



# **ACACIA MINE OPERATIONS GÖKIRMAK COPPER MINE**

## **Oil and Chemical Spill Response Management Plan 2017**

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**Prepared By**

**Environment & Social Department,  
AECOM Consultant**

**AECOM**

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## **1. PURPOSE AND SCOPE**

Regardless of the type or quantity of hazardous chemical or substance involved, all worksites must implement measures to reduce the potential for spills and have a plan for responding to spills. This document describes methods for preventing spills, directly responding to spills of low or minor hazard, and the procedures for reporting and addressing larger or major, releases at AMI.

This Plan sets out the roles and responsibilities for spill prevention and response, summarizes spill prevention recommendations, provides spill preparation guidance, relates the general spill response procedures applicable to all chemical and biological releases and relates the necessary reporting obligations.

## **2. ROLES AND RESPONSIBILITIES**

Roles and responsibilities for E&S management for the GCP are described in detail in the Project ESMS. The Health and Safety Manager (and the department's sub-level personnel including the Health and Safety Supervisor) and the Environmental and Public Relations Coordinator (and the related department's sub-level personnel regarding the environmental subjects, including the Environmental Supervisor) will be responsible for implementation of the Oil and Chemicals Spill Response Plan .

## **3. PROJECT STANDARDS**

Project standards and requirements are described in detail in the Project ESIA Volume-I and Volume-II and are listed below:

- National legislative requirements and all permits, licenses and approvals
- EBRD Environmental and Social Policy and Performance Requirements (PRs)
- European Union legislative requirements and Best Available Techniques (BAT) applicable to the Project
- Other good international industry practices (GIIP)
- International Conventions and Protocols Turkey is a party to
- AMI Environment, Health and Safety Policies

Applicable standards shall be complied with for all Project activities.

## **4. SPILL PREVENTION**

The first step in chemical or biological spill response is to prevent the exposure, release, or spill from happening in the first place. The shop, worksite, chemical storage area, or laboratory should be examined to identify measures that can be taken to minimize the risk of a release occurring. These measures can be identified during regular worksite and laboratory safety inspections. The precautions may include physical controls (secondary containment, safety cabinets); standard operating procedures (labeling, container specifications, lab procedures), or training.

Chemical or biological spills occur during five types of activities: Storage, Transport, Transfers, Usage, and Disposal. Material Safety Data Sheets (MSDSs) must be maintained reasonably available for each chemical or product containing hazardous chemicals--throughout each of the following activities:

### **4.1 Storage**

Storage may be temporary, long-term, or for daily use. Regardless, certain precautions must be taken:

- Ensure that all containers are properly identified with the common chemical name, physical and health hazards (labels or words), and manufacturer. All containers must include these three pieces of information. This will be on all chemicals as received and must be maintained in a legible condition or be replaced when necessary.

- If a hazardous material is removed from its primary container for use or dispensing, the secondary container must be labeled with the same information – chemical name, hazards, and manufacturer. Mixtures must also be identified. The “manufacturer” name may be the individual preparing the material or decanting it to the working container.
- Shelves used for chemical storage should be securely fastened to the wall or floor to provide added stability. The shelves should have “lips” to prevent falling of the containers from the shelves.
- Do not overcrowd storage rooms, laboratories, cabinets, or shelving units. Access must be provided for the identification of the materials and inspection of the area for spillage.
- Identify the presence and hazards of chemicals stored in an enclosed area, storage room, or in laboratories housing large quantities of hazardous materials on the entry door or the approach to the area.
- Ensure chemicals are stored within easy reach of everyone in laboratories, storage rooms, or shops, and no higher than eye level. Large bottles and containers should be stored as close to floor level as possible. Liquid containers should be stored no higher than shoulder height.
- Flammable, combustible, and corrosive chemicals should be stored in safety cabinets whenever possible.
- Do not store chemical containers directly on the floor where they might be knocked over and broken-- unless they are in safety cans or still in their original shipping carton and packing.
- Do not store chemical containers on top of flammable storage or acid storage cabinets.
- Ensure that lighting and ventilation is adequate in the storage areas.
- Regularly inspect chemicals in storage to ensure there are no leaking or deteriorating containers:
  - Keep the outside of containers clean and free of spills and stains.
  - Check that caps and closures are secure and free of deformation. Use only screw caps on chemical containers in storage; foil, corks or other plugs are not acceptable.
  - Ensure that containers are free of rust, bulges or signs of pressure buildup.
- Do not store chemicals in unsuitable containers or containers made of incompatible material.
- Do not store incompatible chemicals together.
- Chemicals must be stored by hazard category and not alphabetically (except within a hazard group) or by size. Chemicals storage matrix is provided in Appendix 2.
- Ensure that all gas cylinders are securely fastened and upright with cylinder caps in place when not in use.
- Any waste chemicals or products should be identified as waste or unwanted material and, if a hazardous waste, be so identified. Contact the HSE Team for waste characterization assistance or removal.
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## 4.2 Transport

