

# CONTRACTOR HEALTH AND SAFETY MANUAL PART ONE

February 2017

Expires February 1, 2018

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February 2017 Revision 8

PROJECT NAME:
PROJECT NUMBER:
PROJECT MANAGER:
E-mail:
Phone:
EMERGENCY NUMBER:
SAFETY CONTACT:
GLOBAL SUPPLY CHAIN CONTACT:
ENVIRONMENTAL CONTACT:

A copy of the most recent Contractor Safety Manual Part One and Part Two (consisting of individual documents) must be available on site and available for reference and review during the course of the project.

# **Revision History**

Rev	Section	Description of Change	Effective
			Date

0		Initial Release	
1	11.10	Added HDPE Pipe Guidelines	May 2011
2	1.3.1	Added sentence re: contractor attending monthly safety meetings	
	1.6	Added bullet point re: reporting man hours	-
	1.8	Changed title, added sentence re: periodic inspections	
	5.16	Added sentence re: inspecting electric powered tools	January
	10.4	Added wording re: tampering with drug/alcohol testing samples	2012
	11.3	Added Revised Blasting Guides	
	11.6	Added Revised Confined Space Guidelines	1
3	11.10	Replaced HDPE Guidelines with current revision	luly
	10.2	Some rewording for meaning, no change in policy	2012
4	2.2.1	Changed 6th of the month to 5th of the month	
	5.19	Good tires (more than 20/32") changed to Good Tires (more than 2/32")	
		Removed bullet points: Fire extinguisher and First Aid kit	-
	5.4	Changed in Electrical Safety Policy: Added section 5.4.1	-
	10.2	Changes in policy. Added wording re: drug and alcohol policy	- Fobruoru
	Appendices	All reformatted to represent an actual appendix	2013
	Appendix C	Replaced entire appendix with current Contractor Drilling & Blasting Guidelines	
	Appendix D	Replaced with revied Fall Protection Guidelines	
	Appendix F	Replaced with revised Confined Space Guidelines	
	Appendix J	Added new: Bus Safety Policy	
4.1	Appendix D	Work in aerial lifts and mobile platforms bullet point 3: added the word not.	February
5	Appendices Changed	Individual PDFs of these policies/forms are Part 2 of the manual (online): Working at Heights, Confined Space, Surface Blasting, Hot Work, HDPE Pipe Safety, Bus Safety, Fatigue Management, Supervisor Incident Investigation Report, Team RCA)	2013
	1.1	References to 'both parties' now found throughout part one. Added CSM, FM Project Manager, GSC Contract Administrator, and Site Health and Safety definitions.	-
	1.2	Policy change/revision re: responsibilities	
	1.3	Added new first paragraph	
	Throughout Document	"Competent Person" has been changed to "Qualified Person". References to Fall Protection Guidelines have been changed to Working at Heights Policy.	-
	1.8	Policy change/revision re: permit and approval form requirements	
	4.5	Policy Change/revision re: equipment inspection and deficiencies	
	5.4	Policy change revision re: use of extension cord	lanuary
	5.5.1	Policy change/revision re: cylinder handling (10th bullet point)	2014
	5.6.1	Policy change revision re: electrically powered tools (3rd bullet point). Policy change/revision re: quick disconnects (6th bullet).	
	5.7.1	Policy change/revision re: quick disconnects (6th bullet point)	
	5.10	Renamed Construction Safety. Policy change/revision re: Rebar (3rd bullet point). Policy Change/revision re: fall arrest systems (4th bullet point).	
	5.11.1	Renamed Barricading	
	5.15.7	Policy Change/revision re: Other PPE reviewed by site project manager	1
	5.19	Policy change/revision re: ROPS certification sticker	1
	Appendix C	This Appendix is now the Scaffolding Checklist	1
	Changed Appendix D	This appendix is now an explanation and list of what Part Two of the CSM consists of.	1
6	1.2 & 1.21	Deleted 1.21 as it stated the exact same things as 1.2.	t .
		-	January

	5.9	Changed 4' fall protection to 6' foot fall protection.	
	8	Added definition of Out of Service Locks/Tags	
	10.3.2	Deleted last sentence and add the following: Persons are not permitted to take U.S. Department of Justice Drug Enforcement Agency Controlled to this policy for non-sedating controlled substances or other extenuating circumstances will be reviewed on an individual basis.	
7	1.1	Alphabetized all definitions. Added definitions of immediately, for cause and competent person.	
	1.6	Last bullet change to 2nd of month	
	2.2.1	Added Project Manager to 1st paragraph	
	3.2.3	Added bullet "immediately report incident to supervisor". This is 2nd to last bullet.	
	4.4	Paragraph 3: changed 2nd word from opreators to operator	
	5.4	Change 2012 NFPA to 2015 NSPA	
	5.5.1	8th bullet, first sentence should read: Cylinder containing acetylene, propane, butane, oxygen or inert gases such as argon, nitrogen, etc. shall not be placed in confined areas or enclosed storage areas and shall be stored away from combustible/flammable materials.	
	5.6.1	Separated 3rd bullet.	
	Added 5.6.2	Portable grinders. 3rd bullet - remove the term whip cable.	
	Added 5.6.4	Powder actuated tools: add operating the tools & everything after the word "Wear" to the 3rd sentence of 1st bullet	
	Added 5.6.5	Condition of use: remove first 3 bullets	
	Added 5.6.6	Maintenance	
	5.7.1	Remove the word flammable from 1st bullet. Added semi-colons to separate all rather than commas. Removed plants or oeprations (last 3 words). Moved compressed gas cylinders bullet: "shall be stored only in properly ventilated areas" to 5.5.1. Also: added indent regarding materials on the welding bullet. Cables worn bullet: removed all verbiage after the word used (everything about repair). Remove 2nd to last bullet re: welding on fall protection.	
	5 9	Add applicable site to 1st sentence	January 2016
	5.5	2 2 d bullet - same us port should severe as sectoreds. Demous Eth bullet - ampleuses not being allowed to work vertically. Demous	
	5.10	last bullet: All rebar with protruding ends shall have the ends protected.	
	5.11.1	2nd bullet - remove portion of 1st sentence, replace with "shall be demarcated". remove "along with perimeter, floor and wall opening fall protection. Last sentence of this bullet: Remove vertical debris net	
	5.11.2	2nd to last bullet re: guardrails. Remove (890N) after 200 pounds.	
	5.11.5	last sentence change from 20 inches to 19	
	5.14.1	Add as "determinted by" to 1st bullet.	
	5.14.4	Bullet 4: Change 3 feet to 2	
	5.15.1	Add (electrical) & (general) to 1st bullet. Add another bullet re: nothing worn between head & helmet.	
	5.15.2	2nd bullet: change 1968 to 2015	
	5.15.3	Add bullet regarding long hair must be tied back	
	5.15.5	Change steel toed to safety, remove standard and add as appropriate for work location	
	5.16.1	1st bullet: add dispensed after stored. Make no smoking or open flames its own bullet - remove part about smoking within 100 feet where flammable materials are dispensed	
	5.16.2	Remove 1st bullet fom diking section	
	5.17	Crane safety. Remove from 1st bullet: and cable (wire rope) rigged hoisting equipment. Add final 2 bullets.	
	5.17.3	Add one more bullet.	
	Entire	Reformatted	February
8	Appendix D	Removed available on FCX.com and replaced with "and also available from the FM Project Manager"	2016

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# Vision

The Freeport-McMoRan (FCX) Contractor Safety Manual describes project requirements designed to:

- Protect the lives and health of employees of FCX and contractors working on all FCX locations, as well as the general public
- Prevent damage to property, materials, equipment and supplies
- Protect the workplace environment
- Comply with all applicable laws and regulations

# Mission

To maintain an injury-free and productive workplace by actively promoting safety and health measures with contractors and suppliers. Freeport-McMoRan seeks to establish relationships with its contractors and suppliers based on mutual trust, cooperation and communication, as we strive to achieve our corporate vision of zero incidents, injuries, fatalities and occupational illnesses.

# **Mission Goals**

- Encourage safe production with a focus on fatality prevention while striving for zero incidents, injuries, occupational illnesses
- Align safety standards of contractors and suppliers with Freeport-McMoRan expectations and philosophies
- Promote and establish a drug-free work environment
- Mitigate the impact of litigation caused by injuries involving contractors' and suppliers' employees
- Emphasize the value of:
  - Proactive management of risk o Safety pre-project/pre-task planning o Safety orientation and training o Incident investigation and analysis
  - o Constant communication of safety expectations and employee monitoring
- Meet or exceed compliance with regulatory requirements for safety and health
- Compliance with all Freeport-McMoRan site-specific safety and health requirements

These goals will be achieved through the common effort of Freeport-McMoRan and its contracting partners. All individuals working on Freeport-McMoRan projects must ensure that activities which fall within their range of expertise and responsibility comply with the safety and health requirements of this manual.

It is the firm belief of Freeport-McMoRan that all incidents are preventable through commitment, participation and cooperation of all parties involved by:

- Emphasizing prevention by taking proactive steps that reduce the likelihood of an incident
- Ensuring full application of and conformance with local, state and country laws and regulations
- o Ensuring compliance with the components of this manual, in addition to any sitespecific H&S requirements

- Issuing clear and concise instructions and holding individuals accountable for their safety responsibilities, including all activities within their work area
- Providing all adequate and necessary H&S resources and leadership required to achieve these goals

This project safety manual is considered one of the contract documents. All contractors shall, and are required to, ensure that their employees, subcontractors, suppliers, vendors and visitors comply with the provisions of this manual pertaining to the work to be completed. The contractor also must become familiar with the Freeport-McMoRan site-specific H&S policies which may exist where work is to be conducted (i.e. LOTOTO, confined space entry, working at heights, excavation). Where differences in detail or requirements exist between this manual and a site-specific requirement, the more stringent policy will prevail. Non-compliance with safety requirements as identified herein may result in work stoppage or removal of the employee(s) and/or contractor from the work site. Any willful or repeated non-compliance will result in contractor dismissal.

National, regional, local regulations, international country regulations and other safety codes and site standards are part of the contract. The ultimate responsibility for providing a safe place to work rests with each individual contractor and its employees. Regulatory compliance is the responsibility of each contractor. This manual is not to be construed as superseding federal, regional or local regulations. Nor is this document a definitive or comprehensive listing or description of the applicable rules and regulations.

# Statement of Policy

The goal of Freeport-McMoRan, and thereby the goal of all contractors, employees and visitors on the site, is to manage risks to prevent fatalities and other work-related injuries and to provide a safe and healthy work environment. It is expected that all personnel will be committed to that end. All contract personnel are responsible to work safely and immediately resolve any unsafe conditions or observed at-risk behaviors.

**NOTE:** There will be 100% reporting of all work-related injuries and occupational illnesses, (including serious "nearmisses"), property damage, fires, etc. to Freeport-McMoRan site management. Failure to report injuries, illnesses, or serious near-misses will be construed as a violation of contract obligations. Reporting of those events is to be immediate.



Freeport-McMoRan Inc. Safety and Health Policy

The safety and health of all Freeport-McMoRan Inc. ("FCX") employees is of the highest priority and a core value of the company. Our objective is zero workplace injuries and occupational illnesses. Production and costs are critical to the wellbeing of the company, but these considerations must never take precedence over safety, employee health or protection of the environment.

We believe that all injuries and occupational illnesses are preventable. We further believe that safety and health considerations are integral to, and compatible with, all other management functions in the organization and that proper safety and health management will enhance rather than adversely affect production or costs.

A fundamental tenet of our policy is that there will be compliance with applicable internal and external safety and health standards. Safety and health is a line management responsibility and all safety and health policies and practices must be adhered to and actively supported by all levels of management. Each employee must take individual responsibility for his/her safety and that of their co-workers. It is the job of each employee to create a work environment that eliminates occupational health and safety hazards whenever possible. If a hazard cannot be eliminated, then employees must work together to ensure that it is effectively reduced or controlled. Assigning responsibility and determining accountability measures for safety and health performance are established at all levels of management. The Board of Directors will monitor and receive regular reports on outcomes and results.

We will measure progress to attaining our objectives against regularly established benchmarks. We will provide the training and resources necessary to achieve our safety and health benchmarks, and everyone will be held accountable for the results.

We will ensure that employees and contractors are properly trained and held accountable for following all prescribed safety procedures and practices. Safety and health issues will not be compromised. Each employee and contractor is responsible for their personal safety, the safety of others and the environment in which they work. No job will be considered so important, and no schedule so urgent, that time cannot be taken to perform work in a safe manner. Working safety is a condition of employment.

As a matter of philosophy and practice, we will hold all contractors operating at our facilities accountable for the same level of safety that we expect of ourselves. All contracts will include specific safety provisions designed to achieve this result. Regular audits of our contractor's safety compliance will be performed to ensure adherence with our policies and core values.

We will conduct comprehensive safety audits and industrial health audits on a regular basis at our operations to evaluate the status of compliance with our safety and health programs and will communicate that information to all levels of management.

The safety professionals working in our operating units are charged with assisting those units in achieving their safety and health objectives. They will assist management in developing and implementing effective safety programs, and will design the methods to effectively measure safety performance. They will also analyze compliance results and trends in order to make recommendations to improve performance.

We are committed to providing a safe and healthy workplace and to providing adequate resources through training programs, safety incentive programs, and occupational health programs to attain recognized leadership in matters of safety and health. We consider safety and health programs, both on and off the job, to be an investment in our most valuable resource - our employees.

As amended by the Board of Directors through February 3, 2015

# 1.0 Administration and Responsibilities

#### 1.1 Definitions

**Competent Person** – One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Contractor - Project Manager, General or Prime Contractor, Subcontractor or supplier working on the site.

**NOTE:** Visitors, consultants, delivery personnel (such as UPS or Federal Express; beverage vendors; paper products vendors; infrequent reagent handlers [for this purpose, infrequent is defined as fewer than six days per year]), individuals working in offices, etc. are exempt from requirements of the following sections: 1.3; 1.4; 1.6; 2.2.1; 3.2.2.; 4.1; 4.2; 4.3; 6.4; 9.1; and 9.2 except where determined otherwise by the Project Manager or <u>unless</u> they are or would be exposed to chemical and/or physical industrial hazards in the course of the work they are performing.

The company does reserve the right to conduct for-cause or reasonable suspicion drug and alcohol testing of any persons on company property. Any person refusing to submit to testing, or comply with the request to be tested shall be denied access to the property.

**CSM** – Contractor Safety Manual and its additional documents.

**FM Project Manager** - The Freeport-McMoRan employee who has either requested the work of a contractor/subcontractors and has over-sight responsibilities for that work, or who has responsibility for managing the project on behalf of the company.

**For Cause** – includes, but is not limited to direct observation of drug or alcohol use; an employee exhibiting physical signs or symptoms of being under the influence; actions, appearance, and/or conduct consistent with impairment or erratic behavior.

**GSC Contract Administrator** - The Freeport-McMoRan Global Supply Chain employee who manages the contract with the contractor/subcontractor on behalf of the company.

**Immediately** – as soon as possible without compromising safety and security. Incidents shall be reported within 30 minutes of having knowledge that one has occurred.

**Imminent Danger** - A condition or action that presents an immediate life-threatening or severe injury situation.

Owner - The entity having possession and control of the site and overall operations.

**Qualified Person** - A person designated by the Contractor who, through education, training and experience is capable of identifying existing and predictable hazards in surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authority to take prompt, corrective measures to eliminate them; one having abilities and experience that fully qualifies him/her to perform the duty to which he/she is assigned.

**Safety Sensitive** - For a definition and description of this term, refer to your written contract and obtain further clarification and description from your Global Supply Chain contract manager.

**Site Health and Safety-** The Health and Safety Department and personnel assigned to the site where the contracting/subcontracting work is being done.

#### 1.2 H&S Responsibilities

Contractors are responsible for establishing, implementing and maintaining their safety programs to meet the goals and objectives as stated by Freeport-McMoRan and for monitoring the programs of their Subcontractors and suppliers to ensure compliance with Freeport-McMoRan expectations.

#### 1.2.2 FM Project Manager

Responsible for oversight of Health and Safety performance of the contractors/subcontractors and the provisions of this Manual. Communicates project-relevant safety information to the contractors/subcontractors in a timely manner, such as updates to this Manual, revisions/changes to policies and procedures covered by this Manual and safety advisories such as Potential Fatal Event (PFE) communications. Monitors contractor/subcontractor health and safety performance. Takes corrective actions as warranted.

#### 1.2.3 GSC Contract Administrator

Manages conformance with and adherence to the contract. Enforces contract provisions on behalf of the Company. Communicates with the contractor/subcontractors relating to contract issues, such as change orders, work quality, timeliness, etc.

### 1.2.4 Site Health and Safety

Periodically audits contractor/subcontractor performance and adherence to the provisions of this Manual. Organizes and presents monthly safety meetings to discuss project-relevant safety issues and topics. Provides technical support to the FM Project Manager as requested or needed.

