SECTION D: ENVIRONMENTAL AND SOCIAL CONSTRUCTION MANAGEMENT PLANS

CHAPTER D20: EMERGENCY PREPAREDNESS AND RESPONSE CONSTRUCTION MANAGEMENT PLAN

Contents

Tables

Annexes

20 EMERGENCY PREPAREDNESS & RESPONSE PLAN

20.1 INTRODUCTION

This Construction-Phase Emergency Preparedness & Response Plan (this *"Management Plan"*) is designed to provide a high-level overview of the procedures to mitigate and control the impacts on community and occupational health and safety, the environment and the Project in the event of emergency situations during the construction of the Oyu Tolgoi Project. The plan makes specific reference to detailed sub-plans and procedures that have been developed by Oyu Tolgoi and its contractors.

Whereas this document provides the overall approach and commitment to emergency response and preparedness, the specific plans provide detailed command and control and response actions, and it is these plans that must be used in conjunction with this overarching plan in the event of an emergency situation.

Oyu Tolgoi is introducing a Business Resilience Management Plan which incorporates an Emergency Response Plan for operations activities.

The health, safety and environment management systems will be fully developed in compliance with Rio Tinto Standards and Guidelines and applied in Production areas by the start of commercial operations and the corresponding implementation plan will be completed during 2012. .

20.2 OBJECTIVES

The objectives of this Management Plan are to:

- Outline the applicable standards with regards to emergency preparedness and response;
- Define the emergency preparedness and response procedures utilised during the construction phase;
- Define roles and responsibilities;
- Define training requirements; and
- Signpost supplementary emergency scenario or facility plans where response procedures are detailed.

20.3 SCOPE

The Oyu Tolgoi Project is committed to complying with various environmental standards which are managed through a suite of topic specific Management Plans as described in *Chapter D1: Environmental and Social Management Plan (ESMP) Framework*. The ESMP Framework defines standards for Management Plans for the following phases of the Project (see *Chapter D1: ESMP Framework* for the definition of these phases):

- Construction Phase
- Operations Phase

For the construction phase, Management Plans are developed that address health and safety (HSMPs), environmental (EMPs), and social (SMPs) aspects.

This Construction-Phase Emergency Preparedness and Response Plan is part of the suite of construction phase Management Plans. The plan covers emergency situations associated with Construction Phase. Particular reference is made here to the following construction phase Management Plans that have direct cross-linkages to emergency preparedness and response:

- *Chapter D11: Transport Management Plan* in relation to major traffic accidents involving Project vehicles;
- *Chapter D5: Petroleum and Fuels Management Plan* in relation to major fuel spills;

- *Chapter D12: Hazardous Materials Management Plan* in relation to major releases of hazardous materials or fire and explosion;
- *Chapter D8: Waste Management Plan* in relation to disposal of contaminated materials;
- *Chapter D18: Community Health, Safety and Security Management Plan*; and
- *Chapter D19: Construction Worker Health and Safety Management Plan* (for both above-ground and underground operations) in relation to major health and safety incidents.

20.4 SOURCES OF IMPACT

Potential events that could impact Project-related activities, personnel or assets range from major physical incidents such as fire, to failure of significant computer or communications systems. These potential events could include:

- Fire (contained and conflagration);
- Explosion (accident or terrorist);
- Flood, earthquake;
- Slope failure, mudslide and fall of ground;
- Underground incidents including shaft collapse;
- Epidemic or pandemic;
- Weather impact – extreme temperatures or dust storm;
- Aircraft accident;
- Road incident or road obstruction (accident, chemical spill, impassable river crossings, bridge/culvert collapse etc.) (see also Chapter *D11: Transport Management Plan*);
- Spillage of hazardous or potentially-hazardous materials (on or off-site) (see also *Chapter D5: Petroleum and Fuels Management Plan* and *Chapter D12: Hazardous Materials Management Plan*);
- Industrial action;
- Criminal, sabotage or arson attack;
- Security emergency;
- Geopolitical emergency;
- Interruption to utilities supplies;
- Interruption to telecommunications system; and/or
- Access roads closed.

In response to an emergency, the prime concerns are to:

- Protect Project personnel, the community, the environment, Oyu Tolgoi assets and information;
- Ensure that the Project can continue to operate with as little effect on schedule as possible in the situation; and
- Ensure that stakeholders and staff do not lose confidence in the Project and its ability to continue in operation.

20.5 PROJECT STANDARDS

The following standards for emergency preparedness and response are applicable to Project activities.

20.5.1 Mongolian Standards

Applicable Mongolian regulations include:

- Law on Hazardous and Toxic Chemicals, May 2006;

- Law on Fire Safety, May 1999 (as amended);
- The Mine safety & Inspection Regulations 1995;
- Law on Disaster Protection, 20 June 2003;
- Law on Controlling Circulation of Explosives and Blasting Tools, 6 May 2004;
- Law on Construction, 5 February 2008; and
- Integrated safety rules for underground ore, non-ore and placer miners, 2001.

