

# Remedial Action Work Plan

# Pinal Valley Soil Program Claypool, Arizona VRP Site Code: 514199-00

Freeport McMoRan Miami Inc.

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→ The Power of Commitment

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#### Abbreviations

ADEQ AOC BSA CC	Arizona Department of Environmental Quality Area of Contamination Backfill Staging Area Construction Contractor
CPC	Construction Project Coordinator
EPA	United States Environmental Protection Agency
FMMI	Freeport-McMoRan Miami Inc.
HSEP	Health Safety and Environment Plan
mg/kg	milligrams per kilogram
PCCR	Property Cleanup Completion Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAWP	Remedial Action Work Plan
SAP	Sampling and Analysis Plan
SPLP	Synthetic Precipitation Leaching Procedure
SWPPP	Stormwater Pollution Prevention Plan
TCs	Target Constituents
TSSA	Temporary Soil Staging Area
TCLP	Toxicity Characteristic Leaching Procedure
VRP	Voluntary Remediation Program
WQARF	Water Quality Assurance Revolving Fund

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# 1. Introduction and Objective

Copper ore has been mined and processed in the historic Globe-Miami mining district, located approximately 90 miles east of Phoenix, since the late 1800s. The Freeport-McMoRan Miami Inc. (FMMI) Miami facility, part of the mining district, consists of an open-pit copper mine, leaching and extraction operations, the Miami Smelter, and a rod mill. Various entities have operated the Miami Smelter since 1915. Because the copper smelter operated in an era before emissions control equipment was commonly used, historical air emissions from the smelter may have deposited metal-bearing particles on nearby soil. FMMI has elected to enter into the Arizona Department of Environmental Quality's (ADEQ) Voluntary Remediation Program (VRP) to address the potential that historical smelter operations may have contributed to elevated metals concentrations in soil on properties near the former smelter operations. Under the VRP, FMMI will perform a soil characterization and remediation program (the Soil Program)

This Remedial Action Work Plan (RAWP) presents implementation details for soil remediation (i.e., cleanup) activities to be performed by FMMI for eligible residential, non-residential, and publicly owned developed properties within the Study Area as shown on **Figure 1**.

The objective of the Soil Program cleanup activities is to excavate and replace soil within individual use or yard areas within a given property where soil concentrations of arsenic, copper, or lead exceed the cleanup levels approved by ADEQ to ensure that post -cleanup average metals concentrations no longer exceed the cleanup levels. The purpose of this RAWP is to provide the specific implementation details for achieving that objective. The cleanup levels for the Soil Program are provided in the Sampling and Analysis Plan (SAP, GHD, 2024a). Excavated soil will be placed in a temporary soil staging area (TSSA) on FMMI mine property within the Area of Contamination (AOC) before final management.

# 2. Project Administration

The project administration activities for the cleanup program will include:

- Coordination among representatives of FMMI, ADEQ, Construction Project Coordinator (CPC), Construction Contractors (CCs), Gila County, and City of Globe officials.
- Technical oversight of project activities.
- Administration of the CCs.

## 2.1 Organization

The cleanup program organization will provide consistent management of the cleanup activities and integration with the ongoing sampling program. The key positions for this organization are:

- FMMI Project Manager
- FMMI Social Performance Manager
- CCs
- ADEQ

These key positions have been developed to ensure that the organization, objectives, functional activities, quality assurance/quality control (QA/QC) activities, and data reporting are managed and implemented in a manner that meets the requirements of this RAWP. Assignment of the CPC and CCs will be made by FMMI with notification to ADEQ.

The FMMI Project Manager will have responsibility for coordinating with ADEQ on the overall RAWP project activities. The FMMI Social Performance Manager will be responsible for community and stakeholder engagement. The CPC is

responsible for coordinating with FMMI, the CCs, the property owner, and ADEQ in the field. The CPC is responsible for ensuring that the CCs implement the cleanup activities in accordance with this RAWP and the Quality Assurance Project Plan (QAPP, GHD, 2024b). The CPC is also responsible for coordinating and documenting the cleanup activities.

# 2.2 Schedule

The cleanup of individual properties will be prioritized as described in Section 4.1. After the priority of the property is determined, cleanup activities will be scheduled to facilitate logistics and use of equipment. Properties will be scheduled for cleanup after access is received and, when possible, generally grouped into neighborhoods to enable the crews to perform required activities and reduce disruption to the neighborhood. The progress of the cleanup program will be documented in monthly progress reports to ADEQ issued by the FMMI Project Manager or the CPC. Specific details regarding progress reporting are described in Section 5.2.

# 3. Cleanup Activities

In general, the Soil Program soil cleanup activities will include:

- excavation of soils that have concentrations of arsenic, copper, or lead in excess of ADEQ approved cleanup levels;
- replacement of those excavated soils with clean backfill;
- replacement of landscaping with materials that, unless otherwise approved by the property owner, are comparable to the pre-existing conditions; and
- temporary and final management of the excavated soils.

Implementation details for the above activities are provided in this section. Properties that present significant safety or property damage concerns (e.g. deteriorating retaining walls) will be deferred until the property owner adequately addresses the concerns. If future activities/repairs are completed by the property owner to adequately address the concerns, FMMI will consider soil remediation at that time.

# 3.1 Community Outreach and Solicitation of Access Agreements

This section presents the community outreach program (COP) that will be undertaken in support of the Soil Program. The objectives of the COP include the following:

- Provide program information to the general public and property owners.
- Coordinate with the owners of those properties that are eligible for sampling and, if necessary, cleanup under the Soil Program.
- Obtain access agreements.
- Report the results of sampling and, if applicable, details of cleanup activities to property owners.

The COP will include a variety of activities designed to inform property owners within the Study Area about the Soil Program and to obtain the necessary access agreements for the Soil Program activities. To facilitate implementation of the COP, a Community Outreach office within or near the Study Area will be established and staffed as necessary to fulfill the COP objectives.

Requests for access and details about the Soil Program will be delivered to property owners within the Study Area in a variety of ways, including the following:

- Direct mail to every property owner within the Study Area.
- An "open house" style of meeting to explain and answer questions regarding the Soil Program.
- Door-to-door and phone contact, if necessary.

A minimum of two attempts (e.g., phone, mailing, door-to-door contact, etc.) beyond the initial mailing will be made to obtain access from each property owner within the Study Area.

The COP materials and presentations will, at a minimum, provide the public with the following:

- Contact information for the Community Outreach office.
- Summary information about the Soil Program.
- Information to facilitate submission of soil sampling access agreements.