#### 1.3 General Responsibilities

It is the contractor's responsibility to be familiar with the provisions of this Contractor Safety Manual and its additional documents (CSM) and to follow the requirements of them. When and where a revision of the CSM occurs, the contractor shall implement any changes which result from the revision within 48 hours of the time they are notified of that revision. Implementation includes actions such as, but not limited to, training of personnel, acquisition of equipment, revision of Standard operating Procedures, and any other actions which provide the means to achieve the requirements of a policy or guideline.

Prior to beginning work at the site, the Contractor shall prepare and submit for review a site/task/project-specific safety plan that reflects the Contractor's intentions for full and complete compliance with the applicable provisions of this manual pertaining to the scope of contracted work. (**Note:** Only those portions of this manual which apply directly to the work being done by a Contractor is required to be included in the sitespecific safety plan and which identifies safety risks and corresponding controls or management of those risks. The Contractor's Safety Plan also must address any Freeport-McMoRan facility site-specific H&S provisions that exceed the requirements detailed in this manual. In addition, any Freeport-McMoRan site-specific H&S provisions applicable to the work being done that are not identified in this manual also will be included in the contractor's safety plan.

Contractors shall attend a project safety conference with the Freeport-McMoRan Contract Project Manager, during which, the Contractor's Site-Specific Safety Plan will be reviewed to ensure it meets all H&S expectations of Freeport-McMoRan, and is specific to the job or task being done. FCX will communicate to the contractor any sitespecific details not addressed by the plan which must be addressed. Modifications to the safety plan will be finalized at this meeting. Subsequent amendments or changes to the plan must be submitted for review and approval before being implemented.

Each contractor shall provide, as a minimum, one full-time, qualified safety professional whenever the contractor's workforce meets or exceeds 50 employees. Additional fulltime, competent safety professionals will be assigned to the project for each additional 250 employees. All Contractor H&S professionals, through education, training and experience, must be capable of:

• Identifying existing or potential risks, including unsafe acts, of the tasks being performed

- Identifying and implementing controls to mitigate the risks of tasks
- Identifying working conditions that are unsafe, hazardous or dangerous to the safety and health of employees and the environment
- Identifying any non-conformance with H&S rules and policies, including at-risk behavior
- Authorizing prompt action to maintain a healthy and safe work environment

The names and credentials of all contractor H&S professionals that will be assigned to the project shall be provided to the Freeport-McMoRan Project Manager and site H&S manager for review prior to initiating work on the contract.

# 1.3.1 Specific Requirements

Within 10 days after receipt of notification of the contract award, but prior to the start of work, the contractor must submit to the Freeport-McMoRan representative a letter signed by an officer of the company setting forth a statement of the company's health and safety policy.

### All Contractors are also required to:

- All contractors shall review their contract with the Global Supply Chain contract manager to determine "safetysensitive designation" as it relates their work force, the tasks they perform, and the work areas where that criteria applies.
- Comply with national, regional, and local H&S laws and regulations, the FreeportMcMoRan Contractor Safety Manual, and with any requirement imposed by the local Freeport-McMoRan operation where work is being conducted.
- Provide all contract personnel personal protective safety equipment for the work for which they are responsible, including safety glasses, hard hats, protective footing, fall protection, respiratory protection and other safety equipment as required.
- Maintain the highest standards of housekeeping. Workplaces must be kept organized with all debris, waste materials, etc., cleared as work progresses. All wastes shall be properly disposed of according to the site-specific policies.
- Play a full part in managing risk and implementing controls in the workplace since risk assessment is a key element in the Freeport-McMoRan H&S management system. Additional direction will be supplied by Freeport-McMoRan on-site personnel, including Hazard Identification and Risk Assessment (HIRA) tools.
- Verify that all contract employees have received project safety orientation as well as other training that is
  required specific to the job function being performed (i.e., lockout/tagout/tryout, confined space entry, working
  at heights, digging and excavation, etc.). The contractor will also check for understanding as part of the training
  process.
- Provide a disciplinary action policy, including exclusion from the site if necessary, for individuals who violate H&S procedures or drug and alcohol policies, or otherwise work in a careless or unsafe manner.
- Provide the first response for emergencies (first aid, emergency, fire, etc.) while activating FCX site response for supplementary action, treatment and support. Keep all registers, records and reports up-to-date and properly completed, stored in a safe place onsite, and maintained for review by legal or regulatory agencies.
- Stop all work in an area should an imminent danger condition be discovered, until appropriate and effective corrections are implemented. The Contractor is responsible for ensuring that immediate action is taken to eliminate all unsafe acts and/or conditions. If the Contractor delays or refuses corrective action, Freeport-McMoRan may elect to do the following: o Immediately cease operations o Stop payment for the work being performed

o Correct the situation and back-charge the Contractor for expenses incurred

Any Contractor's manager, supervisor, owner or other person in charge that requires, condones, asks or allows employees to work in or around unsafe acts or conditions shall be immediately removed from the project site.

A management or supervisor level representative for each Contractor shall attend periodic (as defined by the site) site safety meetings to which they have been notified.

#### 1.3.2 Employees

No employee shall be required or knowingly be allowed to work in an unsafe environment. Each employee is responsible for learning and abiding by those rules and regulations which are applicable to his or her work, and for reporting and correcting observed or anticipated hazards to his or her immediate supervisor. The contractor is responsible to provide to each employee initial training on the project safety rules, risks of the tasks and controls to mitigate the risks prior to starting work. As necessary and required, refresher training will also be given.

#### 1.4 Insurance Carrier

Based on the nature of work and details of the contract, the on-site Freeport-McMoRan contracts administer may require each contractor and subcontractor to provide verification of insurance and experience modification details. Contractors are required to provide proof of insurance during the bidding phase of contract negotiations and maintain such coverage throughout the duration of the contract terms.

#### **1.5 General Training Requirements**

Each Contractor is required to provide regular and continuing H&S training for all employees, and to monitor subcontractor training programs. Training is to include a site safety orientation as well as task-specific training as required by regulatory agencies or identified within the Freeport-McMoRan Contractor Safety Manual Part One and it's Appendices Part Two. All training must be documented and a process implemented allowing a quick verification of training received by any individual. No individual will be allowed to work on a Freeport-McMoRan property who has not received required initial orientation safety training as required in this manual and by governing authorities. Verification of training received must remain with each contract employee whenever on site and in contractor files. Specialty or regulatory compliance training shall be conducted by a qualified person and shall be completed prior to the contractor's employee performing the task.

#### 1.6 Health and Safety Meetings and Communication

All safety meetings will be documented. Record retention will be in accordance with the contract. Regularly scheduled safety meetings will be held on the site for all personnel. At a minimum, these will include:

- **Tailgate Safety Meetings**: Each supervisor will hold a safety/task training meeting in his or her work area, at least weekly. Subject matter will include specific safety procedures pertinent to the crew's activities, with emphasis on risks of the tasks to be performed and controls to mitigate those risks, safe working procedures and potential hazards.
- Monthly Supervisor Safety Meetings: Each Contractor will hold a monthly meeting for all supervisors and managers to review safety statistics and safety incidents, address safety concerns, and develop action plans to achieve project H&S goals and objectives. Action items shall be documented and tracked to completion. Freeport-McMoRan project manager representatives should be invited to these monthly meetings.
- Safety Communications: Each Contractor shall be responsible for providing employees with pertinent information regarding health and safety as necessary with respect to: country-specific H&S regulatory information, company-specific safety information, awareness posters, communication of workplace incidents, etc. This can be accomplished through the use of strategically located employee communication bulletin boards.
- When a FCX Contractor safety meeting is held, the Contractor's management representative must attend.
- Man hours must be submitted by the 2<sup>nd</sup> of each month.

#### 1.7 Work Assignment

All work assignments, regardless of the level of activity, will include specific attention to safety. Employees must have immediate access to written safety procedures and/or guidelines pertinent to the work being conducted and Safety Data Sheets where chemicals or hazardous materials are being used. Where verbal safety instructions are provided in lieu of written guidance, employees must be able to repeat safety instructions to demonstrate and acknowledge understanding of critical safety guidelines.

#### **1.8 Permits and Inspections**

The Contractor is required to provide specific certifications and maintain required permits where periodic inspection is required for any mobile or temporary equipment or device. The Project Manager shall identify the certification and permits required for the project. Contractor permits/forms shall be reviewed by site health and safety. Examples of activities requiring permits include, but are not limited to: confined space entry, hot work, excavation, and rigging activities. Certification examples include, but are not limited to, crane operation, ATV operation, rigging, fork lift operation, and blasting.

In addition some temporary or portable units (such as boilers, crushers, etc.) may require a permit and approval from local governmental agencies before putting into use at the site. Check with FCX Health and Safety on these specific requirements.

#### 1.9 Orientation

Newly employed, promoted, and/or transferred Contract personnel who will be working on Freeport-McMoRan property shall be fully instructed in the safety practices required by their assignments. All employees will receive orientation prior to starting work. Visitors will receive orientation prior to leaving the office area and shall be escorted while on the site. Initial instructions for new site personnel will include discussion of the site's basic safety regulations. The initial safety orientation is to be performed under direction of Project Manager or the Contractor's qualified trainer as a part of the initial site orientation. Proof of such training must be documented.

At a minimum, the orientation should address, if applicable, the following:

• Site-specific hazards o Incident reporting procedures o Emergency evacuation procedures o Reporting of unsafe acts or conditions o How to obtain first aid or summon for emergency help o Hazard communication standard requirements o Blasting signals and response procedures o Personal protective equipment requirements o Identification of workplace hazards, risks and controls of those risks o Drug and alcohol policy o General safety rules and responsibilities/Codes of Safe Practice o Fire protection and exit procedures for the work area o Safety procedures unique to each job o Haul road procedures o Environmental procedures

- o Working around heavy equipment
- Applicable global significant risks (see Section 2)

#### 1.10 Reservation of Rights

Freeport-McMoRan reserves the right to add, interpret, change, revise or depart from any/all policies and procedures at any time, and to promulgate additional safety standards during the course of the project. Appropriate notice of change will be provided for immediate implementation and communication to contract employees

# 2.0 Emergency Action and Incident Reporting

#### 2.1 General Procedures

In the event of a serious injury, immediately activate the site emergency response system, maintain scene safety and trained contractor personnel should render first aid to any incident victims. Contractor personnel shall immediately

contact the Freeport-McMoRan Safety Department, and the Freeport-McMoRan project manager. Freeport-McMoRan senior management will address any media inquiries or announcements and make other decisions critical to the overall site.

Emergency telephone numbers shall be posted at all contractor lunchrooms and meeting locations as well as where there may be a hardline available.

If an incident requires immediate notification to government agencies, the area must be secured and nothing disturbed or removed after evacuation of the injured employee until approval from all Government Agencies, and Freeport-McMoRan representatives is received. The area can only be released by the owner.

# 2.2 Incident Reporting

- All employees shall promptly report any incident (including near-misses), no matter how slight, to their supervisor. All incidents shall also be reported to the Freeport-McMoRan Safety Department immediately.
- Incidents of a serious nature may require "immediate" notification to government agencies. It is the
  responsibility of each contractor to ensure its leaders identify what incidents require "immediate" notification
  and maintain a list of numbers of who must be notified, and the time limits required (15 minutes in some cases
  with MSHA). If time permits a brief call to Freeport-McMoRan representatives will be made prior to notifying
  agencies such as MSHA. In some cases the site may make the call to the agency. Check with local site H&S for
  site-specific requirements.
- A completed "Incident Reporting Form" must be provided to the Freeport-McMoRan site Safety Department within 24 hours of all injuries, regardless of severity. Contractor needs to coordinate record information and details of an incident using the site Incident Report form.
- Each incident will be reviewed immediately to determine if it had the potential to result in a fatality. A Potentially Fatal Event (PFE) could be a near miss or property damage with no actual injury. The determination is based on the potential severity not actual severity. After the occurrence of such an event, the contractor shall immediately contact the Freeport-McMoRan site safety department and project manager so they may assist in the investigation. In such instances the event will be investigated with the same rigor as if a fatality had actually occurred. Actions plans will be developed and implemented to prevent re-occurrence. Investigations shall be fully documented and maintained on site for review. FCX views these as opportunities to prevent an actual fatality so reporting is essential.
- Failure to promptly report a workplace injury, illness or significant event may result in cancellation of the contract.

# 2.2.1 Monthly Frequency Report

All contractors shall provide to the Freeport-McMoRan site Safety Department, Project Manager or his/her delegate a monthly safety summary for results occurring on the project, which must include the following: o Number of lost time/restricted duty injuries o Number of medical treatment injuries o Number of occupational illnesses o Number of first aid injuries

- Number of hours worked by contract personnel (Note: Hours and injuries reported are specific to the location where contract work is being completed).
- Fire incidents o Vehicle equipment damages o Property damages
- Monthly summary reports will be due no later than the 5th of the following month (Note: These reports are to be site-specific, not company-wide data)

# 3.0 Roles and Responsibilities

#### 3.1 General Duties

It is the policy of Freeport-McMoRan to provide a safe and healthful place of employment for all employees. Contractors have the obligation to:

- Abide by all federal, regional, local regulations and Freeport-McMoRan policies and procedures as they pertain to construction and other contract-related activities
- Protect the public from any and all hazards which result from contractor activities

#### **3.2 Specific Expectations**

To further these goals, the following assignments of responsibility are made:

#### 3.2.1 Senior Management/Project Management

- Establish rules and programs designed to promote safety and make known to all employees the established rules and programs
- Hold individuals accountable for fulfilling their H&S responsibilities
- · Make necessary training available for employees to perform their tasks safely
- Require all subcontractors, as a matter of contract, and all material suppliers, through purchase order terms. to follow their company safety rules, and those of Freeport-McMoRan
- Provide a safe and healthy work environment
- Conduct regular safety inspections of the job site, maintain records, and continually monitor the program for effectiveness

#### 3.2.2 Project Supervision

- Ensure all work is done in compliance with established safety regulations
- Be completely responsible for on-the-job safety and health and ensure that safety deficiencies are corrected
- Monitor employee actions and behaviors
- Review and investigate incidents, supervise correction of unsafe practices, and file incident reports
- · Conduct regular job-site safety meetings and provide employees with proper instruction on safety requirements
- Require conformance to safety standards from subcontractors
- · Instruct new employees and existing employees performing new tasks on safe working practices
- Make sure personal protective equipment is available and used properly
- Secure prompt medical attention for any injured employees
- Ensure regular and thorough communication with FCX project manager

#### 3.2.3 All Employees

- Report to work fit for duty, well-rested, free from effects of alcohol and harmful drugs
- Work safely to ensure your own safety as well as that of co-workers and others
- Request help when unsure about how to perform any task safely

- Correct unsafe acts or conditions within the scope of the immediate work
- Report any uncorrected unsafe acts or conditions to the appropriate supervisor
- Use and maintain all safety devices as required
- Follow all safety rules and keep work areas clean and free of debris and obstacles
- Utilize established safety controls to reduce risks of the tasks performed
- Immediately report incidents (injury, illness, property damage, environmental events, etc.) to supervisor
- If work cannot proceed safely, employees must notify their supervisor and stop work until the necessary steps have been taken to address and correct the hazards.

### 3.2.4 Subcontractors and Suppliers

- Abide by the safety rules, regulations and policies of all governing agencies and Freeport-McMoRan
- Check in with job-site supervision before entering the job-site
- Inform controlling contractor of all injuries to workers
- Report to controlling contractor any unsafe conditions that come to your attention
- Subcontractor/Supplier personnel (supervisors and hourly personnel) are responsible and accountable for their safety.

# 4.0 Assessments and Audits

Periodic documented H&S inspections of the project work areas are a key tool for quantifying H&S performance. These inspections are essential to identify deficiencies that need correcting, to identify and track trends, to evaluate the effectiveness of training and H&S procedures, and to ensure regulatory compliance.

Audits and inspections also should identify positive elements in H&S performance to help ensure a proactive element in building and maintaining a positive safety culture. Project workers should be given opportunities to become involved with these audits and inspections. The type of audit inspections required is listed below.

#### 4.1 Daily Supervisory Audit

Each contractor supervisor (or his designee) shall conduct daily inspections of each work area to identify and control unsafe conditions and practices. Inspections shall be documented. Records shall be maintained for a minimum of one year unless a longer duration is required by regulatory authorities or site policies. Items of non-compliance will be listed on an audit registry and corrective action identified and tracked to completion.

Defects identified during the inspections shall be corrected prior to commencing work.

#### 4.2 Weekly Self-Assessment Audit

Weekly self-assessment audits of all work areas will be conducted by the contractor to evaluate H&S performance. The contractor shall define an audit schedule and the areas to be inspected, and shall distribute the schedule to all inspectors.

Self-assessment audits will be conducted jointly with the affected line supervisor so any deficiencies may be corrected and good performance recognized promptly. Items of non-compliance will be listed on an audit registry and corrective actions will be tracked to completion. The contractor will summarize audit findings and provide to the project manager on a weekly basis. Audit findings also will be made available to Freeport-McMoRan H&S personnel to review on a periodic basis.

