



FREEPORT-McMoRAN

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Morenci Environmental Services

**Environmental Awareness &
New Miner Orientation Training**



fcx.com

FCX
LISTED
NYSE

ICMM
International Council
on Mining & Metals

Morenci Environmental Services

SE Arizona Operations

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*“We do not inherit
the earth from our
ancestors, we
borrow it from our
children.”*

~Native American Proverb



What we do . . .

- **Provide guidance, communication, commitment, training and education to support the Morenci workforce.**
- **Assist divisions/individuals with environmental concerns and issues.**
- **Ensure environmental compliance with applicable rules & regulations.**
- **Preserve and promote Morenci Operations by protecting and improving our environment.**

■ *Introduction*

Morenci Environmental Services

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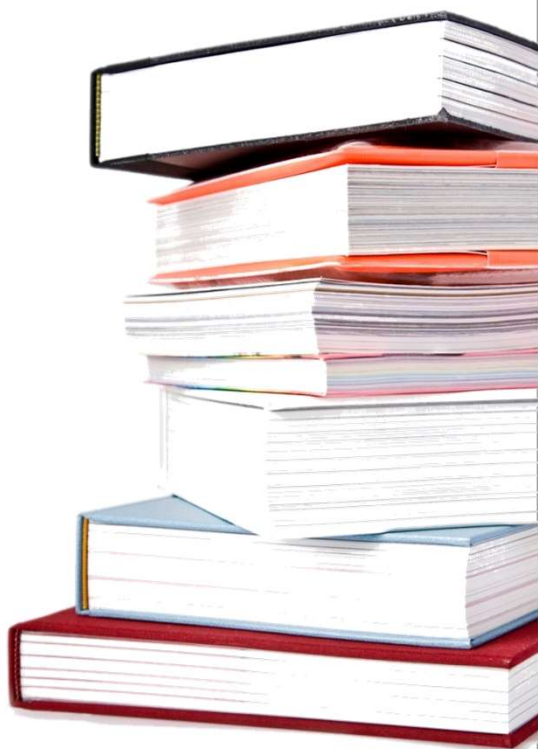
Where we are located . . .



Hwy 191 & Palo Verde
(928) 865-6000

■ *Introduction*

Roles & Responsibilities



Our interaction with the environment is governed by regulations, as well as our roles and responsibilities as FMI employees.

It is important that you understand how your specific job & activities that may impact the environment.

If you knowingly fail to follow the rules and regulations set forth by Freeport you will be held accountable for your actions

■ *Introduction*

Environmental Policy

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Policy Key Points

- **Commit to protecting the environment**
- **Continue to improve environmental performance**
- **Comply with environmental laws and regulations**
- **Establish environmental objectives**

■ *Introduction*

Management - ISO 14001

Environmental Management System
International Standards specifies requirements to enable an organization to develop & implement an Environmental Management System.

Management program is designed to include all legal requirements, permits, policies, and industry practices.

Defines roles and responsibilities.

Continuous improvement is an important part of the program and includes audits and other measurements.

ISO 14001 is a mandatory program for all Freeport McMoRan facilities.

ABS Quality Evaluations

Certificate Of Conformance

This is to certify that the Environment Management System of:

Freeport McMoRan Morenci Inc.

4521 US Highway 191
Morenci, AZ 85540
U.S.A.

has been assessed by ABS Quality Evaluations, Inc. and found to be in conformance with the requirements set forth by:

ISO 14001:2015

The Environment Management System is applicable to:

EXTRACTION, PROCESSING AND PRODUCTION OF COPPER PRODUCTS INCLUDING MINING, CRUSHING AND CONVEYING, MILLING, LEACHING, SOLUTION EXTRACTION, ELECTRO-WINNING AND CONCENTRATION OPERATIONS

This certificate may be found on the ABS QE Website (www.abs-qe.com). For certificates issued in the People's Republic of China information may also be verified on the CNCA website (www.cnca.gov.cn).

Certificate No: 58759
Certification Date: 02 January 2007
Effective Date: 21 December 2018
Expiration Date: 18 January 2022
Issue Date: 21 December 2018

Alex Weissberg
Alex Weissberg, President



Validity of this certificate is based on the successful completion of the periodic surveillance audits of the management system defined by the above scope and is contingent upon prompt, written notification to ABS Quality Evaluations, Inc. of significant changes to the management system or components thereof.