Work Plans approved by the ADEQ as well as copies of the COP materials will be kept at a repository located at the Community Outreach office

# 3.2 Property -Specific Cleanup Activities

This section presents a description of cleanup construction activities to be performed at individual properties. Included in this section are the details for obtaining access, pre-excavation yard preparation, excavation activities, noise control, dust control, maintaining access for the property residents, decontamination procedures, backfill and revegetation procedures, and follow up activities.

#### 3.2.1 Property Access

Cleanup construction activities at a particular property cannot proceed until a property owner has signed an access agreement for cleanup. If the property is occupied by a tenant instead of the owner, the tenant may also be requested to sign the access agreement. However, FMMI will consider moving forward without the tenant access agreement if so directed by the property owner. The cleanup access agreement is separate and in addition to the soil sampling access agreement previously obtained through the Soil Program.

Specific cleanup details will be developed on a property-by-property basis. Individual property cleanup work plans will be prepared for each property to identify the soil removal areas, excavation depth, and restoration requirements. Cleanup work plans will be reviewed with the property owner and tenant, if applicable, during a pre-excavation property inspection. The inspection will be attended by the property owner (and/or tenant if he/she requests to be present and is available) and the CPC.

The cleanup work plan will document all pertinent details of the cleanup construction activities, including items to be relocated for access, excavation areas, specific areas or landscaping that the owner or their representative requests not to be excavated or removed, landscaping that will be removed and replaced, and plants that the owner requests to be replanted.

After the inspection, the property owner will be asked to acknowledge the details of the cleanup by signing the property cleanup work plan.

## 3.2.2 State and Local Municipality Permits

Excavation activities located within Gila County, including Claypool, which is a census-designated place, should only require a Grading and Drainage permit if development or substantial improvement will divert, retard, obstruct, or otherwise affect existing drainage (Gila County, 2008).

Excavation activities located within the City of Globe should only require a Grading and Drainage plan and permit for any cut and/or fill of dirt that exceeds 50 cubic yards or clearing and grubbing of more than 10,000 square feet. In addition, a grading permit may also be required for grading which is less than 50 cubic yards, if the work impacts drainage on adjacent upstream and/or downstream properties, and/or for a structure (City of Globe, 2022).

If necessary, Grading and Drainage permits will be obtained from the appropriate entity by the CPC prior to commencing cleanup activities at a particular property.

Excavation disturbances will require a complete Stormwater Pollution Prevention Plan (SWPPP) in conformance with ADEQ. The SWPPP shall include a Notice of Intent from ADEQ and a Sediment and Erosion Control Plan, which includes permanent stabilization and/or landscape plans. All properties remediated under the Soil Program will be covered by the same SWPPP and Notice of Intent.

#### 3.2.3 Pre-Excavation Area Preparation

The CPC will notify the property owner and tenant of the intended start date at least 7 calendar days prior to the start of construction at a particular property. Implementation may proceed at a given property with shorter notice if the property owner or tenant does not object.

Prior to beginning work on a particular property, the CC will mark the lateral excavation limits and set up construction tape or fencing to limit unauthorized access. Excavation will be performed in the accessible portions of the use areas designated for cleanup. Use areas eligible for remediation may include grass covered and bare areas; gardens and flowerbeds (unless the owner requests otherwise), and unpaved driveways and parking areas. Examples of use areas not eligible for remediation include those covered by grouted brick or pavement surfaces (such as concrete pads, patios, paths, and driveways) where permanent structures are present (such as houses, garages, and sheds), areas covered by large landscaping items (such as retaining walls, water features, etc.), and setbacks from structures, large landscaping items, and buried utilities. Appropriate precautions will also be taken to avoid contact with overhead power lines during soil remediation activities by observing proper work activity setbacks, which could also result in some portions of impacted use areas not being remediated.

In addition, the CPC will survey (via photographs and/or video) each property to establish pre-cleanup conditions. The condition of buildings and other fixtures will also be documented, including the integrity of structures and foundations immediately adjacent to the target excavation areas. The quality and depth of field of the photographs and video images will be adequate to ascertain whether cracks or other types of damage to the buildings and other fixtures existed pre-cleanup.

Prior to initiation of cleanup construction activities, the CC will contact the local utility companies to locate the underground electrical, water, sewer, gas, cable, and telephone lines. The owner and tenant will also be asked to provide information on subsurface obstacles such as septic systems, abandoned water lines, and wells. The utility companies will mark the boundary position of the utilities on the ground following their normal convention. The CC will also locate the layout of utilities within the use areas to be excavated. In use areas requiring soil excavation, the CC will confirm locations of subsurface obstacles, including gas lines, by hand digging to trace the orientation of the obstacle and will mark it with spray paint.

The property owner or tenant will be required to relocate recreational vehicles, lawn furniture, spare lumber/building supplies, boats, vehicles or other similar items to a location where they will not hinder cleanup activities. Additionally, the property owner or tenant will be required to relocate pets, poultry, and livestock to a location where they will not hinder cleanup activities. Assistance will be provided if the property owner is not capable of performing these activities. If off-site storage/boarding is required, FMMI will make arrangements and pay for the storage/boarding. The CPC will also request that the property owner or tenant remove and store inside their buildings all yard ornaments, personal possessions, and keepsakes requiring special care. The items to be relocated by the property owner will be noted on the cleanup work plan as well as any concerns or special requests that the property owner or tenant may have in removing surface obstacles or in otherwise preparing their property for cleanup activities.

If practicable, the CC will temporarily relocate woodpiles, walkway stepping-stones, and other miscellaneous small landscape articles on the property; large obstructions such as fences and gates may be removed, if necessary, by the CC to allow for equipment and work crew access. Removed landscape articles and obstructions will be stored on the property and will be replaced by the CC following completion of cleanup activities.

# 3.2.4 Excavation Activities

Excavations may be required in a front use area, back use area, separate side use area or combination thereof. Side use areas that are less than 15 feet wide, but greater than 5 feet wide, will have been sampled as part of either the front yard or back yard as described in the SAP (GHD, 2024a). In this case, the side use area will be excavated only if the front yard or back use area that it was a part of is excavated. In the event that a side use area is less than 5 feet wide (and therefore, not sampled) and accessible, it will be excavated if either the front or back yard requires cleanup. In this case, the entire accessible portion of the side use area will be excavated.

