HALEY & ALDRICH, INC.
One Arizona Center
400 E. Van Buren St., Suite 545
Phoenix, AZ 85004
602.760.2450

3 December 2020
File No. 130966-005

Arizona State Mine Inspector
1700 West Washington Street
Suite 403
Phoenix, Arizona 85007

Attention: Joe Hart
Arizona State Mine Inspector

Subject: Response to Comments on the Technically Incomplete Reclamation Plan for Salt River Materials Group, Glendale Facility

Dear Mr. Hart:

Salt River Materials Group (SRMG) and Haley & Aldrich, Inc. (Haley & Aldrich) have reviewed the comments from the Arizona State Mine Inspector (ASMI) correspondence dated 26 October 2020 regarding the technically incomplete notification for the Reclamation Plan for the SRMG Glendale Facility located in Maricopa County, Arizona (Attachment A). The following presents SRMG's response to ASMI request for missing information.

Comment 1:

A.R.S. § 27-127l(B)(10) – Submission and Contents of Reclamation Plan (Schedule): *This section of the ARS statute states that the Plan will include "a proposed tentative schedule for beginning surface disturbances and beginning and completing the reclamation measures." The Plan does not include discussion of the proposed schedule other than stating that concurrent mining and reclamation will occur.*

Please include the time of completion of reclamation (relative to cessation of mining) in your tentative schedule.

Response to Comment 1:

Section 2.8 – Conceptual Schedule for Disturbance and Reclamation has been added to the revised text of the Plan. This section describes the tentative disturbance schedule and reclamation activities to be completed after the cessation of mining activities occurs.

Attachment B presents the revised text for the Plan.

Comment 2:

Section 2.1.5 – Description of Current Operations and Section 2.5.1 – Structures to be Removed: *These sections state that portions of the Plant area are leased out to other entities for other operations, such as concrete batch plants and hot mix asphalt plants. The Plan states that the operators of these plants are responsible for removal of these plants from the site, and that SRMG is not responsible for these costs.*

As land owner of the Glendale Facility, SRMG is ultimately responsible for removal of these plants. Since part of the intent of the Plan is to provide adequate financial assurance in the event of unforeseen circumstances, such as lessees not removing their equipment, that could then cause a need for the owner to provide these costs, or if the owner is unable, for third party reclamation to occur. Therefore, reclamation costs need to account for removal of this equipment by a third party unless the lessees have their own reclamation plans approved by this office.

Response to Comment 2:

Plant equipment removal costs have been added to the Appendix A – Reclamation Cost Estimate for the Plan. These revisions have been made in the following sections in the text of the Plan;
2.1.5 – Description of Current Operation; 2.5.1 – Structures to be Removed; 2.10.7 – Plant Removal Cost; and 2.10.10 – Total Reclamation Cost.

Attachment B presents the revisions to the Plan text and Appendix A presents the Reclamation Cost Estimate.

Comment 3:

Section 2.1.5 – Description of Current Operations and Section 2.5.1 – Structures to be Removed: *These sections state that utilities will include an on-site well and electrical power from nearby power lines and that the well will remain for later sale and development of the property. The Plan does not discuss abandonment of electrical lines on site, if any.*

The Plan does not include discussion of on-site electrical line abandonment. Please include this discussion and any associated costs.

Response to Comment 3:

SRMG will retain the existing Site water well and all of the power infrastructure (poles and lines) for possible future use in redevelopment or sale of the property.

Attachment B presents the revised Section 2.5.1 – Structures to be Removed which will include this discussion. A revised Figure 2 – Existing Site Conditions is included to show the water well and powerline/poles locations. No costs are associated with this change to the Plan.

Comment 4:

Section 2.3 – Reclamation Measures to Achieve Post-Mining Land Use: *This and other section discusses the plan to excavate to 50 feet below grade at 2H: 1 V pit slopes and fill concurrently with inert backfill until the pit is brought back to grade. Section 2.9 of the Plan states that therefore there are no costs for pit regrading and scarifying or for stockpiles or overburden grading or removal. However, there needs to be provision for unforeseen circumstances that cause the pit to remain unfilled and for stockpiles that remain on site.*

Costs need to assume third party reclamation in the event of unforeseen cessation of mining. As such, third party costs should account for any necessary grading of the pit area and removal or rough grading of stockpiles if operations cease before the pit is completely filled or before stockpiles have been removed or graded.

Response to Comment 4:

Costs have been added for regrading and scarifying up to 5 acres of mining areas in the event that SRMG is not able to complete their reclamation requirements. The current operations are concurrently backfilling previously mined areas according to the Plan as written.

Attachment B presents the revised Section 2.3 – Reclamation Measures to Achieve Post-Mining Land Use; Section 2.10.1 – Pit Regrading and Scarifying; and Appendix A – Reclamation Cost Estimate to reflect the cost increase for regrading and scarifying mining areas.

Comment 5:

Section 2.9.4 – Structure Demolition Cost: *This section lists costs for demolition of a maintenance shop and secondary containment around aboveground storage tanks, but these are not mentioned within the discussions of existing or future site operations or elsewhere in the Plan.*

Please include a discussion of these structures in the appropriate sections within the text.

Response to Comment 5:

A description of the maintenance shop and the aboveground fuel storage tank and fueling area have been added to the revised text of the Plan in Section 2.1.5 – Description of Current Operations and 2.5.1 – Structures to be Removed.

Attachment B presents the revised text for the Plan.

Please feel free to contact the undersigned if you have any questions or require additional information.

Sincerely yours,
HALEY & ALDRICH, INC.

Rich Brown, R.G.
Geologist – Client Specialist

Eric J. Mears, R.G.
Mining Market Segment Leader

Enclosures:

Attachment A – Technically Incomplete Reclamation Plan for Salt River Materials Group – Glendale Facility Letter dated 26 October 2020
Attachment B – Revised Reclamation Plan Significant Amendment

ATTACHMENT A

Technically Incomplete Reclamation Plan for Salt River Materials Group – Glendale Facility Letter dated 26 October 2020

Arizona State Mine Inspector
JOE HART
1700 W. Washington Suite 403
Phoenix, Arizona 85007-2805
(602) 542-5971
Fax (602) 542-5335

October 26, 2020

Frank Turk, PE
Salt River Materials Group/Phoenix Cement Company and Salt River Sand & Rock
8800 East Chaparral Road, Suite 155
Scottsdale, AZ 85258

Re: Technically Incomplete Reclamation Plan for Salt River Materials Group – Glendale Facility

Dear Mr. Turk,

On June 17, 2020, the State Mine Inspector Agency received Salt River Materials Group's (SRMG) Reclamation Plan Significant Amendment (Plan) for the Glendale Facility and the Plan was found to be administratively complete. The amendments to the Plan were found to be a substantial change from the original Plan. This Plan was forwarded to a contracted consultant for review. The site is located at the southeast corner of West Glendale Avenue and 115th Avenue within Section 7 of Township 2 North, Range 1 East in Maricopa County, Arizona.

On October 26, 2020, this office received the following information from our consultant reviewing your plan. In accordance with A.R.S. §§ 27-1272, 27-1273, this letter is to notify you the plans have been found ***Technically Incomplete***.

The following items need to be addressed:

A.R.S. § 27-1271(B)(10) – Submission and Contents of Reclamation Plan (Schedule): This section of the ARS statute states that the Plan will include "a proposed tentative schedule for beginning surface disturbances and beginning and completing the reclamation measures." The Plan does not include discussion of the proposed schedule other than stating that concurrent mining and reclamation will occur.

Please include the time of completion of reclamation (relative to cessation of mining) in your tentative schedule.

Section 2.1.5 – Description of Current Operations and Section 2.5.1 – Structures to be Removed: These sections state that portions of the Plant area are leased out to other entities for other operations, such as concrete batch plants and

hot mix asphalt plants. The Plan states that the operators of these plants are responsible for removal of these plants from the site, and that SRMG is not responsible for these costs.