#### 4.3 Monthly Project Audit

The project manager and contractor site manager shall jointly organize and perform a monthly documented site-wide H&S assessment. Area supervisors and safety professionals (contractor and FCX) should accompany them in their respective areas. Audit results will be documented, and corrective actions will be identified and tracked to completion.

### 4.4 Equipment and Facilities

All contractors shall operate, inspect and maintain equipment and facilities as directed by the criteria identified within this manual, and as dictated by the applicable federal, state and country safety and health regulations, and as recommended by equipment manufacturers. In the event of conflict, the more stringent requirement will take precedence.

Any equipment brought onto site which requires inspections (daily, monthly, annual, etc.) shall be accompanied by that documentation and it shall be made available for review on request. Equipment added or changed after the project has commenced shall be identified by the contractor and is subject to the same requirements.

Each operator of stationary and mobile equipment must complete a written preoperation inspection of the equipment prior to operation. The inspection form must have room for operator comments, so that deficiencies can be reported. Items presenting an immediate safety hazard must be corrected before the piece of equipment is returned to service. The system must ensure both the prompt correction of any noted problem and proper documentation. Inspections must be maintained for a period of one year and all corrective actions must be noted on the inspection card(s).

#### 4.5 External Audits

Freeport-McMoRan Health and Safety Professionals and/or Contract Administrators will perform periodic, comprehensive safety audits of the contractor's work areas. Any deficiencies will be documented. The contractor will be required to respond in writing within 72 hours on the corrective actions taken, and follow-up audits will be conducted as necessary.

FCX reserves the right to inspect equipment prior to acceptance onto FCX property and anytime during use of the equipment on property. Equipment found to have deficiencies will be tagged out or removed from property until such deficiencies are corrected.

# 5.0 Safe Practices

Freeport-McMoRan is committed to zero fatalities and strives for zero incidents, injuries, and occupational illnesses. Any number other than zero is simply not acceptable. This means integrating safety into all aspects of our work and taking this level of commitment beyond the workplace and into everything that we do at home and in our communities where we live.

### 5.1 Purpose

The purpose of these Safe Practices is to provide all employees with an awareness of workplace safety and how to ensure their safety and that of their co-workers. Each employee must understand those safety practices that are applicable to the tasks they are assigned, and abide by them. Lack of understanding or familiarity with safety rules is not an acceptable reason for a safety rule violation. Employees violating safety rules may be subject to disciplinary action up to and including permanent removal from all Freeport-McMoRan properties in accordance with the provisions of a management review. Contractor management is responsible for the enforcement of all rules.

# 5.2 Code of Conduct

All contract employees are responsible and accountable for working safely and productively, while remaining aware of the hazards of their jobs and following recognized safe job procedures. Specifically, employees will:

- Comply with all health and safety rules, departmental standard operating procedures, and regulations as outlined in this Code
- Report to work physically fit and mentally alert for duty
- Report any dangerous or potentially dangerous condition to supervision
- Stop any unsafe job or task immediately upon observing it and find a way to make it safe before continuing
- Not engage in horseplay
- Not use cell phones while operating mobile equipment or vehicles
- Not tamper with any emergency medical supplies or emergency vehicles
- Not interfere with any radio communications
- Not interfere or disable remote control, automatic equipment, safety interlocks or warning systems or guards that could contribute to a safety event
- Not tamper with the scene of a safety event
- Not engage in distracting activities while operating a company vehicle or a piece of equipment

### 5.3 Housekeeping

Work areas, passageways and stairs in and around the buildings and structures shall be kept clear of debris. Project materials shall be stored in an orderly manner. Storage areas and walkways on the site shall be maintained free of dangerous depressions, obstructions, trash and debris. Equipment/tools shall be stored or placed in an orderly manner.

### 5.4 Electrical Safety

- All temporary and permanent electrical work, installation, and wire capacities shall conform to the current National Electrical Code in addition to all applicable federal, regional, local codes.
- Only qualified electricians trained in electrical safety familiar with federal, regional, local codes and standards shall be allowed to perform electrical work, including repairs to electrical equipment.

- No employee shall be allowed to work close to unprotected electrical power circuits unless the area has been barricaded off or the employee is protected against electrical shock by de-energizing the circuit, grounding it, locking out, tagging the device, and "trying out" the system, and protecting the individual by effective insulation or providing protection by other means.
- All switches shall be enclosed and grounded. Panel boards shall have provisions for closing and locking the main switch and fuse box compartment.
- Extension cords used with portable electric tools and appliances shall be heavy duty (no less than 12 gauge conductors), of the three wire grounding type, and conform to the type and configuration required by federal, regional, local electrical standards. No flat-type electrical cords will be allowed on-site.
- Suitable means shall be provided for identifying all electrical equipment and circuits, especially when two or more voltages are used on the same job. All circuits shall be marked for the voltage and the area of service they provide.
- Electrical cords and trailing cables shall be covered, elevated or otherwise protected from damage which could create a hazard to employees or other persons in the area. In areas where cables or cords enter or pass through walls, panels or boxes, appropriate bushings/sleeves shall be used. Electrical cords shall not be repaired, but removed from place when worn or frayed
- Temporary lighting will be equipped with guards to protect the bulb and wiring and will be equipped with threewire insulated cable.
- The use of extension cords shall be temporary and limited as much as possible. These shall not be used in areas where they can be run over or damaged by equipment, where there is potential for contact with water, or in any manner that can cause damage or failure of the insulation (such as passing through a doorway or window).
- All electrical grounding systems (buildings, conveyors, portable generators, equipment, magazines, etc.) must be tested for continuity and resistance immediately after installation, repair and modification, and annually thereafter. Test documentation, with OHMS reading, must be kept on-site for review by compliance officers and safety personnel for one year.
- All electrical equipment (including hand tools and extension cords) must be visually inspected prior to use and monthly to ensure proper operation and free of electrical shock hazard. This shall be done by visual inspection, resistance and continuity checks. All inspections and checks must be documented and the equipment identified. Equipment with defects shall be removed from service until repaired.
- All temporary electrical tools and cords shall be properly protected by ground fault circuit interrupters (GFCI) throughout all phases of the project. This includes appliances such as refrigerators, microwaves, toasters, etc.
   Electrical equipment capable of holding a charge (such as capacitors or transformers) shall be deenergized and tested by a qualified person to confirm an absence of residual charge.
- The following standards shall be referenced and followed. Federal, regional, and local standards shall be followed as minimally acceptable practices.
  - NEC and NFPA 70E (U.S., México, Costa Rica, Venezuela, Columbia)
  - British Standards BS 76 6064/60298 (EU) o RGIE (Belgium)
  - NFC 15-100 (France for low voltage only)

### 5.4.1 Training Requirements

Contract electricians who work in energized electrical rooms or near energized electrical installations will be required to attend NFPA 70E Training and wear the appropriate Arc Rated PPE. These requirements shall be followed when working near energized circuits within an electrical room or work area; it is not intended for work performed on de-energized equipment. De-energized circuits shall be "locked, tagged and tried out" (LOTOTO) per local site safety policy. Contract employers are responsible for ensuring that all contract employees assigned to work on the facility follow the electrical

safety rules and requirements required by the host employer. Additional training requirements can be found in the 2015 NFPA Guidelines.

# 5.5 Compressed Gas Cylinders

All compressed gas cylinders shall be clearly marked, with contents and hazard identified. Cylinders shall not be accepted on sites that are not properly labeled as to contents.

#### 5.5.1 Cylinder Management

- When compressed gas cylinders are hoisted, they shall be secured on a cradle, cylinder truck, sling board or pallet.
- At no time may cylinders be hoisted with choker chains nor shall cylinders be hoisted by hooking or strapping onto the cylinder cap. Cylinders shall be secured in a vertical position when moved with power vehicles.
- Regulators and gauges must be either protected from damage or dislocation with a cover/collar or be removed and cylinders capped whenever not in use or when the equipment is being moved. Never transport cylinders unless regulators have been removed. Cylinders shall not be rolled along the length of their axis.
- Cylinders shall be secured in an upright position, except when being hoisted or moved.
- Cylinders shall be placed where they cannot become part of an electrical circuit and shall be kept away from piping systems and layout tables that may be used for grounding electrical circuits.
- When in use, cylinders shall be placed with the valve up, and properly secured (to prevent them from being knocked over, tipping or falling over).
- Cylinders shall not be placed where they are, or can be, exposed to open flames, hot metal, or other sources of heat, including the sun.

Cylinders containing acetylene, propane, butane, oxygen or inert gases such as argon, nitrogen, etc. shall not be placed in confined areas or enclosed storage areas and shall be stored away from combustible/flammable materials. Cylinders shall not be stored, placed, or kept next to or adjacent to exits or in a manner that blocks or obstructs walk-ways or exits.

- A suitable cylinder truck with chain or other secure form of securing shall be used to keep cylinders from being knocked over while in use.
- Cylinders of oxygen shall not be stored close to cylinders of acetylene or other fuel gas (connection to hoses for standard use configuration is accepted). They shall be separated by a minimum of 20 feet or by a non-combustible barrier, at least five -5 feet high with at least a half-hour fire rating. Cylinders are considered to be in service (that is, not stored) if they are equipped with a regulator. Additionally, this restriction does not apply to gas cylinders of oxygen and fuel gas (acetylene for example) if the capacity is 120 cubic feet or less (per cylinder).
- Oxygen cylinders, cylinder valves, couplings, regulators, hose, and apparatus shall be kept free from oil and grease, since oil and grease in the presence of oxygen under pressure may ignite violently. Employees shall be prohibited from handling oxygen cylinders or apparatus with oily hands or gloves.
- Cylinders in storage should be kept away from sources of heat and shall always be shielded from the direct rays of the sun.
- Empty cylinders shall have their valves closed. Valve protection caps shall always be in place except where cylinders are in use or connected for use.
- Gauges shall be removed and bottles capped while being transported; this includes welding trucks and service vehicles.
- Compressed gas cylinders shall be stored only in properly constructed storage racks, properly secured at all times, in properly ventilated areas.

• Compressed gas cylinders, empty or full, shall be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being hoisted or carried. Empty cylinders shall be marked "Empty." If a cylinder is not equipped with a valve wheel, a key will be kept on the valve stem while in use.

# 5.6 Small Tools

# 5.6.1 Power, Air, Powder-Actuated and Hand Tools

- Power tools shall not be used if safety equipment,-such as shields, tool rests, hoods, and guards have been removed or otherwise rendered inoperative.
- Employees using tools under conditions that expose them to risk of flying objects, harmful dusts, and/or noise shall be provided with the required personal protective equipment.
- All electrically powered tools shall be properly grounded. **NOTE:** the only exception to this may be in an EW tankhouse on the cell line (where DC current is used) to prevent creating a path to ground. Check with local site safety if working in this area for specific requirements.
- Outlet tools shall be protected by ground fault circuit interruption devices.

Double-insulated electrical hand tools are recommended. Doubly insulated power tools shall be inspected and maintained in a manner that preserves the insulating properties of the unit (buildup of dirt, dust or debris which may provide a pathway for current to flow is unacceptable).

### 5.6.2 Gasoline or Diesel-Powered tools

- Gasoline or diesel-powered tools shall not be used in unventilated areas. Gasoline and other flammable liquids shall be dispensed only from U.L. listed or equivalent metal safety cans.
- Cans are required to have a flash screen in place, with a self- relieving vent.
- All cans must be labeled by contents.
- Safety cans and drums shall be grounded when dispensing.
- Gas shall not be dispensed into cans when the can is in the back of a pickup. The cans must be placed on the ground when being filled with a flammable liquid.

### 5.6.3 Portable Grinders

- Portable grinders will be provided with hood-type guards with side enclosures that cover the spindle and at least 50% of the wheel. All wheels will be inspected regularly for signs of fracture and that wheels are rated for the grinder's RPM.
- Bench grinders shall have deflector shields and side cover guards. Grinders shall have a maximum of 1/4-inch clearance to top of the guard, and tool rests shall have a maximum clearance of 1/8 -inch from the wheel. Bench grinders must be secured to the bench to prevent displacement of the unit during use.
- Hoses supplying pneumatic tools shall have couplings secured to prevent accidental disconnection. "Push, twist, click" locking connection disconnects shall be used. Where those cam lock connectors are not used, a safety pin and whip check must be utilized. Quick disconnects larger than ¾" inside diameter must have safety pins attached to the hose, pipe connection and between connected hoses, unless automatic shutoff valves are used. Whip checks are required for air hoses ¾" or larger.
- Air supply lines will be protected from damage, inspected regularly and maintained in good condition. Air sources supplying hoses exceeding 1/2-inch ID shall be protected by excess flow valves to prevent whipping in the event of hose separation or failure.
- The pressure of compressed air used for cleaning purposes will be reduced to 30 psi or less (this does not apply to cleaning of forms, etc.). Hose extensions always will be used. At no time shall compressed air be directed toward a person.

#### 5.6.4 Powder-Actuated Tools

- Each powder-actuated tool operator must be certified in accordance with regulatory requirements. Only trained, certified employees shall be allowed to operate a powder-actuated tool. Employees operating the tools shall wear eye and face protection and hearing protection while in protection zone established within 50 feet of the tool use area where eye, face, HPD shall be required.
- Tools shall not be loaded until immediately before use, and loaded tools shall not be left unattended.

Tools shall not be used in an explosive or flammable atmosphere. Cartridges (powder source) shall be separated from all other material.

- Powder-actuated tools shall meet all applicable requirements of regulatory requirements.
- Signs will be posted throughout the area, warning that powder-actuated tools are in use.
- All powder-actuated tools shall be of the low-velocity, cushioned-pistol grip, piston-type design.
- Loads, studs, nails, etc., used in powder-actuated tools shall be specifically approved by the manufacturer for use in that tool.
- Powder-actuated tools shall be designed so that discharging the powering load can be accomplished only when the barrel of the tool is firmly depressed against the working surface.
- All powder-actuated tools shall be U.L. and/or F.M. listed, or equivalent.
- Powder-actuated, piston-drive tools shall be designed so that the pistons always remain captive within the tool.

### 5.6.5 Condition of Use

In addition to the above requirements, the following conditions shall govern use:

- All misfired loads shall be disposed of immediately and safely, in a manner specifically approved by the manufacturer, contractor and owner.
- All loads, except while in actual use, shall be secured.

# 5.6.6 Maintenance

All maintenance work on powder-actuated tools shall be performed by competent and qualified technicians in accordance with the manufacturers' recommendations and using only exact replacement parts.

### 5.7 Welding, Cutting, and Burning

### 5.7.1 Hot Work Permit

- A hot work permit is required before working over or near oxidizers; flammable gasses; liquids oils rubber belting or lining; plastics; easily combustible materials; concentrate; coal; or hydrometallurgical piping.
- All sites have designated hot work permit required areas. It is the contractor's responsibility to become familiar with those specific areas at the worksite. Prior to any burning, grinding, cutting, welding, soldering, open flame or other operations capable of initiating fires or explosions, the contractor shall contact the client area supervisor to obtain permitting requirements.
- When not in use, welding gas hoses shall be bled to remove residual pressure.
- The Hot Work Permit will be issued only after each flame source has been checked to ensure proper procedures are planned and personal protective equipment is available and within reach.
- Each separate cutting and welding unit will be required to have, within 25 feet, a 20-pound ABC fire extinguisher. A Fire Watch must be posted during the activities which generate heat, and for 30 minutes after to ensure

residual heat does not result in a fire. Where a flammable or combustible is in the immediate vicinity of the hot work and cannot be moved, it shall be covered or protected from the heat source.

- All hoses shall be frequently inspected for leaks, worn places and loose connections. They shall be elevated or protected against damage and placed so as not to prevent the safe passage of workers and equipment.
- Approved flash arresters shall be provided on both oxygen and acetylene hoses in accordance with the
  manufacturer's recommendation. Placement is dependent upon the pressure of the gases -- at lower flow, the
  arrest device should be at the torch; at higher flow rates (greater than or = to 400 schf) the arrest device should
  be at the outlet of the regulator.
- Welding current return circuits or grounds shall carry current without hot or sparking contacts and without
  passage of current through equipment or structures that might be damaged or made unsafe by the welding
  current or its voltage. Specifically, welding current must not be allowed to pass through any of the following
  materials:
  - Acetylene, fuel gas, oxygen or other compressed-gas cylinders
  - Tanks or containers used for gasoline, oil or other flammable or combustible material
  - Pipes carrying compressed air, steam, gasses or flammable or combustible liquids
  - Conduits carrying electrical conductors
  - Chains, wire ropes, metal hand railings or ladders, machines, shafts, bearings or weighing scales
- All arc welding and arc gouging operations shall be shielded by noncombustible, flame proof screens. **NOTE:** Air arc gouging has specific requirements for hearing protection. See site-specific procedures.
- The ground for the welding circuit shall be mechanically strong and electrically adequate for the service required.
- Electrode and ground cables shall be elevated and supported to prevent obstructions from interfering with the safe passage of workers and equipment.
- Where it is necessary to couple or uncouple several lengths of cable for use as a welding circuit, insulated cable connectors shall be used on both the ground line and the electrode holder line.
- An electrode holder of adequate rated current capacity shall be used, with enough insulation to protect the operator against possible shock and to prevent a short or flash when laid on grounded material.
- Cables with worn or damaged insulation shall not be used.
- All connection lugs on welding machines will be insulated.
- Only approved sparking strikers will be used to ignite flammable gas tools.
- If materials are to be covered or protected from welding slag or sparks, the contractor is to furnish fire resistant covers (non-asbestos).
- Any source of ignition (such as cigarette smoking, use of lighters or open flame) is prohibited within 50 feet of any hot work operations.

