Environmental and Social Impact Assessment Report (ESIA) – Appendices 21-30

Project Number: 50330-001
February 2018

INO: Rantau Dedap Geothermal Power Project (Phase 2)

Prepared by PT Supreme Energy Rantau Dedap (PT SERD) for Asian Development Bank

supremeenergy	SAFETY HEALTH & ENVIRONMENT ENVIRONMENTAL ASPECT	PROCEDURE
CORPORATE	CULTURAL HERITAGE AND ARCHAEOLOGICAL CHANCE FINDS PROCEDURE	SE-MSHE-ENA-PRO-0001 Revision: 0

APPROVAL

	POSITION	NAME	SIGNATURE	DATE
Prepared by	Sr. SHE Manager	M. Arief Tarunaprawira		**20/01/2017**
Reviewed By	SEML Project Manager	Paul Taylor		
	SERD Project Manager	Ralph Hoellman		
	SERB Project Manager	--		
Approved By	VP Relations & SHE	Prijandaru Effendi		**04/02/2017**

REVISION HISTORY

REV	DATE	BY	REVIEWED	APPROVED	DESCRIPTION
A	18/11/16	AWA	MAT		Final Draft
0	04/02/17	AWA	MAT	PE	For Use

TABLE OF CONTENTS

1 PURPOSE

Unlike most other environmental resources, direct impact to heritage is typically localized to the areas of the project construction activity, making a project's area of influence more geographically limited than for other resources such as critical habitat, a natural water supply, or endangered species. Thus, it is often possible to avoid impacts to heritage by minor project design changes.

Because cultural heritage is non-renewable, its protection is best accomplished by "reservation-in place." This method is generally preferred over removal, which is an expensive and partially destructive process. (IFC, 2012 (Annex B: Process Guidance Note, Performance Standard 8, Cultural Heritage)).

The purpose of this guideline is to address the possibility of archaeological and other cultural heritage finds and features (including human remains) becoming exposed during earth moving and ground altering activities associated with the construction of a Geothermal Power Plant and its supporting facilities.

It is further intended to provide appropriate procedures for Supreme Energy and its contractors and sub-contractors to follow in the event of a chance cultural heritage or archeological find.

2 OBJECTIVE

The objectives of these procedures, in line with the IFC Performance Standard 8 (PS 8), are to identify and promote the preservation and proper management of archeological, tangible cultural resources or human remains. This Chance Finds Procedure will be included in the Company's Environmental and Social Management System as per IFC PS 1.

3 SCOPE

This process applies to all activities under the operational control of Supreme Energy.

4 RESPONSIBILITY

Company and or the contractor	• Stop any Project construction activities in the immediate vicinity of the chance find; • Delineate the discovered site or area; • Secure the site to prevent any damage or loss of removable objects. • Consider a night guard if deemed necessary until the responsible local authorities take over; • Immediately report the discovery to the responsible site manager.

Site Support Manager	Contacts the relevant officer / Safety, Health and Environmental (SHE) representative within the Company who will arrange for expert assistance. Contact details of the person to be contacted are included in this Chance Finds Procedure and are to be regularly updated. File a report to Company Management that includes: • Date and time of discovery • Precise location of discovery • Description of the discovered item/site (including photographs) • Estimated size/weight/dimensions • Temporary protection implemented.
Site SHE Representative or other responsible Company responsible for chance finds response	Contact and request assistance and advice from the relevant authorities or expert.

5 REFERENCES

None

6 DEFINITIONS

Not required

7 PROCEDURE

7.1 TYPES OF TANGIBLE CULTURAL HERITAGE RESOURCES

Most of the chance finds that may be made are likely to be replicable. Tangible Cultural Heritage is replicable if it can be moved to another location or be replaced by a similar structure or natural features to which cultural values can be transferred by appropriate measures. Archaeological sites are considered replicable if particular eras and cultural values that they represent are well represented by other sites and/or structures.

The Replicability of tangible cultural heritage determines removal and other mitigation strategies.

The following list describes the type of tangible cultural heritage resources that may possibly be encountered in the construction site of the Project:

- Archaeological Sites: Concentrated and patterned physical remains of past human activity, especially human settlements, possibly including artifacts, plant and animal remains, structural remains, and soil features. Note that the cultural importance of such sites cannot be identified based on surface examination alone.

- Artifacts: Portable objects that are created by past human activity and become part of an archaeological site or isolated archaeological find. Importantly, most artifacts lose substantial cultural value when removed from their 'context' in the ground.

- Human remains: individual graves, graveyards, or mass burial sites.

7.2 OWNERSHIP

All findings belong to the government of Indonesia and must be reported to the Ministry of Education and Culture as the relevant regulatory authority, or to the Police, within 30 (thirty) days. The relevant authorities will determine the final destination of any artifact or object found by chance during the construction process.

7.3 IDENTIFICATION AND PROTECTION PRACTICES

The Company will ensure that internationally recognized practices for the protection and documentation of cultural heritage are implemented at all times.

7.4 EXPERT AND TRAINING ASSISTANCE

The Company will work with the Ministry of Education and Culture or the relevant local authorities, and with the local branch of the Indonesian Heritage Trust (IHT) to support the implementation of this chance finds procedure, and for the identification and protection of cultural heritage.

The Company or the contractor that will carry out Project construction will train all workers, especially those working on excavations and earthmoving, in identifying cultural and archaeological artifacts, features, or sites. The information contained in this document, although not exhaustive, should include a description (and illustration) of the most common criteria and site indicators that may signal the presence of an archaeological or burial site. Relevant authorities or the IHT may provide suitable expert assistance to conduct this training.

7.5 INITIAL RESPONSE

1. If intact or disturbed archaeological and historical sites, remains, and objects including graves are encountered, the Company and or the contractor are to:
    - Stop any Project construction activities in the immediate vicinity of the chance find;
    - Delineate the discovered site or area;
    - Secure the site to prevent any damage or loss of removable objects;
    - Consider a night guard if deemed necessary until the responsible local authorities take over;
    - Immediately report the discovery to the responsible Site Manager.

2. The responsible Site Manager contacts the relevant officer / Safety, Health and Environmental (SHE) representative within the Company who will arrange for expert assistance. Contact details of the person to be contacted are included in this Chance Finds Procedure and are to be regularly updated.

3. The SHE representative or other responsible Company responsible for chance finds response will contact and request assistance from the relevant authorities or IHT.

4. The Site Manager will file a report to Company Management that includes
    - Date and time of discovery;
    - Precise location of discovery;
    - Description of the discovered item/site (including photographs);
    - Estimated size/weight/dimensions;
    - Temporary protection implemented.

5. The work must be put on hold during investigation of the importance of the chance find.

It is recommended the Company works out a time deadline/schedule with the relevant authorities for response time and clarifies contractor rights in terms of compensation claims for work suspension, and consequences, if these guidelines are not uphold by the contractor.

7.6 FURTHER ACTION BY EXPERT ASSISTANCE

Depending on the nature of the chance find, determined either by telephone conversation, submitted report or field visit, decision is taken by the expert assistance if construction can continue as planned or has to be put on hold.

In the case of a chance find of human remains, the local policing authority must be informed in addition to the expert assistance.

Further specific expert assistance will be sought if deemed necessary, depending on the nature of the chance find.

An appropriate procedure will be determined by the expert in agreement with the Company for the removal, if applicable, of the artifact or human remains. In the case of human remains, the policing authority is involved in the decision on removal.

It is recommended that site visits by external expert assistance, if deemed necessary, occur within the time frame of the first 24 to 48 hours after the discovery.

7.7 MANAGEMENT OPTIONS FOR CHANCE FINDS

The following options should be considered in the event there is an identified presence of an intact or disturbed archeological site by the appointed external expert in collaboration with the Company and any other relevant authority:

7.7.1 Option 1 – Avoidance through partial project redesign or relocation:

This is the preferred option from a cultural resource management perspective (in line with IFC PS 8) as it results in minimal impact to the cultural heritage find. It can also be the least expensive option from a construction perspective. A site investigation may be required to define site limits.

7.7.2 Option 2 - Salvage or emergency excavation if necessary:

If restoration or preservation in situ is not possible, removal can be considered as long as the cultural heritage is considered replicable and non-critical. This option will require a site investigation prior to the excavation. Precautions should be taken to minimize

damage/destruction of the chance find. The permanent removal of archaeological artifacts and structures should be carried out according to internationally recognized practices and with the support of appropriate expert assistance. It should be noted that the recovery can lead to delays in constructions by up to several weeks.

7.7.3 Option 3 - Application of site protection measures:

Site protection measures include both temporary and long term strategies, such as fencing, and other protective barriers. Appropriate protection measures should be identified on a site-specific basis and decided by the expert assistance in collaboration with the Company and the contractor.

7.8 SUSPENSION OR CONTINUATION OF CONSTRUCTION WORKS

Suspension or continuation of construction work will be determined by expert assistance in collaboration with the Company and the contractor.

7.9 CONTACT DETAILS

Positions to be contacted in the case of a chance find:

TITLE
• Site Support Manager
• Site Manager
Relevant Officer for chance finds occurrences:
• Project Manager
• Sr. SHE Manager
• Field Relation Manager
• Business Relation Manager
• VP Relation & SHE

8 RECORDS

Not required

APPENDIX 1 CONTACT PERSONS

Persons to be contacted in the case of a chance find:

TITLE	SEML	
	NAME	CONTACT NUMBER & EMAIL
Site Support Manager	Asharry Sofyan	021-29341021 0811-150995 Asharry-sofyan@supreme-energy.com
Site Manager	Christian Pintea	021-29341002 0811-8703930 Christian-Pintea@supreme-energy.com
Relevant Officer for chance finds occurrences:		
Project Manager	Paul Taylor	021-29342076 Paul-taylor@supreme-energy.com
Sr. SHE Manager	M. Arief Tarunaprawira	021-29342091 Arief-tarunaprawira@supreme-energy.com
Field Relations Manager	Yulnofrins Napilus	021-29342028 Yulnofrins-napilus@supreme-energy.com
Business Relations Manager	Ismoyo Argo	021-29342022 Ismoyo-argo@supreme-energy.com
VP Relations & SHE	Priyandaru Effendi	021-29342021 effendi@supreme-energy.com

TITLE	SERD	
	NAME	CONTACT NUMBER & EMAIL
Site Support Manager	Frank M Tungka	021-29342132 0812-8782-0164 Franky-tungka@supreme-energy.com
Site Manager (acting)	Erwin Guminda	021-29342131 0812-8935813 Erwin-guminda@supreme-energy.com
Relevant Officer for chance finds occurrences:		
Project Manager	Ralph Hoellman	021-29342077 0812-1124371 ralph-hoellmann@supreme-energy.com
Sr. SHE Manager	M. Arief Tarunaprawira	021-29342091 Arief-tarunaprawira@supreme-energy.com
Field Relations Manager	Yulnofrins Napilus	021-29342028 Yulnofrins-napilus@supreme-energy.com
Business Relations Manager	Ismoyo Argo	021-29342022 Ismoyo-argo@supreme-energy.com
VP Relations & SHE	Priyandaru Effendi	021-29342021 effendi@supreme-energy.com

supremeenergy	SAFETY HEALTH AND ENVIRONMENT WORK RULES	PROCEDURE
CORPORATE	PUBLIC HEALTH AWARENESS RAISING PLAN	SE-MSHE-WOR-PRO-0016 Revision: 0

APPROVAL

	POSITION	NAME	SIGNATURE	DATE
Prepared by	Sr. SHE Manager	M. Arief Tarunaprawira		
Reviewed By	SEML Project Manager	Paul Taylor		
	SERD Project Manager	Ralph Hoellmann		
	SERB Project Manager	--		
Approved By	VP Relations & SHE	Priyandaru Effendi		

REVISION HISTORY

REV	DATE	BY	REVIEWED	APPROVED	DESCRIPTION
0	20/01/2017	AWA	MAT	PE	For Use

TABLE OF CONTENTS

1 PURPOSE

The Public Health Awareness Plan has been developed to address communicable disease issues which may affect the Supreme Energy Employees, Contractor, and Community. Infection diseases, transmission diseases and actual or potential epidemic and pandemic level infectious diseases are reminders that novel viruses do emerge, and the need for the company to be prepared for this inevitability is a vital necessity.
The community may be exposed to potential risks of health and safety associated with hazards created through the Project construction phase and equipment, vehicles and infrastructure allocated for project use. Major directly affected community members during the construction phase are members living nearby the Project area and visitors to the construction site.