As land owner of the Glendale Facility, SRMG is ultimately responsible for removal of these plants. Since part of the intent of the Plan is to provide adequate financial assurance in the event of unforeseen circumstances, such as lessees not removing their equipment, that could then cause a need for the owner to provide these costs, or if the owner is unable, for third party reclamation to occur. Therefore, reclamation costs need to account for removal of this equipment by a third party unless the lessees have their own reclamation plans approved by this office.

Section 2.1.5 – Description of Current Operations and Section 2.5.1 – Structures to be Removed: These sections state that utilities will include an on-site well and electrical power from nearby power lines and that the well will remain for later sale and development of the property. The Plan does not discuss abandonment of electrical lines on site, if any.

The Plan does not include discussion of on-site electrical line abandonment. Please include this discussion and any associated costs.

Section 2.3 – Reclamation Measures to Achieve Post-Mining Land Use: This and other section discusses the plan to excavate to 50 feet below grade at 2H:1V pit slopes and fill concurrently with inert backfill until the pit is brought back to grade. Section 2.9 of the Plan states that therefore there are no costs for pit regrading and scarifying or for stockpiles or overburden grading or removal. However, there needs to be provision for unforeseen circumstances that cause the pit to remain unfilled and for stockpiles that remain on site.

Costs need to assume third party reclamation in the event of unforeseen cessation of mining. As such, third party costs should account for any necessary grading of the pit area and removal or rough grading of stockpiles if operations cease before the pit is completely filled or before stockpiles have been removed or graded.

Section 2.9.4 – Structure Demolition Cost: This section lists costs for demolition of a maintenance shop and secondary containment around aboveground storage tanks, but these are not mentioned within the discussions of existing or future site operations or elsewhere in the Plan.

Please include a discussion of these structures in the appropriate sections within the text.

Please supply the additional information within 90 days. If you have any questions concerning this determination, please contact Amanda Lothner at (602) 542-5971.

Sincerely,

Joe Hart
Arizona State Mine Inspector

1700 W. Washington Suite 403
Phoenix, Arizona 85007-2805
(602) 542-5971
Fax (602) 542-5335

ATTACHMENT B

Revised Reclamation Plan Significant Amendment

www.haleyaldrich.com

REPORT ON

RECLAMATION PLAN SIGNIFICANT AMENDMENT FOR THE GLENDALE FACILITY GLENDALE, ARIZONA

by Haley & Aldrich, Inc.
Phoenix, Arizona

REGISTERED GEOLOGIST
CERTIFICATE NO. 50990
RICHARD A. BROWN
DATE SIGNED 12/3/20
ARIZONA U.S.A.
Expires 6/30/2022

for Salt River Materials Group
Scottsdale, Arizona

File No. 130966-005
December 2020

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REGISTERED GEOLOGIST
CERTIFICATE NO. 50990
RICHARD A. BROWN
DATE SIGNED 12/3/20
ARIZONA U.S.A.
Expires 6/30/2022

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HALEY ALDRICH

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1. Introduction

This Reclamation Plan (Plan) Amendment was written for the Salt River Materials Group (SRMG) Glendale Facility (Site) located in Glendale, Arizona. State law requires a reclamation plan for all aggregate mining operations that are located on private land, create disturbance areas larger than 5 acres, and have continued operations after 1 April 1997 (Aggregate Mined Land Reclamation Act [AMLRA], Arizona Revised Statute [A.R.S.] 27-1202 et. seq.). Plans were required to be submitted to the Arizona State Mine Inspector (ASMI) before 1 January 2007. After 1 January 2007, all new aggregate mining operations located on private land must have an approved reclamation plan before exceeding a cumulative disturbance area of 5 acres.

The property was previously leased from the John F. Long Family Revocable Living Trust (Trust) and was subsequently purchased from the Trust in 2019 by SRMG. The property is located within the incorporated limits of the City of Glendale and encompasses in total approximately 270 acres. In 2017, SRMG amended the original 2014 approved ASMI Reclamation Plan (Plan) to increase the area of disturbance to 160 acres from the original 100 acres of disturbance. Subsequent to SRMG's 2019 purchase of the 270-acre property, this Significant Amendment has been prepared due to the change in property ownership, increased acreage of the mining area, and re-calculation of the estimated reclamation costs.

This Plan was written to describe and summarize the overall reclamation approach to reclaim the Site during production through concurrent reclamation, followed by final closure and reclamation at the end of mine life, in accordance with Arizona statutes and regulations.

2. Reclamation Plan Narrative

2.1 OWNERSHIP/OPERATOR INFORMATION

According to the records of the Maricopa County Tax Assessor, the Site is owned by Salt River Materials Group. SRMG plans to continue to conduct mining and processing on the Maricopa County Parcel 102-59-241. Owner and operator information are provided below.

2.1.1 Owner/Operator Name and Address

Owner: Salt River Materials Group
8800 East Chaparral Road, Suite 155
Scottsdale, Arizona 85250

Operator: Salt River Materials Group
8800 East Chaparral Road, Suite 155
Scottsdale, Arizona 85250

2.1.2 Contact Person Name and Address

Operator's contact person (for regulatory contact):

Frank Turk, P.E.
Land and Reclamation Manager
Salt River Materials Group / Phoenix Cement Company and Salt River Sand & Rock
8800 East Chaparral Road, Suite 155
Scottsdale, Arizona 85258
Phone: (480) 850-5757

2.1.3 Responsible Party

SRMG is the responsible party for the reclamation described in this Reclamation Plan.

Signature _____ Date 6/3/20

Bruce A. Dyer
Name

Vice President
Title

2.1.4 Certificate of Disclosure

The certificate of disclosure required by A.R.S. 27-1205 was prepared by SRMG and will be submitted separately.

2.1.5 Description of Current Operation

The Site is located in Glendale, Arizona on the southeast corner of West Glendale Avenue and 115th Avenue in Maricopa County (T2N, R1E, S7). The Site location is shown on Figure 1. The Agua Fria River runs west of the Site, although the Site is outside of the 100-year floodplain. The confluence of the Agua Fria River and the New River is located approximately 0.5 mile south of the Site. The Site is surrounded by existing sand and gravel and landfill operations to the north and west and the Glendale Municipal Airport to the east. There are no known fish or wildlife habitats within the Site boundary that would potentially be disturbed by Site operations. Features of the property include existing and future aggregate mining areas (Mining Area) of approximately 195 acres and a processing plant area (Plant Area) encompassing approximately 20 acres. Current access is provided by a paved road (115th Avenue) from West Glendale Avenue to the gate location to the west of the Site near the Plant Area.

A substantial non-disturbance area borders the eastern portion of the Mining and Plant areas. This area hosts several transmission and utility corridors and provides a buffer to ongoing flight operations at the Glendale Municipal Airport (Airport) to the east.

Figure 2 presents the existing Site conditions. The combined Mining and Plant areas encompass approximately 215 acres. The Plant Area has been mined and will remain as the material processing, ready mix production, and operations area through the end of mine life. The Mining Area to the north will be excavated to approximately 50 feet below grade. Within the Mining Area, SRMG will conduct concurrent reclamation and intends to backfill with a combination of excavated overburden and inert materials. This process is further described in Section 2.3. Within the Mining Area is an approximate 800 square foot (ft^2) maintenance shop and an above ground storage tank fueling area for the mine and plant equipment. The fuel tanks are surrounded by a monolithic concrete secondary containment structure.

The Plant Area consists of equipment, structures, and facilities that are used for aggregate crushing, screening, washing, and concrete batch mixing. The Plant Area will remain located at the southern portion of the property throughout the mine life. SRMG will conduct all mining and aggregate crushing, washing, screening, and stockpiling within the Plant Area. SRMG leases portions of the Plant Area to other companies to produce ready-mix concrete from the SRMG owned batch plant.