20.5.2 International Standards

The IFC General Environmental Health & Safety Guidelines set out the following recommendations with regard to spills and emergency response[1]:

All projects will have an Emergency Preparedness and Response Plan that is commensurate with the potential risks of the facility and that includes the following basic elements:

- Administration (policy, purpose, distribution, definitions, etc);
- Organisation of emergency areas (command centres, medical stations, etc.);
- Roles and responsibilities;
- Communication systems;
- Emergency response procedures;
- Emergency resources;
- Training and updating;
- Checklists (role and action list and equipment checklist); and
- Business Continuity and Contingency.

IFC Performance Standard 3, Pollution Prevention and Abatement, and EBRD Performance Requirements 3 and 4 also define emergency preparedness and response expectations.

The UNEP APELL "*Guidance for the Mining Industry in Raising Awareness and Preparedness for Emergencies at Local Level*" also provides applicable guidelines for emergency preparedness and response for mining operations. This guidance is focused on environmental and community impacts resulting from mining operations such as tailings dam failure, collapse of waste heaps, subsidence and hence provides limited applicable guidance for the construction phase. However, this guidance will be taken into account in the operational phase Emergency Preparedness and Response Plan. More broadly, the Operations Phase Emergency Response Plan will aim to address all potential underground emergency situations and other above ground activities associated with the production of ore, including but not limited to failure of the tailings dam and slope failures at the open pit and elsewhere.

20.6 ROLES & RESPONSIBILITIES

Overall responsibility for the implementation of this Management Plan shall rest with the Oyu Tolgoi (Fluor) HSES Deputy Director who will coordinate all aspects of emergency preparedness and response, and who shall report on progress to the Oyu Tolgoi Executive Vice President, Construction.

Project-wide roles and responsibilities with regard to health and safety (including emergency response) are set out in *Chapter D19: Worker Health and Safety Management Plan*.

Others with responsibility for the implementation of this Management Plan include:

[1] International Finance Corporation. *General Environmental, Health & Safety Guidelines for Mining*. 30 April 2007. pp 86.

- Fluor, as EPC Manager, is responsible for the integration of these procedures and requirements into the programme management procedures and plans for the construction phase. The principal document in this regard is the ***Oyu Tolgoi Disaster Management and Recovery Plan***;
- Redpath is responsible for the integration of these procedures and requirements into their procedures and plans during the construction of the underground mine shafts. The principal document in this regard is the ***Redpath Emergency Response Plan*** for Shaft #1[2]; and
- The Oyu Tolgoi Environment Department, responsible for implementing the Chemical and Oil Spill Response Procedure.

The above procedures and plans define specific roles, responsibilities and lines of communication.

Oyu Tolgoi will require that at all times a "Duty Manager" is clearly designated who will have responsibility for coordinating and managing emergency response activities.

The Oyu Tolgoi Disaster Recovery and Management Plan is the key document for the management of emergency situations. This plan requires the active involvement of the most senior Oyu Tolgoi representatives. A separate plan, with its own localised command and control structure, will be in place for less severe emergency situations, such as minor spills.

Further details of command and control structures are provided in *Annex 2*.

20.6.1 Above-Ground Emergency Response Team

The surface emergency response team comprises 30 full-time rescue staff. The emergency response capability is divided into 3 duty-shift teams of 6 persons (to allow for rosters).

For fire-fighting, this provides:

- A two-person entry team;
- A two-man standby team;
- One person to operate the pump on the fire truck; and
- A team captain who is scene commander and entry controller.

For any major incident, the stand-down shift is also called-in to support the duty-shift. At any time, the duty-shift comprises a team of 6 rescuers, supported by a senior Oyu Tolgoi safety manager.

20.6.2 Underground Emergency Response Team Training

The underground emergency response team comprises 18 volunteers. Many of the full-time surface rescuers also work as underground volunteers.

20.7 EMERGENCY PREPAREDNESS AND RESPONSE CONTROLS

The measures for effective emergency preparedness and response during the Construction Phase are described in the table below. Contractors are required to incorporate the measures outlined in the table below within their own working procedures.

[2] Note that Shaft #2 is still being constructed with above-ground structures being completed prior to shaft-sinking commences.

