WMSA using Cat 651 scrapers. Scrapers are self-loading machines and do not require a loader, however a dozer is required as a push cat to assist in loading of the scrapers. The average haul distance is approximately 1,400 feet one way. Below are production estimates and assumptions utilized for the cost estimate:

Fixed Time	
Load Time	.6 min
Spread Time	.7 min
Total	1.3 min

Cat 651E Scraper Production Rates	Avg (ft) Distance	Avg Grade (%)	Avg Time (min)	Round Trip Time (min)	Total Trip Time (min)	Trips per Hour
Site Average Loaded	1,400	4	1.1	2.9	4.2	14.2
Site Average Empty	1,400	4	.8			

Cat 651E Scraper Operational Logistics	Trips/Hour	651E Capacity (struck)	CY/Hr	CY Total	Job Efficiency	Hours Required
Logistics	14.2	32 cy	454	229,000	83%	**608**

All labor and equipment costs for distributing non-limestone capping material are included in the table below:

Equipment	Each	Rate	Hours	Total
Cat 992B Loader	2	$331.77	724	$240,201
Cat 777 Haul Truck	3	$282.01	1087	$306,545
Cat 651 B Scraper	4	$293.55	608	$178,478
Cat D 10N Dozer	2	$330.39	304	$100,439
Water Truck	1	$44.22	514	$22,729
Loader Operator	2	$61.79	724	$44,736
Off-Road Haul Truck Driver	3	$52.16	1087	$56,698
Scraper Operator	4	$63.17	608	$38,407
Dozer Operator	2	$61.79	304	$18,784
Water Truck Driver	1	$51.51	514	$26,476
Total Non-Limestone Material Capping Costs				**$1,033,494**

2.2.5 Scarification of Roads

It is assumed that a CAT D8R Bulldozer, configured with multi-shank ripper, will be used to scarify the roads. Moving at an assumed average rate of 2.2 m.p.h. (1st gear) it would take approximately four (4) hours to rip an estimated 18,000 feet of roadway, making four overlapping passes.

Equipment costs were derived from the Caltrans Labor Surcharge and Equipment Rental Rates manual (4/1/13-3/31/14). Labor rates are provided by the Department of Industrial Relations Prevailing Wage Determinations for Operating Engineers and Teamsters.

Task	Each	Hours	Rate	Total
D8R Dozer W/Ripper	1	7	$212.70	$1,489
Operator Cost	1	7	$61.79	$433
Total Cost for Road Scarifying				**$1,922**

2.2.6 Finish Reclamation

Finished grading will include dressing out material storage areas, the Rock Plant site and other previously disturbed areas in preparation for revegetation.

Approximately 590 acres are currently disturbed, of this area approximately 542 acres of this total will require finish grading prior to revegetation. This total assumes that 30 acres of roadway will remain following reclamation and another 14 acres within the Permanente Creek Restoration Area (PCRA)will not be graded. The table below assumes the use of a dozer with an average finish grading rate of one acre per hour. A dozer is preferred over a wheel type tractor because its track impressions will imprint final slopes to retain seeds and increase water retention and infiltration, thereby increasing the potential for revegetative success.

Task	Each	Hours	Hourly Rate	Total Cost
Grading with a D8N	1	542	$198.48	$107,576
Operator Cost	1	542	$61.79	$33,490
Total Cost for Finish Grading				**$141,066**

2.2.7 Installation of BMP's

After grading work has been completed and prior to revegetating the site permanent BMP's will be installed to manage stormwater runoff. A total of three permanent desiltation basins will be constructed to manage runoff at the WMSA, North Quarry and EMSA. Costs in the table below include all equipment and labor required to install BMP's.

Type	Cost Each	Quantity	Total Cost
Desiltation Basins	$20,500	3	$61,500
Total Cost for BMP Installation			**$61,500**

2.2.8 Geotechnical Oversight

Backfilling operations as well as distribution of non-limestone capping material and Permanente creek restoration will require the oversight of a geological technician in the field during operations. Once all backfilling is completed a final report will be prepared by a Registered Geologist. Costs in the table below account for a field geologist to spend 20 hours per week for observing backfilling operations for approximately five years. Additional field time is also included in the table to account for time to geotechnical supervision of distribution of capping material.

Task	Hours	Hourly Rate	Total Cost
Geotechnical Monitoring (Technician)	5,545	$90.00	$499,050
Geotechnical Monitoring (Supervision)	280	$150.00	$42,000
Final Geotechnical Report	80	$150.00	$12,000
Total Costs for Geotechnical Oversight			**$553,050**

Total Cost for Site Grading and Backfilling $43,874,024

2.3 Permanente Creek Reclamation Areas (PCRA)

This section describes the reclamation costs of historic mining disturbance adjacent to Permanente Creek, described as the Permanente Creek Reclamation Area ("PCRA"). For mapping and illustrative purposes, the PCRA is divided into seven different subareas (numbered one through seven) with customized reclamation treatments for each subarea. In 2012 after approval of the RPA reclamation work commenced in Subareas 4, 5 and 6 and was completed in late October. Work completed included installation of BMP's as well as hydroseeding of disturbed areas. In total approximately nine (9) acres in the PCRA was reclaimed in 2012. Costs in the tables below reflect completed reclamation work as well as anticipated reclamation costs in

accordance with the approved RPA. Invoices for the completed work are included as Attachment 4.

2.3.1 Concrete Culvert Removal from Permanente Creek

Removing a concrete half culvert located in the proposed restored stream channel is one aspect of the Permanente Creek Restoration. The concrete half culvert is located just downstream from Pond 13 and covers a length of approximately 375 feet. It is estimated that approximately 130 cubic yards of concrete will need to be demolished and removed to complete removing the concrete half culvert.

According to the CAT Handbook, an H120c hydraulic hammer attached to a 315L excavator can demolish approximately 230 cubic yards of reinforced concrete within 8 hours. Once the concrete has been broken into pieces that are 2-feet in diameter or smaller, the excavator will be used to load the material into haul trucks. According to the CAT handbook, the 315L has an average cycle time of 20 seconds. Assuming that the average bucket load will be 0.75 yd^3, it will take one (1) hour for the excavator to load 130 yd^3 into the trucks. It is estimated that each truckload will have a capacity of 17 yd^3 and each load will take 1.5 hours to complete. All concrete removed from the site will be hauled off site to a C and D Recycling facility. Additional time has been added to this time to account for truck warm-up and mobilization. The table below represents a cost estimate for demolishing and removing the culvert.

315L Excavator w/ Rock Breaker Attachment	1	$103.03	6	$618
Excavator Operator	1	$63.17	6	$379
315L Excavator w/ bucket	1	$64.01	2	$128
Excavator Operator	1	$63.17	2	$126
Haul Truck	4	$88.70	12	$1,064
Truck Driver	4	$51.21	12	$615
Foreman	1	$63.17	8	$505
Laborer	2	$46.92	8	$375
Pick Up	1	$21.43	8	$171
Concrete Recycling Fees*				$640
Total Cost of Removing Concrete Culvert				**$4,623**

** Concrete Recycling fees of $80 per load were obtained from Hanson Aggregates*

2.3.2 Permanente Creek Reclamation Grading

The reclamation plan calls for restoration of about 2,500 linear feet of Permanente Creek. Material from historic mining has collected in the creek channel. The reclamation plan calls for removal of this material and creation of a reconfigured creek channel that is roughly 50 feet wide with a 10 foot bottom and 3:1 side slopes. Material removed from the creek during the reconstruction of the channel will be hauled to the North Quarry and utilized as backfill material. In total there is an estimated 17,500 Cubic Yards of material that will be removed from the channel to create the reconfigured channel. Costs in the table below include all grading to

reconstruct the channel, as well as the installation of step pools and the repair of sheet piles located in Subarea 6.

Task	Each	Hours	Rate	Total
Cat 330 Excavator	1	110	$152.34	$16,757
Cat 966F Loader	1	100	$147.60	$14,760
Cat 740 Articulated Haul Truck	2	90	$122.66	$11,039
Excavator Operator	1	110	$63.17	$6,949
Loader Operator	1	100	$61.79	$6,179
Truck Driver	2	90	$52.16	$4,694
Laborer	1	20	$46.92	$938
Total Cost for Creek Channel Restoration Grading				**$61,317**

2.3.3 Boulder Removal

A number of limestone boulders have found their way into Permanente Creek as a consequence of mining operations. These boulders range in size from approximately 10" to 3' in diameter. The majority of these boulders falls within a size class of between 12" and 24" in size. This estimate assumes that 200 boulders are located within the inundation limits of Permanente Creek. It is estimated that 25% of the boulders fall into the smaller sized fraction. These boulders will be removed using hand labor. Boulders ranging in size from 12" to 24" represent 60% of the total, while 15% fall in the upper size range. These boulders must be removed using a combination of hand labor and mechanized equipment.

The smaller of these boulders will be removed using hand labor, while the larger boulder will require mechanized removal. All of the boulders will be removed and deposited on the north side of Permanente Creek where they can be removed using a front end loader and dump truck.