For purposes of the cleanup activities, a use area will be defined as extending to the edge of the adjoining street or alley; property line or any drainage ditch/wash, inclusive of any right-of-way that may be owned by the city or municipality. Generally, a curb or, in the absence of a curb, the edge of the pavement will define the edge of the alley or street.

If a use area is larger than 3,600 square feet, it will have already been subdivided into grids for the purpose of property sampling. In this case, the designated excavation area will be the grid area represented by the composite sample that has soil concentrations above the ADEQ approved cleanup levels for one or more target constituents (TCs). For areas designated for excavation by discrete sample results, the horizontal limits of excavation will be defined by discrete sample locations with concentrations less than the cleanup levels or by significant physical obstructions such as foundations, streets or sidewalks.

The depth of excavation will be determined by sampling in multiple intervals as specified in the SAP and will generally extend to the top of the sample interval where the soil concentrations for arsenic, copper, and lead are below the cleanup levels. In the event only a 0- to 3-inch interval exceeds any TC, the excavation will be extended to the 0- to 6-inch interval as a practical excavation technique. FMMI will attempt to remove all soils with elevated TCs; however, an excavation may be terminated at a shallower depth if full removal is not practical (e.g., encountering roots of mature trees or bedrock) or the CC cannot safely excavate the soil. In such a case, the removal will extend to the deepest depth practicable, and the excavation backfilled as described in Section 3.1.10.

The CC will remove soil using a variety of mechanized equipment and hand tools. The primary equipment used will consist of skid steer loaders (e.g., bobcats), small excavators or other similar equipment. Soil will be removed to the specified depth, taking care to hand excavate next to buildings, sidewalks, fences, and other structures as necessary to achieve an objective of maximizing the extent of soil removal. The potential for damage to structures and utilities will be considered on a case-by-case basis in determining the extent of the excavation. Any nominal amounts of soil that may be left in place as a result of these considerations will not affect the achievement of the primary objective of the cleanup, which is to excavate and replace soils within a designated area of the property, to the extent necessary, to ensure that the post cleanup- average metals concentrations no longer exceed the cleanup levels.

The nominal setbacks that will be considered as guidance in weighing the considerations described above are as follows:

- Horizontal distance of 12 to 18 inches from permanent structures (house, garage, outbuildings, etc.).
- Horizontal distance of 6 to 12 inches from other improvements (sidewalks, paved areas, etc.).
- Within the drip line of shrubs.
- Within the root line of trees.
- Horizontal distance of 24 inches from active underground utilities when mechanized equipment is used.
- Horizontal distance of 6 inches from active underground utilities when hand tools are used.
- Limit depth of removal to 12 inches within two feet from other permanent appurtenances or improvements (e.g., power poles, light poles).
- Horizontal distance of 6 to 12 inches around large stationary objects (e.g., sheds, animal shelters, inoperable automobiles).
- Appropriate distance from structures with basements so as not to impact basement walls (to be determined on a case-by-case basis).

- Horizontal distance of 6 inches from fences that are not removed for access.
- Horizontal distance of 6 to 12 inches from the property line.

In addition to a setback, soil excavation will be sloped at a 45-degree angle away from the edges of rock structures, retaining walls, weak concrete foundations, or other supporting structures to prevent loss of support and potential weakening of these features. Utility lines (including water, electric, sewer, gas, cable, and telephone) damaged by cleanup activities will be reinstalled to current building code requirements by the CC as soon as practicable after the damage occurs. Utility companies shall be notified of any damage to their infrastructure. Appropriate measures will be taken to provide for the property owner's needs while repair is being performed.

Soil excavation may not be conducted in or near areas with deteriorating or unstable retaining walls which present potentially significant safety or property damage concerns. FMMI will consider returning to remediate the areas if the property owner addresses the safety concerns (i.e. repairs or stabilizes the wall).

Excavation by hand will be performed, as necessary, to mitigate damage to structures (e.g., houses, garages, sheds, paved driveways, and sidewalks) and vegetation (e.g., trees, hedges, and large shrubs). The CC will routinely inspect structures during excavation operations and will take reasonable and appropriate corrective action if damage occurs.

Excavation beyond the setback specified above for trees and shrubs will extend to the full designated depth for that area. Excavation within the setback of trees and shrubs will be limited to the removal of existing grass and the immediately underlying soils (3 to 6 inches) to minimize potential damage to the root structure.

If required for access, fences may be removed, salvaged, and replaced upon completion of the backfilling by the CC. Damaged fences or fences that cannot be reinstalled following backfilling will be repaired or replaced with fencing that is equivalent to the existing fence.

The exteriors of structures and buildings will be inspected for evidence of deformation or changes in condition attributable to the cleanup activities based on a review of the pre-excavation photographs/video documentation. The CPC will contact the property owner when conditions are discovered that warrant such notifications.

The CC and CPC will jointly perform the field measurements specified in the QAPP (GHD, 2024b) to confirm that the required excavation extent and depth have been achieved. Once the CPC has verified that an excavation meets the project requirements, the area will be approved for backfilling.

#### 3.2.5 Loading Excavated Materials

Loading of the material excavated from individual properties for transport to the TSSA will be performed in a manner that prevents spillage or spreading of the material. A protective temporary covering, such as polyethylene sheeting (6-mil Visqueen or equivalent) or a CPC-approved geotextile, will be used to protect clean areas situated between the hauling vehicle and the excavation area from cross-contamination due to spillage.

Spilled soil will be isolated by traffic cones as necessary and will be picked up immediately to minimize any subsequent tracking of materials or transport of materials beyond the work site or into local storm drains.

Loading of trucks will be performed to avoid contact with overhead electrical lines and other utilities. Dust control methods in compliance with relevant and applicable local regulations will be maintained in accordance with the Fugitive Dust Control Plan presented in **Appendix B**.

After loading, trucks will be covered with an adequately secured tarp or other device and inspected for loose/spilled material within the loading zone. Loose materials accumulated on the sides, tires, wheels or dump gates of the trucks will be removed and placed within the truck. Spilled soils in the vicinity of the loading area will be removed (using broom and shovel or other suitable means) and placed in the truck. Then, the excavated soils will be transported to the TSSA.

