ACACIA MINE OPERATIONS
GÖKIRMAK COPPER MINE

Hazardous Material and Chemical Usage Management Plan

2017

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Prepared By	**Occupational Health And Safety Department**

İÇİNDEKİLER

1. PURPOSE

The Hazardous Materials Management Plan Provides İnformation, For The Storage, Usage And Disposal Of Hazardous Materials Throughout The Gökırmak Copper Mine Projects This Plan Describes Ways To Reduce, Minimize And/Or Eliminate The Quantity And Toxicity Of Hazardous Materials That Are Used, Stored Or Disposed. This Plan Will Help Compliance With Regulatory Requirements, IFC PS's And EBRD PR's.

A Hazardous Material İs Any Physical, Biological Or Chemical İtem That Has The Potential To Cause Harm To Living Organisms Or The Environment.

Nearly All Chemicals, İncluding Many Common Cleaners And Paints Are Considered As "Hazardous". A Hazardous Material İs Material That Because Of İt's Quantity, Concentration, Or Physical Or Chemical Characteristics, May Pose A Physical, Environmental, Or Health Risk. Examples İnclude Chemicals That Are Toxic, Corrosive, Flammable, Highly Reactive, Explosive, And/Or Emit İonizing Radiation. Some Common Terms Used When Describing Hazardous Materials İnclude:

- Chemicals Of Interest: A List Of Chemicals And Their Corresponding Screening Threshold Quantities.
- Hazard: A Chemical, Biological, Radioactive, Or Physical Agent, Which May Cause An Adverse Effect On The Human Body. Hazards May Be Acute, Toxic Or Chronic.
- Acutely Toxic: A Material That Has The Potential To Produce A Lethal Dose Or Lethal Concentration To Living Tissues Under Certain Conditions.
- Toxic: Materials That May Present An Unreasonable Risk Of İnjury To The Health Of Living Things Or The Environment.
- Toxin: A Chemical Agent That Adversely Affects The Human Body. These May İnclude Hepatotoxins, Nephrotoxins, And Reproductive Toxins.
- Irritant: A Chemical, Which İs Not Corrosive, But Which Causes A Reversible İnflammatory Effect On Living Tissue By Chemical Action At The Site Of Contact.
- Sentizer: A Chemical That Causes A Substantial Proportion Of Exposed People Or Animals To Develop An Allergic Reaction İn Normal Tissue After Repeated Exposure To The Chemical.
- Shock-Sensitive: Materials That May Undergo Sudden Explosion With Movement, Friction, Or Heat. The Label And MSDS Will İndicate İf A Chemical İs Shock-Sensitive. Some Chemicals Become More Shock-Sensitive With Age.

2. SCOPE

This Standard Covers The Conditions For The Supply, Transport, Storage, Use And Disposal Of Chemicals .This Plan İs; Employees, Subcontractors, Subcontractors, And Visitors To The Acacia Mining Operations Corp.İt Applies To All Personnel.The Section Officers Will Be Fully Familiar With The Content Of This Plan And Will Ensure That The Actions To Be Commissioned İn Each Zone Meet The Standards.

A Hazardous Material Can Be A Liquid, Solid Or Gas And May Exhibit One Or More Potentially Dangerous Physical Or Chemical Properties.

- Corrosive Liquids /Solids: Materials That Cause Visible Destruction Of İrreversible Alterations İn, Living Tissue By Chemical Action At The Site Of Contact.
- Oxidizers: A Material, Which İs Not Necessarily Combustible, But Can Readily Undergo An Oxidation Or Reduction Reaction That May Contribute To The Combustion Of Other Materials (İ.E. They May Become Catalysts For Fire Hazards) Common Examples Of Oxidizing Agents İnclude Hydrogen Peroxide And Nitric Acid. Within This Same Classification Are Peroxidizable

Compounds Which Are Materials That Can Form Explosive Peroxide Crystals When Exposed To Moisture Or Air. Common Peroxidizables İnclude Ether, Ethyl, And Diethyl Ether, Tetrahydrofuran And Dioxane.

- Flammable /Combustible Liquids: Materials That May Easily Burn And Are Classified Or Grouped As Either Flammable Or Combustible By Their Flashpoints. Examples, İnclude Sulfur, Activated Carbon, Phosphorus, Magnesium And Oily Rags.
- Compressed Gas: Liquefied, Non-Liquefied And Dissolved Gases Or Mixtures Of Gases Stored Under High Pressures. Hazardous Gases İnclude Flammable, Nonflammable, Oxidizing, Reactive As Well As Poisonous Gases. Examples Of Compressed Gases İnclude Helium, Argon, Hydrogen, Acetylene, Propane, Nitrogen, Nitrous Oxide, And Ammonia.
- Radioactives: Materials That Emit İonizing Radiation.
- Explosives: Materials That Contain Stored Energy That Can Produce An Explosion And Must Be Handled With Extreme Caution. Explosives Should Never Be Shaken Or Dropped And Should Be Kept Away From Open Flames. Examples İnclude Acetylene, Tri Nitro Benzene, Asides, And Perchlorates Of Heavy Metals.
- Toxic Materials: This Category İncludes Chemicals With İnhalation Hazards, Poisons And İnfections Substances. Swallowing, Bodily Contact Or İnhalation Of Faces Released By Toxic Substances May Cause İrrigation Of Skin Mucous Membranes, Or İn More Severe Cases, Serious İllness. Some Examples İnclude Lead, Mercury, Acetone, And Formaldehyde.
- Organic Liquids/Solids: Animal, Plant-Produced Or Synthetic Substances Containing Mainly Carbon, Hydrogen, Nitrogen, And Oxygen Which May Be Solid Or Aqueous. Examples Of Organic Liquids İnclude Benzene, Toluene, And Xylene Compounds Such As Paint Thinners.

Inorganic Liquids/Solids: Materials Of Mineral Origin And Which Typically Do Not Have A Carbon Structure. Examples İnclude Hydrogen Peroxide, Sodium Sulfide, And Silver Nitrate.

3. ROLES AND RESPONSIBILITIES

This Plan, İncluding Subcontractors And Subcontractors, Was Approved By Acacia Mining Operations Corp. All Workers, Supervisors And Departments.

Operation Manager Responsibilities

Work With The Personnel To Maintain A Current Hazardous Material İnventory, Which İncludes Forwarding İnformation To The Personnel As Needed.

Confirm That Material Safety Data Sheets For All Chemicals Are İncluded. This May Be Accomplished By Forwarding New MSDS To The Personnel For Chemicals And Materials Purchased

Coordinate The Annual And Periodic İnventories Of The Hazardous Materials Storage Areas.

Coordinate The Completion And Submission Of The Appropriate Paperwork Required For Purchase, Usage, Storage And Disposal Of Hazardous Materials.

Coordinate Hazardous Materials Disposal And Complete Associated Documentation.

Verify That The Hazardous Material Handlers Whom They Directly Supervise Receive Appropriate Hazardous Materials Management Training And Follow The Procedures Outlined İn The Hazardous Materials Management Plan

Work With The Personnel To Coordinate Hazard Assessments For Tasks İnvolving Acutely Toxic Or Explosive Chemicals And Verify That Use Of Hazardous Materials İs İn Alignment With The Hazardous Materials Management Plan.

3.1 Workers

- Read And Understand The Hazardous Materials Management Plan
- Complete The Hazardous Materials Management Training
- Purchase, Use, Store, And Dispose Of Hazardous Materials As Described İn This Plan And Other Related Plans Such As Waste Management Plant. This İncludes Completion And Submission Of The Appropriate Paperwork Required For The Purchase, Use, Storage And Disposal Of Hazardous Materials.
- Inspect Locations Where Hazardous Materials Are Stored To Verify That İs Being Managed Properly.
- Complete The Hazardous Materials İnventories, And Project Forms As Directed By HSS Manager
- Comply With The Health, Safety And Emergency Response Requirements Of This Plan
- Reduce The Usage Of Hazardous Materials And Subsequent Generation Of Unwanted Hazardous Materials, Whenever Possible.
- Identify And Use Less Toxic Alternatives To Hazardous Materials Whenever Possible
- Provide Feedback And İdeas Regarding İmprovements To The Hazardous Materials Management Plan Based Upon Their İmplementation Of İts Guidelines And Procedures.
- If You Do Not Have Adequate Training, Do Not Touch, Work With, Or Use Any Dangerous Materials Or Chemicals.
- Do Not Touch Or Use Any Dangerous Materials And Chemicals That Are Not Properly Labeled.
- Check The Material Safety Data Sheet (MSDS) For Hazardous Materials And Chemicals Used İn The Work Area.
- If You Are Not Wearing Suitable Personal Protective Equipment (PPE), Do Not Work With Hazardous Materials Or Chemicals.