Details of the Plant Area owned and operated by SRMG or others include:

- Crushing and screening plant;
- Wash plant;
- Concrete batch plant;
- Maintenance shop;
- Fueling area;
- Portable construction trailer; and
- Scale and scale house.

Utilities on the Site include:

- Water provided by an on-site well and portable storage;
- Electric power via nearby power lines;
- Wastewater needs will be minimal due to low employment density at the Site;
- Sanitary facilities; and
- Solid waste disposal provided by a licensed solid waste contractor.

Stockpiling of material will initially occur within the Plant Area. As phased mining progresses, temporary aggregate and overburden stockpile staging areas will be established in the central portion of the Site. An earthen berm, approximately 10 feet high, will be present along the northern and eastern/southeastern perimeter of the Mining Area and will remain through excavation activities. Chain-link fencing will be maintained around the boundary during all operation activities.

2.1.6 Current Permits, Licenses, and Approvals

Operations will comply with applicable air, storm water, and hazardous/regulated materials management regulations. The property currently has the following permits/plans:

- Arizona Pollutant Discharge Elimination System Multi-Sector General Permit 2010;
- Maricopa County Air Quality Department Non-Title V Air Quality Permit; and
- April 2020 City of Glendale Special Use District Overlay Rezoning.

Although these permits/plans indirectly regulate operations at the Site, they do not have the authority to control or limit the depth or extent of mining.

2.2 DESCRIPTION OF FUTURE DISTURBANCE

All future aggregate mining and reclamation activities on the Site are planned to occur within the Mining Area within the property boundary (Figure 3):

- Total disturbances for the Mining and Plant areas are estimated at approximately 215 acres.
- Pit walls mined to a pre-reclamation slope of 2H:1V and concurrent reclamation will occur by backfilling with overburden and inert materials.
- The Site will maintain unpaved haul roads that lead from the Mining Area to the crushing, screening, and stockpile areas located in or near the Plant Area.
- Excavation and concurrent reclamation of the Mining Area over approximately 195 acres.

The setbacks will vary depending on location:

- The setback from West Glendale Avenue to the north is approximately 90 feet.
- The Site will be separated from the City West Area Water Reclamation Facility to the south by the existing 460-foot wide power line easement.
- SRMG will maintain an existing 460-foot wide easement between the eastern property boundary and the Mining and Plant areas. The 460-foot setback from the east property line also establishes an operational buffer from the Airport. In addition, Glen Harbor Boulevard, the

access road to the Airport, runs along the west property boundary of the Airport. Glen Harbor Boulevard has a setback of approximately 50 feet from the SRMG property.

- The setback from 115th Avenue to the west is approximately 48 feet. This setback is sized appropriately considering that the neighboring sand and gravel operation on the west side of 115th Avenue runs the full length of the Site, up to West Glendale Avenue.
- No Site operations will occur within the setback areas, with the exception of Site ingress/egress off of 115th Avenue.

The maximum final depth of mining will be approximately 50 feet below land surface.

Inert backfill, overburden soil and wash plant fines will be used to reclaim all mining pits, including the Plant Area. The entire Site will be sequentially backfilled to restore the entire Site back to surrounding grades.

2.3 RECLAMATION MEASURES TO ACHIEVE POST-MINING LAND USE

The entire Site including the Mining and Plant areas, encompasses approximately 215 acres. An approximate 10-foot thickness of overburden soil from the Mining Area will be removed initially, temporarily stockpiled, and incorporated into future backfill operations. The Mining Area will be concurrently backfilled with overburden and inert material as excavation progresses.

Site reclamation will be achieved by backfilling, which will use a combination of inert materials transported to the Site, fines produced at the wash plant and overburden removed from the Mining Area. A.R.S. 49-701-15.a defines inert material as material which is not flammable, will not decompose, and will not leach substances in concentrations above prescribed standards. Inert materials that will be accepted at the Site include concrete, asphaltic pavement, brick, rock, gravel, sand, and soil or other materials that meet the definition of inert. Allowable and non-allowable backfill material is generally described in Table I below.

Table I – Backfill Material Summary

Allowable Backfill Material	
Concrete	Gravel
Asphaltic pavement (fully cured)	Sand
Brick	Soil
Rock	Other materials meeting A.R.S. definition of inert
Non-Allowable Backfill Material	
Special Waste	Municipal solid waste
Hazardous waste / Listed hazardous waste	Liquid waste
Glass	Radioactive waste
Metals materials	Household hazardous waste
Asbestos	

The sources of inert material may come from a variety of local sources, which include homebuilders, homeowners, general commercial developers, general building contractors, highway and street contractors, bridge erectors/constructors, bituminous pavement contractors, small home remodelers,

site grading contractors, demolition contractors, roofing contractors (except for prohibited roofing materials), dry wall contractors, and excavation specialists.

For outside suppliers of backfill material, SRMG will require the supplier to complete a materials survey and, when available, provide geotechnical and analytical test results of the material. This will allow SRMG's trained personnel to review the survey and test results and conduct a visual inspection of the material prior to its acceptance. SRMG will maintain all associated records and test results. The post-aggregate mining land use at the Site has been designated naturalized open space.

In the unlikely event that SRMG can not finish backfilling the mined areas in accordance with the Plan, costs have been added for regrading and scarifying up to 5 acres, or approximately 8,500 cubic yards, of stockpiled material.

2.4 POST-AGGREGATE MINING RE-GRADING AND EROSION CONTROL

2.4.1 Description of Final Topography

Following the reclamation of the Mining and Plant areas, the entire Site will have been backfilled to existing grade (Figure 4).

2.4.2 Erosion Control Plan

Storm water drainage controls have been established as part of a Storm Water Pollution Prevention Plan (SWPPP) for the Site. Specific erosion control measures include:

- Storm water will be routed into the active Mining Area, Plant Area, and low-lying areas within the Site.
- An earthen berm will be installed along the north and east/southeast perimeter of the Site to prevent run-on of storm water to the Site, and to prevent run-off of storm water from the Site.
- A paved access road, 115th Avenue, runs along the western perimeter of the Site. A setback of 48 feet will be maintained from this access road to prevent run-on of storm water to the Site, and to prevent run-off of storm water from the Site.

The SWPPP will be followed in addition to site-specific best management practices.

2.4.3 Surrounding Area Land Use

The Site is located in a highly industrialized and undevelopable portion of Glendale. Surrounding land uses generally consist of:

- Glendale Municipal Airport to the east and southeast;
- The confluence of the New River and Agua Fria River, and the City West Area Water Reclamation Facility to the south;
- An existing sand and gravel facility to the west; and
- A City of Glendale landfill to the north.

The planned post-aggregate mining land use as naturalized open space is consistent with surrounding land uses.

2.5 POST-AGGREGATE MINING PLAN FOR STRUCTURES AND EQUIPMENT

2.5.1 Structures to be Removed

All structures in the Plant Area will be removed, except as specifically noted. SRMG will be responsible for all the structures that are described in Section 2.1.5 above. It will be SRMG's responsibility to remove their equipment/structures at the cessation of their operations. SRMG will keep the existing Site water well and all power transmission lines and power pole infrastructure and not abandon them for use later in potential development or sale of the property. The maintenance shop, fuel storage tanks, and secondary containment will be removed. The associated costs of structure removal are included in Appendix A.

2.5.2 Access Restriction/Public Safety

An earthen berm will be established around the perimeter of the Mining Area. Signs and other markings will be installed and maintained during mining to identify any potential hazards in an effort to prevent access and to ensure public safety. Fencing and locked gates have already been established around the perimeter of the property.

2.6 POST-AGGREGATE MINING ROAD RECLAMATION

All plant roads and haul roads will be reclaimed by scarifying and regrading. Compacted roadbeds will be ripped/scarified to match surface drainage patterns of surrounding reclaimed land. Due to the mining and concurrent backfilling of the Mining Area, it is estimated that approximately 2,000 feet of plant and haul roads will be reclaimed at the end of mine life.