2 SCOPE

This Procedure applies to the Company and Contractor employees within Supreme Energy Sites (SEML, SERD, and SERB).
These work rules have been prepared to mitigate the risks associated with following:

- communicable and infectious diseases
- infection prevention and control
- environmental and occupational health
- emergency preparedness and medical facilities
- health promotion

3 RESPONSIBILITY

Site Support Manager	- Ensure this procedure applied by his/her subordinate - Review the Health program which either proposed by medic on site or site SHE Representative
Site SHE Representative	- Coordination with Paramedic/ Doctor on site to create the health program which related with worker and community - Ensure that the prevention program be applied by employees - Perform of audit system to make sure this procedure applies properly
Medical Doctor/ Paramedic	- Provide some suggestion which related the needs of medical facilities and public health equipment that required by Company - Prepare material for health promotion in the workplace or public
Contractor/ Workers	- Applies to prevention action which mentions in this procedure - Share the knowledge about health promotion that given by company to their family and relation

4 REFERENCES

- Act No. 36 Year of 2009 regarding of Health

- Decree of Health Minister No. 1405/MENKES/SK/XI/2002 regarding of Requirement of Office and Industry Work Environment
- Regulation of Health Minister No. 492 Year 2010 about Quality of Drinking Water Requirement

5 DEFINITIONS

Disease prevention	covers measures not only to prevent the occurrence of disease, such as *risk factor* reduction but also to arrest its progress and reduce its consequences once established (WHO 1984).
Communicable Disease	A disease that is transmitted through direct contact with an infected individual or indirectly through a vector. Also called *contagious disease***.**
Airborne Disease	Any disease that is caused by pathogens and transmitted through the air. Such diseases include many that are of considerable importance both in human and veterinary medicine. The relevant pathogens may be viruses, bacteria, or fungi, and they may be spread through coughing, sneezing, raising of dust, spraying of liquids, or similar activities likely to generate aerosol particles or droplets. Strictly speaking, airborne diseases do not include conditions caused simply by air pollution such as dust and poisons, though their study and prevention may be related.
Environmental Health	sits within the broader scope of public health. Critical to the pursuit of public health is the relationship of human populations to their environment. Environmental health is defined as those aspects of human health determined by physical, chemical, biological and social factors in the environment. Central to environmental health is the understanding that our health is dependent upon our physical and social environment. Environmental health is about creating and maintaining environments that promote good public health (enHealth 1999).
Hazard	represents a chemical, physical, or biological substance that has the potential to produce harm to health if it is present in the environment and comes into contact with people. The hazardous properties of an environmental agent are defined according to the nature and severity of its harmful consequences. Fortunately, many hazards can be either contained or avoided, so not every potential environmental hazard poses an actual health risk.
Public Health	is the science and art of promoting health, preventing disease, and prolonging life through the organized efforts of society (Acheson 1988). Public health is a social and political concept aimed at the improving health, prolonging life and improving the *quality of life* among whole populations through *health promotion, disease prevention* and other forms of health intervention. The Public Health Bill defined public health as the physical, mental and social wellbeing of the community.
Health Risk Assessment	A **health risk assessment** (also referred to as a health risk appraisal and health & well-being assessment) is one of the most widely used screening tools in the field of health promotion and is often the first step in multi-component health promotion

	programs

6 PROCEDURE

6.1 HEALTH RISK ASSESSMENT

The Health Risk Assessment should be carried out at the earliest possible stage of engineering, as soon as the following Project installation/construction/operation draft documents are available. Some of the purposes of HRA study are listed below.

- Identify the health hazards (i.e. weather, diseases, insects, chemical agents, etc.)
- Identify the exposed persons
- Assess the health risks
- Determine appropriate control and recovery measures
- Assess eventual residual, acceptable risk to health.

6.2 OCCUPATIONAL AND ENVIRONMENT HEALTH

6.2.1 Occupational Health Program

Occupational Health emphasizes that engineering, work practice, and administrative controls are the primary means of reducing employee exposure to occupational hazards. Engineering controls minimize employee exposure by either reducing or removing the hazard at the source or isolating the worker from the hazards.

Hygiene and occupational health program will be applied in the following areas:

- Provision of medical check-up
- Catering Practice
- Portable Water Dispensers
- Housekeeping practices
- Radiation Protection
- Respiratory Protection
- Hearing Conservation Program
- Ergonomic Program
- Prohibition of drugs
- Prohibition of alcoholic drinks during work

6.2.2 Public Health Program

These program introduce the field of health promotion in Supreme Energy sites covering important definitions and concepts; key values and features underlying practice; key milestones that led to the development of the field of health promotion in Supreme Energy sites; and how to identify and apply key strategies to take action on the health issues affecting individuals and communities.

6.3 COMMUNICABLE DISEASES

Communicable diseases pose a significant public health threat worldwide. Health hazards typically associated with large development projects are those relating to poor sanitation and living conditions, sexual transmission and vector-borne infections. Communicable diseases of most concern during the construction phase due to labor mobility are sexually-transmitted

diseases (STDs), such as HIV/AIDS. Recognizing that no single measure is likely to be effective in the long term, successful initiatives typically involve a combination of behavioral and environmental modifications.

Recommended interventions at the project level include:

- Providing surveillance and active screening and treatment of workers
- Preventing illness among workers in local communities by:
  - Undertaking health awareness and education initiatives, for example, by implementing an information strategy to reinforce person-to-person counseling addressing systemic factors that can influence individual behavior as well as promote individual protection, and protect others from infection, by encouraging condom use.
  - Training health workers in disease treatment
  - Conducting immunization programs for workers in local communities to improve health and guard against infection
  - Providing health services
- Providing treatment through standard case management in on-site or community health care facilities. Ensuring ready access to medical treatment, confidentiality, and appropriate care, particularly with respect to migrant workers.
- Promoting collaboration with local authorities to enhance access of workers families and the community to public health services and promote immunization

6.3.1 Vector-Borne Diseases

Reducing the impact of vector-borne disease on the long-term health of workers is best accomplished through implementation of diverse interventions aimed at eliminating the factors that lead to disease. Project sponsors, in close collaboration with community health authorities, can implement an integrated control strategy for mosquito and other arthropod-borne diseases that might involve:

- Prevention of larval and adult propagation through sanitary improvements and elimination of breeding habitats close to human settlements
- Elimination of unusable impounded water
- Increase in water velocity in natural and artificial channels
- Considering the application of residual insecticide to dormitory walls
- Implementation of integrated vector control programs
- Promoting use of repellents, clothing, netting, and other barriers to prevent insect bites

6.3.2 Water-Borne Disease

Waterborne diseases are caused by *pathogenic microorganisms* that most commonly are transmitted in contaminated fresh water. Below is the list of water-borne disease which resulted by contaminated water.

- Amebiasis: caused by protozoa. Symptoms include fatigue, diarrhea, flatulence, abdominal discomfort and weight loss.
- Campylobacteriosis: caused by bacteria. Symptoms include diarrhea, abdominal pain, and fever.
- Cholera: caused by bacteria. Symptoms include muscle cramps, vomiting, and diarrhea.
- Cryptosporidiosis: caused by protozoa. Symptoms include diarrhea, and abdominal discomfort.
- Giardiasis: caused by protozoa. Symptoms include diarrhea and abdominal discomfort.

- Hepatitis: caused by a virus. Symptoms include fever, chills, jaundice, dark urine and abdominal discomfort.
- Shigellosis: caused by bacteria. Symptoms include bloody stool, diarrhea, and fever.
- Typhoid fever: caused by bacteria. Symptoms include fever, headache, constipation, diarrhea, nausea, vomiting, loss of appetite and an abdominal rash.
- Viral gastroenteritis: caused by a virus. Symptoms include gastrointestinal discomfort, diarrhea, vomiting, fever and headache.

Most of the people or workers get infected when the contaminated material enters their mouth. Other possible modes of transmission include:

- Dirty contaminated hands, clothes, cooking vessels, mugs, etc.
- Uncovered food and drinking water
- Contaminated water
- The practice of defecating in the open
- Via flies

Various forms of waterborne diarrheal disease probably are the most prominent examples and affect mainly children in developing countries.

6.3.2.1 Prevention

To prevent water-borne diseases, Supreme Energy and Contractor workers should take necessary actions as following:

- Don't assume that all bottled water is safer than tap water. Tap water must meet Decree of Ministry of Health about the quality of drinking water requirement (Ministry of Health Regulation/*Permenkes No.492 Tahun 2010*) while bottled water does not have to. In addition, bottled water does expire, so always check the label before drinking any. Furthermore, make sure your bottled water has been kept in a dry place out of direct sunlight at room temperature or cooler.
- Be especially careful about the water you drink if you have a weakened or suppressed immune system. An outbreak of a generally non-lethal waterborne disease became extremely serious in one community because it was contracted by dozens of people who had AIDS. Similar severe reactions to waterborne diseases can also occur in those who are elderly, have had an organ transplant or have a chronic disease which weakens their immune system.
- If you find out that your water supply is not sanitary, be sure to boil your water for at least one minute before using it. You can also use bottled water as a supplementary source of water until the water supplier meets sanitation guidelines.
- Do not expose your water supply to harsh chemicals or pesticides. These substances create the potential for waterborne disease and other illnesses.

This precaution will also be communicated to the local community through a campaign program during the project and operational phase collaborates with regional/local health agencies.

6.3.3 Airborne Disease

The Airborne disease can spread when an infected person coughs, sneezes, or talks, spewing nasal and throat secretions into the air. Certain viruses or bacteria take flight and hang in the air or land on other people or surfaces.

When you breathe airborne pathogenic organisms in, they take up residence inside you. You can also pick up germs when you touch an infected surface, and then touch your own eyes, nose, or mouth.

Because these diseases travel in the air, they're hard to control.

Types of Airborne Disease are following:

- Common Cold
- Influenza
- Tuberculosis (TB)
- Diphtheria
- Pertussis
- Measles
- Chickenpox
- Mumps

6.3.3.1 Prevention

- Avoid close contact with people who have active symptoms of the disease.
- Stay home when you're sick. Don't let vulnerable people come in close contact with you.
- If you must be around others, wear a face mask to prevent spreading or breathing in germs.
- Cover your mouth when you cough or sneeze. Use a tissue or your elbow to cut down on the possibility of transmitting germs on your hands.
- Wash your hands thoroughly (at least 20 seconds) and often, especially after sneezing or coughing.
- Avoid touching your face or other people with unwashed hands.
- Supreme Energy and Contractor are considered vaccinating to the workers if there is a case of endemic in Supreme's area.

6.4 EMERGENCY PREPAREDNESS AND MEDICAL FACILITIES

Supreme Energy will develop, implement and maintain a plan for medical treatment and case management that include an on-Site medical facility. Supreme Energy sites will be equipped with off-site medical facility prior to mobilization for health treatment of personnel or medical evacuation, on-site clinic, ambulance and qualified Paramedic. This personnel provide treatment as required and carry out routine hygiene inspections throughout the worksite.

As a means to improve the health context in which the Project operates, Supreme Energy will collaborate with regional/local Government and relevant NGOs if required to support improvements to existing health services to handle the potential increase in population numbers and changes in the existing health profile of the area. This may include improving health facilities, the quality of medical personnel, the diagnostic capacity and treatment, the provision of vaccines, and the capacity to address epidemics and pandemics.

7 MONITORING

The following table details the monitoring (measurement) activities for the preservation of community health and safety in the Construction phase.

For each monitoring activity and measure/action identified, the table shows:

- The reference (or source) documents (i.e. AMDAL, IFC Performance Standards and EHS Guidelines, etc.;
- frequency/timing of the measurement;
- Key Performance Indicator (KPI), and related quantitative target, if the target consist of a regulatory limit this will be indicated;

- The related responsibility for implementing the monitoring activity.

PUBLIC HEALTH AWARENESS PROGRAM PLAN

Monitoring Action/Measure description	Frequency/ Timing	KPI	Target/ Acceptance criteria	Responsibilities
Number of communicable and non-communicable diseases and injuries.	Ongoing	n.a.	No significant increase in communicable and non-communicable disease	Company & Contractor
Number of community health safety & security complaints from local communities as recorded in the grievance management system.	Ongoing	n.a.	Minimize and continued improvement in number of community health safety and security related complaints.	Company & Contractor
Number of health awareness and education initiatives to the worker and community.	Ongoing	n.a	Project affected community members to attend trainings.	Company & Contractor
Implementation of integrated vector control programs (pest control)	Ongoing	n.a.	Accomodation camp (company and contractor)	Company & Contractor
Conducting immunization programs for workers in local communities to improve health and guard against infection.	Annual	n.a	Workers in local communities	Company & Contractor

supremeenergy	SAFETY HEALTH & ENVIRONMENT WORK RULES	PROCEDURE
CORPORATE	COMMUNITY, SHE & SECURITY PLAN	SE-MSHE-WOR-PRO-0015 Revision: A

APPROVAL

	POSITION	NAME	SIGNATURE	DATE
Prepared by	Sr. SHE Manager	M. Arief Tarunaprawira		
Reviewed By	SEML Project Manager	Paul Taylor		
	SERD Project Manager	Ralph Hoellmann		
	SERB Project Manager	--		
Approved By	VP Relations & SHE	Priyandaru Effendi		**20/01/2017**

REVISION HISTORY

REV	DATE	BY	REVIEWED	APPROVED	DESCRIPTION
A	20/01/17	AWA	MAT	PE	For Review

TABLE OF CONTENTS

1 PURPOSE & OBJECTIVE

The purpose of the CHSSMP is to provide a clear set of actions and responsibilities for the control of impacts affecting the health and safety of the communities within the Project's area of influence.