Table 20.1: Emergency Preparedness & Response Control Measures

ID	Topic/ Aspect	Applicability/ Activity	Control Description	Responsible Parties	Means of verification	Comments
ERP01	Emergency Response Planning (general)	Project plans	A project-wide emergency response plan has been implemented. This plan addresses: ▪ Roles and responsibilities (Disaster Management and Recovery teams). ▪ Contact details for Project personnel and relevant third party organisations. ▪ Lines of communication. ▪ Equipment and resource needs including PPE. ▪ Area-based emergency procedures for the mine licence site, the airport and other off-site construction areas, each of which include: o Response actions o Recovery actions ▪ Evacuation plans.	Oyu Tolgoi HSES Deputy Director Principal Contractor (Fluor)	See Oyu Tolgoi Disaster Management & Recovery Plan and the PMC HSES Procedures A2MW 653 8010	Excludes underground mine plans – see ERP03 for details. Oyu Tolgoi has a spill response procedure that specifically deals with oil and chemicals spill response.
ERP01 -a	Emergency Response Planning	Project Plans	Specific procedures are in place to address: ▪ Natural disasters. ▪ Pandemics. ▪ Medical Emergencies. ▪ Fires and explosions. ▪ Traffic incidents. ▪ Civil unrest. ▪ Bomb warnings. ▪ Environmental incidents including release of fuels and hazardous substances (see later commitment.	Oyu Tolgoi HSES Deputy Director. Principal Contractor (Fluor)	Review of records	
ERP02	Spill Response procedure	General	A Spill Response Procedure, applicable to all Project activities, has been developed by the Environmental Department specifically for accidental spillage of oils and chemicals. The procedure specifies : ▪ Responsibilities. ▪ Response equipment.	Oyu Tolgoi Environmental Department. Principal contractors and sub-contractors	See Oyu Tolgoi Spill Response Procedure Doc ref. OT-ENV-PR-045	

ID	Topic/ Aspect	Applicability/ Activity	Control Description	Responsible Parties	Means of verification	Comments
			▪ Hazard assessment (before attempting a clean-up). ▪ Notification and response actions. ▪ Response actions including waste disposal. ▪ Record keeping and reporting. ▪ Training requirements.			
ERP03	Emergency Response Planning (Underground)	Project plans	Dedicated emergency response plans have been implemented for the construction of the underground mine shaft. These plans address: ▪ The Command and Control approach to emergencies. ▪ Roles and responsibilities for all relevant personnel/positions. ▪ Contact details for Project personnel and relevant third party organisations. ▪ Lines of communication. ▪ Mine rescue operations. ▪ Survival program (including self-rescue, sheltering and refuge stations).	Oyu Tolgoi HSES Deputy Director. Principal Contractor (Redpath)	See the Redpath Emergency Response Plan for Shaft #1 and the Redpath Mine Rescue Plan	
ERP04	Critical Incident	Project plans	The Project has developed a critical incident procedure that defines the requirements for the management of the critical incident recovery process to minimise the negative emotional and physical effects on personnel following critical incidents. Specialist resource from SOS is available to provide free and ongoing counselling where / when required	Oyu Tolgoi HSES Deputy Director. Principal Contractor (Fluor)	See Oyu Tolgoi Critical Incident Management Plan A2MW 653 8124	
ERP05	Training	Throughout construction	All employees, contractors and visitors will be introduced and instructed on the policies and procedures established within this Emergency Response plan. Area specific inductions will be given to individuals working in high risk activity areas such as the mill, the open pit, or the open areas surrounding the mine. See also Section 20.8, Training.	Oyu Tolgoi HSES Deputy Director. Principal Contractors	Training records	See also *D5: Petroleum & Fuels Management Plan* and *D12: Hazardous Materials Management Plan*.

ID	Topic/ Aspect	Applicability/ Activity	Control Description	Responsible Parties	Means of verification	Comments
ERP05-a	Training	Throughout construction	Safety and environmental concerns and awareness will also be discussed at every safety meeting and at the start-up of any new operations that may affect the environment. If an incident happens all employees will be informed and re-instructed and retrained as deemed necessary.	Oyu Tolgoi HSES Deputy Director. Principal Contractors	Review of records	
ERP05-b	Training	Throughout construction	The training for spill response will be part of the worker orientation at the site. All personnel will be made aware of the products present on site through the orientation program and the availability of Material Safety Data Sheets (MSDS) in prominent locations. Supervisors who will fill the role of Spill Response Coordinator, the Spill response Supervisor and the Clean-up. Crew will receive a more detailed training allowing them to respond quickly and safely to any spill on the site. Specified disaster response teams will receive additional training as well (see also *Chapter D5: Petroleum and Fuels Management Plan* and *Chapter D12: Hazardous Materials Management Plan*).	Oyu Tolgoi HSES Deputy Director. Principal Contractors	Review of records	
ERP05-c	Training	Throughout construction	All employees on site will be made aware of the nature and location of hazardous materials within their workplace and will be familiar with MSDS. Each employee will be made aware of the locations of storage facilities and the locations of spill containment and recovery equipment (see also *Chapter D12: Hazardous Materials Management Plan*).	Oyu Tolgoi HSES Deputy Director. Principal Contractors	Review of records	
ERP05-d	Training	Throughout construction	Emergency Response Drills and Practice will include exercises and drills where some participants do not have “prior warning”.	Oyu Tolgoi HSES Deputy Director. Principal Contractors	Review of records	
ERP06	Drills	Throughout construction	Personnel at the site will be required to undertake periodic testing of the emergency response procedures. These tests will be undertaken on at least a twice-yearly basis. The outcome of each exercise will be recorded, and reviewed for areas of improvement by the responsible person for the respective area.	Oyu Tolgoi HSES Deputy Director. Principal Contractors	Drill records	
ERP07	Plan reviews	Throughout construction	All emergency plans will be reviewed every six months by the Project and the Disaster Management & Recovery Teams.	Oyu Tolgoi HSES Deputy Director. Principal Contractors	Review records	Plans are undergoing major review in 2011 as part of the business resilience