- When transporting large, heavy, or a multitude of containers use a cart suitable for the load with high edges or spill trays that will contain any spills or leaks. At the minimum, two people should be involved when transporting large amounts of chemicals.
- Carry glass containers in bottle carriers or another leak resistant, unbreakable secondary container.
- Contact the HSE Team regarding shipping of hazardous materials off site or transport of hazardous materials on public roads or property.

### 4.3 Decanting

- When transferring chemicals between containers, pay careful attention to the size of the receiving container to prevent overfilling it.
- When transferring liquids from large containers, use pumps, siphoning (not initiated by mouth) or other mechanical means instead of pouring.
- Use funnels and spill containment trays to catch leaks and spills when transferring liquids.
- Use approved safety containers when transferring flammable and combustible liquids.
- When transferring flammable liquid from drums, ensure that both the drum and receptacle are grounded and bonded together to avoid an explosion initiated by a static electric spark.
- Ensure that the materials are compatible prior to mixing.
- Remember to label the secondary container with the material name, hazards, and manufacturer.
- Perform the material transfers only in locations with containment to capture or retard the escape of any spillage to the environment or drains.

### 4.4 Handling and Use

- In workshops, during maintenance work on site, and in laboratories, ensure that ventilation is adequate for the chemical or material being handled, used, or applied. Remember that vapors, particulates, or odors may cause exposure to persons not in the immediate vicinity.
- Ensure the work area is free of unnecessary clutter.
- When planning work with hazardous materials, anticipate possible accidents and provide controls to deal with problems that may occur.
- If working alone is required, ensure the working alone protocol addresses chemical spill response as part of the emergency procedures.
- Ensure you have access and know the location of a suitable spill response kit before you start working with chemicals.
- Know the location and how to use emergency equipment such as eye washes, and emergency showers, be aware of the exits and evacuation routes, telephone locations, and Material Safety Data Sheets.

### 4.5 Disposal

- Properly identify the contents of all waste containers and the associated hazards to avoid unsafe or inappropriate disposal.
- Be knowledgeable of the types of waste you may generate (hazardous waste, domestic waste, solid waste, etc.) and how to properly identify, label, and arrange for disposal of the wastes.
- Do not mix incompatible wastes together.
- Do not mix chemical wastes together unless they are of the same chemical nature in order to minimize disposal expenses.
- Notify the HSE Team of any waste (or recyclable) materials requiring disposal. Do not deposit hazardous chemicals in the trash or down the drain. Do not leave hazardous wastes near dumpsters or other locations without notifying the HSE Team for prompt and separate pickup.
- Leave at least 10% air space in bottles of liquid waste to allow for vapor expansion and to reduce the potential for spills due to overfilling.
- When not in use (emptying or adding contents), keep waste containers securely closed or capped. Do not leave open funnels in waste containers.

- Dispose of waste on a regular basis; do not allow excess waste to accumulate in the work area. Contact the HSE Team for waste pick-up to ensure prompt and proper disposal.
- Be sure that any containers being discarded have been emptied. Containers storing some chemicals (some hazardous wastes and pesticides) must be triple rinsed before discarding.

## 5. SPILL RESPONSE PREPARATION

Emergency preparedness is an important element of a spill response plan. When shops, worksites, building chemical storage areas, or laboratories are prepared for chemical spills--fewer errors are made and there is a reduced risk to persons, property and the environment. The essential elements of spill response preparation are: Training, Hazard Information, Proper Equipment, and Written Procedures as described below.

### 5.1 Hazard Information

Information on the chemical hazards present at the worksite must be kept up-to-date and readily available. Sources of information include Material Safety Data Sheets, signs, container labels, posters, and reference books. Department supervisors/managers are responsible for ensuring that this information is readily available to employees in the worksite, laboratory, and maintenance areas.