Boulders in the 12" to 24" size fraction represent the majority of the boulders and will be removed using a variety of mechanized methods. Where the boulders can be removed by an excavator, these boulders will be placed within the bucket of the excavator using mechanized power assisted by hand labor. This estimate assumes that approximately 25% fall within this capability. Where boulders cannot be manipulated and removed directly using an excavator, large (1 cy) nylon bags will be used extract the boulders. The boulders will be placed into the bags using hand labor to roll the boulders into the bags. The bags will be connected to a choker that is connected to an excavator and pulled onto an area where they can be removed from the influence of Permanente Creek. Larger sized boulders would either be broken up into smaller pieces and removed using hand labor or anchor bolts will be inserted into the boulders. The anchor (eye bolts) will then be attached to a choker using a clevis and choker and pulled from the influence of Permanente Creek. Once removed from the creek, boulders will be loaded onto off-road haul trucks and hauled to the North Quarry for final placement. Costs in the table below include all labor and equipment necessary to complete the task of removing limestone boulders from Permanente Creek.

Task	Each	Hours	Rate	Total
Cat 330 Excavator	1	64	$152.34	$9,750
Cat 966F Loader	1	48	$147.60	$7,085
Cat 740 Articulated Haul Truck	1	64	$122.66	$7,850
Excavator Operator	1	64	$63.17	$4,043
Loader Operator	1	48	$61.79	$2,966
Truck Driver	1	64	$52.16	$3,338
Laborer	4	256	$46.92	$12,012
Total Cost for Boulder Removal				**$47,044**

2.3.4 BMP Installation

After grading work has been completed and prior to revegetating the site temporary and permanent BMP's will be installed to manage stormwater runoff. Temporary BMP's will include Straw Waddles and Silt Fencing to be installed in the PCRA. A total of two permanent desiltation basins will be constructed in Subarea 1 to manage runoff. Costs in the table below include all equipment and labor required to install BMP's.

Type	Cost Each	Quantity	Total Cost
Straw Waddles	$4.61	37,600	$173,336
Silt Fencing	$4.10	3,450	$14,145
Desiltation Basins	$20,500	2	$41,000
Total Cost for BMP Installation			**$228,481**

2.3.5 Slope Treatment

Slopes located in Subareas 2 and 3 of the PCRA are comprised of loose unconsolidated fill material. In an effort to reduce erosion from these slopes and provide more favorable surfaces for seed propagation the slopes will be compacted with a sheep's foot that is moved up and down the slopes by a winch.

Task	Each	Hours	Rate	Total
D8R Dozer W/Winch	1	16	$205.13	$3,282
Sheeps Foot Attachment	1	16	$12.01	$192
Operator Cost	1	16	$61.79	$989
Total Cost for Slope Compaction				**$4,463**

2.3.6 PCRA Revegetation

Seed Mixes:

The tables below summarize the hydroseeding components and associated costs that will be incurred for revegetation of 13.7 acres in the PCRA treatment areas. See Attachment 5 for a seed quote from Pacific Coast Seed.

PCRA Slope Seed Mix:

Scientific Name	Common Name	Lb/Acre	Price/Lb	Total Cost for 13.7 Acres
SHRUBS				
Artemisia californica	California sagebrush	10	$30.00	$4,110
Baccharis pilularis	coyote brush	6	$30.00	$2,466
Eriogonum fasciculatum	Eastern Mojave buckwheat	16	$7.50	$1,644
Salvia mellifera	black sage	4.3	$48.00	$2,828
GRASSES AND HERBS				
Achillea millefolium	yarrow	2	$30.00	$822
Artemisia douglasiana	Douglas' sagewort	1.9	$60.00	$1,562
Bromus carinatus	California brome	6	$6.50	$534
Clarkia purpurea ssp. quadrivulners	winecup clarkia	1	$60.00	$822
Elymus glaucus	blue wildrye	6	$13.50	$1,110
Heterotheca grandiflora	telegraph weed	1	$60.00	$822
Lotus purshianus	Spanish clover	3.6	$70.00	$3,452
Plantago erecta	dotseed plantain	3	$30.00	$1,233
Sisyrinchium bellum	Western blue-eyed grass	1.4	$90.00	$1,726
Vulpia microstachys	small fescue	10	$18.00	$2,466
Total		**72.2**		**$25,597**

PCRA Riparian Seed Mix:

Scientific Name	Common Name	Lb/Acre	Price/Lb	Total Cost for 1 Acres
Artemisia douglasiana	mugwort	2	$60	$120
Carex barbarae	valley sedge	3	$90	$270
Carex praegracilis	field sedge	3	$95	$285
Cyperus eragrostis	tall flatsedge	6	$120	$720
Hordeum brachyantherum	meadow barley	18	$18	$324
Juncus effusus	bog rush	1	$100	$100
Juncus patens	common rush	1	$120	$120
Leymus triticoides	creeping wildrye	6	$55	$330
Total		**40**		**$2,269**

Hydroseeding

Area	Total Acres to Hydroseed	Hydroseed Slurry Application $/acre	Total Cost
PCRA	13.7	$4,951	$67,829
Total			**$67,829**

PCRA Riparian Planting

In areas of Permanente Creek where the channel has been reclaimed, the 3:1 floodplain banks will be hand planted with container stock. Approximately 1.5 acres will require hand planting. This estimate assumes a mix of one gallon and smaller container stock planted at a spacing of about 5'. Costs for plant materials and labor were provided by WRA Inc. Costs in the table below include all labor and materials to install plantings along approximately 2,500 feet of the reclaimed Permanente Creek channel.

Total Number of Plants	Cost Per Plant	Total Cost
2,500	$12.81	$32,025

PCRA Permitting

Prior to completing Permanente Creek restoration activities the proper permits must be obtained. These may include CDFG permits, ACOE permits or RWQCB permits. Costs for obtaining permits and completing a wetland delineation of Permanente Creek are included in the table below. Revegetation is considered successful when total tree, shrub and herbaceous cover meets 50 percent of the total treated surface. For the purpose of monitoring, slope units will be defined as contiguous expanses of slope treated during a single year or application event.

Permitting Costs	$41,000
Wetland Delineation	$5,125
Total	**$46,125**

2.3.6 PCRA Monitoring

During the reclamation of the PCRA treatment areas geologic and revegetation monitoring will be required. Monitoring will include a geologist going in the field to observe grading activities and make grading recommendations as needed. The biologist would monitor the site during construction activity to limit the impacts to existing vegetation. Monitoring costs included in the table only account for monitoring during reclamation activities and do not include costs for monitoring for reclamation success, those costs can be found in Section 2.5.

Cost Item	Hours	Rate	Total
Creek Restoration Monitoring (Biologist)	100	$105	$10,500
Geologic Monitoring (Geologist)	120	$125	$15,000
Total Monitoring Costs			**$25,500**

Total PCRA Reclamation Costs **$545,273**

2.4 Revegetation

The revegetation of disturbed lands at the Quarry is designed to establish a self-sustaining community of native species, in compliance with the Reclamation Plan and consistent with the Reclamation Standards identified in SMARA (California Public Resources Code, Article 9, Section 3705).

Previous restoration planting at the Quarry has been used as a guide for revegetation planning. Revegetated areas now dominated by native species serve as a basis for anticipated revegetation success. Native species common in revegetated areas include California buckwheat, coyote brush, buckbrush and sagebrush.

The goal for revegetation efforts is native community restoration. This refers to the reclamation of disturbed lands to a self-sustaining community of native species which will visually integrate with surrounding lands. Revegetation is designed to control erosion and stabilize slopes against long-term erosion using plant materials capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer.

Revegetation relies on an adaptive management approach. Plant species selected for revegetation consist of native species known to occur on the quarry property. Preliminary species selection is shown in the tables below and includes species common in the area that have proven to be successful in past revegetation efforts. Depending on revegetative success, final species selection may include native plants observed within the greater quarry property.

<u>Growth Medium Distribution:</u>

Prior to revegetation, growth medium will be applied to approximately 542 acres of the site. Where container stock is installed on fill slopes, the target depth of growth medium is 12 inches, which is comprised of six inches of topsoil. Hydroseeded areas require six inches of growth medium comprised of three inches of topsoil. Of the 542 acres that will receive growth medium, a thickness of six inches of topsoil will be distributed over 28 acres of the site and a thickness of three inches of topsoil will be

distributed over 514 acres for a total volume of 206,475 CY. All growth medium will come from within the RPA boundary; however it must be transported from locations around the site to areas of final placement. To transport the material around the site a team of off-road haul trucks will be utilized and D8 dozer will be used to spread the material out. A dozer is preferred to distribute the topsoil over a wheel type tractor because its track impressions will imprint final slopes to retain seeds and increase water retention and infiltration, thereby increasing the potential for revegetative success.

Fixed Time	
Load Time	2 min
Dump Time	.5 min
Total	2.5 min

Cat 740 Production Rates	Avg (ft) Distance	Avg Grade (%)	Avg Time (min)	Round Trip Time (min)	Total Trip Time (min)	Trips per Hour
Site Average Loaded	3,500	4	2.1	3.4	5.9	10.1
Site Average Empty	3,500	4	1.3			

Cat 740 Operational Logistics	Trips/Hour	740 Capacity (heaped)	CY/Hr	CY Total	Job Efficiency	Truck Hours Required
Logistics	10.1	30 CY	303	206,475	83%	**821**

All costs to relocate and spread 206,475 CY of growth medium over areas of the site to be revegetated are included in the table below.