### 5.7.2 Personal Protection

Protective measures for welders and helpers are as follows:

- Hard hats shall be worn in conjunction with welding shields while welding. No soft caps are allowed. Safety glasses or goggles will be worn under the hood.
- Clothing will be free of oil, grease and other flammable material. Collars and cuffs will be buttoned and pant cuffs shall be turned inside pants. Pockets should be covered with flaps and buttoned or eliminated from the front of vests, shirts and aprons.

- All welders shall wear long-sleeve shirts, with the sleeve extended to the wrist (100% cotton clothing is recommended) and protective gloves with leather sleeves, or arm and shoulder covers, or welder's jackets. Cutters and helpers shall wear protective gloves and long sleeves. Welders shall remove flammable safety vest when welding or grinding. Pant legs are to be worn outside of the boots (not tucked in). Tape or other means will be used to ensure that hot slag does not get into the top of the welder's boot.
- Both welders and helpers will wear the proper filter lenses for the welding or cutting project undertaken.
- Face shields shall be worn along with approved safety glasses or goggles during grinding operations.
- No welding, burning or open flame work shall be performed on any staging suspended by means of fiber or synthetic rope.
- Either general mechanical or local exhaust ventilation, meeting applicable regulations, shall be provided whenever welding, cutting or heating is performed in a confined or closed space. Adequate ventilation shall be provided or respiratory protection provided. All welders and cutters shall avoid the fume plume.
- An item being welded cut, or grinded should never be held in the hand. It should be placed on a sturdy support or clamped in a vise.
- Respirators with proper cartridges shall be used when welding or cutting on any galvanized, stainless, painted or coated metal or where other hazardous fumes, gasses or dust of metals may be emitted.
- All face shields and helmets shall be inspected prior to the task to ensure there are no cracks or evidence of damage.

### 5.8 Ladders

#### 5.8.1 Manufactured Ladders

Manufactured ladders shall comply with the specifications of OSHA, or ANSI, or MSHA, or equivalent standards and job procedure.

- Damaged ladders shall not be used, and will be removed from the property or destroyed.
- All portable ladders shall be equipped with non-skid safety feet and shall be placed on a stable base. The access areas at the top and bottom of ladders shall be kept clear.
- The 6-foot fall protection procedure shall apply when working from ladders. All ladders shall be secured at the top with a rope or other substantial device.

Where a tie-off is not possible, a second person must hold the ladder until the work is completed and the worker has descended the ladder.

- Ladders shall not be painted except for identification marking.
- Ladders shall be maintained free of lines, ropes, hoses, wires, cables, oil, grease and debris. Objects shall not be left on ladders.
- If greater heights need to be reached, separate ladders will be used with intermediate landing platforms. Ladders shall be level; extension ladders shall be positioned in a 4:1 rise ratio; "A" frame or "step" ladders shall not be used unless fully opened.
- Maintain three points of contact at all times.
- Extension ladders shall extend 36 inches above the landings. When this is not practical, grab rails shall be installed. All ladders in use shall be tied, blocked, or otherwise secured to prevent accidental displacement.
- The use of ladders in the following manner is prohibited:
- Standing on the top two steps or top of ladders

- Sitting on the top of ladders
- Climbing or working from the back of ladders
- Two people on the same ladder
- Folding up and leaning stepladders
- Working backwards from ladders
- Straddling the top of the ladder, except on "A"-frame or special manufactured ladders
- Using folding ladders not fully opened
- Using extension ladders that have been separated
- Carrying materials up or down ladders
- Facing away from ladders while ascending or descending
- Ladders shall be visually inspected prior to each use. The ladder should be inspected by a qualified person for visible defects on a periodic basis and after any occurrence that could affect the safe use of the ladder.
- Ladders shall be rated for the type of work and load expected (i.e. Type 1A 300pound-rated fiberglass ladders. Warning labels and instructions must be present and legible.)

### 5.8.2 Ladder Training Requirements

- The employer shall provide a training program for each employee using ladders. The program shall enable each employee to recognize hazards related to ladders and shall train them in the procedures to be followed to minimize these hazards.
- The employer shall ensure that each employee has been trained by a Qualified person in the following areas:
- The nature of fall hazards in the work area
- The proper construction, use, placement and care in handling of all ladders
- The maximum intended load-carrying capacities of ladders

### 5.9 Scaffolding

Use, assembly, and inspection of scaffolds shall follow applicable site, local, state, and federal regulations.

Scaffolds shall be designed, erected, moved, disassembled, altered and inspected by a Qualified Person. To avoid the use of makeshift platforms, each application will be carefully planned to ensure that scaffolding is used where required and that such scaffolding conforms to the applicable scaffolding erection requirements. A scaffolding permit shall be completed by the contractor, prior to use. A copy must be posted at the site.

- Lean-to scaffolds and makeshift platforms are prohibited.
- Scaffolds shall not be used for the storage of materials except material being currently used. Materials will be placed only over cross members. Scaffolding shall be kept clear of trash, oil and other debris.
- All scaffolds shall be adequately designed to carry, without failure, four times the maximum intended load. At no time shall a scaffold be overloaded.
- All scaffolds shall be maintained in safe condition. A scaffold damaged or weakened, from any cause, shall be immediately tagged and taken out of service until repaired.
- Scaffolding or work platforms more than 6' above the ground or floor, suspended from an overhead support or erected with stationary supports, shall have standard guardrails. Toe boards shall be installed where there is a

danger to workers below Guardrail systems shall include 1) a top (hand) rail which is 2 inches x 4 inches (or equivalent), 42 inches high above the walking/working surface, and 2) a mid-rail positioned at 21 inches high, respectively, with supports not to exceed 8 feet between vertical supports, and 3) a toe-board shall be 4 inches high.

- Mobile scaffolding will be equipped with outriggers, and all casters will be locked. Mobile scaffolding will be guarded with standard railing regardless of height. No mobile scaffolding will be constructed or used where there is a change of elevation in the floor level.
- The site 6', 100% fall protection requirements will be followed. Gaps or spaces on the work-side of the scaffold shall not create a fall or trip hazard; the walking/working surface shall be solidly planked and shall span the width of the scaffold frame unless workers use fall protection. Scaffold systems shall be held together with bolts, pins or other similar devices rope or wire shall not be utilized.

While erecting and dismantling scaffolding:

- The footing of scaffolding must be sound and rigid, capable of supporting the weight. Unstable objects such as bricks or blocks shall not be used in the support.
- Screens shall be required between the toe-board and mid-rail where persons are required to pass underneath.
- The maximum span for 2-inch x 12-inch planks shall be 8 feet. Minimum plank dimensions shall not be less than 2-inch x 10-inch. Scaffold planks shall extend over their end support at least 6 inches, but not more than 12 inches.
- All planking or platforms shall be fully decked. Ends shall be overlapped a minimum of 12-inches and secured from movement.
- Safe access (ladders) to upper levels of the scaffold will be installed as part of the assembly process. Stair towers shall be used, when physically possible, on stationary scaffolds 18 feet or higher. If not, rope grabs and lifelines shall be installed alongside the scaffold ladder.
- Protection shall be provided when there is exposure to overhead hazards.
- Wire or wire rope and synthetic or fiber rope used for scaffold suspensions shall be capable of supporting six times the intended load.
- Tubular-welded scaffolds shall be secured to the building or structure at intervals not to exceed 30 feet horizontally and 26 feet vertically. Scaffolds shall not be welded to tanks or other structures that could affect the integrity of the tank.
- Each scaffold shall be erected under the supervision of a Qualified Person.
- A scaffolding inspection tag will be completed and attached to each scaffold prior to use.
- Scaffolds shall be inspected by the qualified person at the start of each shift, and after the occurrence of any event which may affect the stability, integrity, or security of the system. The inspections shall be documented. A copy shall be affixed to the scaffold, and the original shall be maintained for one year.

A sample checklist is provided in Appendix C.

### 5.10 Construction Safety

- All equipment and materials used in concrete construction and masonry work shall meet the applicable regulatory requirements
- Employees working more than 6 feet above adjacent working surfaces while placing reinforcing steel, setting or dismantling forms, etc., will use a safety harness with two lanyards/hooks. The standard of 100% fall-protection practices will be followed.

- Rebar shall be capped with steel reinforced impalement protection.
- Where fall arrest systems are used, ensure there is enough distance to prevent persons from contacting surfaces during a fall. If not, seek other means of fall protection such as fall restraint, handrail or other guarding.
- The riding of concrete buckets for any purpose shall be prohibited. Working crews shall be kept out from under suspended concrete buckets. Buckets shall have tag lines, which are a minimum of 6-feet long.
- Reinforcing mats used as a walkway shall be covered with plywood to provide safe footing.
- Workmen involved in abrasive blasting shall wear approved, properly functioning, supplied air respirators and hoods.
- Concrete workers will be required to wear appropriate shirts, boots, and gloves appropriately bloused or taped at the ankles and wrists to reduce the danger of burns.
- All lumber and materials shall be clear of nails and wire. Excess materials shall be removed from the immediate work area. During form stripping, all nails and snap ties will be pulled.

# 5.11 Floor and Wall Openings

- All open-holes in decks and walkways must be guarded (covered), barricaded, or made otherwise inaccessible. If work must performed and it is infeasible to prevent access to a potential fall hazard through barricading, an attendant must be assigned to prevent accidental exposure by ensuring fall protection is used 100% of the time.
- When a safe work platform has been altered, creating a fall hazard, substantial barriers or guarding, red "danger" flagging, and tagging that displays the nature of the hazard and protective action is required utilizing the FCX – Flagging, Guarding, and Barricading Guideline. Refer to FCX-Working at Heights Policy (FCX-02). FCX Flagging, Guarding, and Barricading Guideline in Part 2 of The Contractor Safety Manual.

### 5.11.1 Barricading

- Barricading and/or covers shall be removed only after other means of fall protection are in place. Employees
  installing and/or removing guarding and/or covers shall be protected by alternative fall protection through the
  entire process. The contractor responsible for the removal of barricading/guarding/covers is responsible for its
  replacement.
- The perimeter, floor and wall opening shall be demarcated with orange, 4-foot high vertical debris nets an equivalent means to demarcate and identify the hazard. Temporary toe boards shall be installed. When necessary, debris nets shall also be installed.
- No employee, regardless of position, craft or job assignment, shall be allowed in an area that could expose that person to a fall unless correct fall protection procedures are followed.

### 5.11.2 Standard Rails

- A standard railing shall consist of a top rail, intermediate (mid-rail) rail, 4-foot high vertical debris nets and posts (if toe boards are not present).
- The top rail shall be approximately 42 inches from the upper surface of the rail to the floor, platform or ramp level. The top rail shall be smooth-surfaced throughout its length and be made of at least 2-inch by 4-inch stock or 3/8-inch cable, tripleclamped wire rope and turnbuckles on all straight runs.
- The mid-rail shall be halfway between the top rail and the floor, runway, platform or ramp. The ends of the rail shall not overhang the terminal posts except when it does not constitute a projection hazard. The mid-rail shall be made of at least 2inch by 4-inch stock or its equivalent (3/8-inch triple-cable clamped wire rope).
- The toe-board, with 4-inch minimum height, shall be securely fastened in place and have not more than 1/4 -inch gap between it and the floor level where vertical debris nets cannot be installed.

- Wood railing posts (verticals) shall be made of at least 2-inch by 4-inch stock or its equivalent and be spaced so as not to exceed 8 feet on center.
- Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds applied within 2 inches (5.1cm) of the top edge, in any outward or downward direction, at any point along the top edge.
- All welding must be inspected and approved by a certified welder.

#### 5.11.3 Stair Railings

A stair railing shall be constructed similarly to a standard railing, but the vertical height shall not be more than 36 inches, nor shall there be less than 34 inches from the top rail to the surface tread in line with the face of the riser at the riser's forward edge. All handrails shall be provided with a minimum clearance of 3 inches between the handrail and any other surface or object.

#### 5.11.4 Covered Floor Openings

Floor opening covers shall be capable of supporting two times the maximum intended load (which includes employees, equipment, and materials that may be imposed in any one square foot area of the cover at any time) and shall be installed as to prevent accidental displacement. Covers shall be distinctively marked and anchored. All floor openings shall be protected by a cover or standard railing with vertical 4-foot-high debris nets.

#### 5.11.5 Procedures during Project Activity

- During the project, stairs shall be provided on all structures exceeding one story in height. Stairways shall be equipped with guardrail systems on leading edges. The guardrails may be temporary in nature so long as they comply with dimensional and strength requirements noted in 5.11.2, above.
- All parts of stairways shall be free of hazardous projections. Debris and other loose material shall not be allowed to accumulate on or under stairways. No flammable or combustible material may be allowed to be stored or accumulate under or beneath any stairway.
- Permanent steel stairways having hollow pan-type treads and landings that are to be used prior to concrete placement shall have the pans filled with solid material to the level of the edging.
- Temporary stairs shall have a landing not less than 30 inches wide, in the direction of travel, for every 12 feet of vertical rise. Wooden treads for temporary service shall be full width.
- Riser height and tread width shall be uniform throughout any flight of stairs.

Steps are required when a vertical step height is 19 inches or greater.

#### 5.11.6 Runways and Openings

- Wall openings from which there is a drop shall be physically barricaded. Flagging is not acceptable except as a secondary measure to identify the hazard.
- Runways shall be guarded by a standard railing, or the equivalent, on all open sides 19 inches or more above the floor or ground level. Whenever tools, machine parts, or materials are likely to be used on the runway, a toe-board shall also be provided on each exposed side.
- Regardless of height, open side floors, walkways, platforms, or runways above or adjacent to dangerous equipment and similar hazards shall be guarded with a standard railing and 4-foot-high debris net.

#### 5.12 Fall Protection Requirements

Please refer to the Working at Heights Policy.

#### 5.13 Steel Erection

#### 5.13.1 Permanent Flooring

Permanent floors shall be installed as soon as practical following the erection of structural members. At no time shall there be more than four floors, or 48 feet, of unfinished bolting or welding above the foundation or uppermost-secured floor.

#### 5.13.2 Temporary Flooring

- The erection floor shall be solidly planked over its entire surface except for access openings which shall be properly and appropriately guarded at all times.
- Planking shall not be less than 2 inches thick, full size undressed, and shall be laid tight and secured against movement. Access openings will be guarded with standard guardrail.
- A safety railing shall be installed, approximately 42 inches high, around the periphery of all temporary planked or decked floors during structural steel erection. This railing shall be at least 3/8-inch cable with at least three cable clamps at each connection with turnbuckles installed in all continuous runs.

#### 5.13.3 General Requirements

- When structural steel is set, each piece shall be secured with no less than two bolts at each connection and drawn up wrench-tight before the load is released.
- Material shall not be hoisted to a structure unless it is ready to be put into place and secured.
- At no time shall an employee be exposed to the potential of a fall without required fall protection.
- When loads are being hoisted, walking under the lift or allowing an employee to be exposed to the swing of the lift is prohibited. No one shall be allowed to ride the load under any circumstances.
- A tag line shall be used to control all loads.
- For the protection of other crafts on the project, barricades and signs shall be posted around the erection area, stating: "Danger Overhead Work in Progress."
- There will be no "multi-tiering" of loads (Christmas Treeing).

### 5.14 Excavation and Trenching

### 5.14.1 Excavation Permits

- An excavation permit is required for any excavation (digging, trenching or drilling). Permits must be completed prior to beginning excavation. The contractor in charge of the work will:
  - Require that all trenches and excavations over 4 feet deep be sloped, shored, benched, braced, or otherwise supported. Contractors also may use a trench box. When soil conditions are unstable (as determined by the competent person), excavations shallower than 4 feet shall be sloped, supported, or shored.
  - Initiate the excavation permit following site-specific requirements and forward the completed form to the project engineer
  - Ensure that all approval signatures required on the permit are obtained after the individuals have reviewed the field drawing
  - Present the completed excavation permit to the machine operator.

Identify by name, the on-site Qualified Person for the excavation(s).
- The determination and design of the supporting system shall be based on careful consideration of the following: depth of the cut; anticipated changes in the soil due to air, sun and water; and ground movement caused by vehicle vibration or blasting, and earth pressures (not only the angle of repose).
- The machine or equipment operator will not begin excavation until the permit, signed by all required personnel, is present at the excavation site.
- The qualified person shall classify the soils of an excavation as "A", "B", or "C" and shall determine safety measures and recommendations appropriate for the soil classification.
- The excavation permit will remain at the site of the excavation during the entire time the excavation is being accomplished.
- When the excavation operation has been completed, the excavation permit will be filed by the contractor.

