

RECLAMATION AND CLOSURE

PLAN

RIO RICO PIT

**SUBMITTED TO THE STATE MINE
INSPECTOR'S OFFICE FOR REVIEW AND
APPROVAL IN ACCORDANCE WITH
ARIZONA REVISED STATUTE
TITLE 27-CHAPTER 6
STATE MINE INSPECTOR AGGREGATE MINED
LAND RECLAMATION**

Submitted
02/15/24

1.0 ADMINISTRATIVE INFORMATION

Landowner: Arizona General Engineering Contracting, Inc. (AGE)
3190 N. Silver Hills Drive
Nogales, AZ 85621

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Operator: Arizona General Engineering Contracting, Inc.
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2.0 INTRODUCTION

2.1 PURPOSE AND SCOPE

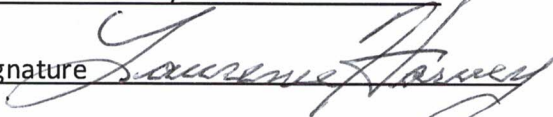
The purpose of this Mine Reclamation and Closure Plan (MRCP) is to present the details of rehabilitation on the Rio Rico Pit located at the end of the West Frontage Rd. The mine site is 35 acres and located on private land in Santa Cruz, County Arizona. The mine is located within Sections 9 and 16, Township 22 South, Range 13 East, Gila and Salt River Meridian, and is comprised of Santa Cruz Assessor's Parcel Number 112-46-111 recorded in Book 3 of Maps and Plats at Page 58. Reclamation will be concurrent with mining operations in accordance with the Arizona Aggregate Mined Lands Act (AAMLRA) (Arizona Revised Statutes [A.R.S.] §27-1202, 1271 (B)(2) This plan has been developed pursuant to the format and content prescribed in the Arizona Aggregate Mined Lands Reclamation Rules (Arizona Administrative Code {A.A.C}, R11-3-101, et seq.)

2.2 RECLAMATION STATEMENT OF RESPONSIBILITY

Arizona General Engineering Contracting, Inc. (AGE) assumes responsibility for the reclamation of surface disturbances that are attributed to the aggregate mining unit consistent with A.R.S. § 27-1201 and Title 11 of the Arizona Administrative Code. All areas that have been disturbed at the site will be reclaimed to a safe and stable condition when mine operations conclude. Approximately 80% of the site will have been excavated for an open pit; therefore, the majority of reclamation efforts will focus on reclaiming the pit and hill side.

The Certificate of Disclosure of Violations under A.R.S. 12-2705 and A.A.S.R11-3-201-A is not applicable.

Laurence Harvey

Signature 

Date 2/15/2024

Title President, Arizona General Engineering Contracting, Inc.
Manager of Rio Rico Pit

2.3 RECLAMATION APPROACH

Arizona General Engineering Contracting (AGE) will reclaim areas surrounding the pit and will remove all construction that has taken place on the property for mining operations.

Reclamation is concurrent with the mining activities. A portable crusher will move in and out each year as needed. Wash material will be manufactured as needed. No permanent structures are located at the pit. All portable equipment will be removed. Once natural vegetation occurs; the site will be used for cattle grazing and industrial sites.

2.4 CURRENT OWNERSHIP AND LAND USE INCLUDED IN THE AGGREGATE MINING UNIT

Arizona General Engineering Contracting, Inc. currently owns 35 acres which will/is conducting sand and gravel operations which manufacture materials for the construction industry. All State, County and Regulatory permits will be required by Arizona General Engineering Contracting, Inc.

The mine is in Santa Cruz County parcel attached. Current access is at the end of the West Frontage Road. The operation is next to the Santa Cruz County Landfill. The approximate area of current disturbance as outlined in Table 1 is 16 acres. A total of 29 acres of the 35 acre site will be mined over a 7 year period. The balance of the site area (6 acres) will be used for storage and sales of material from offsite. The extraction/processing operation consists of removing earthen material for aggregate mining as described in A.R.S 27-441.

The equipment utilized in these operations will be jaw crushers, cone crushers, primary screens, secondary screens, generators, conveyor belts, front end loaders, haul trucks, dozers and other portable earth moving equipment. Portable crusher will be moved in and out of the pit as material is needed. Portable wash plant will operate on an as needed basis.