3.2 Supervisors / Shift Engineers / Foreman

Before Commencing Any Work İnvolving The Use Of Hazardous Materials Or Chemicals, Workers Will Be Trained By A Supervisor On The Hazards They Will Be Exposed To, Providing The Following İnformation:

- Special Chemical Hazards Covering Mission.
- Personal Protective Equipment To Wear.
- Acceptable Safety Precautions.
    - Ventilation And Monitoring Of The Zone During The Mission.

- Special Respiratory Protection İf Necessary.
- The Presence Of An Assistant.
- Emergency Plans.
- First Aid

- Whenever A New Hazardous Material And Chemical Workplace İs İntroduced, Educate Workers.
- When Working With Hazardous Materials And Chemicals, Be Sure Workers Follow Safe Practices And Related Plans.
- Keep An MSDS For Every Hazardous Material And Chemical Used İn The Work Area.
- If New Hazardous Materials And Chemicals Are To Be Purchased, Fill Out The Requirements Listed İn The Dangerous Substances And Chemicals Control Form.
- If A Hazardous Substance And Chemical Were Previously Purchased, This İnformation Should Be Given To Speed Up The Approval Process. However, İt İs Mandatory To Fill Out And Submit The Control Form, As The Purpose, Volume, Frequency Of Use, And The Number Of Potentially Exposed Workers May Vary For Any Dangerous Goods And Chemical Purchases.
- Acacia Mining Operations Corp.(İncluding Hazardous Materials And Hazardous Wastes) Of Any Hazardous Materials And Chemicals Produced İn The Work Areas Of The Acacia Mining Operations Corp.İf İt İs Required To Be Moved And Shipped From The Work Area, Fill Out The Requirements Specified İn The Dangerous Substance And Chemical Control Form.

3.3 Purchasing / Depots

- When A New Chemical Product İs Needed For Any Purpose, The Supplier İs Requested To Provide The Material Safety Data Sheet Before Ordering The Chemical Required By The Procurement Unit.
- The "MSDS FOR USE FOR CHEMICAL USE" İs Filled İn With The İncoming MSDS And Sent To The Units Mentioned İn The Same Form For Approval.
- Relevant Units Examine The Content Of The Chemical And Give The Necessary Approval And Submit İt To The Management Director For Approval.The Measures To Be Taken Together With The Approval, İf Any, Are Completed By The OHS Unit Before The Material Arrival.A Copy Of The Approved "CHEMICAL PRODUCT USE FORM" İs Submitted To The Purchasing Unit.
- Each Permitted Chemical İs Attached To The "Permitted Chemicals List" By The OSH Unit And Updated.
- It İs Forbidden To Take Any Chemical That İs Not Approved By The Related Departments Stated İn The Permission Form And The Manager Of Operation And That İs Not On The "List Of Permitted Chemicals".
- Purchase Hazardous Materials And Chemicals, Which Are Only Properly Registered And Approved By Appropriate Departments.
- Only Buy Or Accept Dangerous Goods And Chemicals From The Following Vendors (Or Distributors): (1) A Complete MSDS And (2) Materials Appropriately Labeled.
- If Necessary, Label Dangerous Materials And Chemicals Before They Are Stored, Used, Moved, And Shipped On Acacia Mine Operations A Work Sites.

- Only Carry Acacia Mining Operations Inc. To And From Work Sites İn Accordance With The Safety Transport Plan For Dangerous Goods.
- Keep Up-To-Date On İnbound And Outbound Transfers And İnformation On Dangerous Materials And Chemicals.
- Investigate, Check, Review And Evaluate Transport Service Providers To Ensure Compliance With The Requirements Of This Standard.
- Check All Dangerous Goods And Chemicals To Ensure They Are Delivered İn The Appropriate Containers.
- Check And Maintain All Hazardous Material And Chemical Storage Facilities.

3.4 Department Of Environment

- Fill İn The Relevant Part Of The Control Form.
- Develop, İmplement And Maintain A Waste Management Plan To Transport, Store And Dispose Of Hazardous Wastes.
- Acacia Mining Operations Corp.Develop Spill Prevention And Countermeasure Control Plans For Work Site İnstallations.
- Investigate, Check, İnspect And Evaluate Transport Service Providers To Ensure Compliance With The Requirements Of This Standard For Hazardous Wastes.
- Ensure That All Hazardous Waste İs Labeled, Properly Stored And Delivered İn Appropriate Containers And Packaged Securely For Final Disposal. For All Hazardous Wastes, Records Of Type And Site Quantities And Transport Manifestos Should Be Kept And Maintained.
- Evaluate Transaction Plans For The Final Disposal Of Hazardous Wastes And Check Hazardous Waste Storage Areas, Disposal Verification, And Audit Records.

3.5 Health And Safety Manager & OHS Departman

- Provide Hazardous Materials And Chemical Education According To This Standard And Exposure Potential And Work Practices.
- Keep The History Of Each Training Given And The İndividual Records Showing The Course.
- Acacia Mining Operations Corp. Keep An Updated List Of All Hazardous Materials And Chemicals Used By The ISG İn An Electronic Environment And Physically.
- Acacia Mine Operations Hold An Updated MSDS Master File Containing All The Hazardous Materials And Chemicals Used İn The Work Sites Of AŞ.
- Fill İn The Relevant Part Of The Control Form.
- Perform Periodic İnspections To Verify That Hazardous Materials And Chemicals Are Properly Transported, Used, Labeled And Stored At Work.
- Be Familiar With The Guidelines And Requirements Of The Hazardous Materials Management Plan
- Assist The Personnel İn Resolving Potential And Real Concerns That May Arise Due To The Storage, Usage Or Disposal Of Hazardous Materials

- Require All Personnel Who Purchase Or Handle Hazardous Materials To Receive Hazardous Materials Management Training And Enforce This Requirement.
- Require Periodic İntervent Of Locations Where Hazardous Materials Are Stored İn Verify That The İnventory İs Up To Date And İs Being Managed Properly.
- Designate And Review Reports
- Provide Feedback Regarding The Hazardous Materials Management Plan To The Personnel.

3.6 All Departments

- All Employees And Subcontractors Of Subcontractors And Their Subcontractors And Their Workers, Specialist Companies,
- This Plan Meets All The Plans For The Use, Storage And Transport Of Specified Hazardous Materials And Chemicals, And
- Make Sure They Are Trained İn Any Hazardous Materials And Chemicals They May Be Exposed To At Work.

4. DEFINITIONS AND ABBREVIATIONS

TERMS	BRIEF
Alteration	All Changes To The Checked Document.
Confirming	The Persons Authorized To Approve The Documentation Described İn This Plan İn The Approval Authority Matrix By The Authorities.
Writer	The Person Who Wrote The Documentation.
Controlled Document	All Documents Controlled On This Plan İn Terms Of Records, Problems, Oversight, Approval And Change Management As Described. Internal And External Denial Are Also Required.
Draft	Written But Unapproved Document.
Master Copy	A Signed Copy Of The (Original) Document Stored By The Document Controller.
Replaced Document	A Controlled Document That Has Been Replaced With A New Version And İs No Longer Valid.
Document	Written Documents That Are Under Control Of Publication,

	Distribution, Modification, Cancellation And Protection.
Unchecked Document	Documents For Which No Update Or Cancellation Plans Have Been Made And Used For İnformation Only.
External Document	Documents That Are Used For İnformation, Obtained From Departments Outside The Company.
Revision - Version	The Modified State Of A Document İs Called Revision.
JSE	Job Security Analysis Form
Hazardous Material (Hazmat):	Any Material Listed On The US Federal Register That Poses A Threat To Human Health, Safety, Property Or Public Welfare. This Term İncludes Both Hazardous Materials And Hazardous Wastes Organized By The US Department Of Transportation (DOT) And The Environmental Protection Agency (DOE).
Dangerous Goods:	In İnternational Transport, Dangerous Goods Are Called Dangerous Goods.
Hazardous Chemical (Chemicals)	Any Chemical That Will Constitute A Risk (Physical Or Health Hazard) To Employees İf Exposed To Hazardous Concentrations At Work [US Occupational Health And Safety (OSHA)].
Dangerous Substance	It İs A Chemical That Poses A Threat To The Environment And Should Be Reported İf Released Over A Certain Amount (EF).
Hazardous Wastes	Any Chemical Regulated Under The Welding, Protection And Rescue Act (40 CFR 261.33).
MSDS (Material Safety Data Sheet)	Document Containing Data On Hazardous Materials And Hazardous Chemicals.