# 5.14.2 Underground Utility Location (Blue Stake)

The contractor shall identify and locate all sub-surface utility and process or product lines prior to making any cut into the ground. This shall be coordinated through both the utility owner and the on-site resources.

# 5.14.3 Designing Adequate Protection

Some of the considerations the contractor must take into account in the design of adequate protection are:

- Soil structure
- Water content of soil
- Superimposed loads
- Other operations in the vicinity
- Underground obstructions
- The presence of "disturbed" soils (either fill material or due to previous excavation activity)

- Dept of cut
- Changes due to weather and climate
- Vibrations
- Overhead power lines
- The presence of underground utilities, product or process lines
- Air quality

# 5.14.3 Installing the Protection

- Shoring must be installed according to manufacturer specifications. Installation of shoring shall closely follow the excavation work.
- All materials used for shoring shall be in good condition, free of defects and of the right size.

# 5.14.4 Special Precautions

- Underground utilities (gas lines, electric lines, communication lines, process lines, etc.) shall be located and
  identified prior to any excavation. As the anticipated location of the utility is approached, manual means of
  excavation shall be used to determine the final, actual location of the utility. The location of the lines may be
  through a commercial service (may be known as "Blue Stake") or by contact with the utility owning the lines, or
  through site planning or facilities departments. In the case of work being performed within a building or
  structure, any penetration of a wall or floor must follow a similar process in terms of locating and approaching
  the hidden utility.
- The contractor shall guard against an unstable excavation bottom, such as below the water line. Sheeting may have to be driven below the bottom of such an excavation to add to the soil stability.
- Standards require that diversion dikes and ditches, or other suitable means, be used to prevent surface water from entering an excavation and to provide adequate drainage of the area adjacent to the excavation. Water causes erosion and softening and shall not be allowed to accumulate in a trench or excavation.
- In excavations that employees may be required to enter, excavated or other material shall be removed or sufficiency retained. Spoil piles, loose materials and equipment shall be kept at least 2 feet or more from the

edge of the excavation. The opening of the excavation shall be secured by fencing or other effective means to prevent a passer-by from falling into the excavation during times when no active excavation is occurring.

- All excavations, when unattended, shall be demarcated to prevent unintentional or unauthorized access.
- Where passage across the opening of the excavation is necessary, a properly secured and guarded walking surface shall be installed.
- No persons shall be allowed to be beneath any live load while the load is being placed into or removed from the excavation.
- In case of emergency, workers must be able to leave the trench quickly. When employees are required to be in trenches 4 feet deep or more, adequate means of exit, such as ladders or steps, shall be provided and located so as to require no more than 25 feet of lateral travel. Ladder will be of proper type, adequate length and secured from movement. Additional means of exit should be considered where relevant.
- Underground utilities shall be located, and provisions made for their protection.
- Excavations which are at or greater than 20 feet deep shall be designed by a professional engineer, and the plans for the excavation shall be kept at the excavation site. The design shall specifically include protection features if persons must enter the excavation for any reason for any length of time.

### 5.14.5 Inspections

Excavations and shoring systems must be inspected daily and after each event or occurrence which may affect the integrity or stability of the excavation, such as rainfall, vibration caused by passage of equipment or mine blasting, etc. by a Qualified Person. Inspections shall be documented and made available for review.

### 5.14.6 After the Work is Complete

As soon as work is completed, backfilling shall take place as the shoring is dismantled. Workers shall remove the shoring from the bottom up, taking care to release jacks or braces slowly. In unstable soil, ropes will be used to pull out the jacks or braces from above.

### 5.14.7 Drilling Operations

- The owner will authorize an excavation permit prior to any excavation, digging, trenching or drilling operations.
- The drilling area shall be inspected for hazards before starting the drilling operation.
- Drill crews and other employees shall be directed to stay clear of augers or drill stems that are in motion.
- When drill helpers assist the drill operator during installation or operation of a drilling rig, the helpers shall be in sight of, or in communication with, the operator at all times.
- While in operation, drilling rigs shall be attended at all times.
- Drill steel, spare parts and tools shall be safely stored in racks or receptacles on the drill rig when not in use.
- Operators must maintain control of the drill during operation
- Employees shall not drill from positions that hinder their access to the controls or from insecure footing or staging.
- Remote operation of drills shall be done at a level, adequate work surface.
- Drilling equipment shall be inspected at the start of each shift by a Qualified Person and any defects noted shall be corrected before the equipment is used.
- Before each drilling cycle is started, warnings shall be given to workers in the area around the drilling operation.
- During a lightning storm, the site-specific procedures for evacuation and safety must be followed.

• Respirators are required for dry drilling operations.

# 5.15 Personal Protective Equipment (PPE)

All contractors are responsible for providing and ensuring use of the required personal protection equipment. Each work area will be reviewed as to the hazards present, and appropriate PPE to control these hazards will be provided. Wearing jewelry is not permitted in areas where moving parts or equipment is located and/or where chemicals are being used. Consult site safety practices for guidance.

This section establishes the minimum requirements of personal protective equipment to be used. As applicable, equipment complying with OSHA/MSHA/NIOSH/ANSI criteria shall be used.

# 5.15.1 Head Protection

• The wearing of approved, non-conductive, safety hats, classes E (electrical) or G

(general) or above is mandatory in all project areas 100% of the time. Refer to ANSI Z89.1, "Safety Requirements for Industrial Head Protection." Aluminum hard hats are not allowed.

- All PPE shall be visually inspected by the employee before use and after any event which may have adversely affected the PPE.
- Nothing shall be worn between the helmet and head unless approved by Project Manager or his delegate.

# 5.15.2 Eye and Face Protection

- Safety glasses with side shields will be provided by the contractor and are mandatory at all times. Mirrored and dark safety lenses are prohibited indoors.
- All work areas require 100% eye protection 100% of the time. Minimum eye protection includes approved safety glasses with side shields or mono-goggles meeting the standards specified in ANSI Z87.1-2015, or equivalent international standard, "Practice for Occupational and Educational Eye and Face Protection." The contractor shall ensure that the protective equipment is adequate and effective for the hazard(s) present--for example, a splash shield is not the same as an impact-resistant shield.
- Additional eye and face protection shall be worn by employees when:
- Welding, burning or cutting with torches
- Using abrasive wheels, grinders or files
- Chipping concrete, stone or metal
- Working with any materials subject to scaling, flaking or chipping
- Drilling or working under dusty conditions
- Abrasive or water blasting
- Waterproofing
- Working on energized switchboards
- Using explosive-actuated fastening or nailing tools
- Working with compressed air or other gases
- Working with chemicals or other hazardous materials
- Working near any of the operations listed above

# 5.15.3 Respiratory Protection

These following practices detail requirements for respirator use to protect workers against the inhalation of harmful air contaminates in the workplace:

- Development of a written respiratory protection policy for the selection and use of respirators that specifies which respirator to use under specific conditions.
- Long hair is to be contained or secured.
- Development and implementation of procedures for medical evaluation of each worker required to use
  respiratory equipment (Note: Medical clearance is required prior to respirator use). An implemented respirator
  fit test program which is done at the time a respirator is issued to a worker, and annually thereafter for all "tight
  fitting" respirators. NOTE: each worker who will wear a tight fitting respirator must have proof of medical
  clearance and documentation for their fit test which identifies the make, model, and size of respirator before
  being allowed to work in areas where respiratory protection is required.
- Development and implementation of initial and annual training for workers on the proper use and limitations of
  respirators to be used for routine or emergency work, with training including respirator selection, functions and
  limitations of individual respirator types.
- Development of fit-check procedures to be taught to each individual required to wear a respirator.
- Development of procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding and otherwise maintaining respirators.
- Identification of, and communication on, workplace areas and job-specific tasks requiring respiratory protection to all employees.
- Establishment of procedural systems to ensure proper respirator usage is adhered to at all times, including policy of clean-shaven faces to ensure proper seal of respirator to face piece.

# 5.15.4 Hearing Conservation

The criteria and requirements for occupational noise exposures are contained in FCX policy. Employee hearing will be protected in accordance with this procedure and accepted hearing conservation measures. The hearing conservation program will include:

- A written hearing conservation plan
- Conducting a determination of job assignments that could expose a worker to noise levels above 85 dBA over an 8-hour Time Weighted Average (TWA), with hearing protection required wherever 85 dBA is exceeded. Note: double hearing protection is required to be provided to workers who are exposed to noise levels at or above 105 dB.
- Implementing feasible engineering and administrative controls to reduce employee exposures to 85 dBA or less
- Training on the effects of noise exposure and the proper use of earplugs and earmuffs
- Provisions for and enforcement of, the use of adequate earplugs or earmuffs for employees who work in areas exceeding 85 dBA. Pre-exposure baseline and annual audiometric hearing tests for all workers exposed to noise at or above 85 decibels (dB) as a Time Weighted Average (TWA) of 8 hours.

# 5.15.5 Safety Shoes

Safety boots/shoes as appropriate for the work location are required. Bare feet, tennis shoes, sandals, Docksiders, Hush Puppies or other footwear that doesn't meet the standard are prohibited. Metatarsal protection shall be worn for certain operations as required, specifically when operating tamping equipment and where employees handle or carry heavy tools or objects.

### 5.15.6 Gloves and Hand Protection

Appropriate gloves shall be provided and worn when handling hazardous objects or substances that could cut, tear, burn, be absorbed through the skin or otherwise injure the hands or health of workers.

### 5.15.7 Other Personal Protective Equipment

Other required equipment to be used under unusual circumstances such as high temperature work, handling corrosive liquids, etc., not specifically covered in this section shall be reviewed by the site project manager with the contractor and will be furnished by the contractor when required.

### 5.15.8 Maintenance

Personal protective equipment shall be destroyed if it has been altered in any manner so as to reduce its effectiveness.

### 5.16 Fire Protection

Fire safety shall be a key component of the contractor safety plan. Requirements include:

- The operation and maintenance of temporary heating equipment shall create no fire hazards. The use of solid fuel salamanders shall be prohibited. Clothing may not be dried by placing it on or near heaters. Only smokeless fuels shall be used for heating purposes.
- All flammable and combustible materials shall be stored and handled with due regard to their fire characteristics. Flammable liquids shall be stored in an approved manner and dispensed only in approved self-venting metal safety containers with flash screen. All containers must be labeled with the name of the contents and with the hazard class. Welding gases shall be stored in isolated areas and segregated by type of gas. Lumber shall be stored as far as possible from any source of ignition. Grounding shall be installed for storage tanks or skids. Where equipment is refueled at storage tanks or skids, bonding straps shall be provided, and the equipment and the fuel tank shall be physically bonded during the refuel process.
- Access to the work area and its perimeter shall be maintained for use by heavy fire-fighting equipment.
- Open fires or sources of ignition shall not be allowed within 50 feet of the storage or use locations of flammable or combustible materials.
- All heaters shall be in proper working order, supervised by properly trained personnel, and UL-listed or equivalent. A tip-over shut-off device shall be included for space heating equipment.
- All electric power tools, devices (portable heaters), etc., shall be inspected prior to use on site to include insulation, grounding, plugs, casings, etc., and shall be marked according to site protocols to indicate a current inspection for use.
- Fire protection equipment will be provided in all areas where combustible materials are present. Only trained personnel will be allowed to use fire protection equipment if the need arises.
- Temporary fire-fighting or fire protection equipment shall be replaced immediately after use and shall be removed upon completion of the project.
- Fire extinguishers will be visually inspected and documented monthly. Defective units are to be taken out of service. A current inspection tag will be displayed on each extinguisher. Each extinguisher will have an annual inspection and certification by a qualified individual.

### 5.16.1 Specific Fire Prevention Guidelines

- Smoking or open flames are prohibited in locations where flammable or combustible materials are stored or dispensed, such as paint shops, fuel stations, carpenter shops, fuel trucks and other restricted areas.
- No Smoking or Open Flames within 50 feet signs will be posted in these areas, visible from all sides.
- Flammable and combustible materials will be separately and properly stored in approved safety containers. All such storage containers will be clearly identified with proper labeling.

- Refueling of gasoline or liquid propane equipment while the motor is running is prohibited.
- Safety waste cans with lids shall be provided for disposal of oily rags or other combustible materials.
- All welding and cutting operations shall have fire extinguishers in the immediate area and shall be continually
  watched during and for 30 minutes after, the completion of the task. Incompatible materials shall not be stored
  in proximity. The degree of separation must be sufficient to prevent contact with each other under spill or
  release conditions.
- The contractor shall determine the need to have and use intrinsically safe tools, equipment, or devices where they may serve as a source of ignition for flammable or combustible materials. Conditions evaluated should include both normal and non-normal situations.

### 5.16.2 Use of Temporary Portable Atmospheric Pressure Fuel Tanks

It is required that all contractors comply with the following specifications for tank construction and design when using this equipment:"

Metal tanks must be UL-approved, or equivalent, by a recognized agency as a flammable liquid storage tank and meet requirements of NFPA, or equivalent, The Flammable Liquids Code. Key provisions of this code include: Tank Size: Minimum 61 gallons, maximum 600 gallons.

### Vents:

- At least one vent having a minimum size of 1-1/4 inch inside diameter is required.
- The automatic vent shall be set to open at 5 psi and have the capacity of limiting internal tank pressure to 10 psi.

### **Outlet Valves, Nozzles, Hoses:**

- Outlet valves, nozzles and hoses must be UL-listed, or equivalent, and of the automatic self-closing nozzle type that can be padlocked to its hanger to prevent tampering.
- A bottom draw-off gravity flow tank shall be equipped with a valve located on the tank discharge pipe ahead of the hose (preferably fusible link valve).
- A top dispensing tank shall be equipped with a UL-listed, or equivalent, antisiphoning pump.

# Grounding and Bonding:

- The tank shall be grounded by a metallic grounding cable with an electric resistance not to exceed 1,000,000 ohms. It must be permanently bonded. o Top dispensing tanks shall be mounted at least 6 inches above the ground.
- Bottom gravity flow tank supports shall be made of steel and have a maximum height of 7 feet.

### Labeling:

- All tanks shall be properly labeled to identify the contents and hazard class.
- Tanks shall be located at a minimum distance of 50 feet from any facilities, major equipment or other materials.

### Diking:

- o Dike shall be of sufficient size to contain 125% of the capacity of largest tank, and dike shall be lined with impermeable material. o **Note:** Double-walled tanks do not require diking. o The minimum distance between the tank and toe of the dike shall be 5 feet.
- Storage of combustible materials, empty or full drums or barrels, in the diked area, is prohibited.

- The fuel tanks may not be located under power lines.
- Electrical equipment within 20 feet of dispensing locations shall be rated as a NFPA/NEC Class I, Group D location, or equivalent. o "No Smoking" or "Open Flame" signs must be displayed within 50 feet of the area.
- At a minimum, one 20-pound ABC fire extinguisher shall be provided within 25 feet of the storage tank. They shall be protected from weather, mounted and labeled.
- The storage vessels shall be protected from being hit, struck, or tipped over by barricades, balusters or similar sturdy devices.

### 5.17 Crane Safety

- All cranes shall have a current annual certification by an accredited third party. This shall be done prior to working and shall maintain a current annual inspection for the duration of the work.
- Worn or damaged wire rope shall be a cause for taking the equipment out of service while being replaced.
- Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or other moving parts or equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard.
  - Guarding shall meet the regulatory or recognized national standard.
- Contractors shall maintain on-site documentation of an annual certification for each crane and associated rigging equipment brought onto the site. Certification must be kept current; re-certification will occur if the crane is damaged or the 12-month certification period is exceeded.
- The crane's operator, or other Qualified Person, shall conduct a daily inspection of the crane, prior to use, to ensure that the crane is safe for operation. This inspection shall be documented and available for examination at any time.
- Under no circumstances will anyone be allowed to ride the suspended load, hook or ball. ٠
- Under no circumstances will anyone be allowed to conduct work, or walk, beneath a suspended load.
- Operators shall be certified by a recognized authority ٠
- There shall be an alternate means of communication between operator and signalman when line of sight is not visible.

### 5.17.1 Mobile Crane - Crane Setup

The operator shall be responsible for:

- Proper placement of the crane in relationship to the load to be handled and the landing area so as to obtain the best rated lift capacity
- Proper placement and use of outriggers for all lifts except where the manufacturer allows otherwise
- Determining the stability of the ground or footing
- The installation and maintenance of crane swing radius protection
- Ensuring anti-two-block devices are installed on all cranes
- The installation of a boom angle indicator on cranes that is readily visible to the operator

### 5.17.2 Load Ratings Determination

- The weight of all auxiliary handling devices such as hoist blocks, headaches balls, hooks and rigging shall be considered as part of the total load, in addition to the weight of all items added at the site.
- The operator shall be provided with a copy of the bill of lading with the item weight clearly legible. No crane will be loaded beyond its rated capacity or used for other than its designated purpose.
- A legible capacity chart specific for each individual crane, and easily visible to the operator, shall be located in the crane during operation.