Reclamation of the paved Site access road (115th Avenue) is not included, as it is a public thoroughfare and not owned by SRMG.

2.6.1 Reclaimed Road Erosion Control Plan

Roadways within the Site used to excavate and process the mined material will be ripped and scarified to match surface drainage patterns of the surrounding reclaimed land. This reclamation of compacted road surfaces will eliminate the concentrated and erosive flow patterns associated with typical road runoff. The uneven and loosened surfaces created by re-contouring, scarifying, and ripping will facilitate infiltration and generate relatively non-erosive sheet flow under heavy precipitation events.

2.7 SOIL CONSERVATION AND REVEGETATION

2.7.1 Topsoil Conservation Plan

The Site will be excavated and backfilled with overburden and inert materials to the final disturbance footprint. Topsoil and overburden will be retained on Site in berms and stockpiles for use in the reclamation activities. The Site will not be revegetated because the planned post-mining land use is naturalized open space.

2.8 CONCEPTUAL SCHEDULE FOR DISTURBANCE AND RECLAMATION

The conceptual schedule includes:

- Disturbance operations are ongoing;
- Excavation and concurrent reclamation (inert backfilling) is anticipated to continue through approximately 2060;
- Reclamation activities will be concurrent with excavation activities as conditions allow;
- If concurrent reclamation is not feasible, areas will be reclaimed after excavation activities are completed. Final post-aggregate excavation reclamation activities will begin within 12 months of the cessation of mining activities and are anticipated to be completed within 12 months, but the availability of inert materials will dictate the final schedule; and
- Reclamation will be deemed complete once the mined areas have been backfilled with inert and fill materials to match surrounding conditions and elevations, and the ASMI verifies that the owner or operator has fulfilled the requirements of the approved Reclamation Plan.

2.9 PROBABLE FUTURE CONDITIONS

The profitable operation of a mine is based on a variety of factors including the amount and quality of geologic resources available for extraction, site-specific hydrogeologic conditions, permitting constraints, economic factors affecting the cost of extraction and processing, and market conditions which influence the supply and demand for these materials or finished products containing these materials. Changes to any of these factors can have significant impacts to mine profitability and can thus require operators to modify mining, processing, or operational methods or expand or temporarily cease operations.

Further, the means and methods described in this Plan to operate a mining facility and implement reclamation are based on the application of currently available technologies and practices. These technologies and practices are constantly evolving and the operations described in this Plan may be modified if the currently-specified means and methods become outdated, obsolete, cost ineffective, or impracticable.

Consequently, factors affecting profitable operation or means and methods are likely to change due to unanticipated or unknown future conditions. Therefore, the operator of the facility described in this Plan reserves the right to adapt their operations or plans to these changing, unanticipated, or unknown future conditions to the extent that these operational changes do not cause substantial non-compliance with existing permits or authorizations.

2.10 ESTIMATED RECLAMATION COSTS

The unit costs developed for this Plan amendment are based primarily on the cost estimating database RS Means Facilities Construction Cost Data (2017) along with estimated productivity for material movement based primarily on the Caterpillar Handbook (Edition 31). Administrative costs were based on Arizona Rock Products Association and Haley & Aldrich, Inc. recommendations.

The estimated costs developed for this Reclamation Plan Significant Amendment include:

- Limited Pit walls regrading;
- Road reclamation;
- Structure demolition and removal;
- Care and maintenance;
- General construction;
- Plant removal; and
- Administrative costs.

A summary of the estimated reclamation costs is listed in Table II at the end of this section. The sources and calculation of the estimated reclamation costs are provided in Appendix A.

2.10.1 Pit Regrading and Scarifying

All slopes will be mined to a slope of 2H:1V, and the resulting pits will be backfilled and compacted to existing grade with a combination of overburden/soil and inert materials. Consequently, no regrading of pit walls will be necessary if the Plan is executed as written. If SRMG is not able to fulfill the backfilling for an excavated area, 5 acres of regrading and scarifying costs have been added to this Plan for ASMI to complete the regrading to establish safe and stable surfaces.

The cost for scarifying and regrading of the mined area is estimated to be $4,000.

2.10.2 Stockpiles, Overburden, or Fines Areas

All remaining stockpiles will be used in the backfilling of the Mining Area. Consequently, no removal of stockpiles will be necessary if the Plan is executed as written.

The cost for removal of stockpiles, overburden or fines area is estimated to be $0.

2.10.3 Road Reclamation Cost

There is an estimated 2,000 feet of plant and haul roads that will be reclaimed by scarifying and ripping at the end of mine life.

The cost of scarifying and regrading the roads is estimated to be $1,000.

2.10.4 Structure Demolition Cost

The reclamation activities detailed in this category include:

- Maintenance shop;
- Secondary containment around the above ground storage tanks for fuel and oil;
- Office trailer; and
- A scale and scale house.

The total estimated cost for this category is $21,000.

2.10.5 Care and Maintenance Cost

Care and maintenance for the reclamation effort at this operation consist of:

- Two annual inspections of the Site;
- Preparation of the required annual report describing Site conditions; and
- Trash removal.

Two annual inspections are anticipated to be needed before the Site is released. The cost of care and maintenance of the Site is estimated to be $22,000.

2.10.6 Construction Cost

Construction efforts for reclamation include:

- Construction efforts will not be required if SRMG reclaims the disturbed areas to match existing surrounding grades.
- SRMG will install site access restriction signs around the perimeter of the property.

The cost of construction is estimated to be $2,000.

2.10.7 Plant Removal Cost

The estimated reclamation costs detailed in this section include the dismantling, loading onto transport, and removal of the following equipment:

- One concrete batch plant;
- One portable crushing and screening plant; and
- One wash plant.

The cost of plant removal is estimated at $242,000. There are no costs for the removal of any facilities or equipment owned by third parties who may be leasing space from SRMG for the independent operation of HMA or ready-mix plants.

2.10.8 Cost Adjustment

A price index factor was included to adjust from 2017 pricing to estimated 2020 pricing on operating and material costs. The index factor supplied is the Consumer Price Index (CPI) for the period 2017 through 2020.

- CPI = 0.04

The cost adjustment is estimated at $13,000.

2.10.9 Administrative Cost

The estimated administrative costs are required to support a third-party cost estimate in accordance with A.R.S. 27-1271.11 of the Aggregate Mined Land Reclamation Statute. These administrative costs include:

- Contingency;
- Mobilization/demobilization;

- Indirect costs;
- Contractor profit; and
- Contract administrative costs.

The total estimated administrative cost is estimated to be $111,000.

2.10.10 Total Reclamation Cost

The total estimated reclamation cost for this reclamation plan is estimated to be $416,000.

Table II. Estimated Reclamation Cost Summary

Section	Reclamation Item	Cost
2.10.1	Pit Walls	$4,000
2.10.2	Stockpiles, Overburden, or Fines Areas	$0
2.10.3	Roads Reclamation Cost	$1,000
2.10.4	Structure Demolition Cost	$21,000
2.10.5	Care and Maintenance Cost	$22,000
2.10.6	Construction Cost	$2,000
2.10.7	Plant Removal Cost	$242,000
2.10.8	Cost Adjustment	$13,000
2.10.9	Administrative Cost	$111,000
	Total Reclamation Cost	**$416,000**

3. Fees

The fee to amend the Reclamation Plan is $1,565.00 for an existing aggregate mining unit. A check covering this fee was previously submitted with this Plan.

4. Financial Assurance

Corporate self-insurance will be the Financial Assurance Mechanism used to cover the estimated reclamation costs. The corporate information required to satisfy the financial test requirements of Arizona Administrative Code R11-3-809.C will be submitted within 60 days under separate correspondence.