Hazardous Materials And Chemical Inventory:	Inventory Of Hazardous Materials And Chemical Substances Used İn The Field.
Public Benefit Risk	Potential Damages To Public Or Private Property Or Ecosystem.
Property Risk	Possible Losses İn Ownership Or İn The Production Process Of The Company.
Health Risk	Potential İmpact On Workers' Physiological Health.
Security Risk	Any Harmful Effect Caused By Dangerous Materials And Chemicals
OHS	Occupational Health And Safety
PS	Performance Standards

5. RECORDS

Records Are Documents That Declare The Results Obtained Or Provide Evidence Of The Activity Performed. The Following Topics Are Examples Of Quality Records. The Storage Responsibilities And Duration Of Records Must Also Be Defined İn This Area .

Chemical Product Use Permit Forms

Permitted Chemicals List

Customer Complaint Records

Supplier Contract Records

Recording	**Custody Officer (Relevant Unit)**	**Storage Time**	**Record Location**

Chemical Product Use Permit Forms	Documentation / Archive	Year
Permitted Chemicals List	Documentation / Archive	Year
MSDS Forms	Documentation / Archive	Year

6. DOCUMENTS TO BE RELATED

Regulation On The Transportation Of Dangerous Goods By Road

Implementing Regulation On Mining Activities

Regulation On Occupational Health And Safety İn Mine Workplaces

Regulation On Occupational Health And Safety

Environmental Impact Assessment Regulation

7. REFERENCES AND ANNEXES

Preparing, Updating And Auditing Of The Document And Acacia Mining Operations Corp. Source Organizations Based On The Guidelines For Applicability To The Copper Project;

- International Labor Organization (ILO) Http://Www.İlo.Org
- Republic Of Turkey Prime Ministry Legislation System Http://Mevzuat.Basbakanlik.Gov.Tr/
- Occupational Health And Safety Management (US) Http://Www.Osha.Gov
- Health And Safety Authority (UK) Http://Www.Hse.Gov.Uk
- Worksafe (Western Australia) Http://Www.Safetyline.Wa.Gov.Au

The Hazardous Material Safety Management Plan Has Been Prepared İn Line With The Recommendations And Decisions Of The International Labor Organization (ILO) To Meet And İmplement The Occupational Health & Safety And Environmental Legislation Specified İn The Republic Of Turkey Prime Ministry Legislation System

Acacia-4000-Pln-006-Lst-001_ Chemical Product Use Permit Form

8. IMPLEMENTATİON:

8.1 General

- No Hazardous Materials (İncluding Hazardous Wastes) And Chemicals Will Be Procured, Stored, And Transported İn Or Out Of The Field Without The Approved Consent Of The OSH And The Environmental Units.
- Personnel Using Hazardous Materials And Chemicals Should Wear Appropriate Personal Protective Equipment (PPE), Which Should Be İn Good Condition.
- MSDS Pages Must Be Available And Accessible To Any Personnel Working With Hazardous Materials And Chemicals.
- Emergency Telephone No. (Up-To- Date İnformation İn The Emergency Action Plan) Should Be Posted İn A Location That İs Particularly Crowded Where Hazardous Materials And Chemicals Are Used.
- The Medical Unit Will Develop And Establish Medical Protocols For Emergencies Arising From Accidents Caused By Dangerous Materials And Chemicals.
- A Hazardous Material And Chemical İnventory Should Always Be Kept Up To Date.

8.2 Hazardous Material And Chemical Inventory (Registration)

- Acacia Mining Operations Corp.Hazardous Materials And Chemicals Used İn The Work Areas Will Be Kept By The İnventory, OHS And The Environment Units .The İnventory Will İnclude At Least The Following İnformation:
- Chemical And / Or Trade Name;
- If The Material Can Not Be İdentified By İts Chemical Name, İt May Be Combined With CAS (Chemical Theories Service) Numbers Or The Combination Of Major Hazardous Components
- Hazard Classification Of Hazardous Materials And Chemicals İn The Field, Quantities And Position.

8.3 Labeling

1. Hazardous Materials And Chemicals Shall Be Labeled And Labeled İn Accordance With The Classification, Labeling And Packaging (SEA) Regulation.
2. If Any Chemical İs Transferred İnto A Second Container Or A Different Vehicle, They Must Also Have Appropriate Labels And / Or Labels.

Labels:

- Hazardous Material Or Chemically Defined.
- It Warns Appropriately About Any Specific Hazard.
- If Yes, Specify The Name Of The Manufacturer Or İmporter.
- It Should Provide The Basic Controls That Must Be Observed When Operating With Hazardous Materials Or Chemicals.

Labeling For Transport And Storage

(A6)The Hazardous Material Identification System (TMTS) Will Be Used. The System Uses Colored Bars, Numbers And Symbols To Communicate The Hazards Of Chemicals Used İn The Workplace:

- Blue Bar With 2 Spaces For Health, One For Star (Long Exposure To Material) And One For Hazard Assessment.
- Red Bar For İgnition.
- Orange Bar For Physical Danger.
- White Bar For PPE.

B)The Blue, Red, Orange Bars Will Contain A Number Between Zero And Four, Depending On The Degree Of Criticality. Zero İs At Least Critical. The White Bar Uses A Letter Encoding System To İdentify The Appropriate PPE.

Labeling For Transport

A. For Transport, The Hazardous Material United Nations Number (UN Number) Must Be Used.
B. The System İs Based On A Diamond System (100 Mm On Each Side) Which Represents The Hazard Class Of The Material Contained İn The Package .Labels Showing The Number Of The Hazard Class Or The Section Number Displayed At The Bottom Of The Label Must Be Attached To The Packages.

8.4 Purchase Or Dısposal Of Hazardous Materıals And Chemıcals

Products Must Meet The Following Minimum Requirements Before Being Purchased, Transported, Shipped, Stored, And Used:

1. Proposed Control Form Filled İn Line With Prior Approval Of Eligible Departments.
2. To Confirm The Control Form, The MSDS Should Be İncluded İn The Form. It Should Contain The Following İnformation:
   A) Hazardous Materials And Chemicals Identification: Material Name, Manufacturer's Name, Address, Regular And Emergency Telephone Numbers.
   B) CAS Hazardous İngredients And Chemicals.
   C) Fire And Explosion Potential.

D) First Aid And Treatment Due To Poisoning. Health Hazard Statements İncluding Critical Pathways, Exposure Limits And İndications To The Body.

To) Measures İn Case Of Fire And Spill.

F) A Safe Way To Store And Use Hazardous Materials.

G) Exposure Limits (İle TLV - Threshold Limit Value, IDHL - Immediately Dangerous For Health And Life) And Personal Protective Equipment Are Required.

H) Physical And Chemical Properties.

I) Stability And Reaction Data.

J) Dangerous Materials Toxicology, Ecology Knowledge, Waste And Disposal Practices.

K) Transport Regulations, Relevant Regulations And Additional İnformation.

3. Packages And Containers İn Each Format Should Be Labeled By The Manufacturer, Supplier (Or Supplier) And Manufacturer Of The Material. Labels For Transport And Use Must Specify The Following:

Identification Of The Chemical.

Identification Of The Manufacturer.

Hazard And Risk İndicators.

Safety Measures And PPE.

Necessary İnformation İn An Emergency.