Equipment	**Each**	**Rate**	**Hours**	**Total**
Cat 988 Loader	1	$187.00	411	$76,857
Cat 740 Haul Truck	2	$167.71	821	$137,690
Water Truck	1	$44.22	411	$18,174
D8R Dozer	1	$198.48	411	$81,575
Loader Operator	1	$61.79	411	$25,396
Off-Road Haul Truck Driver	2	$52.16	821	$42,823
Water Truck Driver	1	$51.51	411	$21,171
Total Cost for Growth Medium Distribution				**$403,686**

Hydroseeding:

The tables below summarize the hydroseeding components and associated costs that will be incurred for revegetation of 565 acres. See Attachment 7 for a seed quote from Pacific Coast Seed.

General Hydroseeding Seed Mix

Scientific Name	Common Name	Lb/Acre	Price/Lb	Total Cost For 542 Acres
Artemisia californica	California sagebrush	16	$30.00	$260,160
Baccharis pilularis	coyote brush	20	$30.00	$325,200
Eriogonum fasciculatum	California buckwheat	20	$7.50	$81,300
Salvia leucophylla	purple sage	2	$80.00	$86,720
Salvia mellifera	black sage	3	$48.00	$78,048
Achillea millefolium	yarrow	2	$30.00	$32,520
Artemisia douglasiana	mugwort	1	$60.00	$32,520
Bromus carinatus	California brome	6	$6.50	$21,138
Elymus glaucus	blue wildrye	6	$13.50	$43,902
Eschscholzia californica	California poppy	2	$16.00	$17,344
Heterotheca grandiflora	telegraph weed	1	$60.00	$32,520
Lotus purshianus	Spanish clover	1	$70.00	$37,940
Lotus scoparius	deerweed	2	$30.00	$32,520
Lupinus nanus	sky lupine	1	$40.00	$21,680
Melica californica	California melic	2	$30.00	$32,520
Nassella pulchra	purple needlegrass	4	$36.00	$78,048
Poa secunda	one-sided bluegrass	2	$28.00	$30,352
Trifolium willdenovii	tomcat clover	2	$40.00	$43,360
Total		**93**		**$1,287,792**

Using mechanical hydroseeding equipment, finished slopes will be seeded, mulched, and composted in a single application. The hydromulch mix will contain compost, organic mulch, fertilizer and the seed mix. The compost provides an infusion of soil organic matter to the graded material that is richer in nutrients than the mulch. Organic matter provides a long-term source of nutrients, increases water holding capacity, and improves the texture of the soil.

Commercial fertilizers, intended for agricultural or ornamental applications, are inappropriate for restoration because they provide a strong flush of nutrients at concentrations rarely present in nature. The typical result is rapid growth of weedy grasses and herbs, which then may out-compete slower-growing chaparral species for sunlight and soil water. Biosol fertilizer is a slow-release fertilizer designed for restoration objectives, and provides a steady supply of major nutrients at relatively low concentrations.

Freedlun Hydroseeding provided a conservative cost quote for the hydroseed applications. The following cost includes all materials and labor required:

Area	Total Acres to Hydroseed	Hydroseed Slurry Application $/acre	Total Cost
Areas Disturbed from Mining	542	$1,350	$731,700
Total			**$731,700**

Bench Planting

In addition to hydroseeding trees and shrubs container plantings will occur on the benches . Approximately 28 acres of the total revegetation area in the EMSA and Rock Plant areas will be planted as tree and/or shrub container planting areas. Shrubs will be planted at approximately 4.5-foot spacing and trees at 9-foot spacing in the designated planting areas.

North-facing benches will be revegetated with approximately 6.5 acres of oak-dominated plantings along with hydroseed. A target quantity of approximately 1,745 oak trees is scheduled to be planted in these areas, in addition to other native tree species. The oaks will be a mixture of acorn and container plantings.

Common name	Scientific name	Unit Cost	Quantity per acre	Total Cost for 6.5 Acres
Pacific madrone	Arbutus menziesii	$2.02	50	$657
Grey pine	Pinus sabiniana	$2.38	50	$774
Coast live oak	Quercus agrifolia	$2.38	54	$835
Canyon live oak	Quercus chrysolepis	$2.38	54	$835
Blue oak	Quercus douglasii	$2.38	54	$835
Valley oak	Quercus lobata	$2.38	54	$835
Interior live oak	Quercus wislizenii	$2.38	54	$835
Mountain mahogany	Cercocarpus betuloides	$2.91	142	$2,686
Toyon	Heteromeles arbutifolia	$1.23	142	$1,135
Scrub oak	Quercus berberidifolia	$2.02	142	$1,864
California coffeeberry	Rhamnus californica	$1.61	142	$1,486
Redberry	Rhamnus californica	$1.61	142	$1,486
Hillside gooseberry	Ribes californicum	$1.61	142	$1,486
Chaparral currant	Ribes malvaceum	$1.61	142	$1,486
Total			**1264**	**$17,235**

East-facing benches comprise of approximately 21.5 acres will be planted with 75 percent (approximately 8,660) grey pine (*Pinus sabiniana*), along with 25 percent other native tree and shrub plantings common to oak woodland habitats.

Trees and Shrubs for Pine Woodland- East facing Benches				
Common name	**Scientific name**	**Unit Cost**	**Quantity per acre**	**Total Cost for 21.5 Acres**
Pacific madrone	Arbutus menziesii	$2.02	22	$955
Grey pine	Pinus sabiniana	$2.38	403	$20,622
Coast live oak	Quercus agrifolia	$2.38	22	$1,126
Canyon live oak	Quercus chrysolepis	$2.38	22	$1,126
Blue oak	Quercus douglasii	$2.38	22	$1,126
Valley oak	Quercus lobata	$2.38	22	$1,126
Interior live oak	Quercus wislizenii	$2.38	22	$1,126
Mountain mahogany	Cercocarpus betuloides	$2.91	142	$8,884
Toyon	Heteromeles arbutifolia	$1.23	142	$3,755
Scrub oak	Quercus berberidifolia	$2.02	142	$6,167
California coffeeberry	Rhamnus californica	$1.61	142	$4,915
Redberry	Rhamnus californica	$1.61	142	$4,915
Hillside gooseberry	Ribes californicum	$1.61	142	$4,915
Chaparral currant	Ribes malvaceum	$1.61	142	$4,915
Total			**1529**	**$65,673**

Planting shrubs and trees will require the efforts of four common laborers and two pickup trucks along with the oversight of a revegetation specialist. Labor and equipment included in the table below accounts for plantings on 28 acres of the site.

Item	Each	Rate/Hr	Hours	Total
Pickup Truck	2	$21.43	240	$5,143
Laborers	4	$46.92	480	$22,522
Revegetation Specialist	1	$85.00	120	$10,200
Total Costs for Planting				**$37,865**

Total Cost for Site Revegetation **$2,543,951**

2.5 Monitoring and Maintenance

A large number of trees and shrubs are proposed for planting within groupings of tree and shrub "islands" in areas of the EMSA and the Rock Plant. By planting a large number of trees and shrubs without irrigation, hearty trees and shrubs will be selected for increasing the chances of their survival. Approximately twice as many trees and shrubs will be planted than the total required to meet performance standards for this area of the site. Based on the preliminary results of test plots at the site and the strategy of planting "extra" trees and shrubs, the amount of replacement plantings required to meet performance standards are expected to be minimized. The costs for replacement plantings were estimated by the biological consultant and are incorporated into the total amount for annual weed control and general maintenance.

A restoration biologist will monitor the revegetated areas three times each year (spring, summer, and fall), and provide an annual report to Lehigh and Santa Clara County. The annual report will specifically assess the following:

- Numbers of trees surviving on each planted bench and slope unit
- General size and condition of trees
- General condition and extent of brush and herbaceous cover
- Overall progress toward a stable, natural plant community and towards meeting performance standards
- Noxious weed growth

The annual report should describe all actions taken during the preceding year and include recommendations for the upcoming planting season.

After planting, the area will be monitored and controlled to ensure unwanted plants do not threaten the success of revegetation efforts. The plants that are considered problematic are found on the California Invasive Plant Council's weed inventory (Cal-IPC 2006). Noxious weeds present at the quarry include, but are not limited to: yellow star thistle (*Centaurea solstitialis*, annual); black mustard (*Brassica nigra*, annual); pampas grass (*Cortaderia sp.*, annual); and fennel (*Foeniculum vulgare*, perennial).

The site will be managed to prevent the spread of noxious weeds. At a minimum, monitoring will occur annually until performance standards have been met for two consecutive years (estimated at 5 years) by means of visual observation to identify the potential for uncontrolled weed propagation. Should weed control be necessary, cultural methods will be implemented to eliminate the spread of noxious species.