ID	Topic/ Aspect	Applicability/ Activity	Control Description	Responsible Parties	Means of verification	Comments
						process
ERP08	Spill prevention	Fuel handling	Measures to prevent the accidental release of petroleum and fuels to the environment and requirements for spill response equipment will be implemented as described in *Chapter D5: Petroleum and Fuels Management Plan*. For spills related to transport of fuels, see also *Chapter D11: Transport Management Plan*.	Oyu Tolgoi HSES Deputy Director. Principal Contractors	See *Chapter D5: Petroleum & Fuels Management Plan* and *Chapter D11: Transport Management Plan*	
ERP09	Spill prevention	Hazardous material handling	Measures to prevent the accidental release of petroleum and fuels to the environment and requirements for spill response equipment will be implemented as described *Chapter D12: Hazardous Materials Management Plan*.	Oyu Tolgoi HSES Deputy Director. Principal Contractors	See *Chapter D12: Hazardous Materials Management Plan*	
ERP10	Disposal of contaminated materials	Disposal of contaminated materials and soils	All materials and soils contaminated following hydrocarbon or chemical releases shall be managed in accordance with the *Chapter D8: Waste Construction Management Plan.*	Oyu Tolgoi HSES Deputy Director. Principal Contractors	See *Chapter D8: Waste Management Plan*	
ERP11	Fire prevention	Throughout construction	Fire prevention measures will be implemented in line with the Construction Health & Safety Management Plan and the Oyu Tolgoi Emergency Response Plan. For fire prevention associated with fuel storage and management, see also *Chapter D5: Petroleum and Fuels* Management Plan. Fire response procedures are set out in HSES Procedure A2MW 653 8110 and Oyu Tolgoi Disaster Management and Recovery Plan, Part 7: Fire in Construction Camp.	Oyu Tolgoi HSES Director Principal Contractors	See *Chapter D19: Construction H&S Management plan* and *Chapter D5: Petroleum & Fuels Management Plan*	
ERP12	Reporting	Throughout construction	Reporting shall be undertaken via monthly reports that shall be prepared and submitted to the Oyu Tolgoi Vice-President Construction. Reporting shall include: ▪ A summary of activities undertaken during the reporting period. ▪ Any material deviations or non-compliances to this Management Plan.	Oyu Tolgoi HSES Deputy Director.	Reporting records	

ID	Topic/ Aspect	Applicability/ Activity	Control Description	Responsible Parties	Means of verification	Comments
			▪ Planned activities during the next reporting period. ▪ Any emergencies that triggered the emergency response procedure. ▪ Any other issues of concern.			
ERP13	Community safety	Throughout construction	In order to protect local communities, Oyu Tolgoi is committed to undertake the following initiatives (see also *Chapter D18: Community Health, Safety and Security Management Plan*): ▪ Work with communities and administrators to identify an effective emergency alert system for the Project. ▪ Provide potentially affected communities with information regarding the potential hazards and Project responses. ▪ Work with communities in a collaborative manner to develop action plans for their preparedness and response. ▪ Organise participative workshops and emergency response demonstrations in Project-affected communities. ▪ Identify the Emergency Response Team to local communities near the site so that they are familiar with this group should they need to be deployed off-site at any time.	Oyu Tolgoi (Fluor) HSES Deputy Director	Records of consultations and identification of relevant local communities.	
ERP14	Spill Response (soils)	In event of a spill	The general response procedures for spills to soil is as outlined below: ▪ The source of the spill is closed or, where immediate closure is not possible, isolated by appropriate catchment provisions. ▪ The spilled material will be contained using booms, earthen dams, or other techniques. ▪ For oils, free product will be recovered as technically feasible. Sorbent material, such as sawdust or synthetic sorbents, may be used to soak the free oil for small-scale spills. ▪ For hazardous materials/chemical spills appropriate PPE requirements will be assessed and implemented (see also *Chapter D12 Hazardous Materials Management Plan* for MSDS requirements). ▪ Contaminated materials will be removed to the waste management facility and stored impermeable containment (lined pits or compactable containers as necessary). Final disposal/remediation disposal of contaminated materials will be	Oyu Tolgoi HSES Director Principal Contractors	Spill response procedures	