FIGURES

GIS FILE PATH: G:\Projects\Salt River Materials Group\130966-005 Glendale Reclamation Plan Amendment\GIS\FIGURE 1 - SITE LOCATION MAP.mxd — USER: rabrown — LAST SAVED: 6/2/2020 2:25:51 PM

LEGEND

- SRMG PROPERTY BOUNDARY
- 2020 AMENDED RECLAMATION PLAN BOUNDARY ADDITIONAL AREA
- 2017 APPROVED RECLAMATION PLAN BOUNDARY
- NO DISTURBANCE AREA
- Parcel
- FEMA FLOODWAY AREA

NOTES

1. ALL BOUNDARIES ARE APPROXIMATE
2. 2020 AMENDED PLAN MINING AREA AND PLANT AREA COMBINED ARE APPROXIMATELY 215 ACRES.
3. 2017 AMENDED PLAN ACREAGE WAS 160 ACRES TOTAL.
4. 460 FOOT SETBACK FROM THE EASTERN PROPERTY LINE WILL BE MAINTAINED.
5. PARCEL DATA IS SOURCED FROM MARICOPA COUNTY ASSESSOR OFFICE GIS DATA.

N

0 600 1,200
SCALE IN FEET

HALEY ALDRICH

SALT RIVER MATERIALS GROUP
GLENDALE FACILITY
GLENDALE, ARIZONA

SITE LOCATION MAP

DECEMBER 2020

FIGURE 1

GIS FILE PATH: G:\Projects\Salt River Materials Group\130966-005 Glendale Reclamation Plan Amendment\GIS\FIGURE 2 - EXISTING SITE CONDITIONS.mxd — USER: rabrown — LAST SAVED: 11/23/2020 11:59:55 AM

LEGEND

- SRMG PROPERTY BOUNDARY
- MINING AREA
- PLANT AREA
- NO DISTURBANCE AREA
- POWERLINES
- Parcel
- FEMA FLOODWAY AREA

NOTES

1. ALL BOUNDARIES ARE APPROXIMATE
2. 2020 AMENDED PLAN MINING AREA AND PLANT AREA COMBINED ARE APPROXIMATELY 215 ACRES.
3. 2017 AMENDED PLAN ACREAGE WAS 160 ACRES TOTAL.
4. 460 FOOT SETBACK FROM THE EASTERN PROPERTY LINE WILL BE MAINTAINED.
5. PARCEL DATA IS SOURCED FROM MARICOPA COUNTY ASSESSOR OFFICE GIS DATA.

N

0 600 1,200
SCALE IN FEET

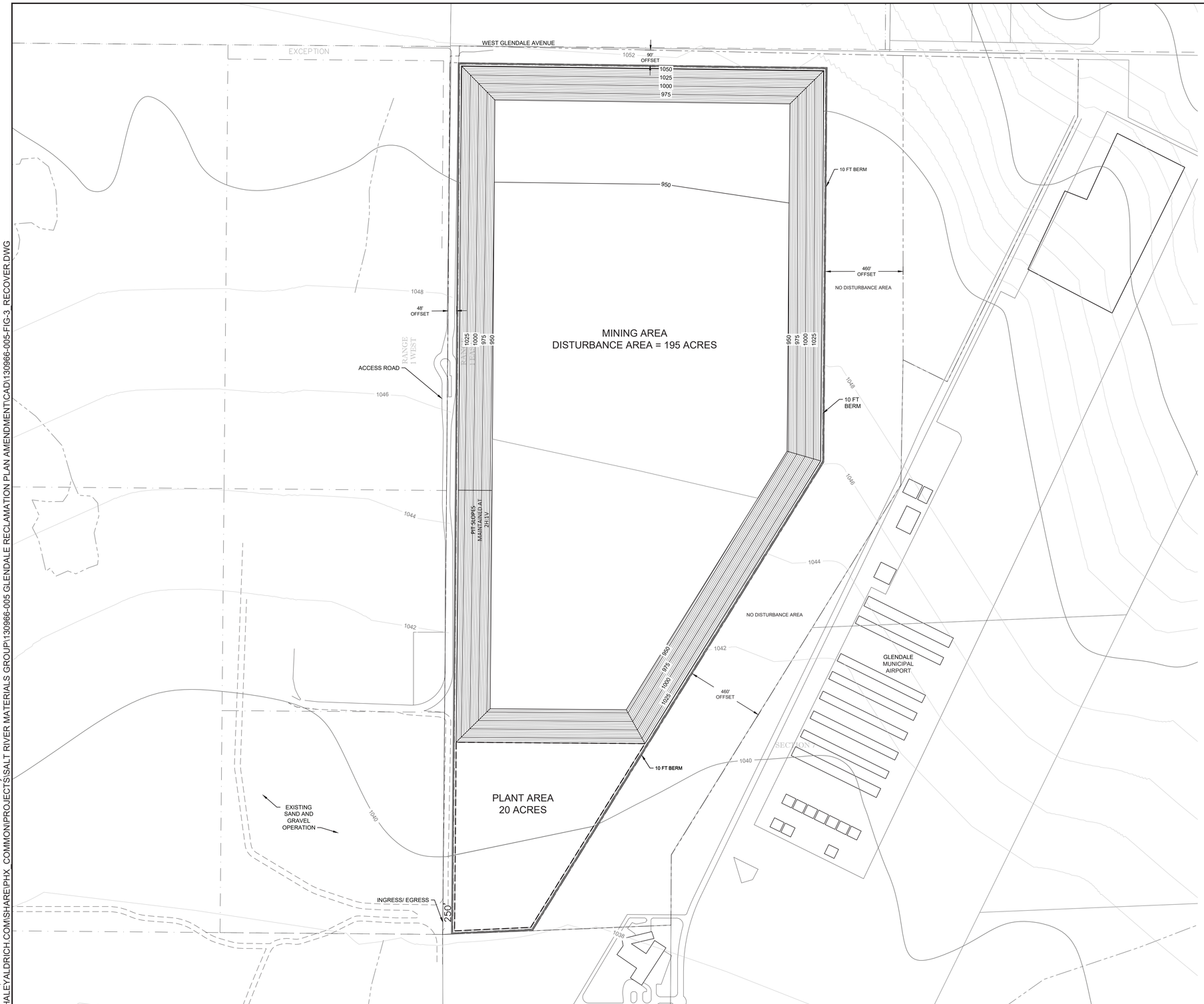
HALEY ALDRICH

SALT RIVER MATERIALS GROUP
GLENDALE FACILITY
GLENDALE, ARIZONA

EXISTING SITE CONDITIONS

DECEMBER 2020

FIGURE 2



LEGEND

- PROPERTY BOUNDARY
- MINING OPERATION BOUNDARY
- BERM
- TOWNSHIP AND RANGE
- 1040 SURFACE CONTOURS
- DRAINAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. ENTIRE MINING AREA EXPOSED EQUALS APPROXIMATELY 195 ACRES.
3. PROCESSING AREA EXPOSED EQUALS APPROXIMATELY 20 ACRES.
4. SRMG LEASES PORTIONS OF THE PLANT AREA TO OTHER COMPANIES TO PRODUCE READY-MIX CONCRETE FROM BATCH PLANTS THAT ARE NOT OWNED OR OPERATED BY SRMG. THESE FACILITIES ARE THE SOLE RESPONSIBILITY OF THE OPERATING COMPANIES AND ARE NOT INCLUDED IN THIS PLAN AS A LIABILITY.