### 5.2 Equipment

The various Departments are responsible for ensuring that an adequate supply of spill response and personal protective equipment is maintained in each Department, work area, or laboratory. Similarly HSE Team is responsible to ensure that the necessary spill preparedness and response equipment is available for their personnel and the chemical, biological, or radioactive hazards they deal with or may be exposed to during their work activities. The type of equipment required includes; first-aid equipment (including emergency eye washes/showers), personal protective equipment (gloves, eye protection, etc.), and spill clean-up supplies (absorbents, neutralizing agents, etc.). Spill kits and PPE should be customized to account for specific hazards and conditions in each Department, shop, laboratory, work site, or chemical or biological storage facility, room, or area).

### 5.3 Procedures

MSDSs of chemicals provide guidance for responding to a variety of chemical, biological, and radiological spills and Appendix 1 includes a flow chart summarizing the considerations and actions which should be taken in both assessing and responding to spills and releases. A copy of this procedure should be made available to personnel at all worksites. Appendix 2 exhibits chemicals storage matrix.

In addition to the general and material specific procedures given in Section 5 of this Plan, chemical specific procedures may also be needed at worksites. Site-specific procedures should include:

- Information on the hazards of the chemical;
- The quantity and storage location of the hazardous chemical;
- The personal protective equipment and spill abatement equipment required and their location;
- The instructions for containing and cleaning up the spill;
- The first-aid measures and materials required to treat exposed individuals; and,
- The method of residual waste disposal.

## 6. SPILL RESPONSE PROCEDURES

When a chemical spill occurs, personnel at the spill scene must act quickly to reduce the consequences of the spill. The actions taken depend on the magnitude, complexity, and degree of risk associated with the spill. Refer to Appendix 1: AMI Spill Response Flowchart. The following steps outline the general actions which should be taken in response to chemical spills. However, because the appropriate response often depends on the identity or characteristics of the material spilled, spill response should be developed for certain categories of chemicals, biological agents, and radioactive materials in accordance with MSDSs. The general response steps are listed below.

### **Stay clear and warn others:**

Proceed with caution and advise others that are in the immediate area of the spill of the potential danger.

### **Assist injured or contaminated persons:**

If persons are injured, provide first-aid if you or another available individual is trained to do so. If persons have been contaminated by the spilled chemical, lead them to the nearest eyewash or emergency shower (depending on the extent / location of the contamination) and assist in washing off the material. However, do not put yourself at risk and become a casualty. Injuries resulting from chemical spills are often medical emergencies, and HSE Team should be immediately notified when this occurs.

### **Assess the situation:**

An emergency situation exists when there is a high risk to:

- Persons;
- Property; or
- Environment.

Spills of amounts less than that listed may also constitute an emergency depending on the circumstances. Always consider the whole situation when determining if an emergency situation exists or not. All spills in areas accessible to the employees are considered emergencies. Whenever a spill occurs in a public area, immediately contact the HSE Team.

If an emergency arises, isolate the area and contact the HSE Team. When informed of an emergency situation, HSE Team, in addition to responding themselves, will contact the appropriate medical or emergency response persons or team. For this purpose, specific information is needed from the person reporting the incident. This information must include:

- Identity of the person making the report.
- Nature of the incident (fire, explosion, chemical spill, gas leak).
- Location of the incident (facility, building, room number, and location in the room).
- Any injuries or exposures to chemicals, biological agent, or radiation?
- What is the identity of the material and its physical state – liquid, solid, gas?
- Is any of the hazardous material escaping from the spill location – vapors/fumes, run-off?
- When and how the incident occurred.

### **Get help for all but minor spills:**

If an emergency does not exist, assistance from outside the immediate work area may still be required. Consider the following;

- Number and response training of persons required;
- Personal protective equipment required;
- Spill abatement material required;

- Nature of the spill (e.g. amount spilled, physical state, hazards of the spilled chemical).
- Is the situation worsening – spreading, oxidizer, fumes, ignition source, liquid run-off to other areas or drains?

Minor spills or spills of chemicals of low toxicity and/or volatility can be handled by trained and equipped personnel at the worksite. These are often referred to as incidental spills. More serious spills should be handled by local personnel, perhaps with assistance from the other members of the Department. If the nature, quantity or location of the spill exceeds the capacity of Departmental, shop, utility, or laboratory personnel to deal with it safely and effectively, then outside help must be requested by contacting the HSE Team. If there is any doubt regarding the ability of Departmental personnel to handle a chemical spill, always contact the HSE Team and request assistance. The HSE Team will contact local emergency response personnel.