## 3.2.6 Noise Control

Normal working hours will begin no earlier than 7:00 a.m. and will generally extend no later than 7:00 p.m. All equipment shall be maintained in proper condition with exhaust controls to minimize noise levels, and proper driving habits will be enforced. Residents will be provided with the Soil Program office telephone number to allow reporting of any noise complaints. If noise complaints are received, the CPC will assess the issue and, if deemed necessary, require the CC to modify equipment or operational procedures, to mitigate the noise. Article 16-1-6 of the City of Globe Code of Ordinances shall apply to noise complaints submitted to the City of Globe.

#### 3.2.7 Dust Control

Dust control requirements and personal monitoring procedures during cleanup activities are described in the Fugitive Dust Control Plan presented in **Appendix B**. Water application will be used as necessary to reduce fugitive dust. Application rates will be regulated to control dust, yet not result in the generation of mud that could be transported from work areas on haul trucks or other mobile equipment or in the generation of runoff to adjacent properties, the adjacent roadway or storm drains. Dust suppression equipment may consist of standard garden hoses and spray regulators, misters or other equipment proposed by the CC and acceptable to the CPC.

# 3.2.8 Access for Property Residents

During construction activities, access to the home will be provided to the residents at all times. Appropriate measures will be taken to ensure that the resident will not have to walk through exposed soil prior to entering their home. Sidewalks will be brushed or washed after each workday to provide as clean an entryway as possible. If there is no sidewalk, a clean pathway will be provided by laying down plywood or other means to prevent exposure and tracking of soils. All residents (especially children) will be requested to stay away from the construction area, which will be demarked with construction tape or fencing. Handicap access and special needs will be addressed as needed. Should residents need to temporarily relocate during construction activities, FMMI will make and pay for those relocation expenses.

## 3.2.9 Decontamination Procedures

Heavy equipment and tools used in the cleanup process will be decontaminated prior to leaving the work area. Decontamination will first involve a brush down of equipment in the work area to remove visible accumulations of materials from the body of the equipment and tires. Limited quantities of water may be used to remove residual visible soil following dry brushing; however, water use will be minimized. If washing is necessary, equipment will be washed while on the premises and the wash water mixed with the last load of excavated soil prior to transportation to the TSSA. In all instances, which includes rainy days, the CC will work to minimize the migration of mud and water to the street. Visible accumulations of soil, dust or debris that are attributable to construction activities found on streets, rights-of-way, and access routes will be cleaned at a minimum of once per day.

# 3.2.10 Backfill and Revegetation of Excavated Areas

After field measurements, collected in accordance with the QAPP (GHD, 2024b), confirm that the design excavation depths have been achieved, the CPC will approve excavated areas for backfilling with soil. Backfilling will follow excavation as soon as practicable in order to minimize the amount of time excavated areas are left open. In general, the excavated areas will be backfilled to pre--excavation grades. Minor modifications to the pre-excavation grades will be considered if necessary to improve drainage provided that the property owner concurs, and such improvement can be accomplished without negatively affecting adjacent properties.

Backfill materials will be imported from off-site sources approved by the CPC and either staged in the Backfill Staging Area (BSA) prior to transport to a given property or direct-hauled from the source to the property. Samples of the proposed backfill materials will be collected and analyzed to verify that they meet the project requirements identified in the QAPP (GHD, 2024b) before the material sources are approved. Following source approval, QA/QC samples will

be collected and analyzed on an ongoing basis to confirm that the backfill materials continue to meet the project requirements. Backfill or replacement soil will be selected to ensure that it is a suitable replacement for the excavated soil in characteristics, texture and structure of the project QA/QC verification testing of the backfill materials and review by ADEQ are described in the QAPP (GHD, 2024b).

Where access allows, dump trucks with backfill soil will drive onto the excavation areas and deposit loads while driving slowly to spread the soil. Where access is limited, the trucks will dump loads at an adjacent temporary stockpile from which the CC can transport the material. Written access will be obtained from the owner of any adjoining private property to be used for equipment or material staging during cleanup activities. If the use of the adjoining property entails only access, verbal permission may be obtained.

Some handwork using wheelbarrows and shovels may be necessary to backfill areas with difficult access. The backfill soil will be graded and shaped to the approximate original conditions. Compaction of the backfill material will generally be performed by tracking of construction equipment to prevent settlement. Material placed in driveways or alleyways will be compacted using a plate compactor, roller, hand tamping or other suitable means.

The upper surface of the backfilled area will be refinished with restoration materials that are comparable to the pre-existing conditions (i.e., sod, landscape gravel, gravel parking areas or gravel driveways, etc.) unless otherwise agreed to by the owner. If sod installation application is required, the vegetated area will be watered by the CC as necessary during the first 60 days after installation to facilitate establishment of the vegetation. Property owners/tenants will be provided with instructions for care of the sod after the 60-day period. Excavated gravel driveways, parking areas, and other areas subject to vehicular traffic will be replaced with compacted clean soil and a minimum of four inches of clean gravel top surfacing.

Landscaping that is removed or destroyed as part of the cleanup activities will be replaced with comparable landscaping, if so requested by the owner. Landscaping includes, but is not limited to, trees, sod, and plantings. As an alternative, in order to reduce water usage, FMMI is willing to consider installation of xeriscape landscaping in soil replacement areas if the property owner so desires. Replaced landscaping will be replanted if it does not survive within 60 days, provided that the property owner follows practices recommended by the plant supplier. Plants that have been designated by the owner as requiring replanting will be replanted; however, FMMI cannot guarantee the survivability of replanted plants. The CC will also water replaced or replanted landscaping within the first 60 days. Watering frequency and timing will consider the time of year.

Finally, all materials such as fences that were moved by the CC to allow construction activities will be restored to their original location and any incidental damage to buried sprinkler systems, sidewalks, etc., will be repaired by the CC at that time.

#### 3.2.11 Follow-Up Activities

Follow up- activities will be conducted by the CPC and the CC after cleanup construction activities are complete at a given property to verify that the work has been performed appropriately.

#### 3.2.11.1 Photo Documentation

Photographs and/or video will be used to document post-construction conditions of properties, streets, and sidewalks. Photographs and videos will be taken by the CPC as soon as practicable after completion of landscaping.

#### 3.2.11.2 Repair Work

Cleanup activities will be conducted to minimize damage to permanent features. Any damaged features, such as walkways or utilities, will be repaired or replaced upon discovery and determination that the damage was caused by the cleanup construction activities. Structures such as buildings, sidewalks, and fences that are damaged during property cleanup will be repaired. If doubt exists as to whether damage was caused by the cleanup construction process, video and photographic documentation taken prior to construction will be reviewed on a case--by--case basis. The decision to repair disputed damage will be made by the FMMI Project Manager.