The objectives of the CHSSMP are to:

- Continuously identify, evaluate and prioritize the risks and impacts of Supreme Energy's activities on the health, safety and security of local communities;
- Proactively prevent and avoid impacts to community health safety and security, and enhance any positive impacts related to community health, safety and security;
- Identify strategies that provide adequate health related information and prevention measures through which communities can manage their own health and safety in an optimum manner; and
- Implement security that protects Supreme Energy's employees, assets and business continuity in a manner that adheres to Indonesia legislation.

2 SCOPE

The scope of this CHSSMP covers construction, operational and decommissioning and closure phases of the Project. The CHSSMP is relevant to Supreme Energy and All Contractors.

The CHSSMP includes measures to respond to the following potential impacts identified in the ESIA:

- Changes to community health profile including exposure to disease,
- Changes in availability and quality of water resources and food insecurity and nutritional status;
- Changes to livelihoods and income generating opportunities and subsequent effects on community access to social and physical infrastructure;
- Changes to community health and wellbeing including changes to social and cultural cohesion; and
- Changes to community safety profile related to traffic, emergency responses, unplanned events, crime and conflict.

Community health includes the concept of well-being, which looks beyond physical health or absence of disease, and incorporates a broader psychosocial concept of mental and social health. Wellbeing also considers the ability of an individual to realize their potential within society, work productively, build strong and positive relationships with others and contribute to their community (2). Factors such as self-esteem, coping mechanisms, resilience and stress response are important in determining an individual's wellbeing.

This CHSSMP is considered to be a 'live' document and will need to be amended periodically in light of operational changes and learnings experienced during its implementation.

3 RESPONSIBILITY

Site Support Manager	• Approve information/ responses for public release • Approve Community Involvement sub-plan and communication protocols • Provide the communications interface with representatives of other contractors until protocols are agreed regarding day-to-day contact • Establish, manage and administer the communication processes and system • Liaise with the Company on all matters relating to community relations • Monitor, review and update the Community Relations plan to suit

	each development phase of the Project
Site SHE Representative	• To ensure this procedure applies and is communicated correctly • Identify hazards which have consequence to the local communities
Doctor/ Paramedic	• Coordinate with local medical service (Puskesmas, local nurse/doctor) in conducting health education and campaign. • Give medical assistance to the local communities in case there are emergencies conditions which interfere with company activities.
Field Relation	• Communicate with the local community an all levels • Organize, attend and participate in local information transfer meetings • Assist with all local authorities in community Development that affect our relationship with the community • Integrate the needs of our labour force in providing accommodation required within the local community • Be aware of the short fall in the local community infrastructure

4 REFERENCES

- SE-MSHE-WOR-PRO-0002 Project Execution Planning: Safety Health Environmental
- SE-MSHE-WAM-PRO-0001 Standard Waste Management
- ML/RB/RD-SSE/HR-PLY-12 Code of Conduct
- ML-MSHE-EMP-PRO-0001 Site Specific Emergency Response Plan (SSERP)
- SE-MSHE-IRI-PRO-0001 Incident Notification & Reporting

5 DEFINITIONS

Company	Supreme Energy Muara Laboh (SEML), Supreme Energy Rantau Dedap (SERD), Supreme Energy Rajabasa (SERB).
Community	Comprises residents, community groups, special interest groups, local government, environment groups, schools, media and local business organisations
Complaint	A verbal or written registration of dissatisfaction concerning any aspect of Supreme Energy's activities. A substantial complaint would include any matter that is a breach of conditions, is current, with potential for media or political interest.
CMT	Crisis Management Team lead by President Director of Supreme Energy

6 SAFETY, HEALTH, AND ENVIRONMENT POLICY

6.1 POLICY INTENT

The Company is determined to implement the highest standards of Safety, Health and Environmental (SHE) execution to ensure that all areas of operation are environmentally proactive and safe places for our stakeholders. SHE is a line function with full accountability throughout the entire corporate structure.

6.2 POLICY

It is the policy of the Company to provide a safe and healthy work environment. The Company is committed to proactively protecting human health and the environment. The Company shares this commitment with its employees, our customers, other companies, and the communities we work with. Our policy is to continuously improve our safety and health performance by routinely reviewing our practices, policies and procedures to identify opportunities for reducing accidents and enhancing compliance. Our policy is founded on the following basic principles:

- We will comply fully with applicable safety and health laws and regulations;
- We will review our operations and assess the potential for safety and health risks and will develop and implement plans to manage these risks prudently;
- We will regularly review our safety and health performance to identify opportunities to enhance our performance;

The Company Safety and Health Policies are designed to ensure that specific requirements, performance-based standards, and the intent of regulations are specifically identified in order to minimize interpretive errors. The Company is committed to efficiently reduce the potential impacts of our business on safety, health and environment (SHE) by managing hazards, preventing injury, reducing waste, emissions and discharges and by using energy efficiently. We will eliminate injury by observing hazards, reporting and rectifying all unsafe actions and any condition which could lead to an incident.

Each employee is responsible for complying with company policies, guidance and procedures to ensure that work is performed in a safe and healthful manner. Responsibilities for SHE performance shall be visible throughout the organization with clear management accountability. Full implementation of SHE Management Policies throughout the entire life of the project is essential to our business. Every employee, affiliate, consultant, contractor and subcontractor of the Company shall unconditionally support and rigorously apply the Supreme SHE goals, objectives and all statutory requirements.

Our business, operational and implementation plans and personal objectives shall including quantifiable measurable SHE targets are that will be established annually, reviewed regularly and adjusted as needed to improve the effectiveness of the program. Every employee is accountable for implementation of this policy. If you have any doubt or questions, don't hesitate to seek guidance from your immediate supervisor.

Safety is everyone's responsibility. We are all responsible for both our own safety and that of our co-workers. This objective is fundamental to our business. All employees of Company and Contractors have the same responsibility to comply with safety precautions during performing their work for Company. We are all responsible to work correctly and safely.

In carrying out the policy intent, the Company will:

- ensure that systems are developed and established to identify and control hazards within the work place and to monitor SHE performance.
- ensure that all employees to understand that Safe Operations is "good business", and has an equal importance with any other business matter.
- motivate and encourage all employees, suppliers (vendors and contractors) and other stakeholders to maintain high standards of SHE consciousness.
- communicate openly with employees, suppliers and all stakeholders to continually improve the SHE standards.
- meet all legal obligations wherever we operate and always strive to exceed requirements.
- adopt best practices and apply standards that protect the Safety and Health of the employees and prevent harm to the Environment.
- follow written procedures for high risk or unusual situations.
- involve the right people in decisions that affect SHE procedures and equipment

- ensure that every employee understands that have the duty to prevent SHE losses and provide a safe and healthy place of work.

7 SUMMARY OF LEGAL AND OTHER REQUIREMENTS

7.1 NATIONAL LEGISLATION AND POLICY

There are several legislative instruments in Indonesia pertaining to the protection of the environment. The relationship between environmental protection and integrity, and community health and safety is indicated within some of these instruments

7.2 INTERNATIONAL LEGISLATION AND STANDARDS

7.2.1 IFC Performance Standards

Supreme Energy have committed to meeting the International Finance Corporation's Performance Standards on Environmental and Social Sustainability (IFC PSs). Specifically in relation to the CHSSMP, this means that Supreme Energy and its contractors will satisfy the requirements of IFC PS4 (Community, Health, Safety and Security).
IFC PS4 outlines a project's responsibility to avoid or minimize the risks and impacts to community health, safety and security that may arise from proposed activities, paying particular attention to vulnerable groups. Focused attention and effort should be made in conflict or post-conflict areas where a project could exacerbate an already sensitive local situation and stress scarce local resources potentially leading to further conflict.

7.2.2 IFC General EHS Guidelines

These guidelines cover a variety of issues related to emergency response planning and preparedness including fire prevention, disease prevention, management and transport of hazardous materials, traffic safety, general site hazards, management of change and financing

8 IMPACT MANAGEMENT

8.1 SUMMARY OF IMPACT MANAGEMENT

As with any project of this scale and nature, there are certain impacts that cannot be entirely eliminated, i.e. residual impacts after implementing mitigation measures. The proposed Project will seek to avoid impacts wherever possible (by changes to Project planning and/or design) and implement measures to mitigate impacts where they remain (to reduce impacts that cannot be avoided to acceptable levels).
The following sections include a description of the potential impacts and the mitigation measures proposed to reduce them to acceptable levels. These mitigation measures essentially comprise the management plan to avoid or mitigate negative impacts and enhance positive impacts related to the health, safety and security of local communities.
The following sections will:

- Identify potential impacts associated with each phase of the Project;
- Identify the objectives and targets related to the impacts;

- Describe the management measure(s) to minimize the impact; and
- Assign responsibilities for the management measures.

8.2 MANAGEMENT DURING CONSTRUCTION

8.2.1 Potential Impacts

Potentially significant impacts during the construction phase are related to reduced access to natural resources, and project-induced and the related indirect consequences for community health safety and security If not managed correctly, construction activities may limit access to natural resources in the Project Area, in particular areas used for power plant thereby impacting income generating / subsistence opportunities from these livelihoods (with indirect consequences for community health safety and security).

The commencement of Supreme Energy construction activities, in addition to other activities occurring in the area (i.e. the presence of other companies/contractors and the construction of the Government road) may encourage immigration.

This may cause an increase in vector borne and communicable disease, community conflict etc.

The likely impacts identified during the
construction phase include:

- Decreased Availability of Water;
- Increased Incidence of Communicable Diseases;
- Increased Transmission of Dengue/Malaria;
- Increased Incidences of Chronic/ Acute Respiratory Infections;
- Nutrition Related Illnesses;
- Increased incidences of chronic/ acute respiratory infections;
- Nutrition related illnesses;
- Increased anti-social behaviours; and
- Increase in injuries/ accidents.

8.2.2 Objectives and Targets

The objectives of the CHSSMP during construction will be consistent with those identified in *Section 1.* Specifically during construction this will include measures to:

- Avoid, minimise or compensate for the potential for community exposure to hazardous materials and substances during construction;
- Avoid, minimise or compensate for the potential for traffic related accidents;
- Avoid, minimise or compensate for the proposed Project's direct impacts on priority ecosystem services which may result in subsequent impacts to local income generating opportunities;
- Avoid, minimise or compensate for the potential for community exposure to communicable and vector-borne diseases;
- Avoid, minimise or compensate for a decline in the availability and / or quality of water resources available to local communities;
- Assist and collaborate with the local communities, local government, and other relevant partners, in their preparations to respond effectively to emergency situations; and
- Assess and manage risks and impacts posed by Supreme Energy's security arrangements to those within and outside the Project site.

In achieving these objectives Supreme Energy will consider the differentiated exposure of different local communities to impacts and the higher sensitivity of vulnerable groups.

8.2.3 Management Actions

8.2.3.1 Management of Communicable Disease

Management of potential incidence of communicable diseases in relation Supreme Energy's workforce are outlined in the SE-MSHE-WOR-PRO-0030 *Public Health Awareness Raising Plan*, and includes pre-placement medical examination of all workers.

This will be supported by periodic medical examinations that are supplemented by regular voluntary Worker Medical Screening Program onsite and a Monitoring and Evaluation (M&E) system. In addition a workplace policy and programme on HIV prevention and mitigation of HIV impacts will be implemented.

As a means to improve the health context in which the Project operates, Supreme Energy will collaborate with regional/local Government and relevant NGOs to support improvements to existing health services to handle the potential increase in population numbers and changes to the existing health profile of the area. This may include improving health facilities, the quality of medical personnel, the diagnostic capacity and treatment, the provision of vaccines, and the capacity to address epidemics and pandemics.

Supreme Energy, in collaboration with the local and regional Government, local emergency providers and local health care facilities will develop and implement Emergency Prevention, Preparedness and Response Plans (EPPRPs) to cover all incidents presenting risks to public safety and the affected communities in proximity to the Project Sites and the environment.

The EPPRPs must:

- Be applicable to all contractors as well as local communities;
- Consider access to health care, major incidences, exposure to hazardous materials, multiple casualty events, epidemics and pandemics; and
- Make provisions for awareness-raising activities and emergency response training to the communities that are considered to be at higher risks.
- Supreme Energy will monitor the emergence of major pandemics through GoI Ministry of Health alerts. If the GoI Pandemic Alert Scale reaches Phase 4 (1) the Project will implement the relevant EPPRPs.

As a means to mitigate impacts related to the increased incidences of HIV/AIDS and other STIs Supreme Energy will develop and implement an HIV/AIDS Prevention Programs for its workforce.

In addition, the following measures will be implemented:

Supreme Energy had developed and implemented a Workforce Code of Conduct.