### 5.17.3 Crane Inspection

- Cranes shall be inspected after setup, prior to the initial lift and before each shift.
- Daily crane inspections will be performed and documented in writing to check the following by each operator:
  - o All control mechanisms for maladjustment, excessive wear or contamination
  - All safety devices
  - Deterioration of air-hydraulic systems o Crane hooks, chokers and slings for damage
  - o Electrical apparatus for malfunctioning, signs of excess wear, dirt and moisture accumulation
  - There shall be a means of communication (horn, whistle, etc.) to alert workers in the immediate vicinity of a left/overhead hazard.

### 5.17.4 Recordkeeping for Cranes

All inspections shall be documented and maintained on-site, available for inspection and review.

### 5.17.5 Crane Maintenance

All maintenance will be performed in accordance with manufacturer's recommendations.

# 5.17.6 Crane Setup Ground Stability

For maximum capacity, the crane must be level, and the ground surface must be adequate to support the dynamic load of a working crane.

### 5.17.7 Calculating Load-Bearing Pressures

Only knowledgeable and certified crane operators will calculate load- bearing pressures. Crane usage beyond rated loadbearing pressures is not allowed.

### 5.17.8 Soil Stability

Different type soils will give different load-bearing pressure. When setting up a crane, the qualified person must be able to distinguish between the three groups of soil, the appropriate mixture of each, their moisture content and their depth.

Factors such as water tables and distance to excavation that affect the soil's ability to withstand the pressure without collapsing also must be considered by the qualified person.

# 5.17.9 Mobile Crane

### 5.17.9.1 Operator Qualifications

- Crane operators shall comply with site requirements to operate a crane.
- Crane operators who possess a nationally recognized license or certificate will be required to provide evidence of their training, qualifications and competence prior to arrival on site. In any case, the operator shall have a current, applicable written documentation of training for the category of equipment being operated.
- Crane operators shall document a recent physical examination, including a vision test, prior to applying for a project crane operator license. (Note: The D.O.T. Physical forms meet the above requirements and may be used as a guideline.)
- In order to receive a project crane operator license, an applicant must be able to pass a written test that includes, at minimum, the following elements:
  - Crane Set-up
  - Reading Load Charts
  - Calculating capacities at a given radius
  - Calculating deductions for rigging, block, jib, etc.
  - Proper Crane Operation
  - Rigging and Rigging Inspection
  - Evaluating Site Conditions
  - Pre-Operations Inspection
- Potential candidates for crane operator shall be able to pass a "hands on" test that includes the following skills:
  - Perform Pre-Operation inspection
  - Set crane up for a lift
  - Inspect rigging
  - Operate crane and show ability to follow hand signals (i.e., swing boom, place hook, etc.)
  - Ability to read load chart and calculate load
  - Perform a test lift
- The "hands on" test shall be documented and results made available upon request.

### 5.17.9.2 Operating Procedures

- The operator shall not engage in any practice that may divert his or her attention while engaged in crane operations, and will never leave the controls when there is a load on the hook.
- The operator shall not operate the crane if physically or mentally unfit, or if taking prescription drugs which may affect judgment.
- The operator shall not respond to any signal that is unclear or is given by anyone other than the appointed signal person (with the exception of a stop signal given by anyone).

- The operator shall have final responsibility and control over the crane operations. When there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle the loads until safety has been assured. Any manager, supervisor or person attempting to bypass the crane operator's authority on this issue will be removed immediately from the site.
- The load shall be attached to the hook by means of slings or other approved devices, and no open hooks shall be used. Hooks shall have functional safety latches.
- A shackle shall be used to retain two or more choker eyes in the hook where the hook is not so designed to attach multiple rigging components.
- Hooks shall not be changed, defaced or deformed in any manner. Hooks that have been exposed to excessive heat such as welding, burning, grinding, etc. will not be allowed on-site.
- The operator shall position the hook over the load in a manner to prevent load swing.
- The operator shall determine that the rope is properly seated in the drum and in the sheaves; the load line is not kinked; and multiple part lines are not twisted around each other.
- Shake out hooks will be used only for shaking out materials.
- During hoisting, the operator shall not suddenly accelerate/decelerate a moving load; allow the load to contact any obstructions; swing loads over personnel; or allow side loading or load dragging.
- All load rigging equipment shall be appropriately rated. Ratings shall be displayed on the device.

# 5.17.9.3 Rigging Requirements

- Rigging will only be completed by competent individuals who have received training on proper rigging techniques. Evidence of such training must remain with riggers during working hours.
- All rigging equipment shall be inspected prior to each use. Damaged or defective slings shall be immediately removed from service and destroyed.
- "Shop-made" grabs, hooks, clamps or other lifting devices are prohibited.
- All rigging equipment shall have a safety factor of five.

# 5.17.9.4 Safe Operating Practices

- Slings shall not be shortened by knots, bolts or other makeshift devices.
- Wire rope slings shall be padded or softeners used to protect against damage due to sharp corners.
- Slings used in a basket hitch shall have the loads balanced to prevent slippage.
- Loads handled by slings shall be landed on cribbing or dunnage so that slings will not be pulled from under or crushed by the load.
- Slings subjected to shock loading shall be immediately removed from use and destroyed.
- Tag lines will be used with all lifting operations.
- Repair to rigging equipment is prohibited. It shall be removed from service and destroyed or sent to the manufacturer for repair.

# 5.17.9.5 Inspections and Recordkeeping

- A thorough written inspection of slings, ropes and chains in use shall be made on a regular basis, but not less frequently than six months.
- A record of inspections shall be maintained.

# 5.17.9.6 Work Platforms Suspended from Cranes

A permit is required prior to using a crane for lifting personnel in a suspended platform. The platform must be certified by a professional engineer. The permit will be issued by the contractor when it is determined that the use of the platform is the only feasible method of accomplishing the task. The safety checklist included with the permit will be utilized prior to hoisting personnel. A pre-lift meeting must take place prior to the lift and be documented. Fall protection must be in place according to regulatory and FCX Working at Heights Policy. Personnel and materials cannot be lifted together.

# 5.17.10 Fixed (non-mobile) Cranes

# 5.17.10.1 Operator Qualifications

- Crane operators shall comply with site requirements to operate a crane.
- Crane operators who possess a nationally recognized license or certificate will be required to provide evidence of their training, qualifications and competence prior to arrival on site. In any case, the operator shall have current, applicable, written documentation of training for the category of equipment being operated.
- Crane operators shall document a recent physical examination, including a vision test, prior to applying for a
  project crane operator license. (Note: The D.O.T. Physical forms meet the above requirements and may be used
  as a guideline.)
- In order to receive a project crane operator license, an applicant must be able to pass a written test that includes, at minimum, the following elements:
  - Crane Set-up
  - Reading Load Charts
  - Calculating capacities at a given radius
  - Calculating deductions for rigging, block, jib, etc.
  - Proper Crane Operation
  - Rigging and Rigging Inspection
  - Evaluating Site Conditions
  - Pre-Operations Inspection
- Potential candidates for crane operator shall be able to pass a "hands on" test that includes the following skills:
  - Perform Pre-Operation inspection
  - Set crane up for a lift
  - Inspect rigging
  - Operate crane and show ability to follow hand signals (i.e., swing boom, place hook, etc.)
  - Ability to read load chart and calculate load
  - Perform a test lift
- The "hands on" test shall be documented and results made available upon request.

### 5.17.10.2 Operating Procedures

- The operator shall not engage in any practice that may divert his or her attention while engaged in crane operations, and will never leave the controls when there is a load on the hook.
- The operator shall not operate the crane if physically or mentally unfit, or if taking prescription drugs which may affect judgment.
- The operator shall not respond to any signal that is unclear or is given by anyone other than the appointed signal person (with the exception of a stop signal given by anyone).
- The operator shall have final responsibility and control over the crane operations. When there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle the loads until safety has been assured. Any manager, supervisor or person attempting to bypass the crane operator's authority on this issue will be removed immediately from the site.
- The load shall be attached to the hook by means of slings or other approved devices, and no open hooks shall be used. Hooks shall have functional safety latches.
- A shackle shall be used to retain two or more choker eyes in the hook.
- Hooks shall not be changed, defaced or deformed in any manner. Hooks that have been exposed to excessive heat such as welding, burning, grinding, etc. will not be allowed on-site.
- The operator shall position the hook over the load in a manner to prevent load swing.
- The operator shall determine that the rope is properly seated in the drum and in the sheaves; the load line is not kinked; and multiple part lines are not twisted around each other.
- Shake out hooks will be used only for shaking out materials.

During hoisting, the operator shall not suddenly accelerate/decelerate a moving load; allow the load to contact any obstructions; swing loads over personnel; or allow side loading or load dragging.

• All load rigging equipment shall be appropriately rated. Ratings shall be displayed on the device.

# 5.17.10.3 Rigging Requirements

- Rigging will only be completed by competent individuals who have received training on proper rigging techniques. Evidence of such training must remain with riggers during working hours.
- All rigging equipment shall be inspected prior to each use. Damaged or defective slings shall be immediately removed from service and destroyed.
- "Shop-made" grabs, hooks, clamps or other lifting devices are prohibited.
- All rigging equipment shall have a safety factor of five.

# 5.17.10.4 Safe Operating Practices

- Slings shall not be shortened by knots, bolts or other makeshift devices.
- Wire rope slings shall be padded or softeners used to protect against damage due to sharp corners.
- Slings used in a basket hitch shall have the loads balanced to prevent slippage.
- Loads handled by slings shall be landed on cribbing or dunnage so that slings will not be pulled from under or crushed by the load.
- Slings subjected to shock loading shall be immediately removed from use and destroyed.
- Tag lines will be used with all lifting operations.

• Repair to rigging equipment is prohibited. It shall be removed from service and destroyed or sent to the manufacturer for repair.

### 5.17.10.5 Inspections and Recordkeeping

- A thorough written inspection of slings, ropes and chains in use shall be made on a regular basis, but not less frequently than six months.
- A record of inspections shall be maintained.

# 5.17.10.6 Work Platforms Suspended from Cranes

A permit is required prior to using a crane for lifting personnel in a suspended platform. The platform must be certified by a professional engineer. The permit will be issued by the contractor when it is determined that the use of the platform is the only feasible method of accomplishing the task. The safety checklist included with the permit will be utilized prior to hoisting personnel. A pre-lift meeting must take place prior to the lift and be documented. Fall protection must be in place according to regulatory and FCX Fall Protection standards. Personnel and materials cannot be lifted together.

### 5.18 Sanitation

### 5.18.1 Potable Water

- An adequate supply of potable water shall be provided by each contractor. Consideration must be given to
  factors such as temperature, altitude, physical exertion of the workers, and the number of workers consuming
  water.
- Portable containers shall be tightly closed and equipped with a tap. Water shall not be dipped from containers, and use of a common, shared drinking cup is prohibited.
- Any container used to distribute drinking water shall be clearly marked as to its contents and not used for other purposes.
- Single serving cups shall be supplied, along with a sanitary container for the unused cups and a receptacle with lid for disposing of the used cups.
- Water containers will be sanitized and inspected weekly.
- Toilet facilities shall be provided for employees according to the following criteria:
- At minimum, meet regulatory requirements.
- Adequate washing facilities shall be provided by the contractor when employees are engaged in the application of paints, coatings, herbicides, insecticides, or any other operations where contamination may be harmful to the employees.

# 5.18.2 Environmental

- Must comply with all relevant and applicable federal, state and local laws and permits, Corporate Environmental Policy, and applicable site Environmental Policies.
- Will properly label, accumulate and dispose of all waste materials generated from activities in accordance with site procedures or guidance. In no case may a contractor transport or dispose of a waste off-site. The contractor must coordinate all disposal activities with the Environmental Department.
- No waste transporters, disposers, recyclers or scavengers will be allowed on site without prior approval from the Environmental Department.
- No material is to be abandoned at the site. If material is found at the site, the contractors will be responsible for all expenses involved in collecting, managing, and disposing of the materials abandoned.

- In no case shall a new chemical product or material be used on site until a *Safety Data Sheet* (SDS) and *Product Approval Form* have been submitted and approved by the Environmental and Health/Safety Departments. When approved, it must be properly labeled and have the appropriate SDS. Un-used material must be removed by the contractor from the site when the job is complete.
- The Contractor shall not allow discharges to drains and/or sewers without prior written approval from the Environmental Department.
- Shall take reasonable steps to prevent any release or spills of hazardous materials.
- Shall immediately notify the Environmental Department, project engineer and/or area supervisor of any spills, releases or other environmental incidents.

All employees must be properly trained and competent to perform the assigned work and tasks, including the proper handling of materials and equipment, proper response to incidents involving its material and general information relating to the site's Environmental Policies. Training documentation must be provided to the Environmental Department prior to commencing work.

- Must obtain, prior to commencing work, all necessary environmental approvals or permits and provide copies of such permits/approvals to the Environmental Department.
- Must obtain approval from the Environmental Department prior to initiating any of the following:
  - O Installing a new tank
  - O Moving an existing tank
  - O Altering a tank
  - O Reusing an out-of-service tank
  - O Emptying a tank for temporary or permanent status
- Trash, rubbish and non-hazardous waste receptacles with lids (dumpsters) shall be placed around the site for collection of waste materials. Good housekeeping shall be maintained in an ongoing manner by the contractor. Accumulation of trash, debris, construction materials, waste, etc. is strictly prohibited.
- No persons shall be allowed to eat, drink or smoke where chemicals, hazardous material or waste material is
  present.

### 5.19 Motor Vehicles and Heavy Equipment

- Vehicles and equipment brought on-site shall be inspected, tested and certified to be in safe operating condition. The inspection, test, or certifying document must be available for review.
- All motor vehicles shall be equipped with the following equipment in good operable condition, including:
  - o Adequate brake system, emergency brake system and brake lights
  - Two headlights and two tail lights
  - o Horn
  - Seat belts (use is mandatory)
  - Good tires (more than 2/32")
  - Windshields, powered wipers and defrosters
  - Rearview mirror when applicable
  - Fuel caps
- A buggy whip and flag that meets site requirements for visibility for vehicles operating in the mine or any other areas as defined by site procedures
- Only authorized, trained, certified (per site requirements) drivers shall be allowed to operate heavy equipment.
- All cab glass shall be safety glass or equivalent that introduces no visible distortion.
- No employee shall use a motor vehicle or equipment having an obstructed view to the rear unless:
  - The vehicle has a functioning backup alarm audible above the surrounding noise level
  - The vehicle is backed up only when an observer signals that it is safe to do so
- No personnel shall be allowed to get on or off moving vehicles or equipment.
- Heavy machinery, equipment, or parts thereof which are suspended or held aloft by use of slings, hoists, or jacks, shall be substantially blocked or cribbed to prevent falling or shifting before employees are allowed to work under or between them. Bulldozer and scraper blades, end loader buckets, dump bodies, and similar equipment shall be either fully lowered or blocked when being repaired or when not in use. All controls shall be in neutral position, with motors stopped, key removed and unit tagged: "Do Not Operate", brakes set, and wheels chocked, unless work being performed requires otherwise.
- Engines shall be shut off during fueling or maintenance operations and when left unattended.
- Trip handles for tailgates of dump trucks and heavy equipment shall be arranged so that, in dumping, the operator will be clear.
- All vehicles shall be checked at the beginning of each shift to ensure that equipment and accessories are in safe operating condition and free of apparent damage that could cause failure while in use. The results of this inspection and corrective action will be documented and kept for duration of project or one year.
- No persons shall be allowed to ride in the bed of a truck unless seats, seatbelts, and roll-over protection are provided.
- No vehicle shall be driven at a speed greater than the posted speed limit for the property. Regard for weather, traffic, width of intersections, character of the roadway, type of motor vehicle, and other existing conditions may reduce this maximum speed limit.
- An accessible fire extinguisher of 5<sup>2</sup> feet of a Class B rating or higher shall be available to the operator of equipment and vehicles.

- Rollover protection (ROPS) as specified by federal, regional, local regulation is required for all applicable equipment operated on the project. Grandfather clauses will not be accepted. Equipment is required to have ROPS certification sticker or placard.
- Contractors are to use supplier or service roads whenever possible. Haul roads will be used only when no other means of access is available. Drivers/operators within the active mine area shall have current, site-specific driver training. When they must be used, haul trucks and all heavy equipment shall have the right-of way at all times.
- No vehicle or equipment shall cross over the top of power cables or pipes except at designated crossings where it has been protected from damage.
- When operating a vehicle in the vicinity of mine or heavy highway equipment, maintain a minimum safe following distance in accordance with site requirements.
- Anyone that must drive in the mine or hauling areas must have an "In Pit Driver's License" which can be obtained at the site.