ID	Topic/ Aspect	Applicability/ Activity	Control Description	Responsible Parties	Means of verification	Comments
			as described in *Chapter D8: Waste Management Plan* (see also ERP10). ▪ If any spill cannot be completely remediated, Oyu Tolgoi will instigate a remedial programme along with an environmental monitoring programme to ensure that the impact was dealt with effectively and efficiently.			
ERP15	Spill Response (surface water)	In event of a spill	The general response procedures for spills to surface water is outlined below: ▪ The source of the spill is closed or, where immediate closure is not possible, isolated by appropriate catchment provisions. ▪ For hazardous materials/chemical spills appropriate PPE requirements will be assessed and implemented (see also the Hazardous Materials CMP for MSDS requirements). ▪ For contaminants such as free oil, these will be contained by berm or other appropriate containment structures. ▪ Such free oil will be recovered by pumps, and then transferred to oil preparation facilities for separation and further processing. ▪ Residual oil in the water may either be burnt or recovered using sorbent material. ▪ If sorbent material is utilised, then the spent sorbent material will subsequently be disposed of in accordance *Chapter D8: Waste Management Plan*. ▪ Once free oil has been removed, the banks will be remediated. ▪ Any spills of oils, grease, solvents or other hazardous materials in the maintenance areas, fuel storage areas or transfer areas will be cleaned up using absorbent materials and placed in appropriate storage containers for appropriate disposal, and will not be washed and dispersed of with water. ▪ If any spill cannot be completely remediated, Oyu Tolgoi will instigate a remedial programme along with an environmental monitoring programme to ensure that the impact was dealt with effectively and efficiently.	Oyu Tolgoi HSES Deputy Director Principal Contractors	Spill response procedures	

ID	Topic/ Aspect	Applicability/ Activity	Control Description	Responsible Parties	Means of verification	Comments
ERP16	Spill notification	In event of a spill	Spills involving hazardous or toxic materials will be notified according the emergency response procedures described in ERP01, including notification of the Mongolian police, intelligence agency and other related Mongolian organisations within 24 hours in line with the Mongolian Law on Hazardous and Toxic Chemical (2005). This will also be incorporated into future Business Resilience Plans.	Oyu Tolgoi HSES Deputy Director Principal Contractors	Spill response procedures	

20.8 TRAINING

20.8.1 General Training

All employees of Oyu Tolgoi and Contractors to Oyu Tolgoi shall be provided with basic training in spill and emergency response (see ERP05 of *Table 20.1*) as part of general induction training. Additional specialist training shall be provided to plant operators and key personnel identified in the detailed emergency response plans identified in ERP01, ERP02 and ERP03 of *Table 20.1*.

20.8.2 Environmental Training

The Environment Department has developed training to provide staff with general information and awareness relating to the management of chemical substances spill. It is required that any staff member who is responsible for the use, storage or management of chemical substances complete the training.

Specific training for chemical spill management is to be coordinated and recorded in a training register.

20.8.3 Above-Ground Emergency Response Team Training

The surface emergency response team, comprising 30 full-time rescue staff, undertakes drills and training on a daily basis with an emphasis on practical fire fighting and search and rescue in an on-site training facility. Training is based around a changing set of construction activities and is planned and managed on a dynamic basis.

20.8.4 Underground Emergency Response Team Training

The underground emergency response team comprises 18 volunteers who undertake and an initial 40-hour training programme, followed by one 12-hour training day each month. The training curriculum covers mine gases, team exploration, rescue and recovery, fires and fire-fighting, medical/triage, etc. Many of the full-time surface rescuers also work as underground volunteers.

20.8.5 Emergency Response Training – Interface with Local Agencies and Communities

Oyu Tolgoi undertakes bi-monthly meetings with Government agencies on emergency response issues. Many of the Mongolian members of the Emergency Response Team are members of the Mongolian National Emergency Management Association (NEMA).

As large-scale new mining methods are being introduced into Mongolia a key focus of the dialogue is to help the Government agencies to understand the production process and the type of scenarios that may be encountered. The objective is to ensure that both Oyu Tolgoi workers and Government officials are well trained and able to respond to any scenario that may arise.

There are no emergency response capabilities within Khanbogd *soum* that would be of relevance to a mining accident or incident. As a result Oyu Tolgoi plans and trains to be self-reliant in the event of an emergency situation. In addition, the Oyu Tolgoi Emergency Response Team does get called out to assist at off-site accidents, such as road accidents occurring along the coal transportation route from the Tavan Tolgoi coal deposits to the Chinese border at Gashuun Sukhait.