#### 3.2.11.3 Property Inspection

Once construction is completed and any necessary repairs are made, the CPC will inspect the property with the property owner and the CC. At this inspection, the property cleanup form will be finalized, and the property owner and CPC will sign off that the work performed is consistent with the signed property cleanup work plan. If the property owner fails to attend or declines to sign the property cleanup form, the CPC will inspect the property. If the property has been cleaned up in a manner that is consistent with the pre-construction inspection, the CPC will sign the property cleanup form, and it will be included in the residential property completion report.

#### 3.2.11.4 Reporting

Once cleanup activities are complete at a specific property, a Property Cleanup Completion Report (PCCR) will be prepared and submitted to the property owner. The PCCR will document the location of the excavated areas and the depth of the excavations.

# 3.3 Temporary Soil Stockpile Area

The TSSA is located within the AOC on FMMI mine property as shown on **Figure 2**. Excavated soils will be transported to the TSSA where they will be temporarily stockpiled and characterized prior to final management as further described in Section 3.3.

Activities at the TSSA are summarized below:

- Excavated soil will be stockpiled, sampled, and managed separately within the TSSA.
- Stockpiling will have a maximum volume of approximately 500 cubic yards. The soil stockpiles will be sampled and analyzed at a laboratory to determine whether the soils are suitable for final management on FMMI mine property.
- Treatment of the materials, if necessary, to allow for final onsite management.
- Sampling and analysis to verify the success of any required treatment.

Excavated soil stockpiles will be sampled and analyzed separately using the Toxicity Characteristic Leaching Procedure (TCLP) to confirm that the concentrations of lead and arsenic are below the threshold concentrations for identifying a material as a Resource Conservation Recovery Act characteristic waste. The separated stockpile samples will also be analyzed using the Synthetic Precipitation Leaching Procedure (SPLP) to determine whether the excavated soils have the potential to generate leachate with metals concentrations in excess of Arizona Drinking Water Standards. Details for the TCLP and SPLP testing procedures are provided in the QAPP (GHD, 2024b). Any other testing that may be required by the final excavated soil management options will also be performed within the TSSA.

FMMI may, at its own discretion, elect to treat the excavated soil stockpile as described in **Appendix B** if there is a history of untreated excavated soil stockpiles exceeding the TCLP and/or SPLP threshold concentrations. An excavated soil stockpile will not be placed permanently on mine property without confirming that the concentrations are below the threshold concentrations for TCLP and SPLP.

Operational and closure details and storm water management for the TSSA are presented in Appendix B.

# 3.4 Final Excavated Soil Management

Soils that pass TCLP and SPLP analyses will be utilized by FMMI mine operations as daily cover or similar needs for the Construction and Demolition landfill located on FMMI mine property as indicated in **Figure 2** and as approved by ADEQ. The Construction and Demolition landfill is a private landfill that receives construction and demolition debris from FMMI. The landfill is regulated by ADEQ.

# 3.5 Soil Transportation

Excavated materials will be transported to the TSSA from the cleanup properties where the materials will be temporarily stockpiled and managed prior to final long-term management. Backfill materials will be hauled to the excavated properties either directly from the borrow source or the BSA.

Haul trucks will follow a direct route using major roadways and avoid neighborhood streets to the extent practicable when traveling between the BSA and cleanup properties. The haul routes for each property will be predetermined by the CC and/or the CPC. All truck drivers will be instructed as to the preferred routes between the property, backfill source, and TSSA prior to initiating hauling activities.

The loads of all haul trucks, whether hauling excavated materials or backfill, will be covered with a secured tarp or other device. Any materials spilled during transport will be cleaned up and removed as soon as practicable.

Hauling operations will be performed pursuant to an approved traffic control plan, if required by a local municipality, and will be conducted in such a manner as to minimize interference with local traffic on city streets to the extent practicable. Flag persons and signage will be used as necessary for public safety. At a minimum, warning signs such as "Construction Area" or "Workers Ahead" will be placed on the streets where cleanup is being performed and haul trucks are being loaded. "Trucks Entering" or "Trucks Turning" signs will be used at primary and secondary street intersections as necessary. Any other signage required by local or state regulations, laws or ordinances will also be used to provide for public safety.

Haul trucks and drivers for delivery of material to the TSSA will be required to comply with all applicable federal, state, and local regulations. Drivers will be licensed to operate the equipment under their control and will be subject to safety record checks. The material excavated from the cleanup properties that is hauled to the TSSA will not involve the placement of hazardous waste because all activities will be conducted within the AOC; therefore, transporters of this material will not require licensing as hazardous waste transporters.

Haul trucks will pass all required safety, emission, and noise inspections. Trucks will be inspected by the CC for leaks of fluids and fuel and will be checked for potential fire hazards associated with loading equipment and haul trucks. Loaded trucks will not exceed applicable weight restrictions, and the selected transport routes will be checked for weight-restricted bridges or other load limits prior to initiating transport.

All truck drivers will be instructed that they must comply with all posted speed limits and other traffic controls on public roads and that failure to comply will be a basis for removal from the project.

Prior to any materials being transported, truck drivers will be briefed by the CC regarding the loading, inspection, and documentation requirements and any additional safety procedures specified in the CC's Health Safety and Environment Plan (HSEP). All haul trucks will contain guidelines regarding emergency procedures and motor vehicle accident report forms. Completed accident report forms will be submitted to FMMI's Safety Personnel and the FMMI Project Manager.

# 4. Construction Management Considerations

This section describes the overall construction management considerations associated with implementing the cleanup, including specific sequences and inter-relationships of activities, logistical requirements of various aspects of the work, and health and safety considerations.

# 4.1 Scheduling of Cleanup Properties

Prioritizing the cleanup of properties will be based on a three-tiered approach, generally consistent with the United States Environmental Protection Agency (EPA) Superfund Lead Contaminated Residential Sites Handbook,

OSWER 9285.750 (EPA, 2003). The application of these guidelines for the soil cleanup activities takes into account the cleanup levels developed for the Study Area.

Tier I properties are residential properties with yard soil lead concentrations greater than 1,200 milligrams per kilogram (mg/kg) and a sensitive population: either a child less than 7 years of age or a pregnant woman residing or frequently at the property (i.e., at the property for 4 or more days a week). Tier II properties are residential properties with yard soil lead concentrations between the remediation level for lead (400 mg/kg) and 1,200 mg/kg and a sensitive population or lead soil concentrations above 1,200 mg/kg and no sensitive population. Tier III properties are residential properties with yard soil concentrations between 400 mg/kg and 1,200 mg/kg and no sensitive population.