In addition to biological monitoring and maintenance, costs for geologic and water quality monitoring are also included in the table below. Geotechnical monitoring will encompass backfilling and inspection of all final slopes within the RPA boundary. These areas include the North Quarry high wall, scenic easement landslide, as well as other areas of the site. The costs below are based on personal communication with the biological and geological consultants who are familiar with the site.

Cost Item	Hours	Rate	Total
Annual Monitoring (Scientist/Tech)	130	$108	$14,040
Annual Monitoring (Project Manager)	12	$128	$1,536
Geologic Monitoring (Geologist)	40	$128	$5,120
Water Quality Monitoring (QSP)	120	$108	$12,960
Water Quality Monitoring (QSD)	40	$128	$5,120
Report Preparation (Scientist/Tech)	50	$108	$5,400
Report Preparation (Project Manager)	10	$128	$1,280
Annual Weed Control and General Maintenance			$123,000
Total Annual Monitoring and Maintenance Costs			$168,456
Total 5-Year Monitoring and Maintenance Costs			**$842,280**

In addition to revegetation monitoring and maintenance, earthwork maintenance will be required for the five (5) year period following completion of reclamation activities. Earthwork maintenance will consist of maintaining and repairing slopes that are affected by uneven settling or erosion; specifically, areas of the North Quarry where backfilling has occurred, settling of fill material may occur. To maintain drainage and reclamation contours minor grading work is expected. Earthwork maintenance is expected to reduce as time passes with the greatest level of effort coming the first year after reclamation work is complete. No reclamation work is expected the in year six (6) following reclamation grading completion. A dozer will be utilized to recontour slopes and provide compaction of material as it operates. The dozer will also create a rough surface from the track impressions that will be beneficial for revegetation success. Revegetation maintenance costs for areas disturbed during earthwork maintenance are addressed in this section in the previous table. Costs in the table below only account for earthwork maintenance.

Monitoring Year	Hours of Grading Required
1	80
2	60
3	40
4	20
5	10
6	0
Total	**210**

Task	Hours	Rate	Total Cost
Grading with a D8R	210	$198.48	$41,681
Operator Cost	210	$61.79	$12,976
Total Cost for Grading			**$54,657**

Total Cost for Monitoring and Maintenance **$896,937**

3.0 DIRECT COST OF RECLAMATION SUMMARY

Task	Cost
Removal of Equipment, Structures, & Rubbish	$84,667
Site Grading	$43,874,024
Permanente Creek Reclamation Area	$545,273
Revegetation	$2,543,951
Revegetation Monitoring and Maintenance	$896,937
Total Direct Reclamation Costs	**$47,944,852**

4.0 INDIRECT COST OF RECLAMATION

Item	Cost
Supervision Expense @ 2.3%	$1,102,732
Profit & Overhead Expense @ 3.8%	$1,821,904
Contingencies @ 4%	$1,917,794
Mobilization Expense @ 1.8%	$863,007
Total Indirect Cost	**$5,705,437**

5.0 SUBTOTALS

Total Direct Reclamation Costs	$47,944,852
Total Indirect Costs	$5,705,437
Total Direct and Indirect Cost of Reclamation	$53,650,289
Lead Agency Administrative Costs @ 2%	$1,073,006
Total Reclamation Costs	**$54,723,295**

TOTAL COST OF RECLAMATION $54,723,295

Attachment 1

AGGREGATE MACHINERY SPECIALIST

January 22, 2014

Mr. Warren Coalson
ENVIROMINE
3511 Camino Del Rio South
Suite 403
San Diego, CA 92108

SUBJECT: Lehigh Hanson Permanente
Quote #: 1401-1002-TO

Dear Mr. Coalson,

At the request of Mr. Damien Galford, (707) 253-1723, we are updating Sections I, II and III of our previous budget quotation of October 24, 2012.

Please notify your client that these are budget prices and subject to confirmation at time of Request for Quotation.

Do not hesitate in contacting us if we can be of service.

Very truly yours,

AGGREGATE MACHINERY SPECIALIST

John F. Mulligan

Cc: T. ONeill
J.C. Mulligan

ENVIROMINE

Hanson Permanente Reclamation

January 22, 2014

ITEM I PRIMARY STATION

A. *LIPPMANN-Milwaukee, Inc.* J3862-VGF6224 Portable Electric Primary Jaw Crushing Plant, with the following specifications:

One (1)*LIPPMANN-Milwaukee, Inc.* Heavy-Duty Jaw Crusher, Model 38 x 62 with the following specifications:

LIPPMANN-Milwaukee heavy-duty jaw crushers have

- An extra heavily ribbed steel frame - stress relieved after welding and before machining;
- One-piece steel pitman;
- Heat-treated forged alloy steel eccentric shaft;
- Oversized tapered roller bearings in both the pitman and frame. Tapered roller bearings exhibit a greater load-carrying capacity than equal size spherical roller bearings that are used in most competitor's machines.
- Reversible manganese steel jaw dies and extensions;
- Hardox steel cheek plates;
- Manual hydraulic toggle adjustment;
- Two heavy-duty flywheels, one grooved for v-belts.
- Includes a 300 hp NEMA C high starting and breakdown torque TEFC electric motor for the crusher (starter, wiring and controls not included in base price of portable plant.

The 38x62 crusher includes an Automatic Oil Lubrication System

- Delivers a metered flow of filtered oil to each bearing.
- Low oil pressure alarm system.
- 20 gallon reservoir.
- 1/2 gpm oil pump with a 1 hp, 230/460 volt electric motor (starter and wiring not included), flow regulating valve, pressure gauge, piping, flow sights for return lines, immersion heater, and controls.
- Slide on and slide off feeder hopper module is a flared-type hopper with 3/4" HARDOX steel plate sides.

LIPPMANN-Milwaukee, Inc. 62" x 24' Vibrating Grizzly Feeder (Rip Rap Style), with the following specifications:

One (1) LIPPMANN-Milwaukee Heavy-Duty Horizontal Vibrating Grizzly Feeder, 62" Wide and 24' long, with the following specifications:

- 1 1/4" thick steel feeder pan, 14' feet long, with 1/2" thick Hardox steel liners on pan and 3/8" thick Hardox liners on side plates of feeder.
- (2) 5' long step deck grizzly section with adjustable bars and 2-1/2" to 4-1/2" nominal openings. The second section will have grizzly bars with nominal openings 5"-7" on discharge end.

- Vibrating mechanism is a model LLH-26 with two full-length, self-counterweighted solid steel shafts
- Helical gears
- Four (4) 130 mm spherical roller bearings
- Oil splash lubrication system.
- Mechanism is enclosed in a dust proof housing.
- Driven sheave is included, in base price of the feeder.

The base plant includes
- 60" x 34' (approx.) front discharge conveyor with 3 ply belting and 5" CEMA C idlers.
- Includes a (1)25 hp 1800 rpm TEFC electric motor.
- The plant has a by-pass chute under the grizzly section of the feeder.

The steel truck frame with king-pin (without front dolly) includes:
- Quad axle Hutch suspension with sixteen (16) Hub Piloted Wheels.
- 11:00 x 22.5 radial tubeless tires, and air brakes.
- Also includes all necessary chutes and supports, support legs, guards for v-belt drives, operator's platform with railing and ladder, tail lights, reflectors, directional signals, mud flaps.

BUDGET PRICE: fob Point of Manufacture **$885,000.00**

OPTIONS / ACCESSORIES

1. Hydraulic leveling jacks, six (6) 70,000 lb., 24" stroke with an 8 Hp gas power unit.

ADD: $ 49,500.00

2. NEMA - 12 Motor Control Center with dust-tight enclosure and full voltage magnetic starters for 60 hp (feeder), (1) 25 hp (front discharge conveyor), and 3/4 hp (Autolube System) motors with:
   - Circuit protection.
   - Also included is as solid state starter and circuit breaker for the 300 hp (crusher) electric motor.
   - Start/stop push buttons and wiring from the control center to the electric motors (30/60/460 volts).

ADD: $ 46,650.00

3. One (1) 60 hp, *Altivar* (Square D) AC electric variable speed drive and controls.
   - AC variable speed drive controller
   - Remote control station with 50' pendant cable, and motor circuit breaker.
   - Please note that this drive option includes an electric motor as noted in Option B. above.

ADD: $ 17,850.00

4. Hydraulic Toggle Assembly

ADD: $ 64,000.00

B. DUST COLLECTOR

1. DCE Model DLMV 60/15 Type F (H + K11- 10 Hp Integral Fan) Base Model

- Finish cost: standard finish
- Seal frame assembly (tube sheet): standard –mild steel
- Inserts: mild steel
- Filter bags: Dura-Life™ Polyester
- Control Box with Timer: with solenoids (NEMA 4 ENCL)
- Pressure gauge: Magnehelic
- Motor options: fan rotation
- Compressed air components: piggyback filter and regulator
- Housing assembly (upstands): vertical, unmounted
- Clamp assembly: standard

PRICE: fob Louisville, KY **$ 35,200.00**

2. Mounting

Designed to be installed on the discharge conveyor.

Vertical mounting support, corrugated metal conveyor covers, discharge head box for conveyor.