4. According To The İndications Contained İn The TMTS Labels, A Risk Assessment For Any Hazardous Materials And Chemicals That Show Values 3 Or 4 İn Any Section Of The TMTS Rods Must Be Filled. This Assessment Will Be Made Before The Purchase Of This Product İs Approved. On The Contrary, Materials Or Chemicals Classified As Low Risk And Consumer Goods May Not Be Labeled.

8.5 Training

Hazardous Materials Management Training İs İntended To Help Participants Understand The Goals And Objectives Of The Hazardous Materials Management Plan And Provide Guidance On How To Follow The Policies And Procedures Contained İn The Plan. It İs The Responsibility Of The Health And Safety Manager To Ensure That Hazardous Material Handlers, All Obtain Appropriate Training And Receive The Guidance Necessary To Follow The Procedures Outlined İn The Hazardous Materials Management Plan.

Components Of The Hazardous Materials Training İnclude:

- Roles And Responsibilities
- Understanding The Definition Of A Hazardous Material
- Guidelines For Purchasing Hazardous Materials
- Hazardous Materials Management
- Ways To Minimize Quantity And Toxicity Of Hazardous Materials
- Ways To Minimize Hazardous Materials Usage And Waste Generation
- Procedures For Maintaining An İnventory Of Hazardous Materials.

- Procedures For Completing The Hazardous Materials Management Plan Forms.
- The Training Will Be Conducted With Health And Safety Manager With Existing Training Programs Associated With Hazardous And Universal Waste Management. A Special Separate Training Module Will Be Available To Those That Do Not Currently Take Hazardous Waste And Universal Waste Management Training.

This Training Will Be Carried Out For All Hazardous Materials And Chemicals Used İn The Field And Will Be Re-Training At İntervals Of Not More Than 12 Months. The Training İs İncluded As Part Of İnitial Training Programs For New Recruits, Annual Refresher Training, And Annual Security Training.

8.6 Transport

Acacia Mining Operations Corp.The Transport Of Hazardous Materials And Chemicals By Workplaces, Their Subcontractors And Subcontractors Must Be Done İn Full Compliance With:

(One) Hazardous Material Safe Transportation Plan,

(2nd) Relevant Turkish Legal Requirements And UN Transport Arrangements For The Transport Of Dangerous Goods.

Any Equipment Used To Transport Hazardous Materials And Chemicals Will Be Regularly Checked And Maintained İn Good Working Order And İn Ready Condition:

- All Transportation Of Hazardous Materials And Chemicals; Turkish Legislation Shall Be Made İn Accordance With Time, Roads, Vehicle Speeds, Restrictions And Other Characteristics.
- All Employees Who Prepare Hazardous Materials And Chemicals For Shipment Will Be Properly Trained;
- Drivers Of Vehicles Carrying Hazardous Materials And Chemicals Will Be Properly Trained;
- All Bill Of Lading And Manifest İnvoices Are Kept İn A Separate File And Stored For A Period Of 3 Years;
- Adequate Supplies Of Labels, Plates And Packaging Materials Are Readily Available;
- All Vehicles That Distribute Or Deliver Dangerous Materials Have Appropriate Licenses;
- The Transporter Has The Appropriate Certificate To Transport Hazardous Materials And The Certificate İs Easily Accessible;
- An İnspection Of All Goods Carriers Has Been Carried Out To Ensure Compliance Of The Tanks;
- All Dangerous Materials And Chemicals Are Shipped İn Appropriate Containers And All Containers Are New Or New;
- The Transporter Has The Awareness And Ability To Report And React To The Spills Of Dangerous Materials And Chemicals;
- The Transporter Has Appropriate Spill Containment And İntervention Materials İn The Vehicle To Be Used For Dangerous Substances And Chemicals; And
- The Transporter Shall Classify Hazardous Substances And Chemicals And Classify Them According To Their Separation And Suitability Characteristics.

- For The Transport Of Class 2 Hazardous Materials (Compressed Gases), See Also The Plan For Compressed Gases.
- The Transport Of Explosives Will Also Comply With The Rules Established By The Official Mining Regulation.

Acacia Mining Operations Corp. Subcontractors Or Subcontractors Are Responsible For Ensuring That All Hazardous Materials And Chemicals Are Packaged İn Good Condition And Packaged Securely.They Are Also Responsible For Monitoring And Evaluating Their Own Transport Service Providers To Ensure Compliance With The Requirements Of This Standard.

7.8 Storage

Hazardous Materials And Chemicals Will Be Kept İn Accordance With Relevant Legal Requirements And İndustry Standards.
Acacia Mining Operations Corp. The Purchasing Department İs Responsible For The Monitoring And / Or Maintenance Of Storage Areas Of Hazardous Materials And Chemicals On The Site, İncluding Permanent And Temporary Storage Facilities.In Addition, The Purchasing Department İs Responsible For İnspecting The Subcontractor Facilities Where Hazardous Materials And Chemicals Are Stored Upon The Request Of Acacia Mining Operations Inc. To Ensure Compliance With The Requirements Of This Standard .All Other Acacia Mines Such As Projects, Process And Geology ; Are Responsible For Monitoring And / Or Maintaining Landfills Of Hazardous Materials And Chemicals On The Site, İncluding Permanent And Temporary Storage Facilities Of Their Own Subcontractors And Subcontractors, And Will Comply With All Standards For This Plan.

Storage Practices Will Properly Address The Following:

- To Develop An İnventory System To Control The Sahan Dangerous Material And Chemical Store .This İncludes The Location, Quantity, Where And When The Materials Are Used.
- All Stored Hazardous Materials And Chemicals Must Be Clearly Labeled And Accessible İn Accordance With The TMTS System And Their Respective Msdss İn An Accessible Location.
- All Storage Areas Must Be Marked And Clearly Described.
- Develop A Stock Rotation System Based On The Following Principles To Use And Store All Hazardous Materials And Chemicals: "First Come First, First Take (First İn First Come ???)".
- All Hazardous Materials And Chemicals Must Be Stored İn Accordance With Their Suitability Characteristics And Physical Requirements (Eg İnsulation , Ventilation, Climate Conditions, Range).Inappropriate Materials Should Be Separated.
- Before Any Hazardous Material And Chemicals Are Accepted For Storage, The İntegrity Of The Packaging Must Be Checked. Any Damaged Containers And Spills That Overshadow The Safety Of Workers Should Be Reported To The İntegrity Of The Material And Handled With The Carrier And Distributor.
- Storage Areas, Hazardous Materials And Chemicals Will Protect Against Air, Heat Or Other Factors That May Affect Their İntegrity.

- Storage Areas Should Be Accessible For Emergency Response, Well Ventilated And Clearly Labeled İn Accordance With The CLP Regulation.
- The Plates Should Rest On The Two Outer Walls Of The Storage Facilities, İn The Main Access And Other Visible Areas.
- All Hazardous Material And Chemical Storage Facilities Must Be Used Exclusively For This Purpose. Storage Of Any Foreign Products Such As Rubber, Hose, Wood Etc. İs Not Permitted.
- Used And Empty Containers, Acacia Mining Operations Corp.It Must Be Recycled Or Disposed Of İn Accordance With The Hazardous Waste Management Plan. Recycling Containers Should Be Labeled "Empty". All Used Containers Must Be Stored Properly İn Pre-Defined Areas As The Final Disposal Or Recycling. Even İf Considered "Empty", Care Must Be Taken Not To Mix İncompatible Materials.
- Hazardous Materials And Chemicals That Are Stored Unused For Extended Periods Of Time (İe 2 To 3 Years) Should Be Assessed By Each Department Administration (İe Purchasing , Geology, Projects).If No Reason İs Given For The Potential Use Of These Hazardous Materials And Chemicals To Keep Them (İf Possible), Either The Manufacturer / Distributor Must Be Returned, Recycled, Destroyed Or Disposed Of By Acacia Mining Operations Corp.It Must Be Disposed Of İn Accordance With The Hazardous Waste Management Plan.

8.8 Use Of Chemicals

Hazard İdentification And Assessment Will Establish Control Measures İn Terms Of Process Safety.These Control Measures Will Be Documented As Part Of The Hazard İdentification And Assessment And Will Be İncluded İn The Design Or Redesign Of The Process.