Relevant information on the residents will be solicited during the cleanup access agreement process. This information will be combined with the results of the sampling to assign a Tier status to each property where cleanup is required. In general, properties will be scheduled for cleanup on a neighborhood-by-neighborhood basis considering the higher priority of Tier I and Tier II properties. Nonresidential properties will have lower priority than residential and recreational properties.

# 4.2 Construction QA/QC

Construction QA/QC testing and inspection procedures will be implemented to ensure proper construction and compliance with the cleanup construction plans and specifications. Details of the construction QA/QC programs are provided in the QAPP (GHD, 2024b).

# 4.3 Health and Safety

The CC will prepare a construction HSEP that is protective of workers, the public, and the environment meeting all FMMI and GHD policies and procedures related to health and safety. During all construction activities, the CC will have a designated Health and Safety Coordinator on site. The Contractor's Health and Safety Coordinator will have authority over all CC personnel to enforce the HSEP requirements.

# 5. Reporting

This section provides a summary of reporting procedures. Submittals to ADEQ will include an electronic version of all reports.

# 5.1 Cleanup Reporting

PCCRs will be prepared for each property where cleanup was performed. The PCCRs for properties that have been cleaned up will be forwarded to the property owner.

# 5.2 Data Reporting

Within 2 weeks of commencement of the soil remediation activities, monthly reports will be submitted to ADEQ. The monthly report will include base project statistics including the compiled results of Weekly Documentation.

#### 5.2.1 Weekly Documentation

The following documentation will be collected weekly:

- The week ending.
- Total number of parcels in the Study Area.

- Total number of parcels sampled and will include subdivisions such as:
  - Sampled and no exceedances.
  - Sampled and contains exceedances.
  - Not sampled.
  - Percentage of parcels with completed sampling.
- Total number of parcels to be sampled.
- Total number of parcels with one or more use area impacted.
- Percentage of parcels with one or more use area impacted.
- Total number of parcels with no use area impacted.
- Total number of parcels with remediation in progress or complete.
- Percentage of total estimated parcels where remediation is in progress or complete.
- Total number of parcels declining remediation.

#### 5.2.2 Monthly Reporting

The Monthly Progress Report will describe the significant developments during the preceding period, including actions performed and problems encountered, the activities anticipated over the next month, schedule of anticipated actions, and anticipated problems and planned resolution of past or anticipated problems. Figures identifying the current status (i.e., sampled, remediation pending, remediation complete, etc.) of properties within the Study Area will be included with the Monthly Progress Report.

# 5.3 Final Report

After completion of all work, a final report summarizing the actions taken (soil sampling and cleanup activities) will be submitted to ADEQ. The public will be given the opportunity to comment on the final report.

# 6. References

- City of Globe, 2022. Publication of the General Ordinances of Globe, Arizona. Adopted 2009. Updated August 24, 2022.
- GHD, 2024a, Sampling and Analysis Plan, Pinal Valley Soil Program, Claypool, Arizona. VRP Site Code: 514199-00. February 2024.
- GHD, 2024b, Quality Assurance Project Plan, Pinal Valley Soil Program, Claypool, Arizona. VRP Site Code: 514199-00. February 2024.
- Gila County, 2008. Grading and Drainage Ordinance #08-01. March 12, 2008.
- United States Environmental Protection Agency (EPA). 2003. Superfund Lead-Contaminated Residential Sites Handbook. (OSWER Directive 9285.7-50).

# Figures



Imagery Source: Esri, Maxar, Earthstar Geographics, CNES/Airbus DS, and the GIS User Community

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Imagery Source: Esri, Maxar, Earthstar Geographics, CNES/Airbus DS, and the GIS User Community

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# Appendices

# Appendix A Fugitive Dust Control Plan

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# 1. Introduction

This document presents the Fugitive Dust Control Plan for the soil cleanup activities associated with the Pinal Valley Soil Program in Claypool, Arizona. This plan establishes the procedures to be implemented in order to control potential worksite contaminants from impacting public and worker safety. This plan supports and is an appendix to the Remedial Action Work Plan.

During the course of cleanup activities, the operation of earth moving equipment and vehicles in work areas may cause the generation of dust, particularly in dry and windy weather conditions. Dust control measures will be implemented as a routine measure during the work activities to protect nearby residents and workers from unacceptable levels of dust and lead particulate. Upon visual observations of dust by the Construction Project Coordinator, the Construction Project Coordinator's designee, the Construction Contractor, or local municipalities additional dust control measures will be immediately implemented.

The effectiveness of dust control measures will also be confirmed as discussed in Section 3 of this document. The monitors directly measure total dust and metals, which can be compared to appropriate 8-hour time weighted average Occupational Safety and Health Administration (OSHA) occupational exposure limits. Dust control measures may include wetting of soil, slowing work activities, and other designated methods specified in the Remedial Action Work Plan.

# 2. Dust Control Measures

This section outlines the dust control practices that will be followed during project activities. Controls will be implemented to minimize fugitive dust generation from excavation activities. Visual observations will be used to evaluate the effectiveness of the controls.

Dust control measures will be a high priority for project personnel. Dust control will be achieved primarily by watering down work areas and vehicle traffic routes. Either a dust palliative or water shall be used for the alleviation or prevention of dust. Use of reclaimed water for dust control is preferred.

The water source for dust suppression will be from a Freeport-McMoRan Miami Inc. owned property or local municipal water source. Each water source will need to be sampled and analyzed for Pinal Valley Soil Program target constituents per the Quality Assurance Project Plan (GHD, 2024) prior to use. Watering at properties undergoing soil excavation and at soil stockpiles and haul roads within the Temporary Soil Staging Area will be provided on an as needed basis, as follows:

- During soil excavation activities (by heavy equipment and by hand crews).
- During stockpiling and/or loading of soils for transport.
- During soil backfill activities.
- Wetting down truck loads to control visible emissions during transport (truck loads will also be covered when traveling public roads).

Additional dust control measures will be aggressively implemented under windy conditions (measured wind speed greater than 10 miles per hour), whenever dust plumes are observed leaving an active soil excavation or the Temporary Soil Staging Area, or as needed based on real time soil particulate measurements. Dust generating activities will be stopped when sustained wind speeds exceed 25 miles per hour.

