

|   |            |                          |
|---|------------|--------------------------|
| <b>FCX Department of Occupational Health and Safety</b> | SOP #      | FCX-13                   |
|   | Revision # |                          |
|   | Supersedes |                          |
| <b>Blue Stake Policy</b>                                | Task Risk  | <b>X</b> High            |
|   |            | Medium                   |
|   |            | Low                      |
|   |            | NA                       |
| Approval Date: 12/10/2013                               |            | Original Date: 9/17/2005 |

## Contents

|            |   |          |
|------------|---|----------|
| <b>1.0</b> | <b>Policy</b> .....   | <b>2</b> |
| <b>2.0</b> | <b>Procedures</b> .....                                       | <b>2</b> |
| 2.1        | General.....  | 2        |
| 2.2        | Blue Stake Permit.....  | 3        |
| 2.3        | Procedure for Floor, Roof, Ceiling and Wall Penetrations..... | 5        |
| <b>3.0</b> | <b>References</b> .....                                       | <b>6</b> |
| <b>4.0</b> | <b>Records</b> .....  | <b>6</b> |
| <b>5.0</b> | <b>Revision History</b> .....                                 | <b>7</b> |
|            | <b>Appendix A – Forms and Permits</b> .....                   | <b>8</b> |

## 1.0 Policy

|                |   |
|----------------|---|
| <b>Purpose</b> | Due to the high level of risk during excavations and penetrations of building surfaces, this policy has been developed to minimize risk for injuries, harm to the environment and production losses during such work. |
| <b>Scope</b>   | All Freeport-McMoRan employees and contractors shall follow this policy.  |

## 2.0 Procedures

### 2.1 General

**Blue Staking is the act of identifying and marking utilities such as electric, gas, water, telephone, fiber optic, etc., so that they do not pose a risk of injury to workers or a risk of being damaged during penetration, excavation, trenching, or digging activities in buildings, surface excavations and underground workings.**

|  |  |
|--|--|
| <b>Blue Stake Representative</b>       | A Blue Stake Representative is an engineer, technician, or other qualified individual that has the ability to review drawings or prints and mark out utilities and pipelines accordingly.            |
| <b>Underground Utility Work</b>        | When installing, rerouting or repairing an underground utility the work must comply with local and regional buried utility/new installation requirements.  |
| <b>Hand Digging/Pot Holing</b>         | Hand-digging/pot-holing will be done when working within 24 inches (24”) of known utilities.   |
| <b>Broken/Ruptured Utility Occurs</b>  | If a utility is ruptured or broken during an excavation, the requestor or party performing the excavation must notify a Blue Stake Representative and project manager immediately.                   |
| <b>Unidentified Utility Discovered</b> | If an unidentified utility is discovered, the requestor or party performing the excavation must immediately notify a Blue Stake Representative(s) and the Project Manager and stop work immediately. |
| <b>Excavations Requirement</b>         | All excavations must comply with the federal, state, local or country excavation and trenching requirements.   |
| <b>Environmental/Safety Issues</b>     | If at any time during the process of digging a safety and/or environmental concern arises, the work must stop.<br><br>The individual(s) recognizing the concern will immediately contact their       |

supervisor. The concern must be addressed prior to continuing with the excavation.

**Exemptions – Do not Require Blue Stake Permit**

**The following do not require a Blue Stake Permit:**

- A. Emergency Procedure - In the event that an excavation must commence due to a safety, environmental or facility operation emergency, the area supervisor shall visit the site and determine if the problem is an immediate hazard. If determined to be an emergency, a Blue Stake Representative(s) or a manager must be notified. These persons may authorize the area supervisor to proceed with the emergency excavation. If there is any doubt, the job must be stopped immediately.
- B. Native ground, top surface of active leach and waste stock piles, active mining areas where utilities have never been present.
- C. Residential and commercial lessees of Freeport-McMoRan owned town sites will not be issued a Freeport-McMoRan Blue Stake Permit. These individuals must contact the appropriate entities per the lease agreement and in accordance with local laws.

## 2.2 Blue Stake Permit

**The Blue Stake Representative(s) will determine the necessity for a permit.**

|                              |   |
|------------------------------|---|
| <b>Purpose</b>               | Completing a permit signifies that, to the best of the Blue Stake Representative’s knowledge, inspection and information available, all known utilities have been identified and marked in the designated area.   |
| <b>Initiating/Completing</b> | The permit requestor is responsible for initiating and properly completing the permit.  |
| <b>Issuing</b>               | Only a Blue Stake Representative(s) can issue a Blue Stake Permit.<br><br>A permit may not be required upon consensus of the Blue Stake Representative(s), the requestor, the area General Supervisor/Superintendent, and/or the person(s) performing the excavating (i.e., hand digging to expose a valve or pipeline for repair, etc.). |
| <b>Review Requirements</b>   | A Blue Stake Representative(s) must review the Blue Stake Permit on site  |

---

with the permit requestor and/or individual performing the work.

The supervisor and Blue Stake Representative(s) will determine the need for additional site visits if conditions change or if the operator performing the excavation changes.