# 5.20 Protection of Employees and the Public

All necessary precautions shall be taken to prevent injury to the public or damage to property of others. Precautions to be taken shall include, but are not limited to, the following:

- Work shall not be performed in any area occupied by Freeport-McMoRan or the public unless specifically allowed by Freeport-McMoRan.
- When it is necessary to maintain public use of work areas involving pedestrian ways and vehicular roadways, contractors shall protect the public with appropriate shields, signage, barricades, guardrails, adequate visibility and entrance/exit.
- Appropriate warnings and instructional safety signs shall be conspicuously posted. In addition, a signalman shall control the movement of motorized equipment in areas where the public might be endangered.
- A temporary fence shall be provided around the perimeter of aboveground operations and excavations adjacent to public areas. Perimeter fences shall be at least 6-feet high.
- Barricades shall be provided, where required, between work areas and walkways unless fences or guardrails, or sidewalk sheds, have been used. Barricades shall be secured to prevent accidental displacement and shall be maintained except where temporary removal is necessary to perform the work. During the period when a barricade is temporarily removed for the purpose of work, a watchman shall be positioned at each opening in the barricade.
- Temporary sidewalks shall be provided when a permanent sidewalk is obstructed by a contractor's operation.
- Warning lights shall be maintained from dusk to sunrise around excavations, barricades or obstructions in designated areas. Illumination shall be provided from dusk to sunrise for all temporary walkways in both owner-controlled and project areas.

# 5.21 Highway Work

All work on, or adjacent to, existing public and jobsite roadways shall be performed in conformance to site requirements and applicable jurisdiction requirements. Refer to Australian Standard (AS) 1742.3-2009 Manual of Uniform Traffic Control or the current U.S. Federal Highway Administration Manual on Uniform Traffic Control Devices for guidelines.

### 5.22 Demolition

Prior to commencing any demolition activities, an engineering survey shall be conducted by a qualified person.

### 5.22.1 Utilities

All utilities and process product lines shall be identified and located, as appropriate, disconnected and locked out so that workers will not be injured by electrical energy, natural gas or other energy sources.

### 5.22.2 Processes

All processes normally operating within the structure to be demolished shall be shut down, bled or evacuated, all process chemicals properly disposed of, and lines thoroughly purged. Lines, vessels, tanks, etc. shall be tested to verify that emptying and purging have effectively removed materials of concern.

### 5.22.3 Environmental Exposures

- Asbestos and other hazardous materials shall be identified and removed by certified contractors in accordance with state, federal or local regulations. Employees shall be properly protected from the exposure during and subsequent to abatement work. Such materials will be contained so that environmental contamination does not occur.
- Past operations may have used materials that contain, or are contaminated with, arsenic, lead or other toxic materials. These materials must be identified and removed in the proper manner by certified contractors.

### 5.22.4 Dust Control

Whenever demolition operations are expected to produce dust, water or other environmentally acceptable dust suppressant materials will be used to control that dust.

#### 5.23 Plant Interface

In areas where contractor's work must interface with current operations, the owner's operations supervisor will be contacted prior to commencing work and daily thereafter. All work will be planned and coordinated with the operational supervision at every step of the interface activity. Contractor personnel shall abide by all health and safety procedures while within the area. Activities on the part of either the owner or contractor which may result in hazardous or harmful conditions or activities shall be communicated daily when they occur.

#### 5.24 Blasting

It is expected that all federal, regional, local requirements shall be met whenever blasting is required. All contractors who will be blasting during the course of the contract must review and adhere to the Blasting guidelines and controls located in the Surface Blasting Policy in addition to those required by regulatory agencies. The contractor will provide Freeport-McMoRan with a copy of the blasting permit for the operations.

In the absence of mandated requirements, refer to 1) manufacturer's recommendation; 2) U.S. Department of Alcohol, Tobacco, and Firearms (ATF); or 3) the local blasting expert. The contractor must submit a security plan for the control of explosives and blasting for review and approval of the Project Manager.

#### 5.25 Mobile Crushers

If a mobile crusher is used on the project, the contract company must obtain a permit from the appropriate regulatory agency prior to assembling the unit. Where applicable, any other registrations or certifications (such as a Mine Identification Number) shall be provided to the Project Manager. Copies of the permit, registry, certifications, etc. must be provided to Freeport-McMoRan prior to commencement of work.

# 6.0 Hazard Communication

### 6.1 Hazard Substances Inventory

- All hazardous substances, including chemicals require prior approval from the Health and Safety and Environmental Department before being brought on site.
- The contractor shall provide a list of all hazardous substances proposed for use for the contract along with the corresponding SDS for each; the anticipated site quantity; and the location. This shall be made available to Freeport-McMoRan for approval purposes.
- The list and SDSs shall be updated on all ongoing basis -- substances previously not included in the initial submittal are subject to site approval and must undergo review before being brought onto the property.
- Care shall be taken to select and use materials which can successfully accomplish the required work with minimal health or environmental impact--for example, using non-silica containing blast grit for paint removal
- Unless specifically directed otherwise in writing, the contractor shall remove all hazardous substances from the site within 3 days of completion of the work involving the substances or within 3 days of completion of the contract, whichever occurs first.

# 6.2 Safety Data Sheets (SDS)

In addition to maintaining the hazardous material list, contractors must maintain the most current material safety data sheets provided by manufacturers and distributors. Should the contractor not receive an SDS from the manufacturer or distributor, one must be requested and obtained. Copies are to be available at the work site for review by any employee, regulator or Freeport-McMoRan representative. Copy of SDS shall be provided to Freeport-McMoRan Health and Safety Department upon request.

# 6.3 Container Labels

Contractors must ensure that existing labels on incoming containers are not removed or defaced and that such containers are clearly marked as hazardous.

Each container shall be labeled with the identity of the chemical, the hazard warnings appropriate for employee protection and the name and address of the manufacturer. Labels shall be legible, in English (plus any other language required), and prominently displayed.

# 6.4 Written Hazard Communication Program

Each contractor shall establish a written, comprehensive hazard communication program that includes guidelines for obtaining and maintaining SDS, the hazardous materials inventory and proper container labeling. It shall include a description of the employee training to be given during orientation training and meet all regulatory requirements.

### 6.5 Employee Training

Contractors shall establish a training and information program for personnel exposed to hazardous chemicals in their work area at the time of initial assignment, whenever a new hazard is introduced into their work area and on an annual basis thereafter. The training shall include discussion on the use and application of the specific product which may affect the hazards of exposure to the worker. The discussion topic shall include, at least:

- The existence of this hazard communication standard and the requirements of the standard
- The components of the hazard communication program in the workplace
- Operations in the work area where hazardous chemicals are present

- Location and use of the written hazard evaluation procedures, communications program, list of hazardous chemicals and the required material safety data sheets
- Health effects and symptoms of over-exposure associated with the chemicals used
- Safe operating procedures to prevent over-exposure
- Explanation of labeling system
- Access to SDSs
- Discussion of relevant or important sections of the SDS

# 7.0 Confined Space Entry

# 7.1 Responsibilities

### 7.1.1 Contractor's Site Safety Officer and Qualified person

The Contractor must have a written confined space entry program available on-site which meets all applicable regulatory and site-specific requirements. The contractor's site safety professional is responsible for overseeing the technical aspects of this procedure. The safety professional or Qualified Person:

- Classifies each confined space relative to the need for an entry permit
- Trains supervisors in their responsibilities and duties in connection with the confined space entry program
- Reviews and approves the selection of all personal protective equipment and instrumentation
- Audits confined space entry program execution
- Prior to entry, evaluates each confined space for existing or potential hazards
- Monitors the atmosphere of the confined space with an acceptable analyzer, and ensures that instruments are properly maintained and calibrated
- Identifies any tasks to be performed within a confined space that could create a hazardous atmosphere
- Provides an entry permit
- Reviews provisions of the entry permit with employees entering the confined space prior to entry
- Instructs employees and directs the execution of the confined space entry according to established procedures
- Assures that proper personal protection equipment is provided and used as required
- Designates a trained attendant for each confined space
- Trains all personnel involved in confined space entry and emergency rescue procedures, ensuring that the training is specific to the configuration, hazards, attributes, and controls of each type or class of confined space (by type or class, it is meant to differentiate between dissimilar spaces such as pits, vaults, vessels, chambers, tanks, etc.)
- When the entry has been completed, verifies that all personnel and equipment have been removed from the confined space and signifies that the space may be prepared for return to service
- Has available rescue equipment in the event of an emergency
- Stops work at any time he or she suspects the permit is being violated, or conditions have changed inside the confined space
- Ensure that the Contactor's Confined Space Entry Program complies with applicable federal, regional, or local regulations and the provisions of the Freeport-McMoRan FCX Confined Space Policy.

Refer to Freeport-McMoRan FCX – Confined Space Policy.

# 8.0 Hazardous Energy Control

### 8.1 Purpose

These key elements are required for hazardous energy control where the unexpected energizing and unrestricted release of hazardous energy could cause an incident. These elements shall be used by employees to take personal responsibility for consequence thinking, isolating, locking out and trying out / testing out equipment (LOTOTO). The intent is **NOT TO PROCEED** with work until action has been taken to eliminate or control all hazard / energy exposures to the extent that an incident **WILL NOT** occur. A written Hazardous Energy Control Procedure encompassing the following elements is required of contractors and shall remain on site for access and review by employees and Freeport-McMoRan personnel.

### 8.2 Scope

These key elements apply to all forms of energy, including, but not limited to: electrical, pneumatic, hydraulic, mechanical, chemical, potential energy and human behaviors. These key elements apply to all Contract employees of Freeport-McMoRan.

### 8.3 Definitions

Actual site definitions may be expanded to fit site-specific requirements, but must comply with MSHA, OSHA, NFPA 70E, NEC, Sernageomin and other International Standards that may apply.

**Affected Employee** – An employee whose job requires him or her to operate or use a piece of equipment on which service or maintenance is to be performed under lockout/tagout/tryout, or whose job requires them to work in an area in which such servicing or maintenance is being performed.

**Authorized Employee** – An employee who places a personal lock on equipment isolation devices in order to perform servicing or maintenance on the equipment. An Affected Employee becomes an Authorized Employee when that employee's duties include performing maintenance or service.

**Qualified Employee** – An employee trained in and familiar with the operation and safety hazards of the equipment being worked on. By extension, a Qualified Employee also:

Is capable of recognizing hazards associated with the work

Is capable of avoiding hazards associated with the work

Is capable of and approved to perform energy isolation and dissipation

Is capable of and approved to perform energy measurement/testing and/or tryout

**Energy Control Coordinator (ECC)** – An Authorized Employee in charge of a lockout/tagout/tryout when multiple energy sources and/or multiple employees utilize a lock-box. This person must have a working knowledge of the equipment being isolated and will be assigned by supervision for each specific job. The ECC will request the assistance of a Qualified Employee to isolate the energy source(s). An ECC may be a Qualified Employee.

**ECC Lock** – Lock that is applied (by Qualified Employee) to isolated energy sources by the ECC to prevent energization. Each ECC Lock will have a single key and the ECC Lock will never be used to protect a person.

**ECC Lock Identification Tag** – Identification tag will be secured to the ECC lock and withstand a 50-pound pulling force. The identification tag will contain a suitable warning notice and a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag. The tag will be identified as an ECC tag and the identity of the ECC applying the tag.

**Energy Source** – Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, human behavior or other energy.

**Energized** – Connected to an energy source (electric, hydraulic, pneumatic, chemical, mechanical, and potential) or containing residual or stored energy.

**Energy Isolating Device** – A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: a manually operated circuit breaker, a disconnect switch, a manually operated switch by which conductors of a circuit can be disconnected from all ungrounded supply conductors, a line valve, a block, or any similar device used to isolate or block energy. Push buttons, selector switches, and other control type circuitry devices are not energy isolating devices.

Hazardous Energy Inventory Analysis (HEIA) - An analysis identifying all hazardous energy sources.

**Job Safety Analysis (JSA)** – A written document analyzing the work flow, safety requirements and hazards associated with a specific job.

**Lockout** – The placement of a lockout/tagout device on an energy isolating device ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

**Lockout Device** - A device that uses a positive means such as a lock, lock box, chain, cable, multi-lock hasp, etc. to hold an energy isolating device in the safe position and prevent the release of an energy source.

**Lockout Identification Tags** – Identification tags that will be secure to the lockout device and withstand a 50-pound pulling force. They also must withstand the environmental conditions in the workplace. The identification tags or information on the lock will contain a suitable warning notice and a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag. The tag will have the identity of the employee applying the lock.

**Normal Operations** – The utilization of a piece of equipment to perform its intended function.

**Out of Service Locks/Tags** – Unique/distinct, keyed locks (different from those used for LOTOTO or any other purposes at the site) which are affixed to any equipment/device which secures it in the closed or off position that prevents activation, operation, or function.

The lock shall be accompanied by a durable tag which indicates:

-the name of the individual applying the lock and their department

-the words "Out of Service"

The date the lock was applied

The intent of the lock/tag is to prevent activation of the equipment, and to covey to both upstream and downstream processes that the components(s) is (are) nonfunctional.

Out of Service locks/tags may be affixed for an indefinite period of time; however they must be inspected annually to verify they are in place and functional/legible.

**Personal Lock** – An individually keyed lock or set of locks used for personal protection, for which there is only one key. When these locks are placed, the key must be under the exclusive control of the authorized employee performing the service or maintenance. These locks will be standardized by color, shape or size at each site and not used for any other purpose.

**Pre Job Safety Discussion** – A safety communications process between Authorized and Affected Employees prior to beginning work.

**Tryout/Test out** – Verification that all energy sources have been properly isolated, dissipated or controlled.

# 9.0 Emergency Evacuation

### 9.1 Purpose

All contractors have responsibility of developing and maintaining a current Emergency Response/Evacuation Plan for their employees on site. An emergency or disaster is defined for the purpose of this plan as an event or condition, which has the potential of causing bodily injury or harm to employees and/or significant damage to the plant and/or infrastructure.

### 9.2 Responsibilities

Contractors will develop a site-specific emergency response plan in coordination with the site-specific plans and procedures to include evacuation routes, rally point locations, emergency responders, communication plans, emergency alarms/signals and employee training.

### 9.3 Procedure

Upon declaration of a project emergency, the alarm and assembly procedures will be implemented immediately. It shall be understood and expected that the response shall include actions to properly stop or shut down work in a manner that does not result in injury to workers or create the potential to worsen or escalate the emergency.

### 9.3.1 Alarm

In the event of an emergency, the plant alarm will sound or May Day sounded over the radio. All Project personnel shall proceed to pre-designated assembly areas.

- Following the announcement of an alarm or May Day, radio traffic will be confined to emergency communications only.
- Telephone lines will be used only by those authorized for the purpose of dealing with the emergency.

### 9.3.2 Assembly

Upon receiving instructions to assemble, all craft employees will secure their work areas and walk in a calm, orderly manner to the assembly area.

Securing a work area includes, but is not limited to, the following:

- All motorized equipment, welding equipment and burning equipment will be shut down.
- All gas, diesel, propane, electrical, open flame and other powered equipment will be shut down immediately. All work permits will become void.
- All electrically powered tools will be disconnected from their power source.
- Employees assigned to motorized equipment/vehicles will park off the site roads clear of fire-protection devices, i.e., hose houses, hydrants, and PI valves.
- Use or dispensing of flammable or combustible liquids and gases shall cease and containers of same shall be closed.
- Use or dispensing of corrosive liquids or solids shall cease and containers of same shall be closed.
- **NOTE:** No vehicles other than emergency vehicles will be driven on the site in an emergency condition without the permission of the Site Security.
- Contractor supervision will ensure all employees working in remote areas and in confined spaces have been alerted and have proceeded to the assembly area.
   No attempt will be made to search the emergency for missing employees until:

- A search is authorized by the Site Incident Commander or Security Personnel at the scene
- It is determined that a search and rescue party can be reasonably protected and equipped during such a search
- Project emergency medical personnel will assemble in the First Aid Room, ready for any duties that might be assigned.

# 9.4 Emergency Evacuation Procedures

### 9.4.1 Common Types of Emergency

Common types of emergency include but are not limited to: chemical spill or release, fire or explosion, weather or employee threats.

### 9.4.2 Emergency System Testing/Mock Drills

- Emergency evacuation plans must be posted in all contractor controlled/inhabited buildings.
- Emergency evacuation procedures must be tested at least every 6 months. I If the plant emergency alarm is sounded, all work must cease immediately. Employees are to proceed in an orderly fashion to the designated assembly area. Once clear of the area, employees will not be allowed to return to the area for any reason until the emergency situation is controlled.
- Employees should stay in the group they were working with so an accurate head count can be obtained.
- Supervision will immediately report head count to the site leadership team. Any missing individuals will be identified immediately to Freeport-McMoRan.
- Supervisors will remain with their crews and do the following:
  - Monitor for signs of symptoms or exposure
  - Provide or request assistance where needed
  - Be prepared to direct employees with instructions given by senior management
  - Do not return to the area until the all-clear signal is sounded

# 10.0 Drug and Alcohol Testing/Programs

### 10.1 Policy

The safety of all personnel and quality of work is of paramount concern. The following activities will not be tolerated and will serve as grounds for removal from Freeport-McMoRan property and placement on the No Trespass List for all Freeport-McMoRan operations:

- Being under the influence of drugs or alcohol while on the jobsite
- Use of illegal drugs or alcohol while on the jobsite
- Possession of illegal drugs or alcohol on the jobsite
- Distribution of drugs or alcohol on the jobsite
- Presence of illegal drugs or alcohol in vehicles, offices or other work locations

# 10.2 Substance Abuse Prevention Program

It is the position and intent of Freeport-McMoRan to maintain a workplace free from the use and influence of drugs and alcohol—this includes all stakeholders in a safe workplace, including contractors. Contractors with drug and alcohol programs shall have a written drug and alcohol program consistent with federal, state/regional, and local regulations. It shall be made available to Freeport-McMoRan upon request. Contractors without drug and alcohol programs shall notify Freeport-McMoRan Project Manager, in writing of their lack of a Drug and Alcohol Program.