20.9 MONITORING

A key part of preparedness for emergencies is to ensure that all preparations and emergency equipment are in place and functioning as intended. There are two aspects to this:

- Routine site inspections; and
- Training updates.

Monitoring procedures shall be as described in *Table 20.2* below:

Table 20.2: Monitoring Measures – Emergency Preparedness

ID	Topic/Aspects	Methods	Periodicity	Location
ERPM1	Inspections and audits	Contractors shall report to the Oyu Tolgoi (Fluor) HSES Deputy Director on the implementation of this Management Plan during the construction phase, including: ▪ Training undertaken (numbers of staff, courses etc). ▪ PPE quantities and locations.	Monthly	All construction areas
ERPM2	Inspections and audits	Oyu Tolgoi (Fluor) HSES Deputy Director (supported by the Oyu Tolgoi Environment Department as necessary) shall inspect the Project on a monthly basis and shall maintain appropriate records. The inspection shall include: ▪ Training. ▪ PPE. ▪ Site conditions. ▪ Observations of management practices ▪ Rehearsals and exercises. ▪ Compliance with applicable regulatory and corporate requirements.	Monthly	All construction areas

20.10 KEY PERFORMANCE INDICATORS

Key Performance Indicators (KPIs) for the emergency preparedness and response are presented in *Table 20.3*.

Table 20.3: Key Performance Indicators

ID	KPI	Target	Monitoring measure
ERP-KPI 01	Number of identified non-compliances with emergency prevention and preparedness measures identified in this plan.	Minimise and target zero	See ERPM1 and ERPM2
ERP-KPI 02	Number of incidents that have triggered the emergency response procedure	Minimise and target zero	See ERP12

In addition to above, specific KPIs in relation to compliance with spill and emergency prevention measures associated with fuels, hazardous chemicals and transport respectively are identified in *Chapter D5: Petroleum and Fuel Management Plan*, *Chapter D12: Hazardous Materials Management Plan* and *Chapter D11: Transport Construction Management Plan.*

ANNEX 1: LIST OF KEY EMERGENCY RESPONSE PLANS AND PROCEDURES

Emergency Type/Facility	Full Title – Description of Contents	Document Reference
All serious emergencies	Oyu Tolgoi Disaster Management and Recovery Plan. Also includes specific actions in the event of: ▪ Full emergency or local standby ▪ Bomb warning ▪ Fuel spillage ▪ Natural disaster ▪ Airport emergencies ▪ Medical evacuation ▪ Fire in accommodation camp ▪ Motor vehicle accident ▪ Environmental incident ▪ Civil unrest.	June 2011
All underground emergencies and surface emergencies within Redpath's area of activities.	Redpath Emergency Response Plan for Shaft #1.	Mine Emergency Procedure Rev 07.
Mine Rescue Guidelines	Mine Rescue Guidelines, Redpath Mongolia	Rev. 0, June 2006
Airport	Aerodrome Emergency Management Plan – Oyu Tolgoi	Rev 0, 7 Nov 2003 (currently being updated)
Fires	First Aid, Medical, Fire and other Emergencies. Includes procedures for: ▪ Hot work procedures ▪ Fire extinguishers ▪ Fire fighting and response training	A2MW 653 8110, Jan 2006.
Environmental incidents including release of fuels and hazardous substances	Spill Response Procedure	OT-ENV-PR-045, Aug 2010