---

|   |   |
|---|---|
| <b>Permits Needed</b>                             | Each excavation area in a project scope must have an individual permit for that location.   |
| <b>Numbering</b>                                  | Each Blue Stake Permit shall be uniquely numbered.  |
| <b>Expiration</b>                                 | Once approved, the Blue Stake Permit will be valid for 30 days from the date of issue.  |
|   | If a Blue Stake Permit expires before the renewal is granted, the work must stop until a new blue stake permit is issued or renewed.  |
| <b>Extensions</b>                                 | If the duration of the excavation requires more than 30 days, it is the responsibility of the requestor to contact the Blue Stake Representative(s) for an additional 30-day extension.         |
|   | The Blue Stake Representative(s) may require the area to be resurveyed if an extension of the permit is requested.  |
|   | NOTE: This does not apply to Long-term Agreements. (i.e. road grading).   |
| <b>Long-term Permits</b>                          | Long-term Blue Stake Permits may be issued for one year. Excavations in these areas are unlimited based on the restrictions of the permit, but must be performed by the designated operator(s). |
|   | The operator(s) must be listed on the Long-term Permit at the time of initial request or renewal and a copy of the permit must be with the operator while the work is being performed           |
| <b>Changes/Deviations</b>                         | If the conditions or the scope of the excavation expands a new permit must be requested   |
|   | Any deviations, additions or changes to the Blue Stake Permit must be approved by the Blue Stake Representative(s).   |
| <b>Location of Permit While Work is Performed</b> | The approved Blue Stake Permit must stay on site while the work is being performed.   |
| <b>Location of Permit when Work is</b>            | Once the work is completed, the permit must be returned to the Blue Stake Representative(s).  |

---

---

**Completed**

---

**File Retention**                      The Blue Stake Permit, with any attached drawing/documents, will stay be filed according to the **FCX – Records Retention Policy**.

---

## 2.3 Procedure for Floor, Roof, Ceiling and Wall Penetrations

**This policy is the minimum standard and does not preclude a person from utilizing the full process at any time anyone is not comfortable in proceeding without a full investigation.**

---

**Less than one-inch Penetration**                      If the penetration is one inch (1”) or less, a Blue Stake Permit is not required.

---

**Greater than one-inch Penetration**                      Contact the site environmental representatives prior to penetration greater than one inch (1”) in any surface.

---

**Asbestos**    Contact the site environmental and/or industrial hygiene representative if materials are uncovered that are suspected to contain asbestos.

---

**Hazard Review**    Perform a review of all known utilities, gas, water, air, sewer, or communications lines.

Examine both sides of wall surfaces and ceilings, when possible, to see if there are any utilities that have been installed in the wall joints or studs without making wall penetrations.

---

**Renovations/Demolitions**                      Renovation or demolition projects require coordination with site environmental at least 30 days in advance of the start of the project so that proper testing of materials can be done.

---

**Sawing Into Floors**    Sawing into floors requires a permit at all times.

---

**Drawing/Print Requirements**                      Drawings or prints applicable to the work areas will be obtained when doubt exists concerning the location of utilities within structures. The use of drawings or prints does not take the place of a reasonable and personal assessment by all employees.

---

**Marking Proposed Area**                      Persons requesting a digging permit will outline the area of proposed excavation with white paint prior to scheduling representative(s) to check the area.

---

**Paint Colors for Marking**                      When the Blue Stake Representative marks the area, colors other than

---

white shall be used and typically the color will be relative to the utilities.

The following color-coded marking of underground utilities and proposed excavations shall be utilized for ground marking paint, whiskers and flags.

- RED - Electrical Power
- YELLOW - Gas-Oil-Product, and Air Lines
- ORANGE - Communication Cable
- BLUE - Water Systems
- GREEN - Sanitary Sewer Systems, Drains, Slurry Pipelines
- PURPLE - All Solvent Extraction, Electro winning Lines & Process Water
- WHITE - Perimeter of Excavation/Boundary

|                                      |  |
|--------------------------------------|--|
| <b>Marking Underground Utilities</b> | All underground utilities, in use or abandoned, will be marked.  |
| <b>Marking Utilities/Content</b>     | The name of the identified utility or content, if known, will be written along the painted lines.  |
| <b>Marking Absence of Utilities</b>  | If it is determined there are no utilities in the proposed area of excavation, the word "OK" will be written in white paint inside the area. |

### 3.0 References

|                  |                                |
|------------------|--------------------------------|
| <b>Reference</b> | FCX – Records Retention Policy |
|------------------|--------------------------------|

### 4.0 Records

|   |   |
|---|---|
| <b>The following records must be retained according to the FCX Records Retention Policy</b> | <ul style="list-style-type: none"> <li>• Employee Training Records</li> <li>• Annual program review</li> <li>• Blue Stake Permits</li> <li>• Exemption Documents</li> </ul> |
|---|---|