PRICE: fob Factory **$ 15,800.00**

TOTAL: **$ 51,000.00**

SUMMARY ITEM I

Primary	$ 885,000.00
Leveling Jacks	$ 49,500.00
Motor Controls	$ 46,650.00
Variable Speeds	$ 17,850.00
Hydraulic Toggle	$ 64,000.00
Dust Collector	$ 51,000.00
Subtotal:	**$1,114,000.00**
8.25% Sales Tax:	$ 91,900.00
Freight:	$ 61,100.00
TOTAL:	**$1,267,000.00**

II. CONVEYOR SYSTEM

Superior 42"x 2375' Ground Line Channel Conveyor (4)

Conveyor Frame

Intermediate frame	8" Channel, Bolt in cross members

Drive specifications

Drive	Class I tail end 300HP
Gear reducer	Falk Drive
Brake	Svendborge Brake
Motor	300 HP 1800 RPM TEFC
V-belt drive	with drive guard
Capacity	2000 STPH of 100 PCF material, 25 degree surcharge (90% fines, 10% spherical lumps 6” minus), @ 212' of decline
Belt speed	600 fpm

Superior pulleys, crown face unless stated otherwise

Drive/Tail pulley	42” diameter, 3/8" herringbone lagged Eng. drum
Snub pulley	36” diameter, 1/4” smooth lagged Eng. drum
Head pulley	32” diameter, Engineered drum
Shafts	Turned and polished
Bearings	split house
Take ups	Gravity Tower at tail end
Bend pulleys	32” diameter, 1/4” smooth lagged Eng. drum
Take-up pulley	32” diameter, 1/4” smooth lagged Eng. drum
Weight	Provided by others

Stationary

Conveyor splice	conveyor unassembled for shipment
Supports	Fabricated from structural steel, 2' tall on 20' spacing, 8' discharge height

Conveyor Components

Belting	4-ply-3/8x1/4 1200PIW
Belt splice	Flexco mechanical steel fasteners
Primary cleaner	Superior Exterra® Primary Belt Cleaner
Secondary cleaner	Superior SFL Dual Scraper
V-plow	Superior V-plow on return side
Superior Idlers	CEMA D, 5” dia. rolls, sealed for life ball bearings
Load area	20° trough, 16" spacing
Trough	35° on 3' 4" spacing

Returns	steel rolls, on 10' spacing
Self Aligning	50' from ends every 100' after
Receiving hopper	sloped, 5' long, bolt on design
Gathering trough	with adjustable rubber flashing
Discharge hood	1/4" AR liner
Covers	not included
Emergency Stop	not included

Additional Specifications

Guarding	for drive and tail pulleys, v-belt drive and return idlers. Guards may not meet all local codes; customer is responsible to have guarding inspected.
Electrical	Control panel and wiring not included
Paint	1 coat primer, 1 coat enamel
Cross members	powder coated Superior Orange
Idler Paint	powder coated Superior Orange
Owner's Manual	(1) copy included for operation and maintenance.

BUDGET PRICE: fob Point of Manufacture **$1,450,000.00 each**

LOT OF FOUR: **$5,800,000.00 each**

OPTIONS / ACCESSORIES

1a. Emergency stop switch, cables, brackets for one side.

ADD: **$ 14,500.00 per conveyor**

LOT OF FOUR: **$ 58,000.00**

1b. Emergency stop switch, cables, brackets for both sides.

ADD: **$ 29,225.00 per conveyor**

LOT OF FOUR: **$ 116,900.00**

2. Head end discharge hood, with replaceable ¼" AR liners.

ADD: **$ 4,250.00 per conveyor**

LOT OF FOUR: **$ 17,000.00**

ITEM II SUMMARY

Lot of Four Conveyors	$5,800,000.00
Stop Switches – Both Sides	$ 116,900.00
Discharge Hood	$ 17,000.00
8.25% Sales Tax:	$ 474,100.00
Freight:	$ 200,000.00
TOTAL:	**$6,408,000.00**

III. RADIAL STACKER

Superior 36” x 190' Swing Axle TeleStacker® Conveyor

Conveyor frame

Truss design	Heavy-duty truss, designed for maximum strength / weight ratio
Main conveyor	100' long with 84" deep truss
Stinger	100' long with 66" deep truss
Extension	conveyor extends to 190' long with hydraulic cable winch
Safety stop	mechanically stops retraction in the event of cable failure

Drive specifications (Main / Stinger)

Drive	Class I head end
Gear reducers	shaft mount
Backstops	installed in reducers
Motors	60 HP / (2) 30 HP 1800 RPM TEFC
V-belt drive	with drive guard
Capacity	1500 STPH of 100 PCF material, 25 degree surcharge (90% fines, 10% spherical lumps 8” minus)
Belt speed	450/600 fpm

Superior pulleys

Drive pulleys	24” diameter, 3/8” herringbone lagged drum
Tail pulleys	18” diameter, CEMA Chevron® wing pulley
Auto greaser	included
Shafts	Turned and polished
Bearings	Sealmaster - Browning
Take ups	Screw type

Portability

Undercarriage	Patented FB® Undercarriage, with hydraulic raise cylinders, pumping unit, and covers
Axle type	Pit Portable Axle
Transport axle	(8) 385/65D-19.5 tires, walking beam
Tag axle	not included
Axle Jacks	not applicable
Radial axle	transport axle manually swings to stacking position
Radial travel	2 wheel drive with 2 Hp planetary on each wheel
Fifth wheel	not applicable
Anchor pivot	customer-supplied concrete base secures tail end during radial travel
Brakes	not applicable
Lights	not applicable
Mud flaps	not applicable
Landing gear	not applicable
Towing eye	not included

Conveyor Components

Belting	3-ply 3/16 x 1/16 330 PIW
Belt splice	Flexco mechanical steel fasteners
Primary scrapers	included
Secondary scrapers	requires primary
Superior Idlers	CEMA C, 5” dia. Moxie® rolls (trough), sealed for life ball bearings
Load area (main)	Superior Seal System, with 10" cartridges and steel rollers
Trough	35° (3.5' main / 4' stinger spacing)
Returns	steel cans, on 8' spacing
Self-aligning	Steel can troughing aligner on main / Superior Navigator® on stinger
Radial hopper	Rock box style
Gathering trough	6’ long with adjustable rubber flashing

Controls

Control system	Manual - electric buttons control power travel, conveyor raise, and stinger extension
Cable carrier cover	protect carrier from fugitive material
Matl. flow switch	not included, requires PilePro automation
Wireless remote	not included
Zero Speed Sensor	on stinger conveyor only
Voltage	480 v / 3 ph / 60 hz
Electrical	enclosure with main disconnect, circuit breaker, and starters with on/off push buttons to control each electric motor

Additional Specifications

Startup	on-site training not included
Guarding	for drive and tail pulleys, v-belt drive and return idlers. Guards may not meet all local codes; customer is responsible to have guarding inspected.
Paint	1 coat primer, 1 coat finish enamel Beige
Idler Paint	powder coated Superior Orange
Owner's Manual	(1) copy included for operation and maintenance

BUDGET PRICE: fob Point of Manufacture **$ 650,000.00 per conveyor**

OPTIONS / ACCESSORIES - INCLUDED

1. Belt scrapers on main and stringer conveyors
2. Urathon return idlers, self-cleaning
3. Spray bar on head end of main frame, with flood nozzles, water supply line down to tail section, control valve
4. PilePro Automation – hydraulic functions are controlled by PLC parameters inputted by the operator, or may be manually controlled by switches in the control panel.
5. Sonic Scout ultrasonic sensor, stops power travel when belt is empty
6. PilePro Wireless Remote operates hydraulic functions from up to 1000' feet away.
7. Auto Grease System for head pulley only.
8. On-board Counterweight, maintains tail end during radial travel
9. Mine Duty Pulleys

ITEM III SUMMARY

Stacker	$650,000.00
8.25% Sales Tax:	$ 53,625.00
Freight:	$ 31,375.00
TOTAL:	**$735,000.00**

TOTAL ITEMS I, II and III **$8,410,000.00**

Prices valid until June 30, 2014. Freight is estimated based on current rates and would be invoiced at our actual cost. Sales tax is included and shown at 8.25%. Sales tax would be charged at the appropriate rate. Terms to be arranged.