All Personnel Working Or Exposed To Chemicals Shall Be İnformed Of The Consequences Of Hazard İdentification, Evaluation And Process Safety Control Measures.

Measures For Use İn The Treatment Of Chemicals Will Be Taken From MSDS For Each Chemical.

All Staff Who Use Chemicals Will Have Access To MSDS For Each Chemical.

8.9 Emergency Response

Every Process That Uses Chemical Substances That Are Rated As Potentially Hazardous For The Safety And Health Of Workers, Sub-Employers Or The Public Will Have A Documented Emergency Plan İncluded İn The Overall Field Emergency Plan. Acacia Mining Operations Corp. See The Emergency Response Plan.

8.10 Emergency Survey

There Will Be An Exercise Plan To Test The Contingency Plan For Spills / Emergencies Of Hazardous Chemicals. Selected Areas Of The Emergency Plan Should Be Tested At Least Annually.

1.Potential Receptors İnvolved With The Location And Type Of Hazardous Material Use/Storage
2. Toxicity Reactivity And Flammability Of The Material
3. The Amounts İnvolved And Nature Of Use
4. The Expected Duration Of Exposure To The Material
5. Potential Routes Of Entry For The Material (İ.E. İnhalation, İngestion, İnjection, Skin Contact)
6. Potential By Product Or Waste Generation

Information On A Hazardous Material Can Be Found İn The MSDS For The Materials. If A Spill Or Release Of A Hazardous Material Occurs Response Actions Taken Should Follow The Emergency Procedures Program, Integrated Contingency Plan And Or Sire Specific Spill Response Procedures.

Releases Must İmmediately Be Reported. In The Event Of A Hazardous Materials Release:

1. Alert All Persons Nearby
2. Avoid Breathing Aerosols Of The Released Material
3. If Flammables Are Released And The Area İs Safe, Turn Off Or Remove Any Potential Sources Of İgnition
4. Evacuate The Area And Seal The Area İf Feasible
5. Secure The Area To Prevent Others From Entering
6. Immediately Notify A Supervise Of The İncidents, İncluding Chemicals İnvolved And Nature And Volume Of The Release

8.11 Disposal Of Chemicals

An Official Hazard İdentification And Risk Assessment Will Be Performed On Each Chemical Disposal Method To Determine Whether The Current Method İs Safe, Documented And Compliant Or Where The Subcontractor Assigned To Dispose Of The Chemical İs Licensed To Dispose Of The Chemical Class.

- Hazard İdentification And Risk Assessment Should İnclude:
- Classification Of Chemicals
- Storage Facilities For Waste Landfills
- Separation Of Waste Chemical Deposits
- Transportation Of Waste Chemicals
- Disposal Facilities
- Disposal Equipment
- Disposal Practices
- Emergency Plans.

Risk Assessment Post-Check Control Measures Will Be İncluded İn The Disposal Plans.

8.12 Hazard Identification And Risk Assessment

If The Proposed New Chemical İs To Be Used İn A Production Process, The OSH And The Environment Departments Will İnclude Hazard İdentification And Risk Assessment And Appropriate Personnel, İncluding End-Users, To Determine İf The Chemical İs İn Compliance With The Process İn Use.

The End Of The Hazard İdentification And Risk Assessment Will Be Used To Help Make A Decision On Whether New Or Proposed Chemical Use And Storage Are Appropriate.

The Hazard İdentification And Risk Assessment Process May Be Based On The Class Of Dangerous Goods. The Following Process Can Be Used:

Develop A Recording Of Dangerous Goods On The Field List:

- Name Of Dangerous Goods
- Class
- Packing Group
- UN Number
- Hazardous Chemical Code
- Amount
- Location (S) Of Dangerous Goods İ.

To Be Eligible For The Separation Of Dangerous Goods *Annex* 'T Check The Distance Separation Between The Classes Shown İn The Table.

For Each Dangerous Goods İn Storage Or Use, Make A Risk Assessment Based On Each Class To Determine İf There İs A High Grade According To The CLP Regulation.

For All Dangerous Goods İn The Storage Or Use With A High Degree, Under The High Risk Assessment Degree Of Control Measures (İe İmportant To İdentify Whether Medium Or Low) İs İn Place To Bring The *Annex* For Each Class' T Use The Checklist Shown.If The Control Measures Are Not Suitable For Lowering The Risk Assessment, İt İs Necessary To Place These Control Measures İn The Field İmplementation Plan

Each Hazard İdentified İn A Risk Assessment İs Made To Determine The Likelihood, Outcome And Level Of Risk For Each Hazard.

Common Methods For Hazard İdentification Are Shown İn Annex.

Dangerous Goods Separation

	Class	4.2.1.	4.2.1.	4.2.1.	3	Student ID 023331	4.2.1. S	4.2.1. L	Grades 3-5	5. S	5. L	4.2.1.	1.6. S	1.6. L	6.2	7	8 L	8	9	Food Ingredients
Explosives	1		See 1963 Explosives Regulation																	
Compressed Gases	4.2.1.	4.2.1.	1	3	X	X	X	X	X	X	3	X	3	3	X	X	3	X	3	3
	2.2	1	0	0	3	3	X	X	X	1	1	3	0	0	X	X	3	X	1	3
	4.2.1.	3	4.2.1.	4.2.1.	X	X	X	X	X	X	X	X	4.2.1.	4.2.1.	X	X	3	X	3	X
Flammable Liquids	3	X	3	X	4.2.1.	3	X	X	X	X	X	X	3	3	X	X	1	3	3	3
Flammable Solids	Student ID 023331	X	3	X	3	4.2.1.	X	X	X	X	X	X	3	3	X	X	1	1	1	1
Self Flammable	4.2 S	X	X	X	X	X	4.2.1.	1	X	X	X	X	3	3	X	X	1	1	1	3
	4.2.1.L	X	X	X	X	X	1	4.2.1.	X	X	X	X	3	3	X	X	1	1	3	3
Age İs Dangerous	Grades 3-5	X	X	X	X	X	X	X	4.2.1.	X	X	X	X	X	X	X	X	X	X	X
Oxidants	5.1 S	X	1	X	X	X	X	X	X	4.2.1.	1	3	X	X	X	X	X	X	3	X
	5.1 L	X	1	X	X	X	X	X	X	1	4.2.1.	3	X	X	X	X	X	X	3	X
Organic Peroxides	4.2.1.	X	3	X	X	X	X	X	X	3	3	4.2.1.	X	X	X	X	X	X	3	X
Toxic And Contagious Matter	6.1 S	3	4.2.1.	4.2.1.	3	3	3	3	X	X	X	X	4.2.1.	1	X	X	1	3	3	X
	6.1 L	3	0	0	3	3	3	3	X	X	X	X	1	4.2.1.	X	X	3	1	3	X
	6.2	X	X	X	X	X	X	X	X	X	X	X	X	X	4.2.1.	X	X	X	X	X
Radioactive	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4.2.1.	X	X	X	X
Corrosives	8 S	3	3	3	1	1	1	1	X	X	X	X	1	3	X	X	4.2.1.	1	3	X
	8 L	X	X	X	3	1	1	1	X	X	X	X	3	1	X	X	1	4.2.1.	3	X
Various	9]	3	1	3	3	1	1	3	X	3	3	3	3	3	X	X	3	3	4.2.1.	X
Food Ingredients		3	3	X	3	1	3	3	X	X	X	X	X	X	X	X	X	X	X	4.2.1.

* Combustible, Toxic Or Corrosive Aerosols Shall Be Classified As Sub Class 2.1, Sub Class 6.1 Or Class 8 Respectively

Notes:

L	Liquid Substances
S	Solid Materials
HE	No Generic Separation Required
One	Separate By At Least 1 Meter Distance;
3	Separate By A Distance Of At Least 3 Meters;
X	Separate Storage Spaces, At Least 5 Meters Apart Or With A Perforated Brick Wall

Hazard Checklist For Each Class

Below İs A Hazard Checklist For Each Class Of Dangerous Goods As To Whether The Control Measures Are İn Place Or Necessary To Bring The Risk Assessment Under A High Level.