## 5.0 Revision History

---

**2005**  
**Rev 0**

- Minor edits

---

**2008**  
**Rev 1**

- Minor edits

---

**2013**  
**Rev 2**

1. Formatting changes.
2. Removal of NAOM references

---

## **Appendix A – Forms and Permits**



## Freeport-McMoRan Blue Stake Permit

Date issued: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Requester: \_\_\_\_\_ Phone: \_\_\_\_\_

Division/Department: \_\_\_\_\_ Location: \_\_\_\_\_

Short Description of the Project:

---



---



---



---

Permit issued by (print name): \_\_\_\_\_ Signature \_\_\_\_\_

**THE REQUESTER IS RESPONSIBLE FOR ALL PROPERLY COMPLETED PERMITS NEEDED TO SAFELY COMPLETE JOB.**

|  |
|--|
| <b>Detailed Scope of Work (use added sheet if needed):</b> |
|  |
|  |
|  |
|  |
| <b>Cautions/Markings</b>                                   |
|  |
|  |
|  |
| <b>Site Visit Schedule</b>                                 |

|   | Check one | YES | NO |
|---|-----------|-----|----|
| Is this excavation for a new installation?  |           |     |    |
| Is this excavation to repair an existing buried line?   |           |     |    |
| Is a site investigation required?   |           |     |    |
| Do outside utilities need to be contacted?  |           |     |    |
| Are copies of applicable drawings and prints attached?  |           |     |    |
| Is a Confined Space Entry Permit Required? (If yes, attach signed copy) To be determined by Requestor |           |     |    |
| Is a Hot Work Permit Required? (If yes, attach signed copy) To be determined by Requestor             |           |     |    |
| Is a LOTOTO procedure required?   |           |     |    |

| Approval                                   | Name | Signature | Date |
|--|------|-----------|------|
| Project Supervisor                         |      |           |      |
| Responsible Area Supervisor                |      |           |      |
| Supervisor of equipment operator           |      |           |      |
| Equipment Operator(s)                      |      |           |      |
| Contractor Representative                  |      |           |      |
| Others:                                    |      |           |      |
| Freeport-McMoRan Blue Stake Representative |      |           |      |

## Underground Utility Requirements

These specifications apply to all repaired, rerouted and newly installed underground utilities. (Note: A Blue Stake Team member may waive the requirement for these standards. Explain below)

|  |
|--|
|  |
|  |
|  |
|  |
| UG Requirements shall be completed by the persons installing the line unless otherwise specified by Requestor: |
| Location:  |
| Type of Utility to be Installed:   |

Circle items that must be accomplished to complete this job:

1. Survey: Location by Surveyor for mapping and future location references.

2. Visual markers for Buried Utilities

- Buried or covered pipelines running along or under a roadway may require visible pipe location markers at the time of installation.
- Pipe location markers may consist of 4" HDPE, or commercial markers. Markers will be approximately 10' tall in large equipment traffic areas.
- Enter and exit points for buried lines under roadways shall be at least 6 ft. outside designated roadway to allow for required depth under roadway.

3. Tracer wire installation

- All new U.G. utilities must have a tracer wire buried with utility line during installation.
- Tracer wire must be an 18 gauge or greater insulated wire.
- If a tracer wire must be spliced, the splice must assure an uninterrupted circuit along the entire length of the tracer wire. The wire must be properly insulated from the ground by being wrapped or sealed to make it water tight.
- Tracer wire shall extend at least three feet beyond the exit point of line and be attached vertically, to the pipe location marker, or the utility line itself, if exposed, to assure future accessibility.

4. Underground Caution tapes (Caution tapes may be normal flagging tape unless otherwise specified)

- All gas lines will have yellow caution tape laid in three inches of sand, twelve inches above line.
- All communication/fiber optic lines will have an orange caution tape twelve inches above line.
- Buried acid lines will have yellow caution tape installed twelve inches above line.

5. Depth requirements: Specific burial depths according to the pipe diameter may be obtained from the Mine or Plant Engineering Department

- Three feet from top of pipe for normal vehicular traffic and six to eight foot from top of pipe for heavy equipment or haul truck traffic.
- Gas lines must have a minimum of 28" of fill from top of pipe to grade
- Communications cables shall be a minimum of 28" of fill from cable to grade.
- Gas lines and communication /fiber optic lines will be bedded within 12 inches of washed sand, or other approved fines material.

6. All UG electrical installations are to be encased in red dyed concrete and a red 6" foil backed caution tape will be installed above the installation according to the specific site instructions. For instruction on any buried electrical lines, contact an Electrical Engineer in the Plant Engineering Dept.

**\*PLEASE NOTE:**

Please be advised that these specifications do not alleviate compliance with any State, Federal or site specific regulations. If minimum requirements cannot be met, clear with a Blue Stake team member.

All excavations for underground utility installations/repairs must be left open until line has been inspected and located (which may include activation of line).  
 This form must be signed by a Surveyor from Plant Engineering, Mine Engineering, or a Blue Stake Team member before excavation is covered.

|                      |       |
|----------------------|-------|
| Specifications meet: | Date: |
|----------------------|-------|