ABS Quality Evaluations, Inc. 1701 City Plaza Drive, Spring, TX 77389, U.S.A.

Validity of this certificate may be confirmed at www.abs-qe.com/cert_validation.

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■ *Management – ISO 14001*

Management – ISO 14001



Environmental Risks are elements of an organization's activities, products or services that can interact with the environment.

We look at an activity, identify the environmental aspects of the activity, and then recognize the environmental impact of the activity.

We then develop a Best Management Practice (BMP) to manage, reduce or eliminate the environmental impact.

▪ *Management – ISO 14001*

Morenci Management Systems Web Page

from FM Web

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Insert link to FM Web

Step 1. Click on Morenci

Step 2. Click on Environmental Management Systems

Ta Da!

■ *Management*

Environmental BMPs

Environmental Best Management Practices (BMPs)

- Identified procedures
- Standards
- Guidance for performing certain activities & jobs

Insert pic

■ *Management*

Chemical Inventory & SDS

All chemicals in use on the property must be approved by both the Health & Safety Department and the Environmental Services Department prior to the chemicals being purchased or brought on the property.

Sphera Database contains all reviewed products that have been approved or disapproved for use & copies of their SDS'.

Contact Environmental Services for assistance with new or current products



■ *Management - MSDS*

Morenci Spill Notification

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A spill is any event, outside of normal operations, which results in a loss of product or waste material.

**Environmental Services Department
must be notified of all spills.**

**Spill Notification Phone Number
(928) 865-7745 (SPIL)**

**Notify your supervisor of
all spills**



■ *Management*

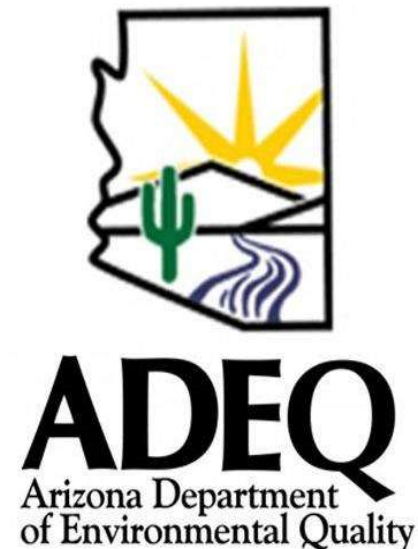
Air Quality

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Permit: Legally-enforceable documents designed to improve compliance by clarifying what facilities (sources) must do to control air pollution

Permits:

- **Title V (Morenci Mine/Processing)**
- **Two Class II (Upper Eagle Creek)**
- **Three Open Burn (Mine/ Morenci Townsite/Clifton Townsite)**



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Regulations:

- Metallic Mineral Processing
- Nonmetallic Mineral Processing
- Multiple Engine
- Gasoline dispensing
- Accidental Chemical Release

Air Quality Management

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Areas of Concern:

- Dust Emissions (including Blasting)
- Spray Painting Activities
- Generators/Engines – Environmental Services must be notified of any new or removal of generators/engines
- Asbestos Renovation/Demolition
- Process Changes -Physical/Operational Modifications