Material will be/is stockpiled on the property for outside sales. Other activities include stripping of overburden, and loading of haul trucks. Water for processing is delivered by wells through a pipeline to the operation. One location has been set aside for storage of water. Haul roads within the plant perimeter rarely change as mining advances. Parking lots may also change locations as needed. The mining operations will employ two or three employees at most. Employees are moved to Construction Company (AGE) when pit is not in operation.

An estimated removal of up to 30,000 tons per year maximum, over a 7-year period. Tonnage may vary

2.5 PROPOSED POSTAGGREGATE MINING LAND USE

When mining is complete the site will be used for cattle grazing and to continue the recycling and material sales business that has been done along with the mining operation. Materials other than recycled materials will be imported. Some areas of the site will be used for cattle grazing, and other portions of the site will be graded for industrial lots in future.

2.6 DESCRIPTION OF THE AGGREGATE MINNING UNIT AND PROPOSED SURFACE DISTRUBANCES

Arizona General Engineering Contracting is currently conducting sand and gravel operations which manufactures materials for the construction industry. Operation is intermediate due to low demand of products. The approximate area of current disturbance as outlined in Table 1-1 is 29 acres. The 29 acres will be mined. The extraction processing operation will consist of removing earthen material for aggregate mining as described in A.R.S. §27-441. The process include the use of crushers, screens, conveyors, mobile equipment for the support of construction aggregate products. Arizona General Engineering Contracting will mine the hill side maintaining a 3 (Horizontal) to 1 (Vertical) slope and the flat area to a maximum of 20 ' and maintaining berms at the top of high wall and access ramps. Mining operations will be carried out in approximately 29 of the 35 acres with the remaining 6 acres for storage and sales of material from offsite.

2.7 EXISTING AND PROPOSED FINAL TOPOGRAPHY INCLUDING WASTE ROCK, STOCKPILES AND FINES AREAS

See the attached survey information and proposed final elevation Appendix A.

The site is located approximately 3362 feet above sea level. No waste rock exists as all material is used in the production of ABC, Fill and Landscape materials.

The surface will be graded to existing natural drainage. The existing settling pond/retention basin will remain as industrial water retention required by Santa Cruz County.

See attached survey, Appendix information and proposed final elevations. Sloping of pit walls and hillside cut slopes are included in the mining operation.

2.8 A NARRATIVE DESCRIPTION OF ROADS

There will be access roads from the pit to the process area. Haul roads within the plant perimeter change rarely as the mining advances. Parking locations rarely change. About 40 percent of the roads will be in the bottom of the pit, which remains flat and to the processing and sales area. Table 1 displays road acres.

2.9 ACREAGE EFFECTED BY EACH TYPE OF SURFACE DISTURBANCE OF 35 ACRE SITE

Table 1 Areas of Disturbance	
Area Description	Areas In Acres
Aggregate Mine Open Pit	29 Acres
Roads	.5 Acres
Settling Ponds/Retention Basin	.15 Acres
Berms	.5 Acres
Process Areas and Storage/Sales Area	4.85 acres
Other Disturbed Areas	0

Area Description:

2.9.1 Aggregate Mine Open Pit

2.9.2 Roads

2.9.3 Settling Ponds/Retention Basin

2.9.4 Overburden Impoundments

2.9.5 Process Facility

AREA DESCRIPTIONS

2.9.1 Aggregate Mine Open Pit

The open pit contains a total 29 acres of minable material. It is located in Santa Cruz County Arizona in Sections 9 and 16, Township 22 South, Range 13 East, Gila and Salt River Meridian. Approximately 29 acres will be mined with 5 acres used for processing storage and sales. 25 acres have been disturbed. Portions have been mined routinely in the past by another company since 1998.

2.9.2 Roads

Presently the Interstate-19 (I19) Frontage Road Dead Ends at the P/L of the mining property. This is the entrance and exit to the sales, storage and plant area and it then continues to the pit area. Haul roads that are moved from time to time account for another .25 of a mile with in the property. Roads average about 24 feet wide. Approximately 1.5 acres are disturbed by roads. Section 2.8 gives a narrative description of the haul roads.

2.9.3 Settling Ponds/Retention Basin

The settling pond/retention basin is .15 acre in size. No materials are washed at this site. The pond/basin settles out fines carried by the rain water and slows the rain water runoff. It will remain for an industrial retention.

2.9.4 Overburden Impoundments

The pit site is protected by fencing and berms constructed from overburden. The actual surface area covered by overburden berms is approximately .5 acres.