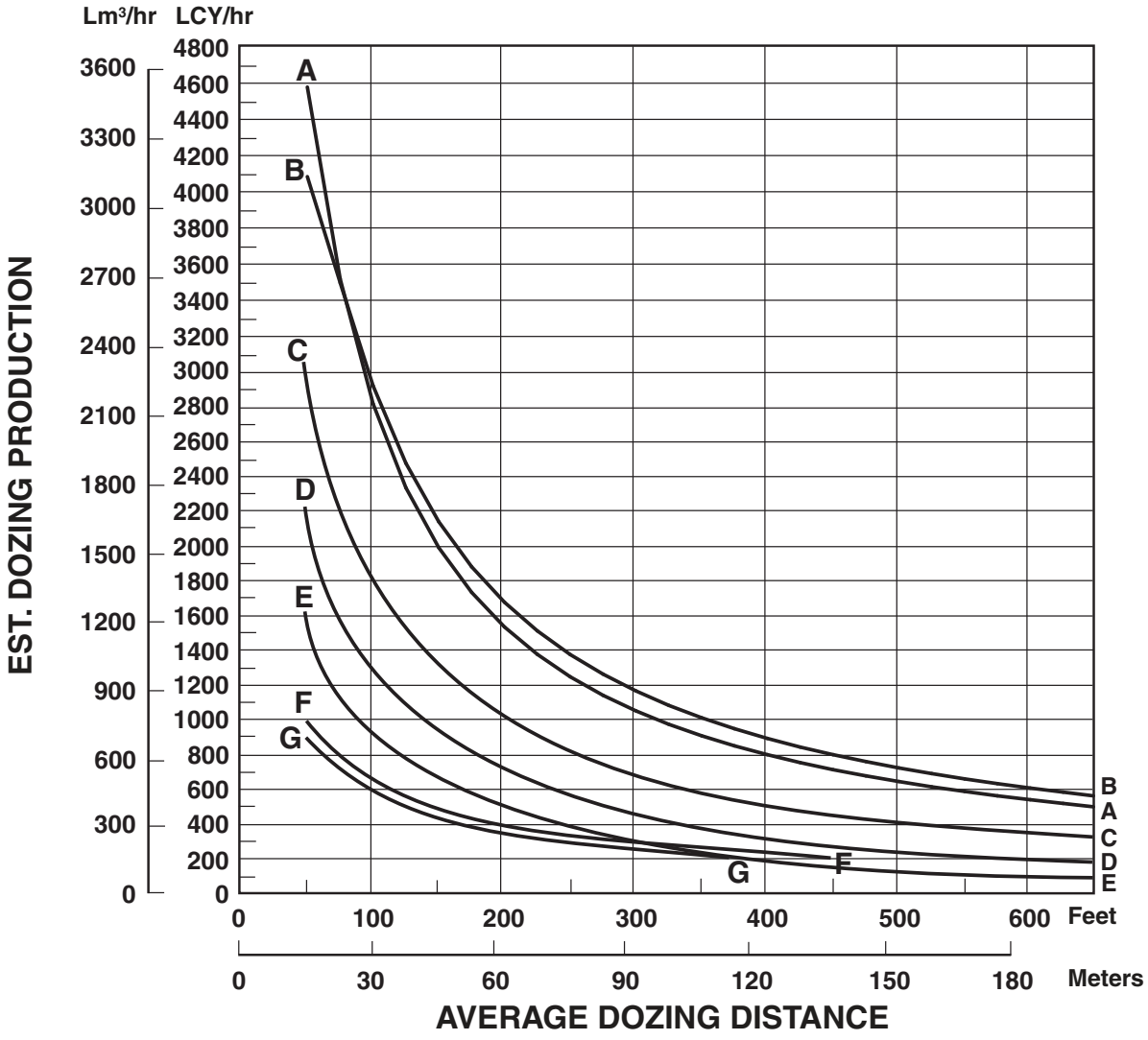
Delivery would be as follows:

Conveyors	14 – 18 weeks
Stacker	8 – 10 weeks

J.F. Mulligan
January 22, 2014

Attachment 2

ESTIMATED DOZING PRODUCTION ● Universal Blades ● D7G through D11T



KEY

A — D11T-11U
B — D11T CD
C — D10T-10U
D — D9R/D9T-9U
E — D8R/D8T-8U
F — D7R Series 2-7U
G — D7G-7U

NOTE: This chart is based on numerous field studies made under varying job conditions. Refer to correction factors following these charts.

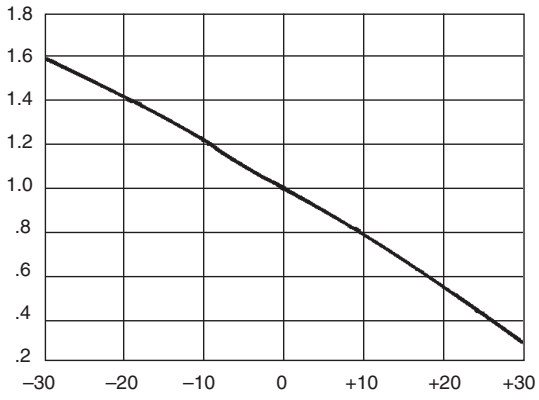
JOB CONDITION CORRECTION FACTORS

	TRACK-TYPE TRACTOR	WHEEL-TYPE TRACTOR
OPERATOR —		
Excellent	1.00	1.00
Average	0.75	0.60
Poor	0.60	0.50
MATERIAL —		
Loose stockpile	1.20	1.20
Hard to cut; frozen —		
with tilt cylinder	0.80	0.75
without tilt cylinder	0.70	—
Hard to drift; "dead" (dry, non-cohesive material) or very sticky material	0.80	0.80
Rock, ripped or blasted	0.60-0.80	—
SLOT DOZING	1.20	1.20
SIDE BY SIDE DOZING	1.15-1.25	1.15-1.25
VISIBILITY —		
Dust, rain, snow, fog or darkness	0.80	0.70
JOB EFFICIENCY —		
50 min/hr	0.83	0.83
40 min/hr	0.67	0.67
BULLDOZER*		
Adjust based on SAE capacity relative to the base blade used in the Estimated Dozing Production graphs.		
GRADES — See following graph.		

***NOTE:** Angling blades and cushion blades are not considered production dozing tools. Depending on job conditions, the A-blade and C-blade will average 50-75% of straight blade production.

% Grade vs. Dozing Factor

(–) Downhill
(+) Uphill



ESTIMATING DOZER PRODUCTION OFF-THE-JOB

Example problem:

Determine average hourly production of a D8T/8SU (with tilt cylinder) moving hard-packed clay an average distance of 45 m (150 feet) down a 15% grade, using a slot dozing technique.

Estimated material weight is 1600 kg/Lm^3 (2650 lb/LCY). Operator is average. Job efficiency is estimated at 50 min/hr.

Uncorrected Maximum Production — 458 Lm^3/h (600 LCY/hr) (example only)

Applicable Correction Factors:

Hard-packed clay is "hard to cut" material –0.80
Grade correction (from graph) . . . . . .–1.30
Slot dozing . . . . . .–1.20
Average operator . . . . . .–0.75
Job efficiency (50 min/hr) . . . . . .–0.83
Weight correction . . . . . .(2300/2650)–0.87

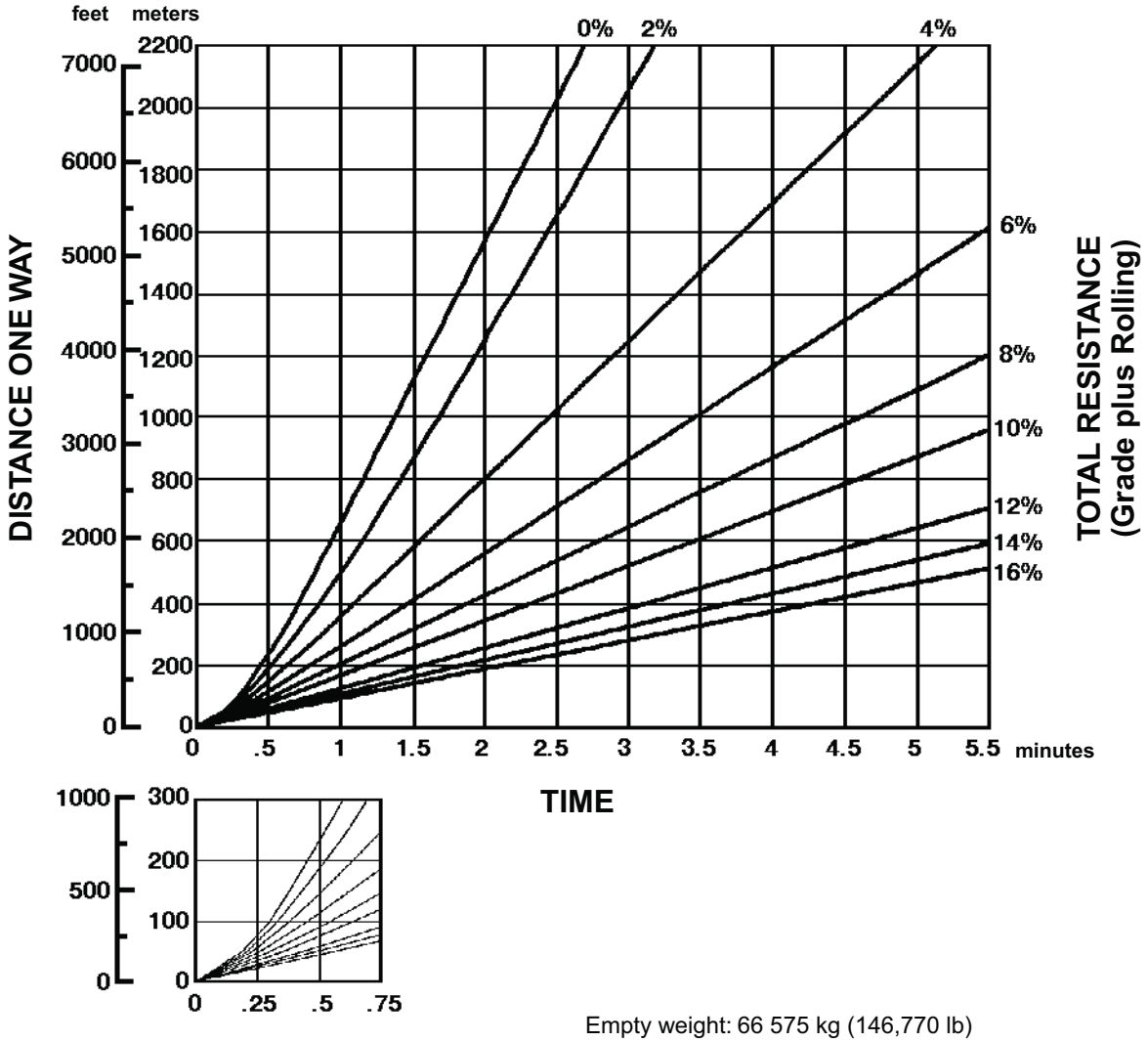
Production = Maximum Production × Correction Factors
= (600 LCY/hr) (0.80) (1.30) (1.20) (0.75) (0.83) (0.87)
= 405.5 LCY/hr

To obtain production in metric units, the same procedure is used substituting maximum uncorrected production in Lm^3.