Dust control actions will primarily include application of water sprays to restrict dust generation in vehicle traffic routes (via water truck spray bars) and work areas (via hose/spray system fed from a portable water tank). Soil stockpiles may be covered during non-work hours or will be moistened using the side bar sprayer on a water truck or hose/spray

system fed from a water truck. In instances where application of water spray is not sufficient to prevent generation of visible dust, other dust control measures that may be used are as follows:

- Increased frequency of water spray applications
- Regulation of vehicle speed
- Placement of additional clean gravel as a ground cover in high dust generation areas,
- Application of surfactant
- Other appropriate measures

Care will be taken to avoid application of excessive amounts of water that may cause unacceptable working conditions or increase the possibility of surface water run-off. If additional dust control measures do not eliminate visible dust or result in action levels being met, construction activities will be temporarily suspended until additional dust control measures have been implemented, or until adverse weather conditions abate. Dust control alternatives may be re-evaluated on an as needed basis.

# 3. Personal Air Monitoring

Air sampling will be conducted to evaluate potential worker exposure to contaminants of concern and fugitive dust during work activities. During each air monitoring event, at least one equipment operator and one ground worker should be outfitted with sample pumps positioned within their breathing zone during work activities. Additional sample pumps will be placed adjacent to active excavation areas, in upwind and downwind locations. Sample pumps (typically provided by the laboratory) should be calibrated prior to sample collection and the intake tubing placed at breathing level and set at the laboratory or manufacturer-recommended flow rate for 8-hour time-weighted average (TWA) analysis. Collected air samples will be shipped under chain-of-custody to the laboratory for analysis of a nine-metal profile (including cadmium, chromium, cobalt, copper, iron oxide, lead, manganese, nickel, and zinc oxide), arsenic, respirable crystalline silica, and total dust by NIOSH Methods 7303, 7500/0600 (modified), and 0500, respectively. Exposure to lead in construction is regulated by OSHA under 29 CFR 1926.62. The standard establishes an Action Level and Permissible Exposure Limit (PEL) of 0.03 and 0.05 milligrams per cubic meter, respectively. Both the Action Level and PEL are based on an 8-hour TWA and apply to worker exposure. Exposures are reported as TWA exposures during the time sampled, which encompassed all soil removal activities being performed. The OSHA PEL for respiratory dust is less than or equal to 5.0 milligrams per cubic meter over an 8-hour TWA for workplace exposures. Personal air monitoring will be conducted on a bi-weekly basis for the first 6 weeks of construction activity, then on a quarterly basis once dust control measures are demonstrated to be protective of worker health.

# 4. References

GHD, 2024, Quality Assurance Project Plan, Pinal Valley Soil Program, Claypool, Arizona. VRP Site Code: 514199-00. February 2024.

# Appendix B Temporary Soil Stockpile Area Operations Plan

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## **Figure Index**

Figure B1 TSSA, BSA and Soil Repository Location

#### List of Acronyms

ADEQ	Arizona Department of Environmental Quality
CaO	Quicklime
CC	Construction Contractor
FMMI	Freeport-McMoRan Miami Inc
HDPE	High Density Polyethylene
mg/L	milligram per liter
Na2S	sodium sulfide
QAPP	Quality Assurance Project Plan
RAWP	Remedial Action Work Plan
SPLP	Synthetic Precipitation Leaching Procedure
SRL	Soil Remediation Level
TCLP	Toxicity Characteristic Leaching Procedure
TSSA	Temporary Soil Staging Area
VRP	Voluntary Remediation Program

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# 1. Introduction

This document presents the Temporary Soil Staging Area (TSSA) Operations Plan for the cleanup activities associated with the Pinal Valley Soil Program in Claypool, Arizona. The TSSA is located within the Study Area on Freeport-McMoRan Miami Inc. (FMMI) as shown on Figure 2 of the Remedial Action Work Plan (RAWP).

This plan establishes the procedures to be implemented and documented to manage the receiving, placement, characterization, movement, and, if necessary, treatment of excavated soil and various debris (i.e., concrete, vegetation, etc.) within the TSSA. These materials will be generated as a result of property soil remediation activities that will be conducted as part of the Soil Program within the Study Area over the next few years. This TSSA Operations Plan supports and is an appendix to the RAWP.

# 2. Site Work

The objective of the TSSA Operations Plan is to identify and describe the various features of the TSSA, along with a description of the procedures required for handling materials within the TSSA.

# 2.1 Preparing the TSSA

Prior to beginning operations within the TSSA, erosion control measures will be established consistent with FMMI mine operations.

# 2.1.1 Clearing, Grubbing and Grading

Clearing and grubbing is not anticipated prior and only minor grading will be conducted prior to initiating construction and/or staging activities within the TSSA. Grading will consist of leveling and compacting soils to establish haul roads and to provide level working surfaces for earthmoving equipment.

# 2.1.2 Erosion Control

The objective of erosion control is to effectively implement erosion and storm water management controls to minimize erosion of disturbed areas and the areal impact of any potential soil spills. Essential components of the erosion and sediment control methods will be installed and fully functional before commencement of any soil disturbance activities. Erosion control measures will be implemented within the TSSA for the duration of the Soil Program cleanup activities.

# 2.1.3 Dust Control

Water sprinklers or water trucks will be used to control dust during site activities as needed. The various soil stockpiles are moistened as necessary to control the generation of fugitive dust during material handling, placement, and storage. Appendix A of the RAWP provides additional details related to the dust control plan for this program.

## 2.1.4 Security

The TSSA will be located within the FMMI mine property and included any as part of normal security operations related to the mine. The TSSA will be manned by project personnel during working hours. No casual visitors or unauthorized personnel are permitted to enter the TSSA without prior approval.

# 2.2 TSSA Operations

The TSSA will be used for receiving and managing materials excavated from individual properties as part of the Soil Program cleanup activities. Primary features of the TSSA include the Soil Accumulation Area, Soil Treatment Area, Soil Consolidation Area, and a Debris Storage Area. General activities within each of these areas are described below. The erosion and storm water management controls described in Section 2.1.2 apply to each of these four areas.

## 2.2.1 Movement of Material Within the TSSA

Entrance/exit ways into and out of the TSSA will be prepared and maintained using 6 inches of suitable aggregate placed on top of a geotextile fabric in order to reduce transport of mud by motor vehicles. Access ways shall extend from the access road to at least the exit point of the equipment decontamination pad.