2.9.5 Process Facilities

4.85 acres are devoted to the plant, stock piles, fuel and storage and sales.

3.0 RECLAMATION

3.1 MEASURES USED TO ACHIEVE POST MINING USE

Reclamation of the mining activity shall be designed to minimize hazards to public safety to the extent technically and economically practicable. All slopes will be 3 horizontal to 1 vertical.

No concrete batch plants or asphaltic plants are located on the property. All trash, scrap wood, metal and other debris that pose a threat to the public will be removed. Pit floors are mined flat, some grading may occur.

Internal roads will be graded and left for future recycling operations. All drainage will be directed to retention basin/settling pond. Vegetation will occur naturally.

3.2 EQUIPMENT AND STRUCTURE REMOVAL

All equipment located at the site; crushers, screens, conveyors, scale, and mobile equipment that will be used for the recycling and material, sales business, will remain. Equipment not needed will be removed.

3.3 ROADS, POWER LINES, WATERLINES AND FENCES

Grading will be directional drained to the settling pond/retention basin pond. All water and power lines located on the property will stay upon completion of mining activity. Boundary fences and gates, will remain in place for security and cattle grazing.

3.4 AREA PREPARATION

Grading will take place to contour any remaining slope to a 3 horizontal to 1 vertical angle if missed during the mining operation. The pit floor will be leveled, no grading or contouring or irregular formations will take place. The final projected depth is 20' maximum.

3.5 SLOPE STABILAZATION

Sloping takes place concurrent with mining. All slopes will be mined and left at a 3 horizontal to 1 vertical ratio which will minimize erosion and result in geotechnical stability for the area. Erosion control in place for drainage will remain.

3.6 SOIL CONSERVATION

Pursuant to A.R.S. §27-974, Stockpiles of conserved soil shall be marked with legible signs that identify the stockpiles as "SOIL". No soils are stockpiled for reclamation at this time.

3.7 VEGETATION

Soil placement will not occur at the site. Natural revegetation is expected to be successful overtime due to the natural occurring geological materials are sufficiently fine grained to provide a suitable growth medium for vegetation.

Care and maintenance of the reclaimed area will involve annual inspection for slope erosion, movement, and vegetation growth. Annual inspection reports will be published on the anniversary date until final reclamation occurs and is released by The State Mine Inspector.

3.8 PROPOSED RECLAMATION MEASURE TO ACHIEVE POST MINE LAND USE AND PUBLIC SAFETY

A gated fence is installed around the entire property for security and cattle operation. Where hazards to public safety cannot be reduced by reclamation, weather resistant warning signs will be posted. All scrap metal, wood, trash, and other debris that pose a threat to public safety or create public nuisance will be removed. Pit slopes are graded to 3 horizontal : 1 vertical. The pit floor will be graded or leveled and left in a safe condition. The final elevation will be contoured to blend with the surrounding area.

Roads and other disturbed or compacted areas of the property will be contoured to control erosion and aid in drainage.

Site specific grading, natural vegetation, or other proposed control measures will be conducted as necessary, to address erosion. No permanent piles of mined material or overburden will be left to restrict drainage.

The final contours and topography will take into account current storm water management plans, which include natural drainage channels, to maintain flood and erosion control.

3.9 TIMELINE AND PHASING OF RECLAMATION

Disturbance operations are ongoing. Mining operations are expected to continue through 2030. Remaining reclamation will begin when mine operations cease and will be completed within 180 days. Reclamation of the mining activity shall be designed to minimize hazards to public safety to the extent technically and economically practicable by measures including; all current MSHA, and State Mining Regulations. No surface disturbance will be left on the site that will be objective to local wildlife and wildlife habitat on adjacent land.

4.0 MINE CLOSURE

4.1 MINING AREAS

Reclamation of the open pit is concurrent with the mining operation. Any remaining reclamation will continue after the mining operations are complete. The maximum twenty foot of the pit allows loaders to slope easily as they mine. Remaining slopes will be contoured to meet governing requirements and receive required erosion control. The floor of the pit will be graded and left in a safe condition.

4.2 PROCESSING AND OTHER AREAS

Reclamation of the processing and related areas not needed for the continuing recycle and material sales business will commence immediately upon completion of mining operations. There will be no substantial period between operation and reclamation. Natural vegetation will take place.

Employees will retain their jobs and or be offered jobs at other locations if available

4.3 MONITORING

Natural vegetation occurs constantly and rapidly due to the open space. The owner of the land, Arizona General Engineering Contracting, Inc. will monitor the revegetation as needed.