N

0 300 600 900 1,200

SCALE IN FEET

HALEY ALDRICH

SALT RIVER MATERIALS GROUP
GLENDALE FACILITY
GLENDALE, ARIZONA

POST-AGGREGATE EXCAVATION CONTOURS

SCALE: 1" = 300'
DECEMBER 2020

FIGURE 3

SMITH, ZACHARY Printed: 5/5/2020 2:44 PM Layout: HA-A-P
\\HALEYALDRICH.COM\SHARE\PHX_COMMON\PROJECTS\SALT RIVER MATERIALS GROUP\130966-005 GLENDALE RECLAMATION PLAN AMENDMENT\CAD\130966-005-FIG-3_RECOVER.DWG

LEGEND

- PROPERTY BOUNDARY
- MINING OPERATION BOUNDARY
- TOWNSHIP AND RANGE
- 1040 EXISTING SURFACE CONTOURS
- 1040 PROPOSED SURFACE CONTOURS
- DRAINAGE
- OPEN SPACE WITH AREAS OF INERT BACKFILL

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. POST MINE LAND USE IS OPEN SPACE WITH AREAS OF INERT BACKFILL.

N

0 300 600 900 1,200

SCALE IN FEET

HALEY ALDRICH

SALT RIVER MATERIALS GROUP
GLENDALE FACILITY
GLENDALE, ARIZONA

POST-AGGREGATE RECLAMATION PLAN

SCALE: 1" = 300'
DECEMBER 2020

FIGURE 4

SMITH, ZACHARY Printed:5/5/2020 2:46 PM Layout: HA-A-P
\\HALEYALDRICH.COM\SHARE\PHX_COMMON\PROJECTS\SALT RIVER MATERIALS GROUP\130966-005 GLENDALE RECLAMATION PLAN AMENDMENT\CAD\130966-005-FIG-4_RECOVER.DWG

APPENDIX A

Reclamation Cost Estimate

Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		1 of 12

Project	Subject
SRMG - Glendale Facility	Estimated Cost Summary (1 of 2)

Reclamation Item	Description and Units	Est. Cost	Number of Units	Cost	References/Notes
Pit Walls					Section 2.10.1 of Report
	Re-Grading and Topsoiling (Cu. Yds)	$ 0.47	8,500	$ 4,000	
(No Mulch or Fertilizer)	Revegetation Cost - Broadcast (Acre)	$ 377		$ -	
	Revegetation Cost - Hydroseed (Acre)	$ 1,175		$ -	
	Containerized Trees (Each)	$ 10		$ -	
			Pit Walls Sub-Total =	$ 4,000	
Stockpiles, Overburden or Fines Areas					Section 2.10.2 of Report
	Re-Grading and Topsoiling (Cu. Yds)	$ 0.47		$ -	
	Revegetation Cost - Broadcast (Acre)	$ 377		$ -	
	Revegetation Cost - Hydroseed (Acre)	$ 1,175		$ -	
	Containerized Trees (Each)	$ 10		$ -	
			Stockpiles, OB or Fines Areas Sub-Total =	$ -	
Roads					Section 2.10.3 of Report
(Side Slope < 30%)	Rip/Scarify (Linear Ft.)	$ 0.28	2,000	$ 1,000	
(Side Slope >30%)	Re-Grading and Topsoiling (Linear Ft.)	$ 1.69		$ -	
(No Mulch or Fertilizer)	Revegetation Cost - Broadcast (Acre)	$ 377		$ -	
	Revegetation Cost - Hydroseed (Acre)	$ 1,175		$ -	
			Roads =	$ 1,000	
Structures					Section 2.10.4 of Report
(Break-up and bury Slab)	Demolition and Removal - Metal Building (Sq. Ft.)	$ 3.81	800	$ 3,000	
(Break-up and bury Slab)	Demolition and Removal - Secondary Containment (Sq. Ft.)	$ 8.52	800	$ 7,000	
(Break-up and bury Slab)	Demolition and Removal - Concrete Building (Sq. Ft.)	$ 15.86		$ -	
	Powerline Removal - Single Pole Utility (Linear Mile)	$ 12,560		$ -	
	Transformer Removal (Each)	$ 6,280		$ -	
	Demolition - Chain-Link Fencing (Linear Ft.)	$ 4.36	1,000	$ 4,000	
	Demolition - Barb Wire Fencing (Linear Ft.)	$ 1.94		$ -	
	Septic Tank Removal (Each)	$ 1,000		$ -	
	Well Removal (Ft. Depth)	$ 33.55		$ -	
	Removal - 15" Culvert (Linear Ft.)	$ 10.29		$ -	
	Removal - 36" Culvert (Linear Ft.)	$ 17.15		$ -	
(Break-up and bury Slab)	Demolition - Concrete Roads and Pads (Sq. Ft.)	$ 8.52	800	$ 7,000	
			Structures =	$ 21,000	
Care and Maintenance					Section 2.10.5 of Report
	Site Monitoring and Reporting (Annual)	$ 10,000	2	$ 20,000	
	Trash Removal (Ton)	$ 75	25	$ 2,000	
			Care and Maintenance =	$ 22,000	
Construction					Section 2.10.6 of Report
	Construction - Chain-Link Fencing (Linear Ft.)	$ 9.21		$ -	
	Install Rip Rap Erosion Lining (Sq. Yd)	$ 77.00		$ -	
	Install Access Restriction Sign	$ 83.40	25	$ 2,000	
			Construction =	$ 2,000	
	Est. Reclamation Operating and Material (O&M) Cost Sub-Total =			**$ 50,000**	

Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		2 of 12

Project	Subject
SRMG - Glendale Facility	Estimated Cost Summary (2 of 2)

Reclamation Item	Description and Units	Est. Cost	Number of Units	Cost	References/Notes
	Est. Reclamation Operating and Material (O&M) Cost Sub-Total (from page 1) =			**$ 50,000**	
Material Haulage for Backfill					
	Truck and Loader - 2000Ft. One Way (Cu. Yd)	$ 0.98		$ -	
	Dozer and Scraper - 1000Ft. One Way (Cu Yd)	$ 0.68		$ -	
			Material Haulage =	$ -	
Plant Removal					Section 2.10.7 of Report
(Processing Equip)	Removal - Plants	$ 242,000.00	1	$ 242,000	
(Beltline)	Removal - Conveyor			$ -	
			Plant Removal =	$ 242,000	
	Est. Reclamation Operating and Material (O&M) Cost Sub-Total =			**$ 292,000**	
Cost Adjustment					Section 2.10.8 of Report
Template based on 2017 costs	Consumer Price Index Increase		0.046	$ 13,000	https://www.usinflationcalculator.com/inflation/current-inflation-rates/
			Cost Adjustment =	$ 13,000	
	Est. Reclamation Operating and Material (O&M) Cost Total =			**$ 305,000**	
Administrative Costs					Section 2.10.9 of Report
% of O&M Cost	Contingency	10%		$ 31,000	ARPA Recommendations
% of O&M Cost	General Mobilization/De-Mobilization	4%		$ 12,000	ARPA Recommendations
% of O&M Cost	Indirect costs	2%		$ 6,000	ARPA Recommendations
% of O&M Cost	Contractor Profit	10%		$ 31,000	ARPA Recommendations
% of O&M Cost	Contract Administration	10%		$ 31,000	ARPA Recommendations
			Administrative Costs =	$ 111,000	
	Total Estimated Financial Assurance Amount =			**$ 416,000**	

Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		3 of 12

Project	Subject
SRMG - Glendale Facility	Unit Cost Basis

References/Notes

The unit cost basis for the estimate is based on two key databases

- RS Means - Facilities Construction Cost Data -2017, and
- Caterpillar Performance Handbook, Edition 31.

Equipment rental rates and operator labor rates are based on the RS-MEANS CREWS data, as referenced for each piece of equipment. The unit rates can be adjusted by the city cost index for specific locations, however, no adjustment was made since the Phoenix Area rates are close to the national average.