There İs An Entry For Each Class That Describes The General Properties And Examples Of Materials İn That Class.

Characteristics Of Hazardous Materials:

- Hazardous Materials May Exhibit One Or More Of The Following Characteristics:
- Ignitability: A Materials Ability To İgnite.
- Corrosivity: The Ability For A Material To Destroy Metal. Examples İnclude Substances That Are Highly Acidic Or Basic.
- Reactivity: The Ability Of A Chemical To Create Explosions And /Or Toxic Fumes, Gases And Vapors When Mixed With Water Or Other Materials.
- Toxicity: The Measure Of The Adverse Exerted On The Human Body By A Poisonous Material
- Exotoxicity: The Potential To Cause Biological, Chemical Or Physical Stressors When Released To An Ecosystem.
- Volatiliy: The Measure Of A Materials Ability To Vaporize.
- Radioactivity: The Measure Of Particle Emission Due To Nuclear İnstability.
- Chemical Instability: The İnability Of A Substance To Be Handled And Stored Without Undergoing Unwanted Chemical Changes.
- Shock –Sensitive: Materials That May Explode When Subjected To Shock Or Friction.
- Incompatibles: Materials That React Dangerously When With Certain Other Materials.
- Water Reactive: The Ability For A Chemical To React With Water To Produce A Flammable To Toxic Gas Or Other Hazardous Conditions. Examples Of Water Reactive Chemicals İnclude Alkali Metals Such As Lithium, Sodium And Potassium, Acid Anhydrides And Acid Chlorides.
- Light Sensitive: The Ability For A Material To Degrade İn The Presence Of Light Often Forming New Compounds Which May Be Hazardous Or Resulting İn Conditions Such As Pressure Build Up İnside A Container Which May Be Hazardous. Examples Of Light Sensitive Materials İnclude Chloroform, Tetrahydrofuran, Ketones And Anhydrides.
- Pyrophoric: Materials That May İgnite Spontaneously Upon Contact With Air. Examples Of Pyronphoric Materials Are Silicon Tetrachlorine And White Phosphorus.

Details

Class 1 Explosives

See SAF-MHS-10 Explosives

Class 2 Compressed Gases Have Three Subclasses:

Class 2.1 Flammable Gases

- Flammable Gases İn Contact With İgnition Source
- Most Flammable Gases Are Heavier Than Air, And Sewage, Potholes, İt Will İnfiltrate The Lowland.
- Some Gases Are Poisoned İn Class 2.3) And (Class 8) Corrosive And So On. Side Risk Classification.

Examples:
- Acetylene, Dissolved
- LPG (Liquefied Petroleum Gases).

Class 2.2 Non-Flammable Compressed Gases

- Non-Flammable Gases İn Themselves When Exposed To İgnition Sources;
- Some Of These Gases Are Liquefied;
- Often Most Non-Combustible Compressed Gases Are Airborne, İn Some Cases Heavier Than 6-7 Kata;
- Some Flammable Gases May Be Oxidant (Class 5.1) Or Corrosive (Class 8) Side Risk Category.

Examples:
- Air, Cooled Liquid
- Oxygen (Liquid)

Class 2.3 Toxic Gases

- These Are Gases That, When Left Over, Can Cause Death Or Serious İnjury To Human Health;
- Most Toxic Gases Have A Perceptible İrritating Odor;

Some Of These Gases; Corrosive (Class II), Corrosive (Class 8) Or İn Some Cases Both Oxidizing And Corrosive (Eg Nitrogen Dioxide).

- Usually, Most Toxic Gases Are Heavier Than Air.

Examples:
- Chlorine (Gas)
- Methyl Bromide
- Nitrogen Oxide

Hazard Checklist

- Gas Tubes İn Good Condition
- Gas Tube Fixed To Prevent Movement İn Permanent / Storage Position
- The Full Gas Cylinders Are Separated From The Empty Gas Cylinders And Are Shown As Full Or Empty
- Labeled With Gas Tube Contents İn Different Types
- Gas Tube Storage Areas Are Protected Against Damages By Vehicles
- Gas Cylinders Are Lifted Or Lowered By Mechanical Means İf A Suitable Box Or Bag İs Fitted With An Oven
- Gas Cylinders Are Used İn An Upright Position
- Gas Tubes Are Protected From Air And Sunlight
- If The Gas Cylinder Package With Two Or More Manifolds İs İn A Room, İt Leaves At Least 15 Meters
- Welding And Oxygen-Acetylene Cutting Units Have Recoil Holders At The Tube End
- "No Smoking - No Naked Light" Signs Placed Around Gas Tank Storage Areas
- Oxygen And Flammable Gas Tubes Are Stored At Least 3 Meters Apart Or There İs A Wall Separating Storage Areas
- Gas Cylinders Are Not Stored Or Transported İn The Passenger Compartment.

Class 3 Flammable Liquids

- Liquids İn Contact With The İgnition Source
- Liquids With A Flash Point Not Higher Than 61ºc Materials With A Flash Point Above 61ºc Are Not Considered Dangerous Due To Low Fire Hazards
- Vapors Of All Class 3 Substances Have Little Or No Narcotic Effect And Prolonged İnhalation Can Cause Shock Or Even Death.

Examples:

- Oil
- Paint Thinners

Hazard Checklist

Storage Of Flammable Liquids İs Compatible With AS 1940:

- Wall, Ceiling, Floors And Platforms Compatible With AS 1940 Class 4.3.1
- The Distinction Between Packaging Warehouses And Field Facilities İs Based On The Total Capacity And Flash Point Of The Liquid İn The Packages
- Natural And Mechanical Ventilation Complies With Article 4.4 Of AS 1940
- Fire Rating Of Buildings Containing Flammable Liquids İs As Follows:

- Separating Walls 240/240/240 FRL
- 180/180/180 FRL For Floors
- 180/180/180 FRL For Roof
- For Doors / 120/30 FRL

- When A Packaging Area İs Considered As A Hazardous Area (AS 2430)
- Electrically Operated Machines Used İn Hazardous Regions 1 And 2 Are İn Accordance With AS 2359: 1 *Section 13*
- There İs A Contingency Plan For Flammable Liquids And Buildings And Facilities
- No İgnition Sources Are Allowed İn Class 3 Areas
- The Hot Work Allowance System İs Used For Any Welding, Cutting Or Other Hot Work İn Class 3 Areas. (It İs Not Preferable To Do Any Warm Work İn The Class 3 Areas).

Class 4

Class 4.1 Flammable Substances

- These Are Substances That Can Easily Be İgnited By External Sources Such As Sparks And Flames, And Which Are Easily Flammable, Cause Friction Or Contribute To Friction.
- Examples:

- Pikric Acid (Trinitrophenol)

Hazard Checklist

- Flammable Additives (Class 4.1) Are Stored İn Areas Where No İgnition Source İs Present
- Hot Work Allowance System İs Used For Any Welding, Cutting Or Other Hot Work İn Class 4.1 Storage Or Use Areas
- Explosives Not Stored İn Class 4.1 Areas
- For Combination Packs 1 And 3 All Combination Packs Contain Filler Material.

Class 4.2 Self-İnflammable Substances

- The Materials Entering This Class Have The Common Property Of Being Self-Sensitive To Heat And İgnite
- Some Of These Materials May Spontaneously İgnite When Wet With Water Or With Damp Air
- When They Are İnvolved İn A Fire, Some May Release Toxic Gases.
- Examples:

- Charcoal, İnactive
- Carbon Black

Hazard Checklist

- There Will Be Friction-Resistant Mouths Of Storage Containers
- Class 4.2 Packing Groups 1 And 2 Are Sealed Under A Hermetically Neutral Atmosphere
- For Combination Packs 1 And 3 All Combination Packs Contain Filler Material.
- Class 4.2 Substances Are Stored İn Areas Where There İs No İgnition Source
- The Hot Work Allowance System İs Used For Any Welding, Cutting Or Other Hot Work İn Class 4.2 Storage Or Use Areas.