For small contractors (fewer than 10 employees) or contractors without a Program, the contractor shall work with the Project Manager and site resources (Health and Safety and Human Resources) to identify and coordinate the resources (collection services, labs, MRO, consortium, etc.) to accomplish the objectives of the Program, such as, but not limited to initial testing, random tests, for cause testing, etc. Aspects of the Program such as costs associated with those tests, management of the personnel tested, consequences of positive tests results, schedules for random testing, etc. are and remain the responsibility of the contractor.

Contractor personnel shall be subject to an initial test prior to assignment at any

Freeport site. Contractor personnel assigned to a Freeport site shall be periodically included in the Contractor managed, unannounced random testing schedule with a probability of 20% (or one chance in five) of their Freeport assigned work force being selected for testing in a calendar year.

# 10.2.1 Program Application

This program shall apply to contractors (including subcontractors), all regular full-time, part-time, casual and contract employees, and suppliers and vendors.

# 10.3 General Conditions

# 10.3.1 Definitions

**Drugs** – Non-prescribed narcotics and illegal drugs, marijuana, related drug paraphernalia, and look-alike (simulated) drugs.

**Company Premises** – For the purpose of this policy, the term company's premises includes property, offices, facilities, land, buildings, structures, parking lots, access roads, fixtures, installations, automobiles, vessels, trucks and all other vehicles and equipment.

### 10.3.2 Prescription Drugs

The contractor shall acknowledge and address the likelihood that employees may report to work while taking medications prescribed by a physician. Employees should discuss the potential side effects of medications with the physician. Persons are not permitted to take U.S. Department of Justice Drug Enforcement Agency controlled substances while actively working in safety sensitive positions. Exceptions to this policy for non-sedating controlled substances or other extenuating circumstances will be reviewed on an individual basis.

Employees shall not report to work while under the influence of any drug, intoxicant, or other substance that will in any way adversely affect their working ability, including their alertness, coordination or safety.

The contractor shall provide training to their supervisors to educate them regarding signs and symptoms of substance abuse; the actions to take where there is reasonable suspicion that the worker may be affected by drug and/or alcohol use; and have the resources available to conduct drug and/or alcohol testing for cause or reasonable suspicion.

# 10.3.3 Drug Screening Test

In US operations where allowed by local, state and/or country laws, all employees or agents of contractors working at a site will be required to participate in the site drug and alcohol surveillance program, a NIDA-certified laboratory must be used. For any other operations, a certified lab shall be used where they are required by local regulators. Drug and alcohol testing shall occur at the time of employment under the provisions of the contractor drug and alcohol program. In those instances where the worker leaves the employ of the contractor, then subsequently returns, they shall be retested as a part of the recall/rehire process. The contractor must maintain an ongoing drug and alcohol program which includes random testing, for cause testing, post-accident testing, etc. A lapse or deactivation of the program will require that all employees assigned to work at a Freeport-McMoRan site or project be tested prior to being on site. The drug screening test shall require each employee to produce his or her sample (biological sample being one or more of the following: urine, blood, hair, breath as applicable and relevant). Freeport-McMoRan will not bear the cost and expenses associated with drug screening.

In accordance with the Freeport-McMoRan Substance Abuse Prevention Program, the urine sample will be tested, at a minimum, for the following substances and any other drugs deemed appropriate for the period of testing:

Cocaine Metabolite	Amphetamines
Opiates	Alcohol
Phencyclidine	Cannabinoids

Employees producing positive test results will NOT be allowed to work on a Freeport-McMoRan property for a period of 3 years from the date of the positive test result.

Contractors who have programs for rehabilitation or "multiple strikes" must notify Freeport-McMoRan immediately upon learning of the positive results and remove that employee from the property and ensure they are not assigned to another Freeport-McMoRan location during the three year suspense period.

All test results will be handled with the utmost confidentiality. Access will be provided only on a need-to-know basis. All samples will be conveyed maintaining a documented chain of custody at all times.

In addition to drug screening testing conducted prior to employee's commencement of work at the site, the contractor will maintain an ongoing D&A program designed to ensure a drug-free workplace. Such policies should include random drug tests and post-incident testing, as well as "for cause" testing.

### 10.4 Enforcement

Contractors will not tolerate the use, possession or distribution of alcoholic beverages or drugs on the property, nor the presence of any person under the influence of drugs or alcohol. Individuals found in violation of this policy will immediately be escorted off the property. Accordingly, persons who exhibit behaviors which cause there to be reasonable suspicion that they may be under the influence of drugs and/or alcohol will be directed to leave the owner's property and not return until the person's employer can certify to the owner that the employee has passed a timely drug test and/or noninvasive test for alcohol and, in fact, was not under the influence of drugs or alcohol. Individuals testing positive or who tamper with or alter a drug and/or alcohol sample or who refuse to submit to testing in a timely period will forfeit their right to work at a Freeport-McMoRan site.

On a quarterly basis, the Contractor shall provide information on their Drug and Alcohol testing processes and program which details:

- The number of persons tested each year, aggregate for the quarter being reported
- The number of positive results determined each year, aggregate for the quarter being reported
- The percentage of persons selected to be randomly tested along with the frequency of random testing
- The name of the consortium they participate in (if applicable)
- The name of the MRO
- A basic program description which describes the processes in place and who manages the program

**NOTE:** The reports shall be provided to the Project Manager according to the above schedule. The Contractor shall not submit any information which contains names of individuals who have been or are subject to testing, nor any personal information such as social security numbers.

# Appendices

# Appendix A: OSHA-Regulated Sites

Most construction safety standards will be under CFR 29, part 1926. Additional safety standards may be covered under CFR 29, Part 1910 - General Industry Safety Standards. All contractors are required to comply with all applicable Health and Safety Standards under both 1910 & 1926.

OSHA requires that all employers initiate and maintain effective safety programs. 1926 (6) (1) See following example.

Safety programs are to provide for frequent and regular inspections of Work Areas, materials, and equipment.

Deficiencies or problems will be noted and corrected prior to operation. Documentation of inspections will be kept for the duration of the project.

Each employer must post an OSHA Job Safety and Health Protection poster in a prominent location at the project site. An OSHA-prescribed Log and Summary of Occupational Injuries and Illnesses must be maintained by each employer.

All fatality cases and incidents in which three or more employees are hospitalized must be reported to OSHA area office within eight hours either orally or in person and the following information must be reported:

- Establishment name o Location of incident o Time of incident o Number of fatalities or hospitalized employees
- Contact person
- Contact phone number
- Brief description of incident

### Training

The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazardous or other exposure to illness or injury.

Records of training, permits, safety meetings, etc. shall be maintained for a minimum of one year, unless there is a regulatory requirement for them to be retained for a longer period of time.

Record-Keeping, Permits and Documentation Requirements for Construction OSHA 300 Logs – 5 years plus current

OSHA 301 or equivalent Annual crane inspection records Crane load chart Personnel platform – engineering drawings and proof test record Custom made rigging devices – engineering drawings and proof test record Concrete test records Concrete form diagrams Insurance company audit reports Minutes of safety meetings Written safety program

Incident investigation records

List of chemicals on site Written hazard communication program Written respirator program, and respirator fit-test records Records of sampling for asbestos, silica, lead, arsenic, cadmium or other contaminants **OSHA** poster Posted statement on access to medical records Material Safety Data Sheets Confined space entry program Lockout – Tagout program Record of hydrostatic testing of fire extinguishers Evidence of competency for Blasters **Explosive inventory** Assured equipment grounding program Record of air quality testing performed in tunnels\confined spaces Hot work permit program Emergency action plan First aid kit inspection records Ladder inspection records Fall protection equipment inspection records Required training records Excavation Qualified person and Safe Excavation processes and procedures per 29 CFR 1926.651 Plans for excavations reaching or exceeding 20 feet or more in depth

# Employer's Safety and Health Program

### **Management's Commitment and Leadership**

Policy statement: Goals established, issued and communicated to employees

Program revised annually

Participation in safety meetings, inspections; agenda items in meetings.

Adequate commitment of resources

Safety rules and procedures incorporated into site operations

Management observation of safety rules

### Assignment of Responsibility

Safety designee on site, knowledgeable and accountable

Supervisors' safety and health responsibilities understood Employees adhere to safety rules Identification and Control of Hazards Periodic site-safety inspection program involves supervisors Preventive controls in place (PPE, maintenance, engineering controls) Action taken to address hazards Safety committee established, where appropriate Technical references available Enforcement procedures by management

#### **Training and Education**

Supervisors receive basic training Specialized training taken where needed

Employee training program exists, is ongoing and is effective

### Recordkeeping and Hazard Analysis

Records of employees' illnesses/injuries maintained and posted

Supervisors perform incident investigations, determine causes and propose corrective action Injuries, near misses and illnesses are evaluated for trends/ similar causes; corrective action initiated.

#### First Aid and Medical Assistance

First-aid supplies and medical services available

Employees informed of medical results

#### Reporting

All incidents (regardless of severity) shall be immediately reported to the Freeport-McMoRan site Safety Department

# Appendix B: MSHA-Regulated Sites

Certain regulations are highlighted in this section. However, the contractor will be required to follow all the applicable regulations set forth in the Code of Federal Regulations (30 CFR).

# 30 CFR Part 41: Notification of Legal Identity

Contractors conducting mining, milling and/or crushing operations shall notify MSHA of the operation and be assigned a legal identity number. Correspondence shall include the site Mine ID number with the contractor ID number as an added extension. Reporting and filing shall be kept separate for each site that the contractor works. The contract company shall also make notification to the State Mine Office where applicable to obtain a State Mine ID number.

30 CFR Part 43: Procedures for processing hazardous conditions complaints

30 CFR Part 45: Independent Contractors General Enforcement policy for Independent Contractors

Definition of Independent Contractor

MSHA identification of independent contractors

Independent contractor register

### 30 CFR Part 48: Training and Retraining of "Miners"

All training is required to be completed prior to an employee commencing work activities Newly Employed Inexperienced Miner

Newly Employed Experienced Miner

Hazard Training

Site-Specific Training

Task Training

Annual Refresher Training

Supervisor and employee first-aid training

All training shall be documented on a 5000-23 form

All contractors should submit a training plan for approval by MSHA and have an approved instructor for on-site training. Cooperative training may be utilized for Surface Operations. This includes two days of classroom training. Companies should realize, however, that new miner training includes an additional day of training (24 hours). The third day of training must be completed on the mine site prior to work assignment and a 5000-23 must be signed by an MSHA-approved instructor.

For underground operations, this includes 30 hours of classroom training and at least 8 hours on the mine site.

# 30 CFR Part 56 and 57: Metal/Non-Metal Safety and Health Regulations

All contractors shall comply with all regulations mentioned above as well as any and all regulations set forth in the CFR 30. At any time, Freeport-McMoRan representatives may conduct health and safety audits to ensure compliance and or note improvements.

Freeport-McMoRan site safety professionals may assist with questions concerning federal or state regulation compliance.

### Reporting

All incidents (regardless of severity) shall be immediately reported to the Freeport-McMoRan Health & Safety Department.

### 30 CFR Part 50: Accident, Injuries, Illnesses, Employment, and Coal Production in Mines

The following sections of the Act should be reviewed and understood by contractors working on an MSHA regulated site. Citations for Failure to Report Under Part 50

- Part 50 Audit After a Fatal Accident
- Part 50 Notification, Investigation, Reporting and Recordkeeping Requirements
- Reporting and Investigating Blocked Passage through the Tailgate Side of Longwall
- Mining Operations in Coal Mines
- Criteria Differences Between Medical Treatment and First Aid

### 30 CFR Part 50.10: Immediate Notification

If specific types of incidents occur, an operator shall immediately (within 15 minutes) contact the MSHA District or Subdistrict Office having jurisdiction over its mine. Additionally, many states also require such notification. It is the responsibility of the contractor to identify and comply with both state and federal notification requirements.

Immediate notifications must be made to Freeport-McMoRan personnel BEFORE notification to a government agency. If an operator cannot contact the appropriate MSHA District or Sub-district Office, it shall immediately contact MSHA Headquarters Office in Arlington, Va., by telephone at (800) 746-1553.

### 30 CFR Part 50.2(h): Accidents Requiring Immediate Notification

- A death of an individual at a mine
- An injury which has a reasonable potential to cause death
- An entrapment of an individual for more than 30 minutes
- An unplanned inundation of a mine by a liquid or gas
- An unplanned ignition or explosion of gas or dust
- An unplanned mine fire not extinguished within 30 minutes
- An unplanned ignition or explosion of a blasting agent or an explosive
- An unplanned roof fall at or above the anchorage zone in active workings where roof bolts are in use; or an unplanned roof or rib fall in active workings that impairs ventilation or impedes passage
- A coal or rock outburst that causes withdrawal of miners or which disrupts regular mining activity for more than an hour
- An unstable condition at an impoundment, refuse pile, or culm bank which requires emergency action in order to prevent failure, or which causes individuals to evacuate an area; or failure of an impoundment, refuse pile or culm bank
- Damage to hoisting equipment in a shaft or slope which endangers an individual or which interferes with use of the equipment for more than 30 minutes
- An event at a mine which causes death or bodily injury to an individual not at the mine at the time the event occurs

30 CFR Part 50.20: Preparation and submission of MSHA Report form 7000-1 – Mine Accident, Injury, and Illness Report All incidents meeting the reportable criteria shall be reported using the 7000-1 form. If the incident is reportable but does not meet the immediate notification criteria, the form shall be submitted within 10 days of notification of the injury. The incident reflected on the 7000-1 form must be summarized quarterly on the MSHA 7000-2 form.

### **Incident Investigation**

Any accident or incident resulting in a fatality, lost time injury, medical treatment injury, damage to property or equipment, or a serious near-miss is to be thoroughly investigated by the contractor as soon as the situation is under control.

Results of the investigation, including signed witness statements, photographs, first report of injury forms, complete analysis, sketches, drawings (used to pinpoint distance and location, etc.) shall be documented and signed. A complete copy shall be available for review by Freeport-McMoRan, and where required by regulatory agencies.

In addition, the employer must complete the Arizona State Mine Inspectors Accident Report (if operating in Arizona) for each lost-time incident.

Any contractors with questions concerning training requirements should not hesitate to call the owner's site Safety Department.

All courses and related training material must be adapted to the specific operation and practice where a contractor's employees work, and must be conducted in the manner as described in the contractor's approved training plan in accordance with CFR 30 Part 4.

# **Appendix C: Scaffolding Checklist**

Job Location:

Date assembled/moved/changed/dismantled: \_\_\_\_\_ Qualified Person: \_\_\_\_ Scaffold Designation: \_\_\_\_\_ Qualified Person on site and oversaw: Set-up of Scaffold System □Yes □No □NA Modification of Scaffold System □Yes □No □NA Dismantling of Scaffold System □Yes □No □NA Periodic Inspection of Scaffold System □Yes □No □NA Scaffold is level, plumb, and solid □No □Yes □NA Scaffold Grade Planking is used □Yes □No □NA Planking has proper overlap □No □NA □Yes □Yes □No □NA Scaffold legs are sound and capable of carrying the maximum intended load Guardrails, mid-rails, toe-boards (as required) are properly installed on open sides □Yes □No  $\Box NA$ Access ladder or equivalent safe access provided □Yes □No □NA Have conditions caused by weather conditions been effectively addressed □Yes □No □NA Has the scaffold been used by other groups (workers or trades) □No □NA □Yes Is a tag line provided during hoisting of materials onto the scaffold □Yes □No □NA Has the tag line been rated for capacity □Yes □No □NA Scaffold system is assembled with appropriate parts □Yes □No □NA

Damaged scaffold members are to be immediately repaired or taken out of service and marked "DO NOT USE"

Comments:

Supervisor/Signature: \_\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/
## Appendix D: Documents Contained in Part Two of Contractor Safety Manual (online)

The following documents are considered an integral part of the Contractor Safety Manual and this manual is not complete without them. They can be found on the DOHS SharePoint page on FM Web and also available from the FM Project Manager. Each of the documents listed here is a stand- alone FCX policy and must be available on site and available for reference and review during the course of the project.

- Bus Safety Policy
- Confined Space policy
- Working at Heights Policy
- Hot Work Guidelines
- Fatigue Management
- Surface Blasting
- HDPE Pipe Safety
- Supervisor Incident Investigation Report
- RCA