The key health and safety elements of the code will include:

- Zero tolerance of illegal activities by all personnel;
- Forbidding the use of prostitution;
- Forbidding illegal sale or purchase of alcohol;
- Forbidding the sale, purchase or consumption of drugs; and
- Forbidding illegal gambling and fighting.

The Workforce Code of Conduct will be adhered to by all Contractors and Supreme Energy employees. Any employee or Contractor found in violation of the Code shall face disciplinary hearing which may result in dismissal.

- Supreme Energy will ensure that company medical services have sufficient capacity and capability to implement the company's policy on care and treatment of HIV-positive employees.
- Supreme Energy will ensure there is access to free condoms at the worker camp to promote safe sexual practices.
- In partnership with local health officials and relevant NGOs, Supreme Energy will undertake information, education and communication campaigns around safe sexual practices and transmission of STIs and HIV/AIDS as well as condom distribution at stopping locations within the transport corridor targeting commercial sex workers.

In partnership with local authorities and relevant NGOs Supreme Energy will support women's empowerment and education programs to promote women's rights and safe sexual practices (including the use of condoms) and support.

As a means to mitigate impacts related to sanitation and water-borne diseases Supreme Energy will:

- Conduct information, education and communication campaigns amongst Project personnel on hygiene and sanitation.
- Partner with local authorities and relevant organisations as (e.g. donors, civil society and NGOs) to facilitate delivery of sufficient supply, and adequate quality, of water to affected settlements (including schools).

8.2.4 Management of the Transmission of Dengue/Malaria

To mitigate impacts related to the transmission of malaria Supreme Energy will develop and implement an Integrated Dengue/Malaria Control, Prevention and Treatment Program. The program will include the following key aspects:

8.2.4.1 Vector Management

- Supreme Energy will avoid the creation of mosquito breeding conditions/ habitats through creation of proactive surface water management during all phases, in particular, reduce the presence of standing water onsite through strict environmental controls. Such measures include repairing leaking pipes, dewatering of open excavations and effective drainage systems along access roads.

8.2.4.2 Control or Reduction of Individual Risk

- Personal protection and behaviour modification measures e.g., awareness raising and education programs, and mandating compliance with appropriate anti-malarial chemoprophylaxis when recommended.
- Reduce the potential for mosquito-human interactions in workforce accommodation, office space and other buildings through the use of screens at windows and doors, application of air conditioners and fans, the use of bed nets and other measures.
- Ensure that the workforce has access to prompt, accurate and effective diagnosis and treatment while working on site or in remote areas.
- Develop and implement a malaria information booklet and training material for the workforce. These materials will be used as part of a new employee induction, as well as part of annual refresher training sessions on dengue/malaria.

8.2.4.3 Limit Effect of Infection

- The malaria immunity status of all employees and malaria transmission patterns of labour source areas will be considered and catered for when considering treatment options.
- Partnership and collaboration in community programs with key external stakeholders to ensure community collaboration and enhance program sustainability.
- Ensure availability of malaria treatment at all clinics used by the workforce and local communities. This will be achieved through a partnership with the ministry of health and / or relevant NGOs.

Box8.1 shows an example of an integrated malaria control program.

PRIMARY CONTROL	
Vector Management	
ENVIRONMENTAL **Site Selection** Buffer zone; distance from vector breeding areas/ population with active malaria transmission. **Source Reduction** Environmental modification to reduce vector habitats; environmental manipulation to produce unfavourable conditions for vectors	CHEMICAL **Larval control** Destruction through biological, mechanical or physical means. No DDT may be used!! **Adult Mosquito Control** In-door residual spraying, space spraying and long lasting insecticide-treated bed-nets and other materials.
SECONDARY CONTROL (A,B,C)	
Control/ Reduction of individual risk	
AWARENESS Malaria and personal protection information distribution	BITE PROTECTION Bed-nets (LLITN), physical exclusion, personal protection
CHEMOPROPHYLAXIS Regular chemoprophylaxis for those considered at risk	
TERTIATY CONTROL (D)	
Limiting Effect of Infection	
DIAGNOSIS Prompt diagnosis through blood sampling or rapid diagnostic tests.	TREATMENT Use of artemisinin-based combination therapy; emergency standby treatment.

Source: ICMM Guidelines on HIV/AIDs, Tuberculosis, and Malaria; 2007

8.2.5 Management of Increased Incidences of Chronic/ Acute Respiratory Infections

Impacts on the ambient air quality as a result of Project activities (construction and operation) are associated with:

- The generation of dust during site clearance and preparation;
- The generation of dust from road traffic (secondary unpaved roads); and
- Exhaust emissions

The measures and recommendations included in this Section should be read in conjunction with measures included in the Air Quality Management Plan

8.3 EMERGENCY PREPAREDNESS AND RESPONSE PROCEDURE

The Supreme Energy Emergency Response Procedure will be adopted and utilized in full affect and support from all project Team members. The procedure will be modified and to address any changes in the delivery of the project compared to the normal daily operation procedure and requirements.

Supreme Energy and contractors, in collaboration with the local and regional Government, local emergency providers and local health care facilities will develop and implement Site Specific Emergency Response Plans (SSERPs) to cover all incidents presenting risks to public safety and the affected communities in proximity to the Supreme Energy Sites and the environment.

The SSERPs must:

- Be applicable to all contractors as well as local communities;
- Consider access to health care, major incidences, exposure to hazardous materials, multiple casualty events, epidemics and pandemics; and
- Make provisions for awareness-raising activities and emergency response training to the communities that are considered to be at higher risks.

8.3.1 FIRE SERVICES

Supreme Energy facilities have been installed by fire protection such as hydrant included with the pump, sprinkler for each room, and portable fire extinguisher for location which not captured by active fire protection. Moreover, Supreme Energy has trained a fire brigade team to overcome a fire and other emergency case. for major emergency and natural disaster, Supreme Energy and contractor should refer to the Site Specific Emergency Response Plan **(ML-MSHE-EMP-PRO-0001)**

8.3.2 HIV/AIDS

As a means to mitigate impacts related to the increased incidences of HIV/AIDS and other STDs, Supreme Energy will develop and implement an HIV/AIDS Prevention Programs for its workforce.
In addition, the following measures will be implemented:

- Supreme Energy has develop and implement a Workforce Code of Conduct (see ML/RD/RB-SSE/HR-PLY-12 Rev.0)

The key health and safety elements of the code are including:

  - Zero tolerance of illegal activities by all personnel;
  - Forbidding the use of prostitution;
  - Forbidding illegal sale or purchase of alcohol;
  - Forbidding the sale, purchase or consumption of drugs; and
  - Forbidding illegal gambling and fighting.

- The Workforce Code of Conduct will be adhered to by all Contractors and Supreme Energy employees. Any employee or Contractor found in violation of the Code shall face disciplinary hearing which may result in dismissal.
- The Workforce Code of Conduct will be adhered to by all Contractors and Supreme Energy employees. Any employee or Contractor found in violation of the Code shall face disciplinary hearing which may result in dismissal.
- Supreme Energy will ensure that company medical services have sufficient capacity and capability to implement the company's policy on care and treatment of HIV-positive employees.
- Supreme Energy will ensure there is access to free condoms (including female condoms) at the worker camp to promote safe sexual practices.
- In partnership with local health officials and relevant NGOs, Supreme Energy will undertake information, education and communication campaigns around safe sexual practices and transmission of STIs and HIV/AIDS as well as condom distribution (including female condoms) at Supreme Energy stopping locations within the transport corridor targeting commercial sex workers.
- In partnership with local authorities and relevant NGOs Supreme Energy will support women's empowerment and education programmes to promote women's rights and safe sexual practices (including the use of condoms and female condoms) and support.
- Supreme Energy will ensure there is access to free condoms (including female condoms) at the worker camp to promote safe sexual practices.
- In partnership with local authorities and relevant NGOs Supreme Energy will support women's empowerment and education programmes to promote women's rights and safe sexual practices (including the use of condoms and female condoms) and support.

8.3.3 Water Borne Disease

As a means to mitigate impacts related to sanitation and water-borne diseases Supreme Energy will*:*

- Conduct information, education and communication campaigns amongst Project personnel on hygiene and sanitation.
- Partner with local authorities and relevant organisations as (e.g. donors, civil society and NGOs) to facilitate delivery of sufficient supply, and adequate quality, of water to affected settlements (including schools).

8.3.4 Malaria and Dengue

To mitigate impacts related to the transmission of malaria, Supreme Energy and Contractor will develop and implement an Integrated Malaria Control, Prevention and Treatment Program. The program will include the following key aspects:

8.3.4.1 Vector Management

- Supreme Energy will avoid the creation of mosquito breeding conditions/ habitats through creation of proactive surface water management during all phases, in particular, reduce the presence of standing water onsite through strict environmental controls. Such measures include repairing leaking pipes, dewatering of open excavations and effective drainage systems along access roads.

8.3.4.2 Control or Reduction of Individual Risk

- Personal protection and behaviour modification measures e.g., awareness raising and education programmes, and mandating compliance with appropriate anti-malarial chemoprophylaxis when recommended.
- Reduce the potential for mosquito-human interactions in workforce accommodation, office space and other buildings through the use of screens at windows and doors, application of air conditioners and fans, the use of bed nets and other measures.
- Ensure that the workforce has access to prompt, accurate and effective diagnosis and treatment while working on site or in remote areas.
- Develop and implement a malaria and dengue information booklet and training material for the workforce. These materials will be used as part of a new employee induction, as well as part of annual refresher training sessions on malaria and dengue.

8.3.4.3 Limit Effect of Infection

- The malaria immunity status of all employees and malaria transmission patterns of labour source areas will be considered and catered for when considering treatment options.
- Partnership and collaboration in community programs with key external stakeholders to ensure community collaboration and enhance program sustainability.
- Ensure availability of malaria treatment at all clinics used by the workforce and local communities. This will be achieved through a partnership with the local authorities of ministry of health and / or relevant NGOs.

Box 6.1 below shows an example of an integrated malaria control programme

PRIMARY CONTROL
Vector Management

ENVIRONMENTAL **Site Selection** Buffer zone; distance from vector breeding areas/ population with active malaria transmission. **Source Reduction** Environmental modification to reduce vector habitats; environmental manipulation to produce unfavourable conditions for vectors	**CHEMICAL** **Larval control** Destruction through biological, mechanical or physical means. No DDT may be used!! **Adult Mosquito Control** In-door residual spraying, space spraying and long lasting insecticide-treated bed-nets and other materials.
SECONDARY CONTROL (A,B,C)	
Control/ Reduction of individual risk	
AWARENESS Malaria and personal protection information distribution	**BITE PROTECTION** Bed-nets (LLITN), physical exclusion, personal protection
CHEMOPROPHYLAXIS Regular chemoprophylaxis for those considered at risk	
TERTIATY CONTROL (D)	
Limiting Effect of Infection	
DIAGNOSIS Prompt diagnosis through blood sampling or rapid diagnostic tests.	**TREATMENT** Use of artemisinin-based combination therapy; emergency standby treatment.

Source: ICMM Guidelines on HIV/AIDs, Tuberculosis, and Malaria; 2007

8.3.5 Management of Increased Incidences of Chronic/ Acute Respiratory Infections

Impacts on the ambient air quality as a result of Project activities (construction and operation) are associated with:

- The generation of dust during site clearance and preparation;
- The generation of dust from road traffic (secondary unpaved roads); and
- Exhaust emissions (which may include sulphates, nitrogen oxides and particulate matter) from construction and operational vehicles.

The measures and recommendations included in this *Section* should be read in conjunction with measures included in the Environmental Management Plan and Environmental Monitoring Plan.

In partnership with the government, and NGOs if required; Supreme Energy will develop and implement educational campaigns to inform families about the early warning signs of acute respiratory infections that indicate the need to seek care.

Supreme Energy will adhere to WHO guidelines for infection prevention and control of epidemic- and pandemic-prone acute respiratory infections in Supreme Energy managed health care facilities.

Supreme Energy will implement the following mitigation measures with regard to road transportation:

- Commit to the lowest sulphur fuel usage possible so as to minimise harmful emissions.
- Develop and implement equipment and vehicle maintenance program to reduce emissions and dust generation.
- A speed limit of approximately 30 kph should be maintained on gravel roads where ashpalt surface have not been applied.
- Supreme Energy will implement a dust suppression programme (on Supreme Energy controlled roads), including covered loads, vehicle washing and road wetting, particularly in areas where the road passes close to dwellings, schools and businesses.

- Any directly affected individuals will be able to lodge grievances with the Supreme Energy using the grievance procedure regarding dust emissions that could be linked to the Project.