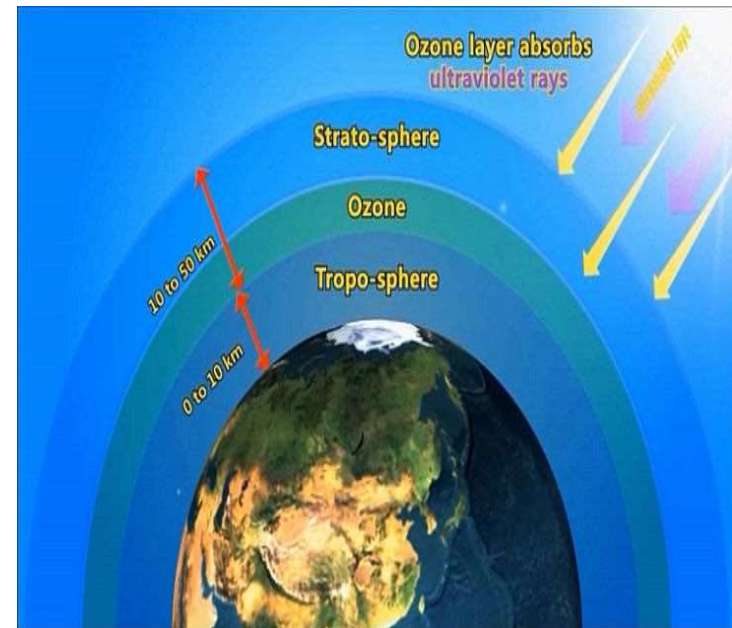


▪ *Air*

Air Quality Management

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- **Refrigerant handling** — documentation, certification, recovery, & disposal
- **Ozone Protection** - When a release of chlorofluorocarbon (CFC) occurs, the sun breaks down the CFC's in the atmosphere and the breakdown products destroy Ozone
- **Monitoring and Recordkeeping**
- **No Open Burning**



■ *Air*

Waste Handling Regulations

Waste is defined by specific characteristics that determine it being classified as a particular type of waste. Waste types are regulated and have specified storage and handling requirements.

- **Hazardous Waste**
- **Universal Waste**
- **Solid Waste**
- **Special Waste**



■ *Waste*

Types of Wastes

Hazardous Waste - Placed in Satellite Accumulation Drums

- Aerosol cans
- Solvent rags
- Gasoline filters
- Lab wastes
- Broken light bulbs
- Paint related debris

Universal Wastes – Placed in Universal Waste drums

- Light bulbs
- Batteries

Municipal Solid Wastes – Placed in trash cans or roll-offs

- Lunch room trash
- Cardboard (recyclable)
- Wood

Industrial Wastes

- Electronics – Taken to the Environmental Yard
- Petroleum contaminated debris – Use gray PC Debris drums
- Tires – Taken to the Environmental Yard

Waste Handling Guidelines

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You **may never** dispose of **Hazardous Wastes** by

- placing them in the garbage
- letting them evaporate into the atmosphere or
- dumping them down the drain and/or into a sewer system.

■ *Waste*

Water Quality Regulations

CWA - Clean Water Act

Requires a permit for the discharge of a pollutant into Waters of the US from any point source.

MSGP – Multisector General Permit

EPA permit that covers storm water discharges.

AZPDES – Arizona Pollutant Discharge Elimination System

Responsibility to administer the Stormwater program for the EPA



■ *Water*

Water Quality Regulations - SWPPP

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Morenci is a “Zero Discharge” Facility

Hydrologic Capture Area

- Pinkard and Gold Gulches
- Bat Canyon
- Tailing Impoundment Canyons
- Central SX/EW Diversions
- Rocky Gulch

All stormwater that comes in contact with process activities is contained and is not discharged from the property. It is reused.



■ *Water*

Spill Prevention Controls and Countermeasure

What: Applies to all petroleum based products

Why:

- **Because Morenci stores a high volume of petroleum products on site (greater than 1,320 gallons)**
- **To protect “Waters of the U.S.” (rivers, washes, streams) from petroleum discharges**

How:

- **Outlines requirements for prevention of, preparedness for, and response to petroleum discharges**
- **The plan must detail in writing, the equipment, workforce, and steps required to prevent, control and mitigate an oil discharge.**

Migratory Bird Conservation

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Avian Handling and Reporting

If a bird of any type is encountered on the Morenci property, do not handle, disturb, or collect the bird.

Immediately report all bird mortalities, injuries, illnesses and sightings to the Environmental Services Department.

Positive verbal notification must be made to a staff member of the Environmental Services Department.



Wildlife Policy includes **all wildlife** found on Morenci property. Report all lingering, injured or deceased wildlife to Environmental Services.

■ *Management - Wildlife*

Your Role

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By being fully aware of all of the requirements, you will help ensure that the system works and that the Environment is protected.

- **Become familiar with the specific requirements for your job that are imposed by rules, regulations, and the BMPs - Best Management Practices that have been developed.**
- **Follow specific job procedures to ensure that these practices are employed and any impact to the environment is minimized.**

■ *Conclusion*

**When in doubt or
if you have a question . . .**

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***Contact a member of the
Environmental Services
Department***

(928) 865-6000

***or your Department
Environmental Representative***

Additional information is available
on the Morenci Management Systems website:

■ *Conclusion*

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