ANNEX 2: COMMAND AND CONTROL STRUCTURES

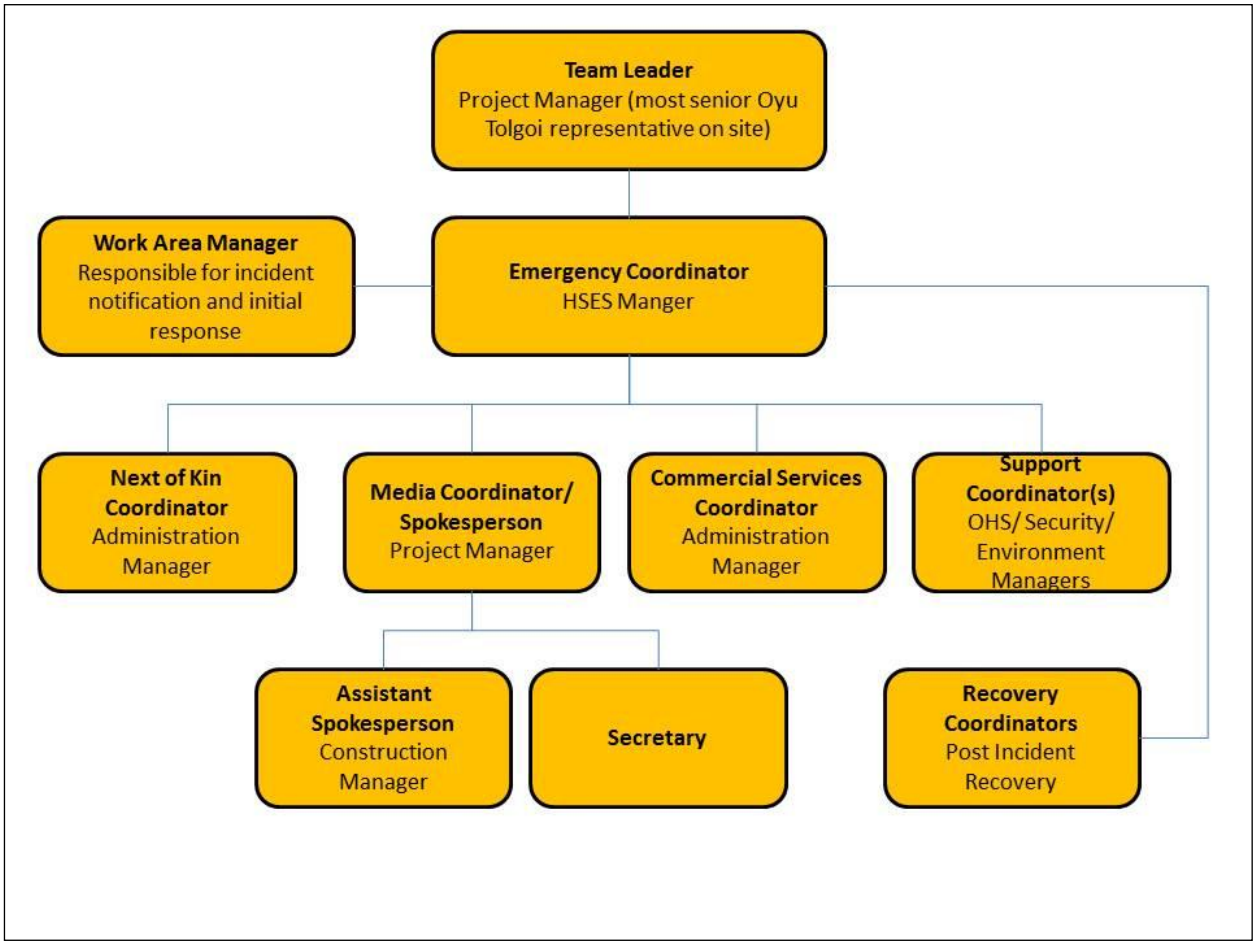
A2.1: Disaster Recovery and Management Team

The *Disaster Recovery and Management Plan* is the key document for the management of emergency situations. This plan requires the active involvement of the most senior Oyu Tolgoi representatives.

Key elements of the Disaster Recovery and Management Plan:

- Addresses all foreseeable emergencies;
- Outlines command and control structure;
- Includes contact details (internal and external organisations);
- Means of communication;
- Periodic drills (6 monthly/annual); and
- Emergency telephone operator questionnaires.