= 458 Lm^3/h × Factors
= 309.6 Lm^3/h

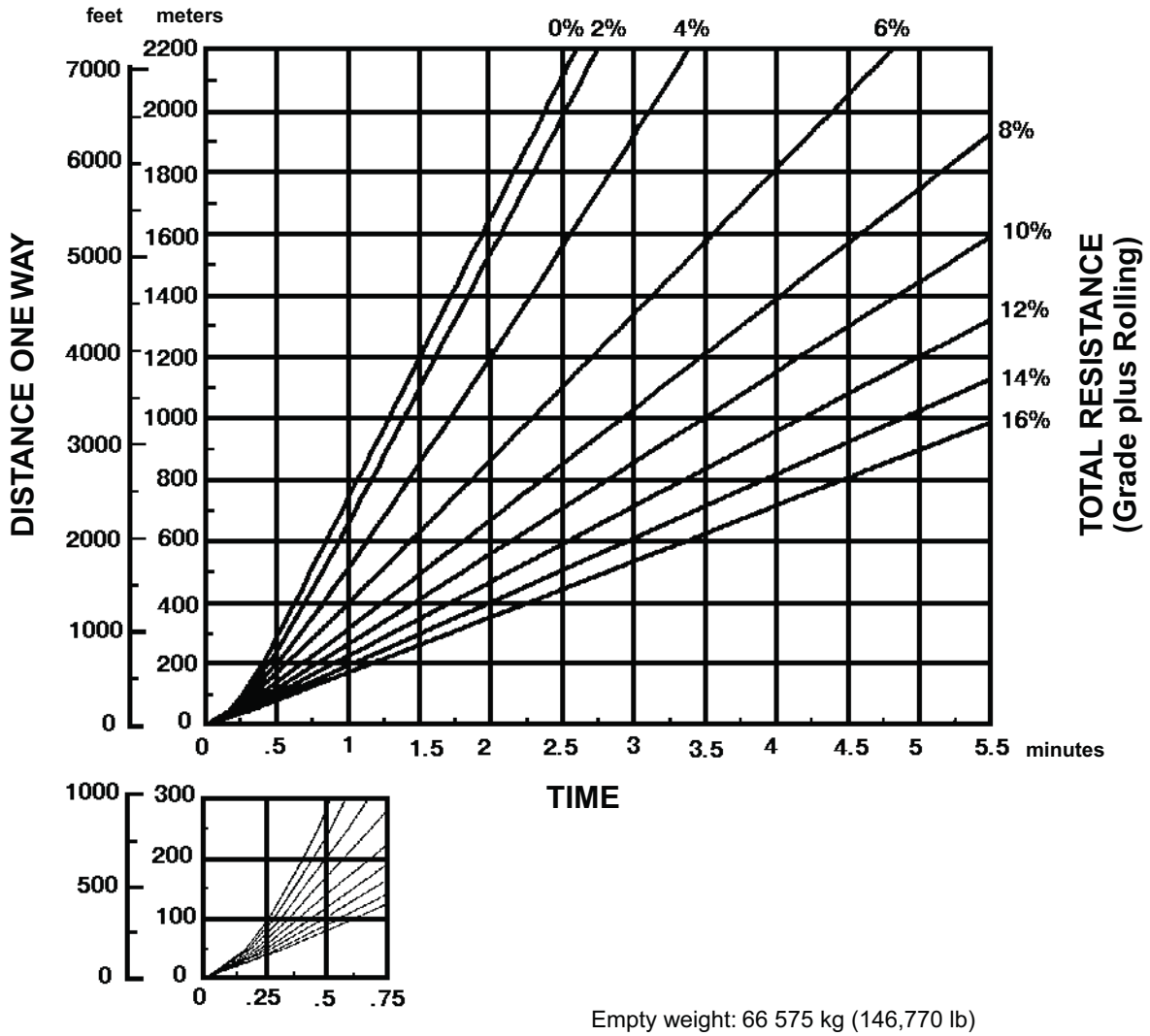
Attachment 3

LOADED



Empty weight: 66 575 kg (146,770 lb)
Payload: 47 175 kg (104,000 lb)

EMPTY



Empty weight: 66 575 kg (146,770 lb)

Attachment 4

Invoice

WRA
2169-G East Francisco Blvd
San Rafael, CA 94901
Phone: 415-454-8868
Fax: 415-454-0129

ENVIRONMENTAL CONSULTANTS

Accounts Payable
Lehigh Hanson, Inc.
PO Box 639069
San Diego, CA 92163

September 30, 2012
Invoice No: 16143-4 - 16752

Manager Sean Avent

Project 16143-4 Permanente Conditions of Approval Compliance

Professional Services for the Period:September 01, 2012 to September 30, 2012

WRA Phase 01 COA Assistance PO 4500509571

Prepare erosion control plan and safety plans. Conduct research on methods to seal limestone. Strategize creek boulder removal. Coordinate team and subcontractors. MSHA training. Procure equipment. Meet with quarry manager. Conduct site visit for erosion control issues and EMSA walk-through. Scheduling and correspondence with CCW. Site visits to meet with quarry staff and check on BMP crew progress. Materials quote for Lehigh ordering procedures. Attend SCC meeting. Meet with Dan Z and Ron Pioki. Prepare submittals 4 and 5. GIS figure production. Conference calls regarding BMP plan and approach. Project management.

Task 01 Default

Labor

	Hours	Rate	Amount	
Principal				
Greer, Philip	.50	154.00	77.00	
Maloney, Sherry	1.25	171.00	213.75	
Smick, Geoffrey	10.00	148.00	1,480.00	
Scientist				
Avent, Sean	127.25	107.00	13,615.75	
Yakich, Jason	3.00	107.00	321.00	
GIS/ CAD Senior Technician				
Rochelle, Michael	2.75	103.00	283.25	
Senior Technician				
Krapek, John	32.25	101.00	3,257.25	
Technician				
Brandt, Reuben	27.00	90.00	2,430.00	
Clerical Support				
Portillo, Perrine	.50	75.00	37.50	
Totals	204.50		21,715.50	
Total Labor				**21,715.50**

Subconsultants

Central Coast Wilds			76,368.86	
Total Subconsultants			**76,368.86**	**76,368.86**

Reimbursable Expenses

Expenses			4,702.43	

Project	16143-4	Permanente Conditions of Approval Compli		Invoice	16752
	Total Reimbursables		**4,702.43**		**4,702.43**
				Task Total	**$102,786.79**
				WRA Phase Total	**$102,786.79**
				Total Project Invoice Amount	**$102,786.79**

LEHIGH
HEIDELBERGCEMENTGroup

PURCHASE ORDER

NUMBER: **4500509156** PAGE: 1 / 1
DATE: 09/26/2012

INVOICE TO:
Lehigh Southwest Cement Company
SSC AP - Cement
PO Box 660140
Dallas, TX 75266-0140
Phone: 877-534-4442
Fax: 972-819-1721
Email: ssa-ap@lehighcement.com

SHIP TO:
Cupertino Plant
Lehigh Southwest Cement Company
24001 Stevens Creek Blvd.
CUPERTINO CA 95014

408-996-4000
408-252-2316

VENDOR:
134401
PACIFIC COAST SEED
533 HAWTHORNE PLACE
LIVERMORE CA 94550

925 373 4417
925 373 6855 FAX

CONTACT PHONE - 408-996-4222
SHIPPING TERMS -
SHIPPING POINT -
PAYMENT TERMS - Net 55 Days

FAXED 9/26/12

Please acknowledge receipt of this PO, and confirm pricing and delivery dates.
Attn: Lawan Ahmed, by Phone at 408-996-4221, Fax 408-996-4107 or email :
Lawan.Ahmed@LehighHanson.com

To ensure timely invoice and payment processing, please refer to Lehigh#s Purchase Order number on all invoice documents.