8.3.6 Management of Increased Risk of Road Traffic Accidents

Given the previously rural nature of the Project Area and surrounds, communities are unaccustomed to high levels of road traffic, and have not been exposed to common road safety measures, thus increasing their vulnerability to road traffic accidents. Construction activities will increase the road traffic levels in the area.
Supreme Energy will develop and implement a Traffic and Journey Management Plan that provides specific traffic calming measures related to identify sensitivities along the transport route. The Plan will make provisions for the following:

- Develop and implement a Driving Policy. This will include:
  - Restrictions on vehicle speeds;
  - Forbidding non-Project passenger transport;
  - Forbidding alcohol and drug use;
  - Forbidding reckless driving;
  - Forbidding cellular telephone use whilst driving; and
  - General safe driving practices.
- Develop and implement a Road Safety Awareness Campaign. Supreme Energy will implement a road safety awareness campaign throughout the route of the proposed road connection to improve community knowledge of the dangers of industrial road traffic and safe behaviour in and around roads. This programme will be implemented by Contractor and Company SHE Representative in partnership with the local government and police department. Such a program may be targeted at schools to help disseminate road safety information to children who may be particularly vulnerable to vehicle traffic.
- Mandatory defensive driving training for all Supreme Energy and Contractor driver that drive vehicles.
- Installation of GPS vehicle trackers to collect live updates on vehicle locations and reports on average speeds, speeding infractions, variations from agreed routes, stopping times etc. This would help to ensure adherence to driving policies and provide required data for driver audits.

8.3.7 H_2S Release/ Dispersion

In the event of a well blow and/or a major H_2S release, the community leader should be notified as soon as possible by the Supreme Energy's field relation through the direct verbal communication (by phone or face to face).
Supreme Energy is going to instruct them to remove from their residence to the safer place if the source of H_2S release could not be overcome based on the instruction from CMT.

8.4 ENVIRONMENT ASPECTS

8.4.1 Waste Management

Site cleanliness is important for both safety and environmental reasons. All Contractors and Company are to maintain clean work areas and to correctly dispose of rubbish and waste material on a daily basis.

The site waste management system consists of the classification, collection, transport, recycling or disposal of waste materials produced during construction and plant operation activities and domestic waste.

8.4.1.1 Waste Classification

This is the identification of the nature of the waste and sorting into appropriate groups, depending on the eventual disposal requirement. Groups include:

- Hazardous Waste
- Non Hazardous Waste

Suitable containers are to be provided around the work site to enable waste material to be easily classified and properly disposed of. In the case of hazardous waste, the Site SHE Representative is to be advised of the presence of this and will make separate arrangements for collection and disposal.

8.4.2 Spoil Disposal

Spoil is only to be disposed in designated areas. The Supreme Energy's Engineer will designate any spoil disposal areas required.

8.4.3 Notification

Contractor shall notify Supreme Energy's ERT Leader and Site SHE Representative immediately with respect to any pollution, loss, damage, claim or demand (or occurrence which may give rise to same) resulting from the work performed under the Contract. Contractor shall report to Company any incidents of non-compliance with legislative and regulatory environmental requirements that occur during the performance of the work refer to **SE-MSHE-IRI-PRO-0001 Incident Notification & Reporting**

8.4.4 Vegetation

Vegetation is important in stabilizing soil surfaces. Vegetation is NOT to be stripped from the ground unless absolutely necessary, in which case the SHE department personnel is to be advised so that he can determine any re-vegetation requirements. Trees, in particular, are not to be disturbed without the permission of the Project Manager and the Site Support Manager.

Supreme Energy will establish a re-vegetation plan, primarily aimed at planting trees to support sustainable environment.

8.5 SECURITY

8.5.1 Site Entry Procedure

Security Area Housing, Office Building and Warehouse/Yard.

This area shall be fenced with gate access locked outside of Site Office, Housing and Warehouse Yard. The area shall be lit at night and is under visual surveillance by Supreme Energy's security guard.

Access Control

- All persons employed by the Supreme Energy are team will be provided with numbered photo identification cards.
- All visitors that will enter to project area have to report to the security personnel in the Admin Complex Gate and they will get safety brief to get visitor ID badge.
- All Supreme Energy/contractors vehicles will display an identification card on the front windscreen after inspected and verified by Site SHE Representative.
- A Supreme Energy security person will be located at the certain location in the project site to control entry of SE/ contractors personnel and vehicles.
- Appropriate numbers of security personnel will be stationed at the security check point location for the hours as required to control Supreme Energy area.

Communications

The security personnel shall be equipped with a mobile radio with frequencies compatible with the Supreme Energy.
All security posts shall be issued with a contact number list for emergency contacts in the case of emergency or security issues.

8.6 AUDIT & REVIEW

The correct implementation of this Plan is verified through internal inspections and audits to be carried out by Supreme Energy SHE Department. The schedule, the frequency, the scope and objectives of the audit as well as the responsible internal inspectors will be indicated in the Audit Program that will be developed and updated by Supreme Energy SHE Department.
Internal auditing will address:

- The correct implementation of this Plan;
- The correct development and implementation of EPC Contractor Procedure;
- The correct and timely implementation of an auditing and review system by the EPC Contractor;

During the inspections, the audit team will address in particular:

- Records of communicable and non-communicable diseases and injuries.
- Records of community health safety & security complaints from local communities as recorded in the grievance management system
- Records of community health, safety and security incidents.
- Training/Awareness Participation Forms for the community members involved in safety awareness training.
- Air and noise emission monitoring reports

Evidences and results of the inspection and audit activities are included in the audit reports and in the "Non-Conformity and Preventive/Corrective actions" records.
Supreme Energy management reviews results of audits and inspections and the progress of the preventive/corrective actions and takes additional appropriate actions if necessary.

8.7 COMMUNITY COMPLAINTS

Community complaints and concerns will be captured and addressed through Grievance Mechanism procedure. The procedure has been designed to provide a simple, fair and transparent process for all external parties to provide feedback and to raise grievances.
Strict requirements apply to the handling of complaints to ensure the source of the complaint is rectified as soon as possible so the community is not subject to unnecessary inconvenience or another impact of the project works. The requirements apply 24 hours a day.

The following personnel are authorized to deal with complaints and arrange appropriate response action:

SEML	
NAME	**POSITION**
Asharry Sofyan	Site Support Manager
Bujang Joan	Field Relation
M. Roza	Field Relation
Firmansyah	Site Security Supervisor
Tba	Contractor Field Relation
SERD	
Erwin Guminda (act.)	Site Support Manager
M. Goerrilah Tan	Field Relation
TBA	Ass.Field Relation
M. Yunus (act.)	Site Security Supervisor
TBA	Contractor Field Relation
SERB	
Ismoyo Argo (act.)	Site Support Manager
Erwin Patrisa Floris (act.)	Field Relation
Raffly SY	Ass.Field Relation
Sunarno	Site Security Supervisor
TBA	Contractor Field Relation

9 REPORTING & MONITORING

9.1 AUDIT REPORTS (BY SUPREME ENERGY)

Evidences of the implementation of the actions/measures and related results are collected through inspection and auditing activities as detailed in section 6 "Audit and Review" of this Procedure; these evidences are described in the audit reports.

9.2 CONTRACTOR MONITORING REPORTING

Contractor is responsible to collect the SHE statistics (including all types of training delivered to communities and incident records) on a monthly basis and report to Supreme Energy. If any Subcontractor is involved, it is responsible for duly implementing requirements included in Contractor Procedure under the Contractor supervision.
The results of the inspection and audit activities will be summarized in a Report on a six monthly basis that will be made available to stakeholders which is under the responsibility of Supreme Energy. This report constitutes the basis for the monitoring report to be available for the Lenders.

9.3 MONITORING

The following table details the monitoring (measurement) activities for the preservation of community health and safety in the Construction phase.

For each monitoring activity and measure/action identified, the table shows:

- the reference (or source) documents (i.e. AMDAL, IFC Performance Standards and EHS Guidelines, etc.;
- frequency/timing of the measurement;
- Key Performance Indicator (KPI), and related quantitative target, if the target consist of a regulatory limit this will be indicated;
- The related responsibility for implementing the monitoring activity.

COMMUNITY, SHE & SECURITY MANAGEMENT MONITORING PLAN

Monitoring Action/Measure description	Frequency/Timing	KPI	Target/ Acceptance criteria	Responsibilities
Number of communicable and non-communicable diseases and injuries.	Ongoing	n.a.	No significant increase in communicable and non-communicable disease	Company EPC Contractor
Number of community health safety & security complaints from local communities as recorded in the grievance management system.	Ongoing	n.a.	Minimise and continued improvement in number of community health safety and security related complaints.	Company EPC Contractor
Number of reported community health, safety and security incidents. Incidents to be recorded on a monthly basis.	Monthly	n.a.	Minimise and target zero per annum.	Company & EPC Contractor
Number of community members involved in safety awareness training.	Annual	n.a.	Project affected community members to attend trainings	Company & EPC Contractor
Air quality and noise monitoring	Semester	As per AMDAL (RKL & RPL)	Meet IFC Standard and Regulation	Company and EPC Contractor

supreme energy	SAFETY HEALTH AND ENVIRONMENT WORK RULES	PROCEDURE
CORPORATE	WILD ANIMAL INTERFERENCE	SE-MSHE-WOR-PRO-0014 Revision: 1

APPROVAL

	POSITION	NAME	SIGNATURE	DATE
Prepared by	SHE Engineer	Erwin Patrisa Floris		
Reviewed By	Sr. SHE Manager	M. Arief Tarunaprawira		
Approved By	VP Relations & SHE	Priyandaru Effendi		10/10/14

REVISION HISTORY

REV	DATE	BY	REVIEWED	APPROVED	DESCRIPTION
0	10 Oct 2014	EPF	MAT	PE	For use
1	8 Feb 2018	BAY	MAT	PE	For use

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Purpose

This document is intended to explain and provide early-warning procedure to wild animal interference that may appear in a working area.

1.2 Scope

This procedure applies to all company, contractor and sub-contractor employees who are working to support SUPREME ENERGY operations.

2. DEFINITIONS

The following definitions apply specifically to this procedure:

Table 2.1 : Definitions

Wild Animals	living independently of man; not domesticated or tame

Wild animals may be a tiger, bear, monkey, snake, eagle, bee, etc both protected or not protected by law.

3. PROCEDURES

3.1 Mitigation of Risk associated with Wild Animals

Before commencing the job that indicates on wild animals path, Job Safety Analysis shall be available. Proper First Aid Kit shall be made available which consists of snake-bite kit or bee-stung kit.

Risk categories based on risk matrix in the Hazard Identification Risk Assessment and Risk Control procedure are the basis for deciding whether controls or improved controls are required to reduce the risk from an identified hazard to acceptable levels.

Based on this approach, an inventory of actions, in priority order, to devise, maintain or improve controls, can be developed and implemented.

Some action plans that may be included in the Job Safety Analysis to minimize wild animal attack risk are :

1. Apply a "**buddy system**". Working or walking alone are strictly prohibited,
2. It was allowed to bring self-defense weapon (knife / long stick) in the location suspected as wild animal path.
3. Always inform your supervisor by updating the condition through radio communication when you work in a remote area.

4. Depart and return home together in remote area location.
5. Strictly prohibited to dump left-over food in the work location. All left-over food shall be collected and brought back to the main camp for disposal.
6. To deploy enough lighting in the flying camp (if any) and certain spot of the work location.
7. Prepare stand-by vehicle for emergency condition.
8. Strictly forbidden to catch or hunt animals that we know the animal is a wild animal from the food chain

3.2 Job Safety Analysis Communication

After the risks are mitigated and the control plan is in place, the JSA shall be communicated to all workers involved. The objectives are to ensure all the workers involved are fully informed and have adequate knowledge regarding the locations, hazard of wild animals and how to protect themselves from wild animal attack.

3.3 Additional Precaution and Mitigation

3.3.1 Tigers

1. Make yourself appear as large as possible

Make yourself appear larger by picking up your children, leashing pets in, and standing close to other adults. Open your jacket. Raise your arms. Wave your raised arms slowly.

2. Make noise

- Yell, shout, bang your walking stick against a tree. Make any loud sound that cannot be confused by the tiger as the sound of prey. Speak slowly, firmly and loudly to disrupt and discourage predatory behavior.
- Other advice was shouting to scare. There is a possibility he will be away, and that's when we ran in the opposite direction as soon as possible. Do not run when it was wary / targeting us, many wild animals are much faster than us.

3. Act like a predator yourself

Maintain eye contact. Never run past or from a wild animal. Never bend over or crouch down. Aggressively wave your raised arms, throw stones or branches, all without turning away**.**

4. Slowly create distance

- Assess the situation. Consider whether you may be between the wild animal and its kittens, or between the wild animal and its prey or cache. Back slowly to a spot that gives the wild animal a path to get away, never turning away from the animal. Give a wild animal the time and ability to move away.
- If the wild animal decided to sleep near where we are, wait until we are sure it actually slept soundly, and then we move away slowly.

5. Do not run away

Many animals chase prey that runs. If you do come face to face with a wild animal, do not turn and run, but instead back away slowly, without turning your back on the wild animal. If you turn your head, you are inviting an unexpected attack.

6. Never feed animals

While it may seem tempting to feed the seemingly hungry animals, doing so can result in injury. Also, feeding animals hurts their overall survival ability, as they lose the skills necessary to hunt and begin instead to depend upon people to feed them.