Disaster Recovery & Management Team Structure



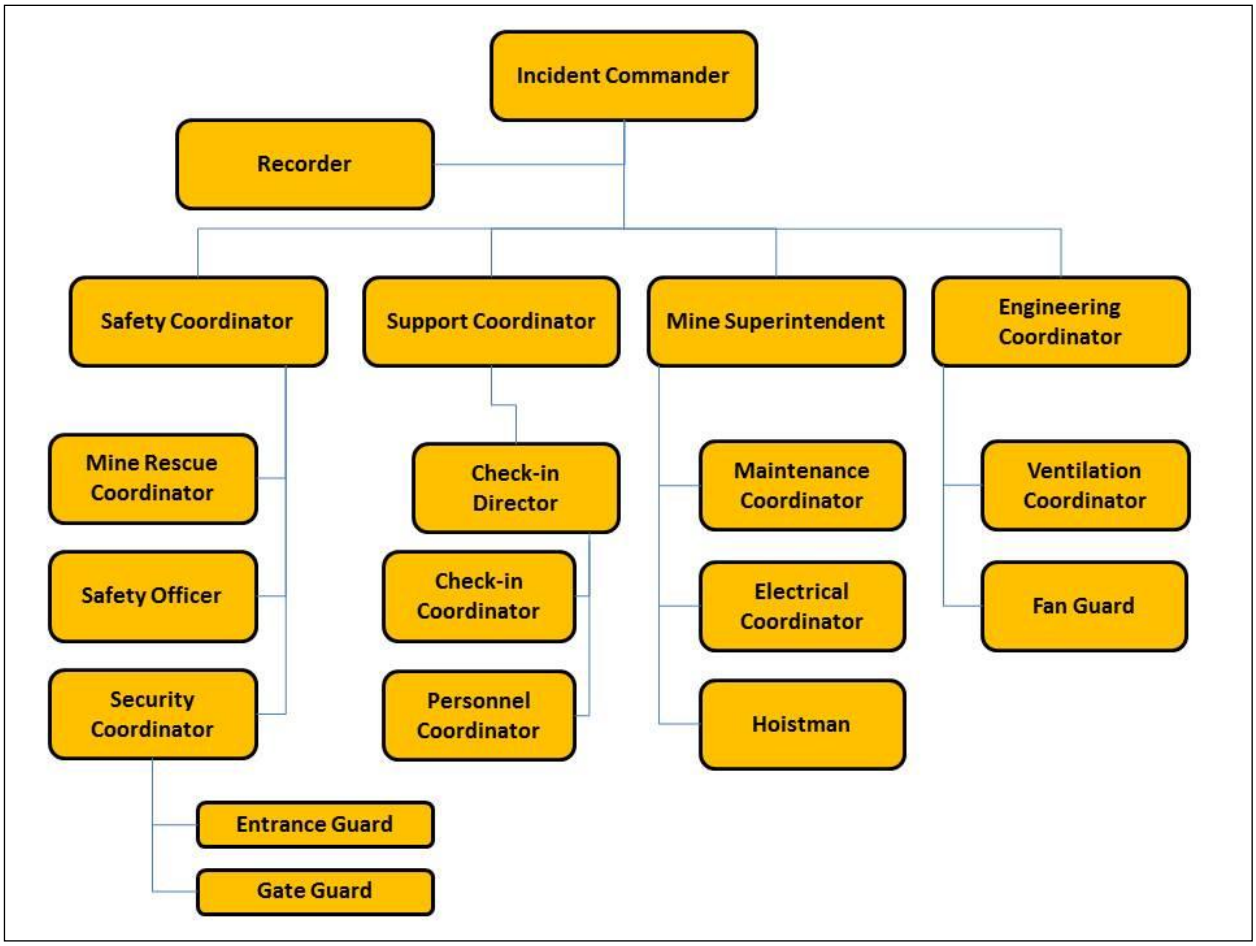
A2.2: Emergency Response Plan for Shaft #1 (dated Nov 2010)

The plan covers all underground activities during construction and surface activities within the area of Redpath operations. It applies to all Redpath personnel, vendors, contractors and visitors.

Emergencies addressed by the plan include ventilation failure, fire, water inundation, gas release and chemical spill.

The plan outlines the roles and responsibilities for each team member. The most senior [Redpath] person at the mine assumes the role of **Incident Commander** with overall responsibility to manage the emergency. The incident commander will appoint the incident management team; roles and command structure is shown below.

Shaft #1 Emergency Response Plan Team Structure



The plan is supplemented by the Mine Rescue Guidelines which give more detailed instruction on methods of communication, rescue operations, competency requirements, duties and the underground Emergency Response Training Programme.

Other key roles and responsibilities within the Mine Emergency response structure include:

- **Safety Coordinator** - who in turn appoints and oversees a Mine Rescue Coordinator, Safety Officer, Security Officer, Entrance Guard and Gate Guard (as appropriate);
- **Support Coordinator** – responsible for notifying Mongolian Authorities and UB office and management of rescued/mustered personnel;
- **Mine Superintendent** – responsible to appoint and oversee a maintenance coordinator, electrical coordinator and oversee Hoistman's duties; and
- **Engineering Coordinator** - responsible to appoint and oversee a ventilation Coordinator and a fan Guard (to undertake gas monitoring amongst other duties).

Appropriate training will be coordinated by the Redpath Training Coordinator.

A2.3: Spill Response Procedure – Command Structure

Typically leaks and spillages would not require senior Oyu Tolgoi management input and therefore would not trigger initiation of Disaster Management and Recovery Plan. Onstead such incidents could be managed at a local level under the control of the Environmental Department (who would report to senior management on any such incidents)

Oyu Tolgoi's Spill Response Procedure covers any spill of a chemical or fuel occurring as a result of any operations at the Oyu Tolgoi Project. Within the Spill Response Procedure:

- the Work Area Section Manager is assigned responsibility for ensuring availability of spill response equipment;
- The Work Area Section Supervisor is responsible for ensuring staff are trained, and equipment/kits are operational/complete; and
- All personnel – responsible for responding in accordance with the Spill Response Procedure.

The procedure itself details the need for:

- Hazard and risk assessment (prior to tackling a spill);
- Notification and containment;
- Clean up and disposal (including location and contents of spill kits);
- Record keeping; and
- Training (by the Environmental Department) for anybody with responsibility for the use, storage or management of chemical substances.