5.0 RECLAMATION COSTS AND FINANCIAL ASSURANCE

5.1 RECLAMATION COST

Reclamation will be performed continually during the mining process and continuing even after the mine is closed during the continuing recycling and materials sales business.

Reclamation costs are given in Table 2. Reclamation costs will be very minimal due to performing them every day as part of the mining process and the continuing recycling and material sales business.

A fee of \$3800.00 submitted with application.

5.2 FINANCIAL ASSURANCE

Reclamation cost will be wholly born by Arizona General Engineering Contracting, Inc.. Attached is a letter from Arizona General Engineering Contracting's president, which states that Arizona General Engineering Contracting, Inc. is in compliance with the Aggregate Mined Land Reclamation Statute Self-Insurance Financial Test.

Table 2
AGGREGATE MINING UNIT OPERATION
PROPOSED RECLAMATION COST ESTIMATE SUMMARY
RIO RICO PIT

Reclamation Item	Units	Description	Cost	Cost Source	Reclaim Cost
Pit Walls	Cu-Yd	Slope Pit Walls to 20' Depth	.57	Unit cost for AGE D7 Dozer less profit from material harvest	
	8,500				\$4845
Grade Pit Floor	Linear Ft	Grade and Slope Pit Drainage to Settling Ponds/Retention Basin	.57	Unit cost for AGE D7 Dozer less profit from material harvest	
	1800				\$1026
Trash Removal	Truck/hr	Clean Pit of Debris and Clutter		Hrly Rate of AGE Roll-off truck	
	2		\$100/hr		\$200
		Dump Fee			\$150
		TOTAL PIT RECLAMATION COST			\$6221
Administrative Cost	%	Contingency	30%		\$1866.30
Annual Reporting	Hour	Close Flood Control Permit	\$150	Estimated Engineer field rate	

	3				\$450
Annual Reporting	Hour	Annual Certification	\$150	Estimated Engineer field rate	
	14.4				\$2,160.00
		TOTAL ESTIMATED RECLAMATION COST			\$10,697.30

TABLE 2 EXPLANATION
AGGREGATE MINING UNIT OPERATION
PROPOSED RECLAMATION COST ESTIMATE SUMMARY
RIO RICO PIT

- Grading:** Since mine depths is only twenty foot, the loader operator will continue back dragging the pit floor, and slopes during mining operations. Grading cost is minimal and calculated at **\$.57** per cubic yard and **\$0.57** lineal foot. Pit walls at **8,500 cu ft**, Pit floor at **1,800 lineal feet**.
- Trash Removal:** 1 truck for 2 hrs at \$100/hr plusload \$150 dump fee is **\$350.00**
- Monitoring:** The land owner, Arizona General Engineering Contracting, Inc. will continue to do business at this property after the mining operations stops. Natural vegetation will occur and no monitoring should be required. If additional attention is required the land owner will be there to implement it.
- Pit Reclamation:** Reclamation before Contingency is **\$6,221.00**
- Contingency:** 30% is added to Total Reclamation Cost which totals to **\$1,866.30**

Flood Control: AGE will contract with a registered engineer to close the Flood Control permit. The estimated rate is \$150/hr for a duration of 3 hrs for a total cost of **\$450.00**.

Annual Reports: AGE will contract with a registered engineer to close the Flood Control permit. The estimated rate is \$150/hr for a duration of 14.4 hrs for a total of cost of **\$2,160.00**.

Estimated Total

Reclamation Cost: A total of **\$10,697.30** is estimated at closure in 7 years.

6.0 RESOURCES

Reclamation of this site will be in a manner consistent with the Mined Land Reclamation Rules and Statutes, January 1997, Article 6, Mining Unit Reclamation Standards, State of Arizona, Mine Inspectors office. This publication provides a very through description of what constitutes acceptable Public Safety Standards, Erosion Control, Topographic Contouring and Road Reclamation. Topsoil conserved in the overburden removal process will be utilized to facilitate the establishment of vegetation.

Brown and Caldwell Proposed Reclamation Cost

Caterpillar Performance Handbook

Resources for information can be obtained through the following publications:

PDS West: Sand and Gravel Reclamation

Arizona State Mine Inspector Sample Reclamation Plan

Pit and Quarry: Quarry ology 101

Appraisal of a gravel Pit by Lloyd R. Manning