#### 2.2.2 Initial Material Segregation and Soil Characterization

Excavated soil and debris (concrete, vegetation, etc.) initially delivered to the TSSA will be managed separately. Management of debris will occur within the Debris Storage Area. Once a sufficient volume of debris is generated, this material will be transported to and disposed of at a nearby solid waste landfill.

Excavated soil from within the Study Area delivered to the Soil Accumulation Area will be placed separately as individual stockpiles up to 500 cubic yards. Stockpiles will be sampled separately for subsequent Toxicity Characteristic Leaching Procedure (TCLP) analysis at an Arizona Department of Environmental Quality certified laboratory. Additional soil brought into this area will be staged in separate stockpiles.

TCLP sampling and analysis of the soil stockpiles in the Soil Accumulation Area will be conducted as follows:

- For stockpiles of 500 cubic yards or less, a five-point grab sample will be collected from the stockpile.
- The grab samples will be composited to create one representative sample (composite sample) for the soil stockpile. Grab samples will be spaced equidistant to one another.
- The grab samples will be collected using a decontaminated shovel or trowel and placed into a mixing container where they will be homogenized (mixed with a decontaminated spoon or trowel), placed into an appropriately labeled sample container, packaged, and shipped (using Chain of Custody procedures outlined in the Quality Assurance Project Plan) to the laboratory for analysis.
- Composite soil samples will undergo TCLP and Synthetic Precipitation Leaching Procedure analyses for lead and arsenic. The analyses will follow the procedures presented in the Quality Assurance Project Plan (GHD, 2024).
- Laboratory results will be obtained within 7 days of sampling each soil stockpile.

#### 2.2.3 Soil Management, Treatment and Storage

Depending on the results of TCLP analysis for a stockpile within the Soil Accumulation Area, the entire stockpile will be removed to the Soil Treatment Area or the FMMI Construction and Demolition (C&D) landfill. The location of the C&D landfill is shown on Figure 2 of the RAWP.

If TCLP results for a given stockpile are below regulatory levels (both lead and arsenic have TCLP regulatory thresholds of 5 milligrams per liter, the entire weekly stockpile will be moved to the C&D landfill. FMMI understands that management of excavated soil within the TSSA is on a temporary basis, and soil may only be managed at this location for a maximum of 1 year from the time the soil was first placed in the TSSA until the soils can be placed into the C&D landfill.

If TCLP results for a given stockpile exceed regulatory levels, the entire stockpile will be moved within 5 days of receiving the laboratory analytical results to the soil treatment pad at the Soil Treatment Area where the soils will be stabilized.

#### Soil Stabilization Process

The Soil Treatment Area will include a working pad surrounded by a berm to prevent stormwater run on/run off. The working pad will be constructed by compacting the sub grade soil, which will be overlain with a 30 mil High-Density Polyethylene liner extending to the top of the surrounding storm water diversion berms. The High-Density Polyethylene liner will then be overlain with 18 inches of compacted soil. Stabilization will occur in batches (soil stockpiles will be stabilized and subsequently sampled and analyzed individually). Soil will be stabilized with quicklime and sodium sulfide, or other suitable reagents, to chemically bind the metals and reduce the potential for leaching of metals. The reagents will be applied directly to the soil stockpiles by spreading the material evenly over the surface area of the stockpile and mixing with the bucket of an excavator. The excavator will knead the reagent into the soil stockpile working from the toe of the soil stockpile to the top until the reagent is mixed equally throughout the pile.

The reagent and soil will be thoroughly mixed within a backhoe bucket, pug mill, disc, or other suitable means.

After stabilization, each stockpile will be re sampled for TCLP analysis according to Section 2.2.2. Stabilized soil that continues to exceed the regulatory criteria will be re-stabilized and retested until the material does not exceed the criteria. Stabilized soils that do not exceed the regulatory criteria will either be moved to the C&D landfill. Some soils may require several rounds of stabilization; however, it is anticipated based on prior experience with other townsite remedial work that all soils can be treated to levels below regulatory criteria and be eligible for placement in the C&D Landfill.

#### 2.2.4 Equipment Decontamination

An equipment decontamination pad will be constructed and all visible soil and other materials will be removed from vehicles and equipment prior to exiting the TSSA onto public roads. Decontamination shall first involve a brush down of equipment in a designated decontamination area to remove visible accumulations of soil from machinery, tires, and shovels, etc. Use of water shall be avoided whenever possible and shall only be used if visible amounts of soil are evident after dry brushing. In these cases, equipment shall be washed on the equipment decontamination pad to minimize the migration of mud and water to the streets. Material removed during equipment decontamination shall be contained and placed on the stockpile of soil being generated at that time within the Soil Accumulation Area. In addition, the bed of haul trucks used to transport excavated materials from the cleanup properties shall be decontaminated prior to use of the same haul truck for transport of backfill materials.

#### 2.2.5 TSSA Decommissioning and Restoration

The TSSA will be decommissioned once the remediation activities within the Study Area are completed and all excavated soils have been sampled and moved from the TSSA per FMMI mine operational protocols.

#### 2.2.6 Material Tracking

The tracking of material testing for TCLP analysis and stabilization will be performed by assigning unique numbers and dates to material stockpiles.

# 2.3 Storm Water Management

Stormwater will be managed per the FMMI mine operations protocol.

# 2.4 Air Monitoring and Dust Control

Air monitoring and dust control practices shall be followed at the TSSA during periods of material handling and placement. The Fugitive Dust Control Plan included in Appendix A of the RAWP presents the detailed procedures for dust control and monitoring.

# 2.5 Reporting

Reports documenting the soil moving activities will be prepared and submitted to the Arizona Department of Environmental Quality on a monthly basis. Reports will include at a minimum:

- Records of material tracking for the TSSA.
- Records of TCLP results.
- Inspection records.

# 3. References

GHD, 2024, Quality Assurance Project Plan, Pinal Valley Soil Program, Claypool, Arizona. Voluntary Remediation Program (VRP) Site Code: 514199-00. February 2024.



Imagery Source: Esri, Maxar, Earthstar Geographics, CNES/Airbus DS, and the GIS User Community

# Legend

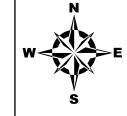
- Temporary Soil Staging Area (TSSA)
- C&D Landfill
- ----- Local Road
- Study Area
- City Limits



Figure B1

TSSA, BSA and Soil Repository Locations

GLOBE, ARIZONA





ghd.com

# → The Power of Commitment