7. Avoid approaching cubs

Avoid approaching cubs, as mother wild animals can be defensive to their young.

8. Store Food Properly

Keep all food at your camp in a high location in tightly close container or locked within your car. If animals smell food, they may be drawn to your camp. Pick up any food waste after your meals to ensure that animals are not inadvertently drawn to the tasty scraps.

9. **Protect yourself**

- If attacked, fight back. Protect your neck and throat. People have utilized rocks, jackets, garden tools, tree branches, walking sticks, and even bare hands to turn away the wild animal.
- If attacked, use a big stick or stone to fight. Be aggressive and loud as you can. Many wild animals do not like to hunt animals that can fight back, and are very aggressive.
- The other suggestion is to climb a tree if there is. Some of wild animals can not climb (e.g. mostly tigers cannot climb).

10. **Seek Medical Attention**

You should always seek medical attention if bitten by any animal. While the animal may seem healthy, many wild animals carry diseases that, if left unchecked, could lead to serious health problems for bite victims.

3.3.2 Bees

1. Do not wear perfumes or colognes

In other words, do not smell like a flower. Bees can detect and follow strong scents, and wearing perfumes or colognes will attract nectar-seeking bees and wasps from a distance. Once they find the source of the flower smell (you), they are likely to investigate by landing on you or buzzing around your body.

2. Avoid wearing brightly colored clothing, especially floral prints

This goes along with #1 - do not look like a flower, either. There is a reason beekeepers wear white. If you're wearing bright colors, you are just asking bees to land on you. Keep your outdoor wear limited to khaki, white, beige, or other light colors if you do not want to attract bees.

3. Be careful what you eat outdoors

Sugary foods and drinks will attract bees and wasps for sure. Before you take a sip of your soda, look inside the can or glass and make sure a wasp hasn't gone in for a taste. Fruits also attract the stinging crowd, so pay attention when snacking on ripe fruits outdoors. Don't leave your peach pits or orange

4. Do not walk barefoot

Bees may be present inside small flowers and some wasps make their nests in the ground. If you step on or near a bee, it is going to try to protect itself and sting you. But if you are wearing shoes, it is only going to hurt itself, not you.

5. Try not to wear loose-fitting clothes

Bees and wasps might just find their way up your pant leg or into your shirt if you give them an easy opening. Once inside, they will be trapped against your skin. And what is your first impulse when you feel something crawling around inside your clothing? You slap at it, right? That's a recipe for disaster. Opt for clothing with tighter cuffs, and keep baggy shirts tucked in.

6. Stay still

If a bee, wasp, or hornet comes near you, just take a deep breath and stay calm. It is just trying to determine if you are a flower or some other item useful to it, and once it realizes you are just a person, it will fly away.

7. Keep your car windows rolled up.

Bees and wasps may get into cars, so keep the windows rolled up whenever possible. If you do find yourself giving a ride to an unwanted stinging insect, pull over when it's safe to do so and roll your windows down. Don't try to swat at it while you are driving.

8. Rinse your garbage and recycling cans and keep lids on them.

Wasps love empty soda and beer bottles, and will check out any food waste in your garbage, too. Do not let food residue build up on your garbage cans. Rinse them well now and then, and always put tight-fitting lids on them to keep wasps away from your garbage. This can substantially cut down on the number of wasps hanging around your yard.

9. Do not hang out in the flower garden.

The chances of being stung while admiring the flowers are small, but if you are really worried about bee stings, do not hang out where the bees are most numerous. Bees spend most of their time and energy collecting nectar and pollen from flowers. Do not get in their way. Keep an eye out for bees and wait until they have moved on to another flower.

10. Call a professional to have unwanted bees, wasps, or hornets removed.

Nothing makes a stinging insect angrier than when someone disturbs or destroys its home. Professional beekeepers or pest control experts can remove wasp or hornet nests or bee swarms safely, without putting you at risk for stings.

3.3.3 Snakes

1. If you see a snake, stop and keep your distance. Give the snake plenty of room to get away.

2. Always watch where you step and be sure to look for snakes in areas of high brush, under logs and when stepping over logs, or fallen trees.

3. Never try to touch a snake or scare it away; give the snake its space and back away to a safe place.

4. Wear safety boots that are at least four inches above the ankle, and long pants when working.

5. Be observant for snakes sunning on rocks or trails, especially in the cooler times of day.

NEVER try to catch a snake.

3.4 Injured Wildlife Protocol

This protocol details the list of activities that any PT Supreme Energy and contractor employees, where in the event of any encounters (whether intentional or unintentionally) with an injured wildlife within the project area occurs. It is noted that no attempts should be made to capture or handle these species, unless the animal is visibly injured in which case observer or experienced wildlife handlers will carefully capture/rescue the animal for immediate veterinary attention.

3.4.1 Roles and Responsibilities

The most important aspect to the injured wildlife protocol is to remember the roles, responsibilities of each witness and the relevant people/party to consult during instances such as these.

Position		Roles and Responsibilities
Site Support Manager	:	• Manage and monitor PT SEML's environmental and biodiversity protection policy compliance. • Will be notified by all wildlife observants at project area upon detection of any dead or injured wildlife within project area. • Will take action towards suspected cause of injury
Site SHE	:	• Establish an incident reporting mechanism, including database (map, record, etc.) to record injured or killed wildlife. • Will asses the suspected cause of injury for

immediate action and for future improvements

PT SEML Employees	:	Will act as observers at project area and is required to report to Site Support Manager upon detection of injured wildlife
Contractors	:	Will act as observers at project area and is required to report to Site Support Manager upon detection of injured wildlife
Sub-contractors	:	Will act as observers at project area and is required to report to Site Support Manager upon detection of injured wildlife

3.4.2 Primary Actions

The most basic steps when encountering an injured wildlife species include:

1. Identifying the injured wildlife observed. Certain wildlife may require specific and/or cautious handling (snakes, bears, tigers, etc.),
2. Identify the type of injury of the observed wildlife and check if relocation would require specific attention,
3. Identify the source, and/or cause of injury. Immediate suspension of specific activities may be required, if any,
4. Isolate the wildlife from its location and take them to a safe haven,
5. Perform the necessary rescue/rehabilitation actions needed as possible,
6. **In the event that the injury of the wildlife is much more complicated than SEML could possibly handle, then immediate experts will be called into action.**

Note:

In the case of endangered species and/or protected status wildlife, relevant government officers may have to be called in for assesment and actions. SEML may contact and coordinate with officers at Kerinci Seblat National Park office by contacting the number below:

Kerinci Seblat National Park Office Head of Division Sector 4

Incumbent name : **David**

Telephone:
0812-7336-243
0822-8851-6729

Bukit Malintang 27778,
Lubuk Gadang, Sangir, Kabupaten Solok Selatan, Sumatera Barat 27778

3.4.3 Follow Up Actions

After basic care and/or expert veterinary actions have been taken, SEML may need to consult with veterinary experts and/or relevant government officers regarding the follow up actions to take. Follow up actions may range from providing care for wildlife until they are ready to be let go into the wild, transfer of wildlife into a specialized facility such as conservational facilities , etc. Other follow up actions may include the assesment and improvement of project practices if any, investigation of suspected cause, and the reparation of suspected cause.

supremeenergy	SAFETY HEALTH AND ENVIRONMENT EMERGENCY PREPAREDNESS	PROCEDURE
CORPORATE	INCIDENT COMMAND SYSTEM - EMERGENCY MANAGEMENT AND CRISIS MANAGEMENT PLAN	SE-MSHE-EMP-PRO-0003 Revision: 1

APPROVAL

	POSITION	NAME	SIGNATURE	DATE
Prepared by	SHE Engineer	Erwin Patrisa Floris		
Reviewed By	Sr. SHE Manager	M. Arief Tarunaprawira		
Approved By	VP Relations & SHE	Priyandaru Effendi		**29/10/2014**

REVISION HISTORY

REV	DATE	BY	REVIEWED	APPROVED	DESCRIPTION
0					
1	04/04/17	AW	MAT	PE	Change of Emergency Contact Number and Office Address

TABLE OF CONTENTS

1 INTRODUCTION, PURPOSE, CONCEPT AND PHILOSOPHY

1.1 INTRODUCTION

In the event of any emergency occurring at a facility owned by, or on lease to SUPREME ENERGY, it is paramount that all personnel involved in the management and control of the emergency have a clear understanding of their roles, and are trained in the performance of their duties. SUPREME ENERGY's Emergency and Crisis Management Plan describes organizational lines of responsibility and guidelines to be used during all emergencies that can occur within SUPREME ENERGY.

This Plan contains guidelines, instructions and procedures to be followed as closely as they are applicable to the actual situation

The Plan is presented in four main sections:

Section 1 : is an introduction covering the purpose and scope and general philosophy of this Plan.

Section 2 : describes the Operational Emergency Management Organization, details of the SUPREME ENERGY callout procedures, Emergency Management Team and their duties and internal and external communication during an emergency.

Section 3 : roles, responsibilities and checklists for the team.

Appendices : contain the emergency contact list.

From time to time the content will need to be revised and amended to reflect changes in personnel in the Organization, new knowledge, skills and techniques. The Plan will also benefit from constructive criticism by the people who use it. Comments and recommendations should be directed to the Sr. Manager SHE who will coordinate the implementation of the revisions and amendments with the approval of the President Director & CEO. Upon receipt of the amended plan, the holder should return the previous edition to the SHE Engineer.

1.2 PURPOSE OF THE PLAN

The purpose of this Plan is three-fold:

1. To identify and record a list of tasks which should be carried out in an emergency, together with some guidance on priorities.
2. To establish, before an emergency occurs, the assignment of such tasks and the appropriate delegation of authority.
3. To provide communication and interface patterns to ensure an efficient coordination of efforts in the Management and control of an emergency.

SUPREME ENERGY Priorities

1. The safety of personnel and the preservation of life
2. The protection of environment, equipment and property
3. The protection of investment
4. The reputation of the Company

1.3 CONCEPT AND PHILOSOPHY

The Emergency Response, Emergency Management and Crisis Management arrangements are based on three tiers as outlined in *Figure 1* with the Emergency Response Team (ERT) is located at each site facilities whereas the Emergency Management Team (EMT) together with the Crisis Management Team (CMT) are located in Jakarta.

The concept of operations of these groups / teams is that the site ERT, led by the Site Support Manager or his deputies as ERT Leader (ERT-L), will undertake the normal tactical role of life-saving, firefighting and repair and response in an emergency. The ERT-L is also responsible for the coordination of immediate support and liaison with other facilities and contractors.

The ERT-L will retain overall command and control during an emergency. It should be noted that the ERT-L must clearly delegate responsibility to his deputy when that is required.

The ERT-L will have full responsibility for all personnel and equipment in the site. However, during drilling activities, the SUPREME ENERGY Drilling Supervisor (Company Man), in cooperation with the Contractor Rig Superintendent, will act as On Scene Commander / ERT Shift Team Leader for the pad where the drilling activities are on-going and has full responsibility on the Drilling Rig and the integrity of the well being drilled. He will also report all events for any emergency that occur on the Rig. He will report directly to his Line Manager at the SUPREME ENERGY office in Jakarta and advise / coordinate with ERT-L at the site.

If the nature of the emergency requires additional support in terms of involvement of Government or Non-government agencies, information to relatives, technical advice and planning assistance then the ERT-L will inform Emergency Management Team Leader (EMT Leader) and the EMT may be partially or fully mobilized.

The EMT will deal with the provision and coordination of support, planning assistance and technical advice to the ERT-L while at the same time identifying strategic issues that may need to be dealt with by the CMT. In addition, the EMT is responsible for the liaison with Government Agencies, the Media and relatives.