CREWS DATA

Earthmoving Equipment, cost $/hr

List	Labor (1)*	Equipment (2)*	Total		RS Means : Facilities Construction Cost Data
980G Loader	$54	$135	$189	$/hr	crew B-10U
775D Haul Truck	$44	$369	$413	$/hr	crew B-34J
Water Truck	$46	$60	$106	$/hr	crew B-59
D10 Dozer	$54	$234	$288	$/hr	crew B-10M
325 Excavator	$56	$300	$356	$/hr	crew B12-D
16H Motor Grader	$54	$85	$139	$/hr	crew B-11L
631E Scraper	$54	$304	$358	$/hr	crew B-33D
80 ton Crane	$56	$281	$337	$/hr	crew A-3L
120 ton Crane	$56	$305	$361	$/hr	crew A-3M

LABOR DATA

Mechanical labor	$51	$0	$51	$/hr	crew A-1A
Laborer	$39	$0	$39	$/hr	crew A-1

MISC COST DATA

Demolition/Removal - Metal Building and Foundation	$	3.81	$/Sq. Ft.	RACER (ver. 8.1.2)
Demolition//Removal - Block Building and Foundation	$	7.61	$/Sq. Ft.	RACER (ver. 8.1.2)
Demolition/Removal - Concrete Pads/roads 12"	$	8.52	$/Sq. Ft.	RACER (ver. 8.1.2)
Demolition/Removal - Chain-Link Fencing	$	4.36	$/Sq. Ft.	RACER (ver. 8.1.2)
Removal of Single-Pole Powerline	$	12,560	$/Mile	Haley & Aldrich Data
Removal of Electrical Transformers	$	6,280	Each	Haley & Aldrich Data
Construction of Chain-Link Fence	$	11.57	$/ft	RACER (ver. 8.1.2)
Installation of Access Restriction/Public Safety Signs	$	83.40	$/sign	RACER (ver. 8.1.2)
Well Removal	$	33.55	ft depth	
Trash Removal	$	75	Ton	Allied Waste Quote
Transport and Unloading, Heavy	$	1,570	$/load	Haley & Aldrich Data
Transport and Unloading, Light	$	1,068	$/load	Haley & Aldrich Data
Broadcast Seeding				
w/ straw mulch, fertilizer, desert scrub seed mixture	$	762	$/acre	Haley & Aldrich Data
w/o mulch and fertilizer	$	377	$/acre	Haley & Aldrich Data
Hydroseed				
w/ mulch and desert scrub type seed mixture	$	1,476	$/acre	Haley & Aldrich Data
Septic System Removal	$	1,000	$/tank	Haley & Aldrich Data

(1) Labor includes operating and maintenance labor
(2) Equipment costs include operating, maintenance, rental costs
* Labor and equipment costs are rounded to the nearest dollar

Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		4 of 12

Project	Subject
SRMG - Glendale Facility	Dozing Cost

D10 Re-grading from 1.5H:1V slope to 3H:1V slope

					References/Notes
	D10 Dozing Productivity				
	Optimum Production (CY/Hr)		950		(1) pg. 1-43 (200 Foot Push)
Push Factors	Operator experience		0.875		(1) pg. 1-45
	Type of material		0.8		(1) pg. 1-45
	Grade of Push		1.6		(1) pg. 1-45
	Weight Correction		0.71		(1) pg. 1-41 Material Weight = 1.62 T/CY
Work Factor	50 minutes/hour		0.83		(1) pg. 1-45
	Average Production (CY/Hr)		629		
	Average Daily Production (CY)		5,036		(8-hour work day)
	D10 Dozer Cost				
	Dozer Rental (Monthly)	$	20,500		(2) Line # 015433204360
	Ownership Cost (Daily)			$ 932	(22 working days/month)
	Dozer Operating Cost (Hourly)	$	125		(2) Line # 015433204360
	Operating Cost(Daily)			$ 1,000	(8-hour work day)
	Dozer Labor Cost (Hourly)	$	54		(2) crew B-10M
	Labor Cost (Daily)			$ 432	(8-hour work day)
	Dozer Total Cost (Daily)			$ 2,364	
	Cost per CY			$ 0.47	

(1) Caterpillar Performance Handbook, Edition 31
(2) RS Means 2017

Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		5 of 12

Project	Subject
SRMG - Glendale Facility	Scarifying Cost

					References/Notes
	Scarifying - Motor Grader				
	16H Grader Productivity				
	Ripper beam (Ft.)		9.75		(1) pg. 3-13, 17.8 inch max depth
	Max first gear with std tires (mph)		2.4		(1) pg. 3-12
	Feet per mile		5,280		
	Half Speed in Ft./Hr.		6,336		assumes 2 passes are
	Double-pass factor		0.5		adequate for road scarifying
	Effective speed in Ft./Hr.		3,168		
	Optimum area/hour (Sq. Ft./Hr.)		30,888		
Work Factor	50 minute hour		0.83		(1) pg. 3-15
	Average area/hour (Ft.^{2}/Hr.)		25,637		
	Average area Daily (Sq. Ft.)		205,096		(8-hour work day)
	Grader Cost (40,000 lb)				
	Grader Rental (Monthly)	$	11,000		(2) Line # 015433201920
	Ownership Cost (Daily)			$ 500	(22 working days/month)
	Grader Operating Cost (Hourly)	$	64		(2) Line # 015433201920
	Operating Cost(Daily)			$ 512	(8-hour work day)
	Grader Labor Cost (Hourly)	$	54		(2) crew B-11L
	Labor Cost (Daily)			$ 432	(8-hour work day)
	Grader Total Cost (Daily)			$ 1,444	
	Cost per Sq. Ft.			$ 0.0070	
	Cost per Linear Ft. of Road			$ 0.28	(40-foot-wide road)

(1) Caterpillar Performance Handbook, Edition 31
(2) RS Means 2017

Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		6 of 12

Project	Subject
SRMG - Glendale Facility	Excavator Costing

					References/Notes
	325 Excavator Productivity				
Factors	Heaped bucket capacity (Cu. Yd.)		1.5		(1) pg. 5-117 Bucket size selected for the
	Optimum Cycles/Hr.		180		(1) pg. 5-1555 325 Excavator = 1.5 CY
	Bucket Fill factor		1.0		(1) pg. 5-126
	50 minutes/Hr.		0.83		Material Weight = 1.62T/CY
	Average Hourly Production (Cu. Yd.)		224		
	Average Daily Production (Cu. Yd.)		1,793		(8-hour work day)
	325 Excavator Cost				
	Excavator Rental (Monthly)	$	6,725		(2) 01590 200 0200 pg. 20
	Ownership Cost (Daily)			$ 306	(22 working days/month)
	Excavator Operating Cost (Hourly)	$	29		(2) 01590 200 0200 pg. 20
	Operating Cost (Daily)			$ 232	(8-hour work day)
	Excavator Labor Cost (Hourly)	$	35		(2) crew B12-D, pg. 1099
	Labor Cost (Daily)			$ 280	(8-hour work day)
	Excavator Total Cost (Daily)			$ 818	
	Cost per Cu. Yd.			$ 0.46	

(1) Caterpillar Performance Handbook, Edition 31
(2) RS Means 2017

Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		7 of 12

Project	Subject
SRMG - Glendale Facility	Scraper Costing

				References/Notes
631E Scraper				
Scraper capacity (heaped)		31 Cu. Yd.		Yd.
Rated load		37.5 ton		(1) pg. 9-5
Scraper Productivity				
Bank Cu. Yd./Hr, 4% RR, 1000 ft haul		540		(1) pg. 9-67
Material correction		0.93		Material Weight = 1.62 T/Cu. Yd.
50 minute hour		0.83		
Actual bank Cu. Yd. per hour		415		
631 Scraper Cost				
Scraper Rental (Monthly)	$ 14,900			(2) 01590 200 3700 pg. 21
Ownership Cost (Daily)			$ 677	(22 working days/month)
Scraper Operating Cost (Hourly)	$ 75			(2) 01590 200 3700 pg. 21
Operating Cost(Daily)			$ 600	(8-hour work day)
Scraper Labor Cost (Hourly)	$ 34			(2) crew B-33D, pg. 1099
Labor Cost (Daily)			$ 272	(8-hour work day)
Scraper Total Cost (Daily)			$ 1,549	
D9 Dozer Cost				
D9 Rental (Monthly)	$ 14,300			(2) 01590-200 4370, pg. 21
Ownership Cost (Daily)			$ 650	(22 working days/month)
D9 Operating Cost (Hourly)	$ 65			(2) 01590-200 4370, pg. 21
Operating Cost(Daily)			$ 520	(8-hour work day)
D9 Labor Cost (Hourly)	$ 34			(2) crew B-10M, pg. 1099
Labor Cost (Daily)			$ 272	(8-hour work day)
D9 Total Cost (Daily)			$ 1,442	
Total Fleet				
Total Fleet Cost (Daily)			$ 4,541	(1 - D9, 2 - 631)
Total Fleet Productivity (BCY/Hr)		830		
Total Fleet Productivity (BCY/Day)			6,640	
Cost per Cu. Yd. Moved			$ 0.68	