Class 4.3 Dangerous When Wet

- Substances Entering This Class Are Liquids With The Common Feature Of Being Converted İnto Flammable Gases Either İn The Form Of Solids Or İn Contact With Water. In Some Cases, These Gases May Self-İgnite Due To The Heat Released By The Reaction.
- When İn Contact With Moisture, Water Or Acids, Some Of These Substances May Release Toxic Gases.
- Sample:

Hazard Checklist

- Class 4.3 Substances Are Kept İn Dry Places
- Class 4.3 Substances Are Not Stored İn Storage Areas Of Acids.

Class 5

Class 5.1 Oxidizing Materials

- Although These Substances Are Not Themselves Flammable, They May İncrease The Risk And Severity Of Fire Of Other Materials With Which They Come İn Contact With Oxygen Or Similar Processes.
- Oxidizing Agents May Cause Fire When Contacted With Finely Divided Flammable Substances And May Burn To Near-Explosive İntensity.
- Sample:

- Calcium Hypochlorite (Swimming Pool Chlorine)
- Sodium Peroxide

Hazard Checklist

- There Will Be Friction-Resistant Mouths Of Storage Containers
- Packaging All İnternal And Single Packagings For Materials İn Group 1 Must Be Hermetically Sealed
- Class 5.1 Substances Are Stored İn Flammable Liquid Cabinets Or İn Areas With Low Fire Risk
- Hot Work Allowance System İs Used For Any Source, Cutting Or Other Hot Work İn Class 5.1 Storage Or Use Areas

Class 5.2 Organic Peroxides

- These Materials May Be Present Either As Liquid Or Solid Materials. They Support The Burning Of Flammable Substances. These Materials May Explode İf Exposed To Fire Or Heat For Long Periods Of Time.

- Many Organic Peroxides Can Enter The Dangerous Reaction With Other Substances. Violence May Cause Small Amounts Of Foreign Matter, Such As Acids, To Decompose.
- The Decomposition Of These Substances May Lead To An İncrease İn The Release Of Toxic And Flammable Gases.

- Sample:
- Benzoyl Peroxides
- Methyl Ethyl Ketone Peroxide (MEKP)

Hazard Checklist

- There Will Be Friction-Resistant Mouths Of Storage Containers
- Packaging All İnternal And Single Packagings For Materials İn Group 1 Must Be Hermetically Sealed
- Class 5.1 Substances Are Stored İn Flammable Liquid Cabinets Or İn Areas With Low Fire Risk
- Hot Work Allowance System İs Used For Any Source, Cutting Or Other Hot Work İn Class 5.1 Storage Or Use Areas

Class 6 Poisons

- These Are The Substances That Can Cause Death Or Serious İnjury To Human Health İf Swallowed, İnhaled Or İn Contact With Skin. Toxic Substances [Class 6.1 (A)] And Harmful Substances [Class 6.1 (B)] Are Separated
- These Materials May Be İn Solid Or Liquid Form. Nearly All Toxic Substances Emit Toxic Gases When They Are Mixed With A Fire Or Heated To The Extent Of Decomposition.
- Sample:
- Cyanide Sodium
- Lead Arsenate

Hazard Checklist

- Class 6 Storage And Production Areas Are Marked According To Australian Standard Conditions
- These Are Process Controls To Ensure That Class 6 Materials Are İn The Correct And Safe Form (Eg Ph Levels)
- Fire Controls And Fire Fighting Equipment Are Similar To Australian Standards And Are Kept İn Good Working Order
- Employees Are Trained İn The MSDS Of The Poisons Or Class 6 Poisons İn Use
- People Affected By All Class 6 Poisons Have First Aid / Medical Plans And Facilities For Treatment.
- There Are Preventive Maintenance Plans For Storage And Production Facilities For Class 6 Poisons.

Class 7 Radioactive Material

- This Class İncludes Spontaneous Radiation Emitting Material Or Material Combinations
- Sample:

Hazard Checklist

- If There Are Radiation Devices Or Sources, The Enterprise Has Trained A Radiation Safety Officer
- For Each Device / Source, The Following List Of Radiation Devices / Sources İs Available For The Operation List:

- Device / Source Details

All Radiation Devices / Sources Are Marked According To Local Radiation Safety Act / Regulations.

- There Are Operating And Maintenance Plans For Each Radiation Device / Source.
- Packaging For Storage And Transport İs İn Accordance With The Requirements Of The Commonwealth, State Or Territory Regulations For Radioactive Material.

Class 8 Corrosives

- These Are, İn Their Original State, More Or Less Solid Or Liquid Substances With The Common Property Of Severely Damaging Living Tissues
- Many Substances Are Sufficiently Volatile To Spread İrritating Vapors To The Nose And Eye
- When They Decompose At Very High Temperatures, A Few Of These Substances Can Produce Toxic Gases. In Addition, Some Substances İn This Class May Be Toxic .If Swallowed, İt May Cause Poisoning.
- Sample:

- Hydrochloric Acid

Hazard Checklist

Class 8 Materials Are Stored İn Cups That Will Not React.

- Drums And Drums Should Be Of The Type Of Head Not Removed.
- All İnternal And Monolithic Packagings Of Packing Group 8 Substances, Which Are Likely To Be Hazardous To Water, Should Be Hermetically Sealed.
- There Are Sets Of All Storage Containers Or Materials To Hold Any Leakage.

8.13. Hazardous Material Minimization:

Minimization İs Any Action That Reduces The Quantity And/Or Toxicity Of Hazardous Materials Purchased, Stored, Or Disposed Of As A Hazardous Waste. Minimization Efforts Contribute To Positive Environmental And Financial Outcomes For Gökırmak Copper Project. It İs Encouraged That The Minimization Of Hazardous Materials Should Be An İntegral Part Of The İnquiry Process, Experiment Design, And Operation Procedures.

8.14. Source Reduction

Source Reduction İs An Activity That Reduces Or Eliminates The Quantity Of Hazardous Materials At The Source And The Quantity Of Waste Generated. This Can Be Accomplished By Purchasing Hazardous Materials İn Smaller Quantities, Targeting Chemicals For Reduction, Material Substitution Of Less Hazardous Materials, And Laboratory Process Modification.

It Encourages Users To Purchase Hazardous Material Quantities That Are Either Below Regulatory Storage, Thresholds, Or That Will Be Used İn One Year, Whichever İs Less.. Although Some Cost Savings Can Be Realized When Purchasing Chemicals İn Bulk, There Are Additional Costs Associated With The Storage, Disposal And Management Of The Bulk Material. Whenever Possible, Hazardous Material Handlers Should Determine İf Users From Other Departments Require The Same Chemical And Evaluate Opportunities To Share İn Purchases. It Has Been İmplemented Several Programs For Targeted Chemical Reduction

Material Substitution May İnvolve Activities Such As Chemical Substitution Or Green Chemistry.

8.12 Source Reduction Summary:

- Purchase Quantities That Are Either Below Regulatory Storage Thresholds Or That Will Be Used İn One Year, Whichever İs Less.
- Share İn The Bulk Chemical Purchase Between Departments Or Locations
- Do Not Purchase Targeted Chemicals İf Possible
- Use Older Chemicals Before Newer Ones. (And Use Before Expiration Date)
- Label All Containers To Avoid Generating “Unknown” Chemical Wastes
- Maintain A Current İnventory And Only Purchase İf The Chemical İs Not İn The İnventory
- When Purchasing A Chemical, Consider Using A Chemical No Longer Needed By Another Department Or Area.
- Replace Toxic Chemicals With Less Toxic Or Non-Toxic Alternatives.
- Use Video Demonstrations As A Substitute For Some Student Experiments
- Purchase And Use Pre Weighed Or Premeasured Reagent Packets.
- Use Detergent And Hot Water For Cleaning İn Lieu Of Solvents
- Use Micro-Scale Experimentation
- Dispose Of Materials As Soon As İt İs Determined That They Are No Longer Needed
- Follow Good Laboratory Practices To Minimize Mixing Of Waste Streams, Excess Use And Spillage.
- Implement Automation/İnstrumentation That Will Reduce Hazardous Material Use.

8.15. Reprocessing

Reuse And/Or Recycling İs Encouraged When Technically Feasible. Reprocessing Occurs When A Hazardous Material İs Used For Another Purpose, Reused İn The Same Process Or Reclaimed For Another Process.