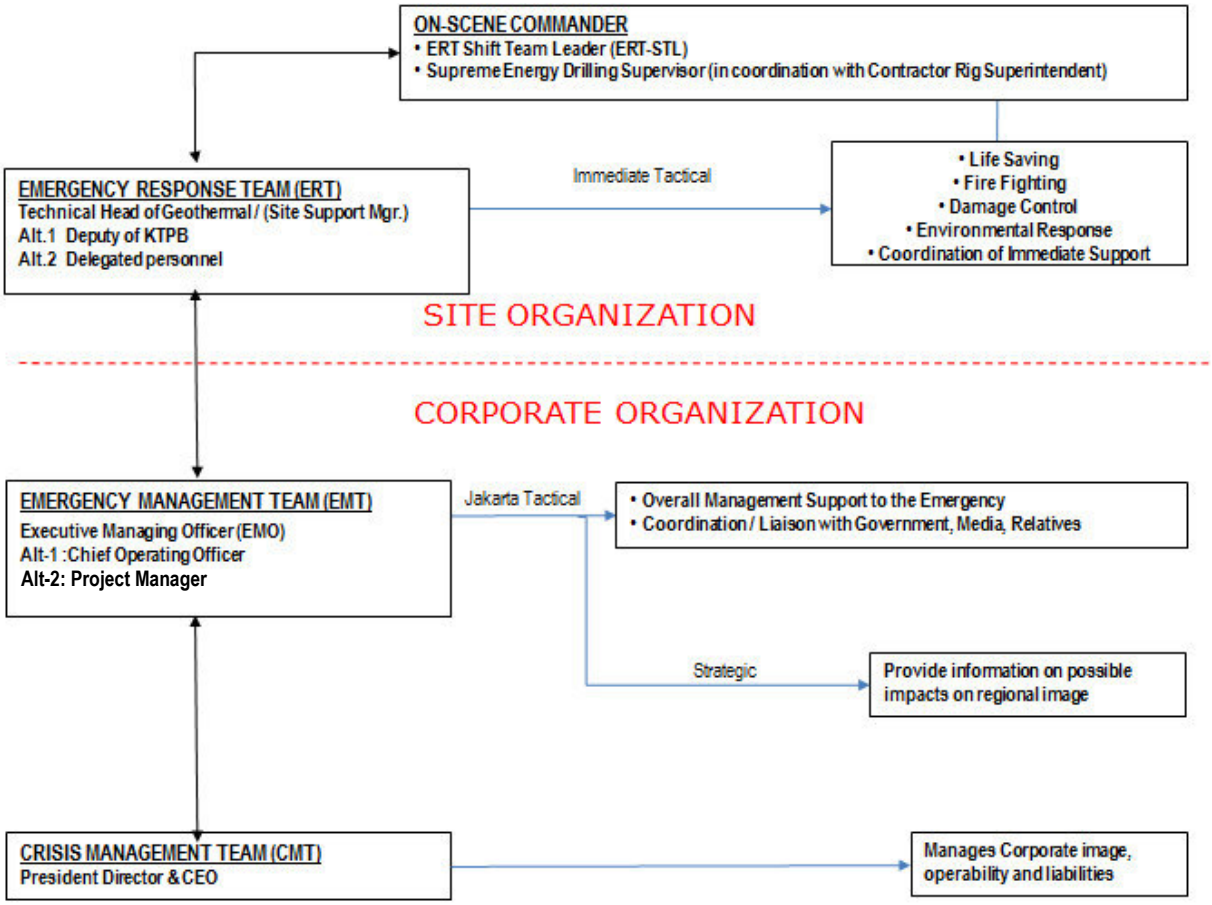
It should be noted that these provisions equally apply to other emergency that may occur such as Civil Unrest, Extortion etc.

The CMT will generally only be mobilized in order to deal with strategic and broader issues affecting SUPREME ENERGY.

Figure 1 describes the Emergency Management Team concept and support arrangements that exist within SUPREME ENERGY. It also describes how the Plan is activated, designates team members and describes what action they will take when it is required to support an emergency.

This Plan affects and applies to all employees of SUPREME ENERGY and the employees of contractors working on facilities owned by or leased to SUPREME ENERGY.

Figure 1 : Concept and Philosophy



ESDM	Kementerian Energi dan Sumber Daya Mineral (Ministry of Energy and Mineral Resources)
EBTKE	Direktorat Jenderal Energi Baru Terbarukan dan Konservasi Energi (Directorate General of Renewable Energy and Energy Conservation)
HUBLA	Direktorat Jenderal Perhubungan Laut (Directorate General of Sea Transportation)
BASARNAS	Badan SAR Nasional (National Search and Rescue)
ER	Emergency Response
ERT	Emergency Response Team
ERT-STL	ERT-Shift Team Leader
OSC	On Scene Commander

ERT-L	ERT-Leader
EMT	Emergency Management Team
EMT-L	EMT-Leader
CMT	Crisis Management Team
CMT-L	CMT-Leader
ECR	Emergency Control Room
SHE	Safety, Health and Environmental
POB	Persons on Board
PIC	Person in Charge
KTPB	Kepala Teknik Panas Bumi (Technical Head of Mining or Geothermal)

2 EMERGENCY AND CRISIS MANAGEMENT ORGANIZATION

2.1 INTRODUCTION

The ability of SUPREME ENERGY to respond quickly and efficiently to an emergency must be the principal objective in the development of an emergency management and support plan.

The importance of ensuring that the appropriate support is available to the emergency area at the time required is paramount.

In addition, it should be recognized that there would also be a need to respond to enquiries from distraught relatives, representatives of government departments, representatives of the press, TV, pressure groups and other organizations.

SUPREME ENERGY provides training for it's personnel in the skills and techniques necessary to handle a fire, an explosion, search and rescue of personnel, the care and evacuation of casualties, lifesaving appliances and all emergencies that could occur at the SUPREME ENERGY facilities including H_2S Leak, Earthquake, Civil Unrest, etc.

Drills are held regularly at site and Jakarta facilities, where these skills and techniques are practiced, along with the use of the communication systems and procedures necessary for these activities.

A live, real-time Emergency Management exercise is planned to be conducted yearly. A comprehensive debrief which follows the exercises, is recognized as an integral part of the exercise plan.

Other (e.g. Walkthrough) exercises may be conducted anytime to check the resources readiness to respond to an unexpected emergency.

2.2 POSSIBLE EMERGENCIES WITHIN SUPREME ENERGY

Possible Emergencies that could occur within SUPREME ENERGY are as follows:

- Fire / Explosion
- Well Control Situation
- Failure of Equipment / Damage
- Hydrogen Sulfide Leak
- Abandon Rig
- Serious Injury / Fatality
- Severe Car Accident
- Helicopter Crash
- Missing Person
- Extortion

- Other Drilling Emergency
- Earthquake
- Volcano Eruption
- Flood/ Flash Flood
- Major spill (oils, brine, etc.)
- Civil Unrest/ Riots
- Terrorism / Sabotage
- Landslide
- Attacked by wild animals

2.3 SITE EMERGENCY RESPONSE TEAM (ERT)

The Technical Head of Geothermal (KTPB) or Site Support Manager as alternate is appointed as ERT-L and will coordinate all emergencies that occur in the site and has full responsibility for all personnel and equipment in the site. Any other responsible person on installations / facilities at site will report directly to this ERT-L who will coordinate all emergency response activities.

2.4 EMERGENCY MANAGEMENT TEAM (EMT)

The EMT is structured in accordance with the current SUPREME ENERGY organization structure. The EMT is located in Jakarta under the direction of EMT Leader. The EMT structure is shown in *Figure 2*.

The EMT will be assembled in the Emergency Control Room (ECR) in Menara Sentraya Building 23rd Floor (SUPREME ENERGY Office). Alternate ECR location will be designated later at a safe place as advised by EMT Leader.

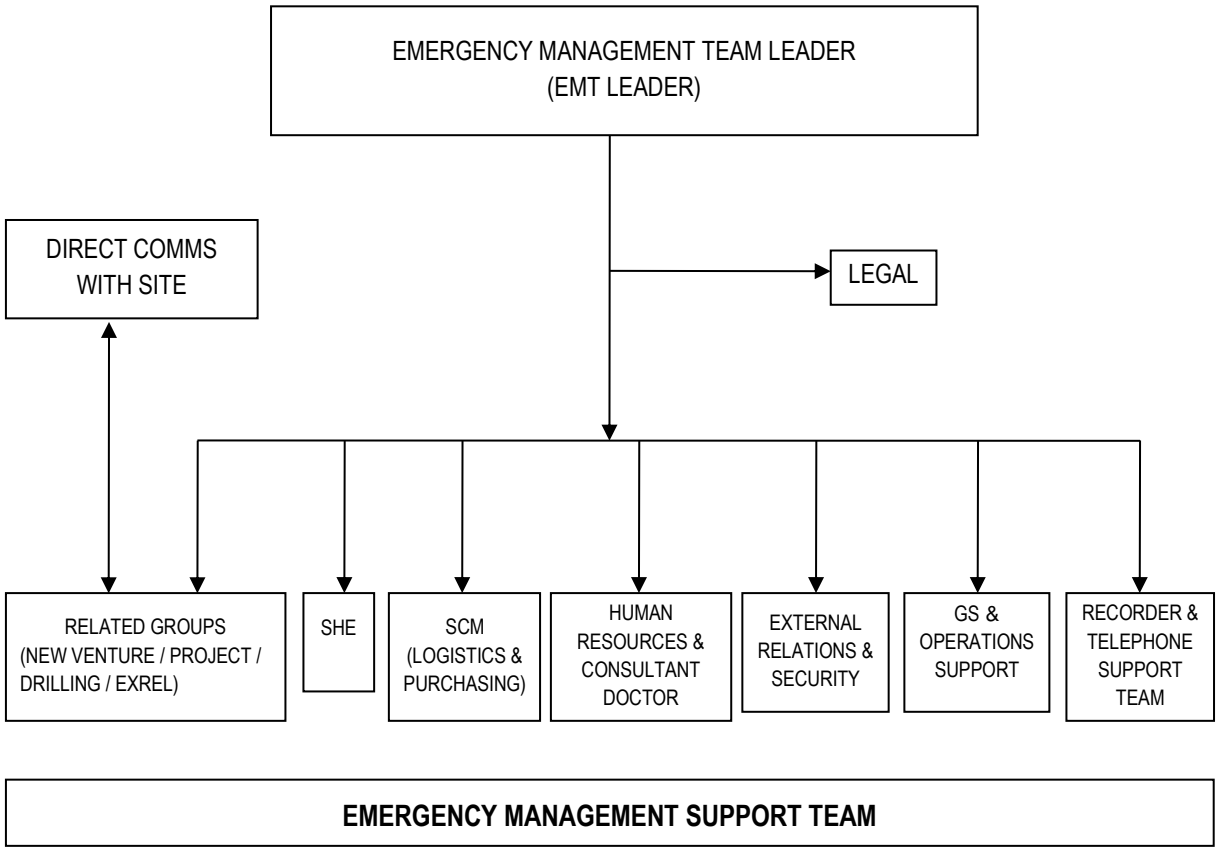
2.4.1 Emergency Management Support Team

The EMT is assisted by an Emergency Management Support Team and they are to be included in the "Call-Out" Procedure. This group of personnel must be readily available to support their respective EMT Member.

The purpose of this Support Team is to provide necessary assistant to the EMT members and to prevent over-load of the members.

The EMT is also assisted by a Telephone Support Team who will answer all external telephone calls regarding the emergency and direct these calls to the appropriate person or provide such details as directed by HR or External Relations personnel. This system ensures that no calls, other than internal SUPREME ENERGY calls, are made direct to the EMT.

Figure 2 : Emergency Management Team



These Primary positions will be filled by the following personnel:

- **EMERGENCY MANAGEMENT TEAM LEADER**

  The Executive Managing Director will be responsible as the Emergency Management Team Leader (EMT-L). If he is not available, he will be replaced by the Chief Operating Officer.

- **RELATED GROUPS (NEW VENTURE / PROJECT / DRILLING)**

  The Head of particular group (depending on the type of incident) or his alternate will act as the direct line of contact with their Person In Charge (PIC) at the affected site.

  Should it be a Drilling Emergency, the Drilling Manager will communicate with the SUPREME ENERGY Drilling Supervisor (Company Man) at site.

- **SAFETY, HEALTH and ENVIRONMENTAL (SHE)**

  This position will be filled by the Sr. Manager SHE and, if not available, he will be replaced by the SHE Engineer and/or Sr. Environmental Engineer.

- **SUPPLY CHAIN MANAGEMENT (SCM)**

  The Sr. Manager SCM will fill this position and, if not available, he will be replaced the Head of Logistics. SCM shall maintain updated list of Contractor representative in each operating area.

- **RECORDER / SCRIBE**

A personnel will be selected to serve this position.

- **HUMAN RESOURCES**

  The Human Resources Manager or selected HR personnel will be on call to provide assistance to handle all Human Resources matters and medical assistance during an Emergency.

- **GENERAL SERVICES and OPERATIONS SUPPORT**

  The General Services Manager or his appointed personnel will be on call to provide assistance to handle services matters during the emergency.

- **EXTERNAL RELATIONS**

  The Sr. Manager Field Relations and Sr. Manager of Business Relations or their alternates will fill these positions. They will be responsible and assist the field in handling Community and External Government Agencies related matters.

- **SECURITY**
  The Security Manager will fill this position to provide assistance in the movement of Security personnel.

Note:
There will be other groups of personnel, which will be required to assist in the handling of the emergency and will be directed when required by the Emergency Management Team.

These groups include but are not limited to:

PROCUREMENT AND FINANCE

Selected Procurement and Finance employees will be on call to provide assistance on obtaining any supplies during emergency.

COMMUNICATION EQUIPMENT SERVICES

Selected Communication / Information Technology employees will be on call to handle communication equipment and computer services.

REPRESENTATIVE FROM MAIN CONTRACTORS

The representatives from main contractors may be called and will be stationed in the Meeting Room close to the Emergency Control Room.

2.5 CRISIS MANAGEMENT TEAM (CMT)

The CMT is structured in accordance with the current SUPREME ENERGY organization structure. The CMT is located in Jakarta under the direction of CMT Leader.