Cubic yards in 1 linear foot of 40 ft wide road, 1 foot thick (Cu. Yd.)	1.48
Cost of placing 1 linear foot (40 foot wide road)	$ 1.01

(1) Caterpillar Performance Handbook, Edition 31
(2) RS Means 2017

Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		8 of 12

Project	Subject
SRMG - Glendale Facility	Truck haul (1 of 2)

					References/Notes
	980G Loader Productivity				
	Basic Cycle Time (minutes)		0.55		(1) pg. 13-46
Cycle Time Factors	Material type (minutes)		0.02		(1) pg. 13-46
	Type of Pile (minutes)		0.02		(1) pg. 13-46
	Common ownership trucks/loaders		0		(1) pg. 13-46
	Constant operation		0		(1) pg. 13-46
	Small target (minutes)		0.025		(1) pg. 13-46
	Fragile target		0		(1) pg. 13-46
	Total Cycle Time (minutes)		0.615		
	Optimum Cycles/Hr.		98		
Work Factor	50 minutes/Hr.		0.83		(1) pg. 13-47
	Average Cycles/Hr.		81		
	Bucket Full Load (Cubic Yards)		7.5		(1) pg. 13-29
	Bucket Fill Factor		0.9		(1) pg. 13-46
	Average Bucket Load (Cubic Yards)		6.75		
	Average Volume Loaded/Hr		547		
	980G Loader Cost				
	Loader Rental (Monthly)	$	11,500		(2) 01590 200 4810 pg. 21
	Ownership Cost (Daily)			$ 523	(22 working days/month)
	Loader Operating Cost (Hourly)	$	58		(2) 01590 200 4810 pg. 21
	Operating Cost(Daily)			$ 464	(8-hour work day)
	Loader Labor Cost (Hourly)	$	34		(2) crew B-10M pg. 1099
	Labor Cost (Daily)			$ 272	(8-hour work day)
	Loader Total Cost (Daily)			$ 1,259	
	775D Truck Productivity				
	Truck Volume (Cubic Yards)		41.1		(1) pg. 10-3
	Loader Cycles needed to Fill Truck		6.09		Use Loader Avg Bucket Load (CY)
	Average Cycles per Truck		6		
	Average Truck Payload (Cubic Yards)		40.5		
	Basic Load Time (minutes)		4.45		Calculated from Loader rate
Cycle Time Factors	Maneuver - Load Area (minutes)		0.5		(1) pg. 10-8
	Maneuver - Dump Area (minutes)		1.1		(1) pg. 10-8
	Haul Time (minutes)		1.2		(1) pg. 10-8
	Return Time (minutes)		1.2		(1) pg. 10-8
	Optimum Truck Cycle Time (minutes)		8.45		(1) pg. 10-8
	Optimum Truck Cycles/Hr.		7.1		(1) pg. 10-8
Work Factor	50 minutes/Hr.		0.83		Assumption
	Average Truck Cycles/Hr.		5.9		
	Average (Cu.Yd.)/Hr. (for 1 truck)		239		
	Average (Cu.Yd.)/Hr. (for 2 trucks)		478		

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Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		9 of 12

Project	Subject
SRMG - Glendale Facility	Truck Haulage (2 of 2)

775D Truck Cost				References/Notes
Truck Rental (Monthly)	$ 12,800			(1) 01590 200 5620 p22
Ownership Cost (Daily)		$	582	(22 working days/month)
Truck Operating Cost (Hourly)	$ 57			(1) 01590 200 5620 p22
Operating Cost(Daily)		$	456	(8-hour work day)
Truck Labor Cost (Hourly)	$ 26			(1) crew B-34A, pg. 1104
Labor Cost (Daily)		$	208	(8-hour work day)
Truck Total Cost (Daily)		$	1,246	
Trucks (2T total Cost (Daily)		$	2,492	
Loader Total Cost (Daily)		$	1,259	
Fleet Total Total Cost (Daily)		$	3,750	
Total Fleet Productivity (Cu. Yd. per Day)			3,821	(8-hour work day)
Fleet Cost per Cu. Yd.		$	0.98	

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Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		10 of 12

Project	Subject
SRMG - Glendale Facility	Crane Costing

Rubber Tired Hydraulic Crane - 80 -on Capacity

80-Ton Crane Cost					References/Notes
Crane Rental (Monthly)	$	8,825			(2) 01590 500 2700 pg. 27
Ownership Cost (Daily)			$	401	(22 working days/month)
Crane Operating Cost (Hourly)	$	54			(2) 01590 500 2700 pg. 27
Operating Cost(Daily)			$	432	(8-hour work day)
Crane Labor Cost (Hourly)	$	35			(2) crew B-95A, pg. 1100
Labor Cost (Daily)			$	280	(8-hour work day)
Crane Total Cost (Daily)			$	1,113	(8-hour work day)
Crane Total Cost (Hourly)			$	139	

Rubber Tired Hydraulic Crane - 120-Ton Capacity

120-Ton Crane Cost					
Crane Rental (Monthly)	$	25,400			(2) 01590 500 2740 pg. 27
Ownership Cost (Daily)			$	1,155	(22 working days/month)
Crane Operating Cost (Hourly)	$	83			(2) 01590 500 2740 pg. 27
Operating Cost(Daily)			$	664	(8-hour work day)
Crane Labor Cost (Hourly)	$	35			(2) crew B-95A, pg. 1100
Labor Cost (Daily)			$	280	(8-hour work day)
Crane Total Cost (Daily)			$	2,099	(8-hour work day)
Crane Total Cost (Hourly)			$	262	

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Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		11 of 12

Project	Subject
SRMG - Glendale Facility	Rip Rap Erosion Control

Material Cost, Hauling, and Placing Erosion Control Structures - Rip Rap

Description	Units	Total Cost	References/Notes
18" Minimum thickness, not grouted			
Material (sq. yd.)	1	$ 19	(2) Line # 313713100200
Labor (per unit)	1	$ 46	(2) Line # 313713100200
Equipment (per unit)	1	$ 13	(2) Line # 313713100200
Estimated Cost per Square Yard for Rip Rap Material and Install =		$ 77.00	

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Appendix A
Reclamation Cost Estimate
Salt River
Materials Group (SRMG) Glendale Facility

Date Checked	Checked By	Job Number	By	Date	Calc. No.	Sheet No.
5/7/2020	EJM	130966-005	RAB	5/6/2020		12 of 12

Project	Subject
SRMG - Glendale Facility	Plant Removal

References/Notes

Removal of Crushing/Screening plants or Wash Plants

Description	Units	Total Cost
80 Ton Crane (Hr)	250	$ 55,000
120 Ton Crane (Hr)	128	$ 33,000
Mechanical Labor (Hr)	1,800	$ 92,000
Loading/Unloading Labor (Hr)	380	$ 15,000
Light Transportation (Trips)	19	$ 20,000
Heavy Transportation (Trips)	17	$ 27,000
Estimated Total Cost for Plant Removal =		$ 242,000

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