#### **Control and clean-up the spill:**

MSDSs provide information on the hazards of spills and how they should be handled in terms of containment, treatment, and clean-up. In all cases, consult the material's Material Safety Data Sheet to obtain more specific information on the chemical spilled to be sure it is cleaned up safely and effectively.

#### **Report the spill:**

If not already done, report the spill to the HSE Team. All spills, even those which do not require outside assistance, must be reported. The HSE Team will, in turn, make any required reports to the appropriate regulatory agencies. See Section 9 for details on the reporting requirements and procedures.

Remember: Any spill of a hazardous chemical, fuel, oil, or other potentially hazardous material must be contained and cleaned up--regardless of quantity or location--or a report must be made to the HSE Team.

## **7. TRAINING**

Spill response training is provided by the HSE Team to workshop personnel, maintenance personnel, and representatives of the various Departments that handle chemicals, biological agents, or radioactive materials, laboratory workers, and other interested individuals. The Department staff may then use this to develop Department specific training which they provide to staff in their Departments, as well as to employees.

This training normally includes, but is not limited to; review of the HSE Team guidelines for spill response, review of any Department, shop, or laboratory specific chemical spill response plans, instruction in spill clean-up techniques and equipment, and review of hazards found in the work area (chemical, physical, biological, radiological) which may be of concern during spill response.

Training is separately provided to AMI personnel involved in the handling of oil products and response to oil spills. Much of the required spill response training for many Departments and staff is adequately completed as a part of employee's regular training plan.

## **8. MONITORING**

Monitoring will be conducted through review of spill records and grievances. In the case a rising trend of spill events is observed as a result of periodic monitoring, additional measures will be developed and implemented, related trainings' contents will be modified and frequency of trainings will be increased.

## **9. AUDIT AND REPORTING**

HSE team will conduct scheduled and random inspections. Any non-compliances and accidents/incidents identified during these inspections will be reported to the HSE Manager and the HSE Manager will develop corrective measures and report the changes to the Operations Manager.

Audit, inspection, accident/incident and grievance records will be kept in accordance with related AMI procedures/plans.

All chemical and biological spills or exposures and gas releases must be reported verbally, in writing, or via email to HSE Team. The report should include the date, time, location, description of the spill (e.g. type and



quantity), personnel injuries or exposures, equipment damage, any escape of material (e.g. into sewers or bodies of water), witnesses, and persons involved in supervision and clean-up of the spill. The report should be submitted to HSE Team as soon as possible following the spill.

The purpose of this reporting procedure is to allow all required reporting to be completed, to ensure that the spill response and clean-up were adequate, and to identify measures that may prevent similar incidents in the future.

All Contractors are also responsible of reporting to the HSE Manager of AMI, in case of any spill.

Depending on the chemical or material released, its quantity and location, any injuries or exposures that may have occurred, the environmental media affected, and a number of other factors, reporting to Provincial Directorate of Environment and Urbanization may be required under Turkish regulations. Failure to make the required reports within the necessary timeframes, and to ensure that the necessary clean-up procedures were completed, can subject AMI to significant penalties and corrective actions. Many times, a follow-up written report must be submitted regarding the spill or release.

Reporting can be triggered by even small amounts of certain chemicals, or by any release that is not promptly and effectively cleaned up. HSE Team may notify any of the following agencies or entities for assistance or to satisfy regulatory reporting requirements:

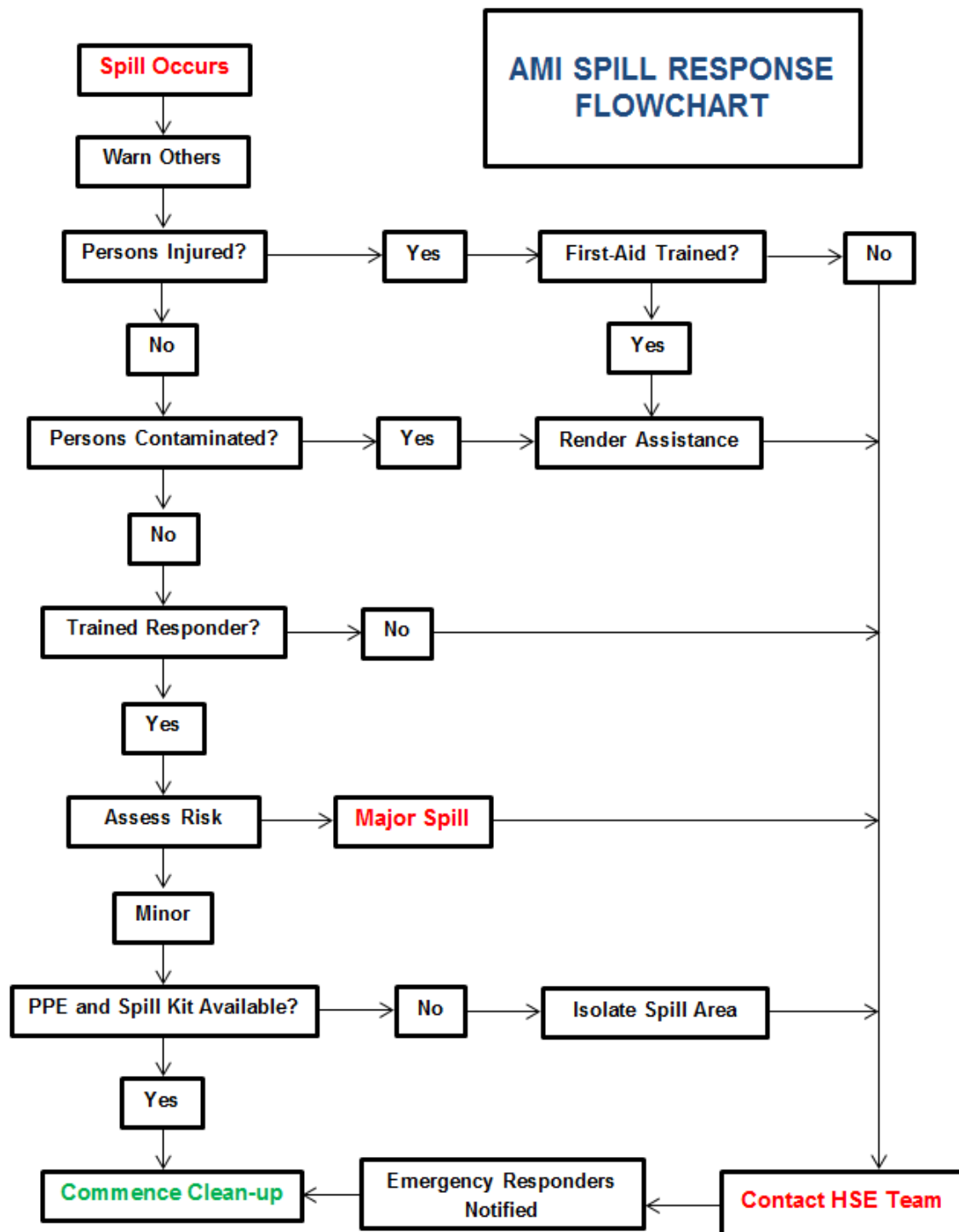
- Provincial Directorate of Environment and Urbanization
- Fire Department
- Emergency Call Number
- Police Department
- Gendarmerie
- Provincial Directorate of Disaster and Emergency

An emergency telephone listing follows. Contact with these entities in the event of a spill or release is restricted to the HSE Team, or other authorized AMI representatives.













## **10. REVIEW AND UPDATE**

This Plan will be reviewed as required by potential changes to operations and/or used hazardous materials. In case any noncompliance with existing project standards is identified or any corrective measure is required, the plan will be updated accordingly. The Health and Safety Manager and Environmental and Public Relations Coordinator will be responsible of review and update of the MP and the Operations Manager will be responsible of approval of any revisions to the Plan. The plan will be recommunicated to AMI personnel and will be shared with contractor/subcontractor management following any such update.

# Spill Response Flow Chart



## Appendix A Chemicals Storage Matrix

						
	+	-	-	-	-	+
	-	+	-	-	-	-
	-	-	+	-	-	+
	-	-	-	+	-	-
	-	-	-	-	+	O
	+	-	+	-	O	+

⊕ Can be stored together

- Can not be stored together

O Can be stored if special precautions are taken