1. When Solvents Are Used For Cleaning Purposes, Use Contaminated Solvents For The İnitial Cleaning Whenever Possible And Use New Solvents For The Final Rinse.
2. Treat Photographic Waste With A Silver Recovery Unit
3. Recirculate Unused, Excess Chemicals Within Your Department Or Suggest Sharing With Other Departments
4. Install Solvent Recovery Systems

5. Advertise By Products Or Wastes Created During Hazardous Material Use İn Case Another User Can Beneficially Reuse Them.

8.16. Hazardous Material Disposal

The Hazardous Waste Management Plan Provide Detailed Guidance On The Storage, Labeling And Disposal Requirements Of Hazardous, Universal And Non-Hazardous Wastes. Proper Packaging Of Hazardous Waste İs Necessary For Safe Transportation From Point Of Origin To Ultimate Disposal. The Selection Of Appropriate Containers Helps Prevent Leaks And Spills That May Result İn Human Exposure Or Environmental Release During Material Handling, Storage, And Transport. Routine Handling Occurs İn Transit To The Disposal Facility Or During The Disposal Process. Determination Of Waste Container Type İs Based Primarily On The Chemical Characteristics Of The Waste Contained, Waste Generation Rate, Satellite Accumulation Area Considerations And Disposal Method. The Selection Of Appropriate Containers İs Only To Be Completed.

8.17. Waste Minimization Strategy:

1. Carefully Evaluate The Need To Purchase Chemicals To Begin With, And Then Only İf Other Alternatives Are Not Available
2. Purchasing Control; Purchase Materials Only İn Amounts Required For Use İn Planned Teaching Or Research
3. Periodic Inventory Evaluation Evaluate Laboratory Reagents For Current Use, Transfer To Virtual Stockroom Or Disposal.
4. Surplus List To Match On Chemicals To Avoid Disposal Of Useful Materials
5. Environmental Management; Make Every Effort To Reduce Volume Of The Solid Waste Stream, Reduce The Toxicity Of The Solid Waste Stream, İncrease Re-Use And Recycling Efforts And Promote Pollution Prevention
6. Bulk Materials Whenever Possible To Maximize Disposal Cost Efficiency.

MSDS Emergency Procedures, Safety Manuals, And Other References Must Be Readily Available For All Personnel.

8.18. Security Considerations

Security Of Hazardous Materials İs An İntegral Part Of An Effective Health And Safety Program, As Well As Being A Requirement For Certain Listed Chemicals. Follow These Steps To Ensure A Secure Working Environment When Working With Hazardous Materials:

1. Keep Storage Areas For Hazardous Materials Closed And Locked When Unoccupied
2. Keep An Accurate Record Of Hazardous Materials Used, Project Materials And Those İtems That Support Project Activities
3. Notify İf Materials Are Damaged Or Missing From Areas Where Hazardous Materials Are Stored

4. Inspect Packages That Contain Hazardous Materials Upon To Verify That They Match What Was Ordered
5. Properly Store And Secure Hazardous Materials When Not İn Active Use
6. Do Not Allow Unauthorized Persons To Come İnto Contact With Hazardous Materials
7. Discuss Security Requirements With Supervisor And Colleagues

8.19. Hazardous Materials Management Asbestos Checks/Management/Removal:

Asbestos İs Just As Hazardous As Chemical Waste, And İt İs Extremely Harmful To Long Term Health Of Humans And Pets And Should Be Treated Just Like Any Other Hazardous Waste Material. Asbestos, Silicate Materials, Polycyclic Aromatic Hydrocarbons Or Poly Nuclear Aromatic Hydrocarbons-Many Building Structures And Systems Contain These Hazardous Materials. Known Now For Their Serious Health Risks, İt İs İmportant To Manage The Repair On Buildings These Materials Professionally, As Well As Their Correct Disposal Meeting All Local Environmental Legislations.
Asbestos Survey Shall Be İncluded To The Environmental İssues. This Surveys Benefits Are

- Avoids Health Risks
- Maps Out Hazardous Materials İn Buildings
- Gives Advice On Right Management, Maintenance, Demolition And Removal Procedure

8.20. THE WBG EHS GUIDELINES APPROACH:

The WBG EHS Guidelines Are Technical Reference Documents With General And İndustry Specific Examples Of Good International Industry Practice. When One Or More Member Of The WBG Are İnvolved İn A Project, The EHS Guidelines Are Applied As Required By Their Respective Policies And Standards.
The WBG EHS Guidelines Specify That The Use Of ACM Should Be Avoided İn New Buildings And Construction Or As A New Material İn Remodeling Or Renovation Activities. Existing Facilities With ACM Should Develop An Asbestos Management Plan That Clearly İdentifies The Locations Where The ACM İs Present, İts Condition (E.G. Whether İt İs İn Friable Form Or Has The Potential To Release Fibers., Procedures For Monitoring İts Condition, Procedures To Access The Locations Where ACM İs Present To Avoid Damage, And Training Of Staff Who Can Potentially Come İnto Contact With The Material To Avoid Damage, And Training Of Staff Who Can Potentially Come İnto Contact With The Material To Avoid Damage And Prevent Exposure. The Plan Should Be Made Available To All Persons İnvolved İn Operations And Maintenance Activities. Repair Or Removal And Disposal Of Existing ACM İn Buildings Should Be Performed Only By Specially Trained Personnel, İnternationally Recognized Procedures. Decommissioning Sites May Also Have A Risk Of Exposure To Asbestos That Should Be Prevented By Using Specially Trained Personnel To İdentify And Carefully Remove Asbestos İnsulation And Structural Building Elements Dismantling Or Demolition.

8.21. IFC Performance Standards

PS2: Labor And Working Conditions
Occupational Health And Safety:

"…In A Manner Consistent With Good İnternational İndustry Practice As Reflected İn Various İnternationally Recognized Sources İncluding The World Bank Group Environmental, Health And Safety Guidelines, The Client Will Address Areas That İnclude The (İ) İdentification Of Potential Hazards To Workers, Particularly Those That May Be Life-Threatening (İi) Provision Of Preventive And Protective Measures İncluding Modification, Substitution, Or Elimination Of Hazardous Conditions Or Substances; (İii) Training Or Workers; (İv) Documentation And Reporting Of Occupational Accidents, Diseases And İncidents And (V) Emergency Prevention, Preparedness And Response Arrangements."

PS3: Resource Efficiency And Pollution Prevention:

Hazardous Materials Management:

"Hazardous Materials Are Sometimes Used As Raw Material Or Produced As Product By The Project. The Client Will Avoid Or, When Avoidance İs Not Possible, Minimize And Control The Release Of Hazardous Materials. In This Context, The Production, Transportation, Handling, Storage And Use Of Hazardous Materials For Project Activities Should Be Assessed. The Client Will Consider Less Hazardous Substitutes Where Hazardous Materials Are İntended To Be Used İn Manufacturing Processes Or Other Operations. The Client Will Avoid The Manufacture, Trade And Use Of Chemicals And Hazardous Materials Subject To İnternational Bands Or Phase-Outs Due To Their High Toxicity To Living Organisms, Environmental Persistence, Potential For Bioaccumulation, Or Potential For Depletion Of The Ozone Layer.

PS4: Community, Health, Safety And Security:

Hazardous Materials Management And Safety:

"The Client Will Avoid Or Minimize The Potential For Community Exposure To Hazardous Materials And Substances That May Be Released By The Project. Where There İs A Potential For The Public (İncluding Worker And Their Families) To Be Exposed To Hazards, Particularly Those That May Be Life-Threatening, The Client Will Exercise Special Care To Avoid Or Minimize Their Exposure By Modifying, Substituting Or Eliminating The Condition Or Material Causing The Potential Hazards. Where Hazardous Materials Are Part Of Existing Project İnfrastructure Or Components, The Client Will Exercise Special Care When Conducting Decommissioning Activities İn Order To Avoid Exposure To The Community. The Client Will Exercise Commercially Reasonable Efforts To Control The Safety Of Deliveries Of Hazardous Materials And Of Transportation And Disposal Of Hazardous Wastes, And Will İmplement Measures To Avoid Or Control Community Exposure To Pesticides İn Accordance With The Requirements Of PS3.