Item	Order Qty/UoM	Material Part Number Description	Price per Unit Tax Status	Net value Delivery Date
1	1.000 Lot		33,250.00 Taxable	33,250.00 09/27/2012
		2012 RPA - Pacific Coast Seed - G/L Account: 420900 2012 RPA implementation - hydroseeding and seed mixture		
		Total net value excl. tax USD		33,250.00

**** This Purchasing Document is Subject to the Terms & Conditions included in the next page.**

THE PROVISIONS OF SECTION 202 OF THE EXECUTIVE ORDER 11245 ARE INCORPORATED HEREIN BY REFERENCE AND SHALL BE APPLICABLE TO THIS AGREEMENT UNLESS THIS AGREEMENT IS EXEMPTED UNDER RULES, REGULATIONS OR ORDERS OF THE SECRETARY OF LABOR.

X

Central Coast Wilds
Ecological Concerns Inc
125 Walk Circle
Santa Cruz, CA 95060
Office: (831) 459-0656 Fax: (831)457-1606

Invoice

Invoice #: 22332
Invoice Date: 10/19/2012

Bill To:

WRA, Inc.
2169-G East Francisco Blvd.
San Rafael, CA 94901

Service Period	Project	Contract No.	Terms
	Permanente Quarry BMP Installa...		Contract

Description	Hours/Qty	Rate	Amount
Erosion Control Labor	841	65.00	54,665.00
Erosion Control - Materials	1	4,316.57	4,316.57
10% Surcharge	1	431.66	431.66

Total $59,413.23

Central Coast Wilds
Ecological Concerns Inc
125 Walk Circle
Santa Cruz, CA 95060
Office: (831) 459-0656 Fax: (831)457-1606

Invoice

Invoice #: 22278
Invoice Date: 9/28/2012

Bill To:

WRA, Inc.
2169-G East Francisco Blvd.
San Rafael, CA 94901

Service Period	Project	Contract No.	Terms
	Permanente Quarry BMP Installa...		Contract

Description	Hours/Qty	Rate	Amount
Erosion Control Labor	802	65.00	52,130.00
Erosion Control Materials - See attachment	1	15,723.85	15,723.85
10% Surcharge	1	1,572.39	1,572.39

Total $69,426.24

Attachment 5

Pacific Coast Seed INC.

Damien L. Galford
Enviromine, Inc.
3251 Beacon Boulevard, Suite 100
West Sacramento, CA 95691

July 1, 2013

Re: Permanente Quarry Cupertino

Dear Mr. Galford:

Thank you for contacting Pacific Coast Seed, Inc. as your seed supplier for the above referenced project. We anticipate that we will have the below listed seed in sufficient quantities to seed the ~48 acres located in Cupertino, CA. The below items have been priced assuming the seed is provided on a Standard Commercial Quality basis. These items will be mixed and labeled in accordance with California and Federal Seed Laws and consist of the following:

Table 1:

SCIENTIFIC NAME	COMMON NAME	Pounds Per Acre Bulk Seed	Cost Per Pound Bulk Seed
SHRUBS			
Artemisia californica	coastal sagebrush	10	$30.00
Baccharis pilularis	coyotebrush	6	$30.00
Eriogonum fasciculatum	Eastern Mojave buckwheat	16	$7.50
Lotus scoparius	deer weed	2	$30.00
Salvia mellifera	black sage	4.3	$48.00
GRASSES AND HERBS			
Achillea millefolium	common yarrow	2	$30.00
Artemisia douglasiana	Douglas' sagewort	1.9	$60.00
Bromus carinatus	California brome	10	$6.50
Clarkia purpurea ssp. quadrivulnera	winecup clarkia	1	$60.00
Elymus glaucus	blue wildrye	6	$13.50
Heterotheca grandiflora	telegraph weed	1	$60.00
Lotus purshianus	Spanish Clover	3.6	$70.00
Plantago erecta	dotseed plantain	3	$30.00

Sisyrinchium bellum	western blue-eyed grass	1.4	$90.00
Vulpia microstachys	small fescue	10	$18.00

Table 2:

Scientific Name	Common Name	Lb/Acre	Price/Lb
Artemisia douglasiana	mugwort	2	$60
Carex barbarae	valley sedge	3	$90
Carex praegracilis	field sedge	3	$95
Cyperus eragrostis	tall flatsedge	6	$120
Hordeum brachyantherum	meadow barley	18	$18
Juncus effusus	bog rush	1	$100
Juncus patens	common rush	1	$120
Leymus triticoides	creeping wildrye	6	$55
Total		**40**	

Please provide a purchase order by June 1st on the year preceding that in which the seed purchase is intended. Some items may require extra collections be made in advance to assume supply of the quantities requested.

Thank you again for consulting Pacific Coast Seed, Inc. as your seed supplier for this project. We look forward to working with you on future projects.

Sincerely,

Pacific Coast Seed, Inc

Patricia Gomez
Operations Manager

Attachment 6

FREEDLUN HYDROSEEDING INC

518 BAYWOOD CT, VACAVILLE, CA 95688

LICENSE #740810

800-300-9423 707-448-9423

FAX 707-446-8146

DEAN@FREEDLUN.NET OR TERRI@FREEDLUN.NET

Price Quote

July 31, 2013
Damien L. Galford
EnviroMine, Inc.
RE: Reclamation Cost Estimate

Hello Damien
Please find our updated pricing for the following BFM products:
Hydroseed using Flexterra: 20+ acres @ $4,951.00 per acre
Hydroseed using HydroBlanket: 20 + acres @ $4,600.00 per acre
Both products shall be applied @ 4,000 lbs/acre

This quote is for one application. Should more applications be required, additional charges will apply. Full payment of the quoted price is due within 30 days of application. Late payments will incur an additional fee of 1.5% per month.
This quote assumes customer will provide legal access to the property and to an ample water supply. If no water is available, let us know. This quote excludes any soil prep, soil amendments, any guarantee of growth, watering, weeding, or maintenance. The seed we purchase is determined by the details you have provided and authorized above, and is State inspected for germination percentages.
If a payment & performance bond is required, our rate is 3%. Unless we have been notified of such requirement in writing, the cost of any bond is not included in our quote, and will be added to the final quoted price. Our company is SB/MICRO certified through the State of California. Init. ____

Due to the changing prices of seed, the quoted price is good for 60 days. Let us know if you want to 'Lock-in' a price for a date more than 2 months away.

To accept this proposal, initial where indicated, sign and date below & fax back to 707-446-8146. Once accepted, this quote will become a contract.
In any legal action undertaken to enforce its terms, the successful party will be entitled to any and all attorney fees and legal costs incurred in connection with such an enforcement action.

x_____ Date_____ Initial Required Above

Printed name_____Title_____

Attachment 7

Pacific Coast Seed INC.

Damien L. Galford
Enviromine, Inc.
3251 Beacon Boulevard, Suite 100
West Sacramento, CA 95691

June 28, 2013

Re: Permanente Quarry Cupertino

Dear Mr. Galford:

Thank you for contacting Pacific Coast Seed, Inc. as your seed supplier for the above referenced project. We anticipate that we will have the below listed seed in sufficient quantities to seed the ~542 acres located in Cupertino, CA. The below items have been priced assuming the seed is provided on a Standard Commercial Quality basis. These items will be mixed and labeled in accordance with California and Federal Seed Laws and consist of the following:

Table 1:

SCIENTIFIC NAME	COMMON NAME	Pounds Per Acre Bulk Seed	Cost Per Pound Bulk Seed
SHRUBS			
Artemisia californica	coastal sagebrush	16 (8) *	$30.00
Baccharis pilularis	coyotebrush	20 (6) *	$30.00
Eriogonum fasciculatum	California buckwheat	20 (10) *	$7.50
Salvia leucophylla	Purple sage	2 *	$80.00
Salvia mellifera	black sage	3	$48.00
GRASSES AND HERBS			
Achillea millefolium	common yarrow	1	$30.00
Artemisia douglasiana	Douglas' sagewort	1 (2) *	$60.00
Bromus carinatus	California brome	6 (8)	$6.50
Elymus glaucus	blue wildrye	6 (8)	$13.50
Eschscholzia californica	California Poppy	2 (1.5)	$16.00
Heterotheca grandiflora	telegraph weed	1 *	$60.00
Lotus purshianus	Spanish Clover	1 (1.5)	$70.00
Lotus scoparius	Deerweed	2	$30.00
Lupinus nanus	Sky lupine	1 (2)	$40.00

Melica californica	Californica melic	2	$30.00
Nasella pulchra	Purple needlegrass	4	$36.00
Poa secunda	One-sided bluegrass	2	$28.00
Trifolium wildenovii	Tomcat clover	2	$40.00
Total		**93**	

Please provide a purchase order by June 1st on the year preceding that in which the seed purchase is intended. Some items may require extra collections be made in advance to assume supply of the quantities requested and are noted with a *. Numbers in ( ) show the more usual seeding rates for these seeds.

Thank you again for consulting Pacific Coast Seed, Inc. as your seed supplier for this project. We look forward to working with you on future projects.

Sincerely,

Pacific Coast Seed, Inc

Patricia Gomez
Operations Manager