The CMT Leader is the President&CEO and is assisted by the Director of Operations / Chief Operating Officer (COO). For crisis in Muara Laboh and Raja Basa facilities, the Director and Chief Financial Officer (CFO) of SEML and SERB is the member of this CMT. For crisis in Rantau Dedap, the Director and Chief Financial Officer (CFO) of SERD is the member of this CMT.

2.6 EMERGENCY CONTROL ROOM (ECR)

The Emergency Management facility in the Jakarta Office is located in the **Board Room**, 23rd Floor of Menara Sentraya, Jl. Iskandarsyah Raya No. 1A, Jakarta 12160.

The Emergency Control Room (ECR) is provided with:

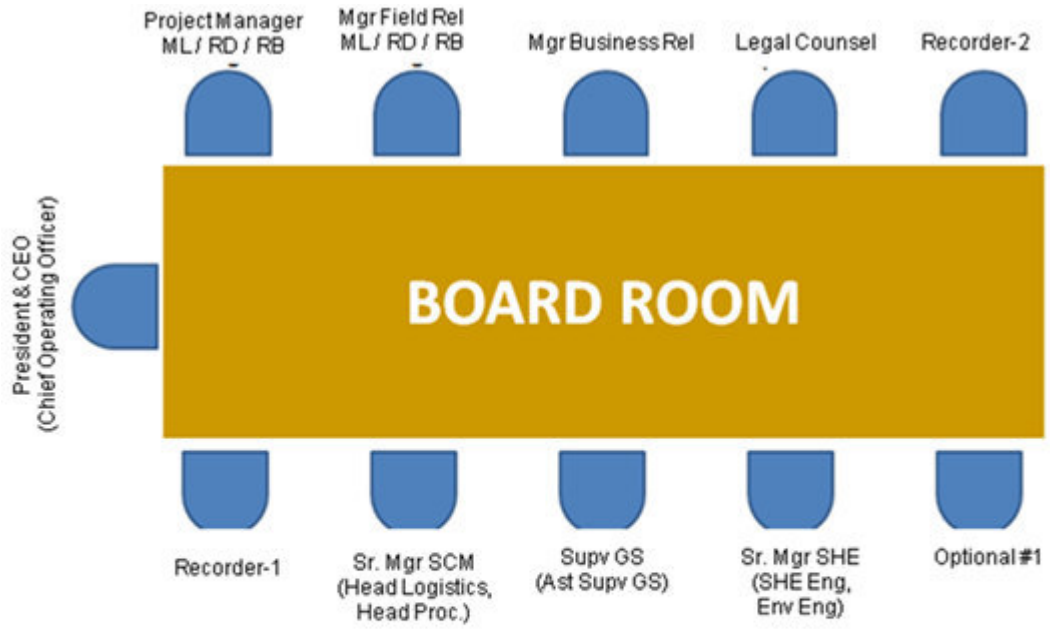
- Printer
- Fax Machine
- 3 - 5 direct phone lines, capable to deliver conference call
- In focus
- Television
- 2- 3 computer plugs and wi-fi facility for data
- Recorders (visual and sound)
- Flip charts
- Emergency Manuals
- Individual Team Member's Packs that contains Individual Check Lists and an Internal SUPREME ENERGY Telephone Directory.

Diagrams / maps of the affected site will be immediately provided by the related department(s) upon an emergency.
Lap-Top Computers will be issued by the IT Group.

The Recorder / Scribe will record a Chronological Log of events as they occur. In addition the Recorder can also be used to send / receive email.

It is the responsibility of the first person to enter the room to distribute individual team member's packs and to check that the telephone extensions and other equipment are working.

Figure 3: Emergency Control Room Arrangement for EMT



Optional :

- Drilling Manager
- Drilling Superintendent
- Production & Well Testing Manager
- Senior Geologist
- Senior Reservoir Engineer
- Security Supervisor

2.7 CALL OUT PROCEDURE

Each member of the EMT shall have the EMT-L and other member phone numbers. In the event of an emergency, the person-in-charge at site will notify the appropriate Line Manager and give full details of incident and request appropriate support.

The Line Manager will:

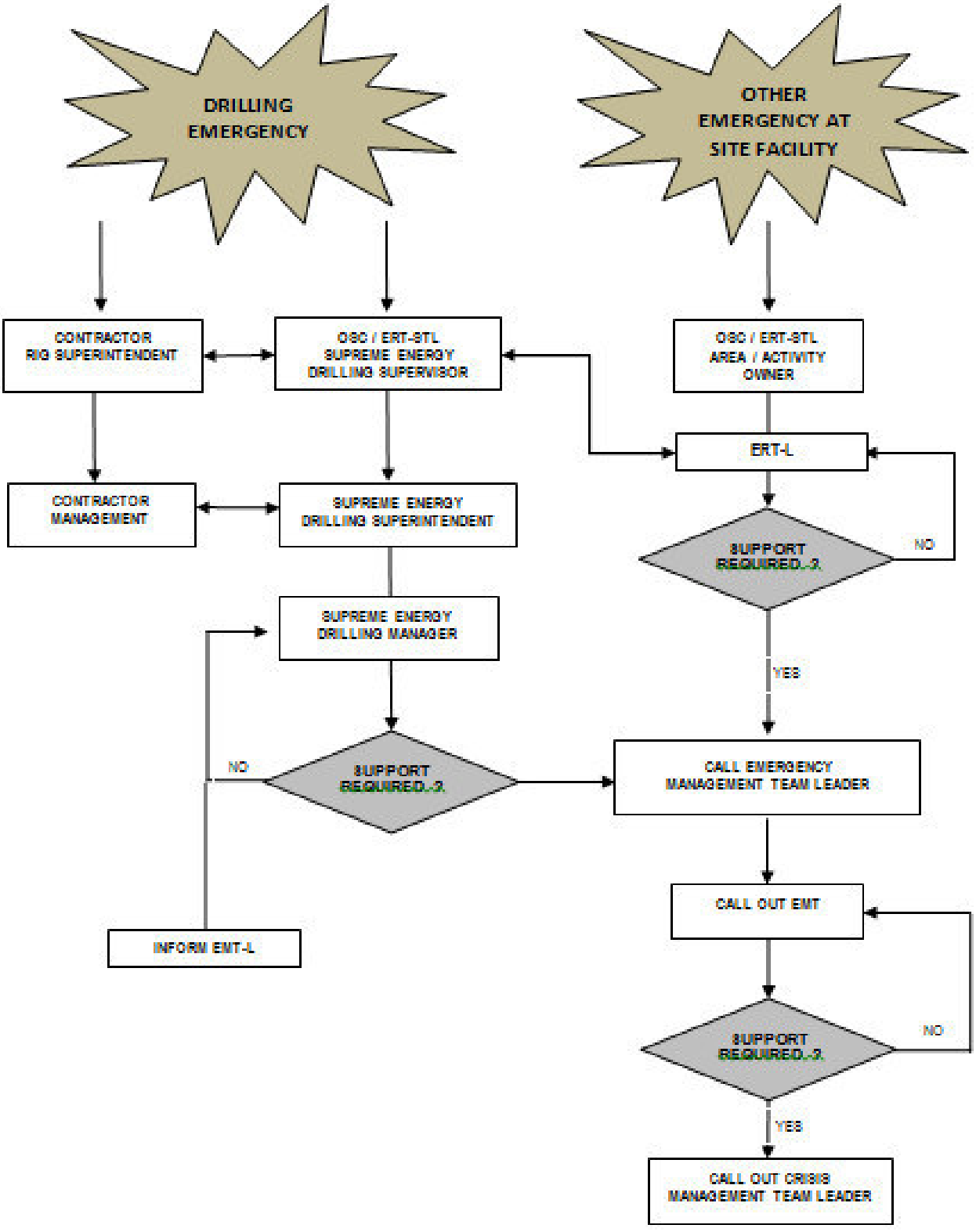
- Notify the EMT-L and if required, EMT-L will mobilize the EMT. If he cannot contact the EMT-L then he will call out the EMT direct.
- Establish and maintain communications with the ERT-L.
- Upon arrival of the EMT-L, brief him on current status.

After receiving notification of an emergency by the Line Manager, the EMT-L will:

- Initiate the mobilization of the Emergency Management Team. This will be done by calling the Group Emergency Team Number.
- On receipt of the call, all duty Emergency personnel will report to the Emergency Control Room.

The call out system is shown in *Figure 4*.

Figure 4 : Emergency Call Out Procedure



2.8 EMERGENCY DUTY

In case any condition whereas both Primary and Alternate members in one department / group are not available, it is the responsibility of the Vice President / Department Manager concerned to appoint a replacement for standby duty. This condition is the part of "Delegation of Authority" system.

2.9 ROLES OF GOVERNMENT AGENCIES

Directorate General of Renewable Energy and Energy Conservation (EBTKE)

The highest authority at site e.g. the Technical Head of Geothermal (Kepala Teknik Panas Bumi / KTPB) and their deputies are responsible to provide safe system of work and safe working condition at site. These persons have the responsibilities to report and communicate directly to the Sub-Directorate of Technical, Safety, Health and Environment in EBTKE for any report related to safety and environment.

The KTPB shall report a serious incident to the Sub-Directorate of Technical, Safety, Health and Environment in EBTKE. Emergencies such as an oil spill in excess of 15 barrels, damage to property estimated to be in excess of US$ 500,000, serious casualty and a fatality must be reported.

Any accident involving a fatality or major disaster, the EBTKE Inspector will usually conduct an inspection.

Note :

- EBTKE may assist in coordination or in seeking the assistance from other government agencies if required.
- EBTKE might be interested in obtaining detailed information for their Media Releases and Response. SUPREME ENERGY may provide this Agency with Draft Media Releases.

Directorate General of Sea Transportation (HUBLA)

For Oil Spill on the ocean, the HUBLA has the responsibility as the On Scene Commander for major oil spills (Tier III) when the National Contingency Plan is activated.

For smaller spills, (Tiers I and II), this Agency will monitor the activities performed by the SUPREME ENERGY. Contact with and reporting to this Agency may be coordinated by EBTKE.

National Search and Rescue (BASARNAS)

The BASARNAS will be responsible for personnel evacuation if required. Normally, the evacuation will be associated with an accident where the location is remote and difficult to be reached. The involvement of this Agency will also be coordinated through EMT-L.

Police

The Police may become involved in the accident or emergency that results in fatality, or is the consequence of a criminal or subversive act (such as bomb threat).

For fatality cases, the investigation by Police at the location may be required. Usually it will be conducted by the Local Police, who should issue a "statement letter" to be used to transport the casualty from the field to his/her Morgue / Hospital either in Jakarta or at other places.

The statement letter from the Police is also required should an autopsy be required.

It is a legal requirement that two registered doctors to sign a statement saying that in his/her opinion the person is deceased. In the case of site operations this can be achieved by the Doctors at the nearest hospital. Until such time as both Doctors have signed this statement then the person concerned is referred to as "Casualty Showing No Vital Signs". This would normally occur when the fatality is evacuated from the field.

When air evacuation is required, there must be close coordination between the Police, the Jakarta and Field appropriate resources (e.g. HR, Security, and Operations Support). This will ensure that the relatives are given timely advice of the arrival time of the fatality at Airport.

EBTKE must also be informed and they may require that an appropriate Inspector from their department inspect the site. Close coordination of transportation of these personnel should also be considered.

The Police may also request access to the site for criminal acts or as they determine necessary. Therefore the scene of the incident should remain undisturbed and marked off. Digital photographs should also be taken at the scene and sent to the EMT in Jakarta.

National Electric Company (PLN)

PLN, as the client of Geothermal Operations shall be informed and reported on any emergency situations especially that could affect power generation availability. SUPREME ENERGY will coordinate with PLN P3B Riau Dispatcher and PLN Switchyard whenever power generation disrupted. PLN could be requested for power back-feeding for plant start-up.

Army

In an event of emergency, Army may become involved if Police request them for security back-up. Yet all security coordination should go through Police first.

3 TEAM ROLES AND CHECKLISTS

3.1 ROLES AND CHECKLIST OF EMT

The main role of the Emergency Management Team is to coordinate the "operational support" and mobilize resources **to support and assist the site in dealing with the emergency,** including the deployment of physical assets and to alert relevant emergency services.

3.1.1 Roles of EMT

The general roles of EMT include the following activities:

- Ensure that the relatives of casualties are informed and kept updated by the HR Team Member.
- Manage communications with other relatives, media, contractors and other outside agencies.
- Make technical appraisal and assessment of the emergency situation and, if required, provide advice to the site of the emergency on possible remedial action and intervention.
- Notify and liaise with the emergency services, including notification and reports to the government agencies.
- Notify and update information to EBTKE and make arrangements for transporting representatives of the government agencies as requested by them.
- Provide an effective response to public interest in the emergency by preparing a draft media statement and follow-up draft statements for EBTKE.
- Notify other SUPREME ENERGY operational areas which may be affected by, or hear of, the emergency.
- Identify the strategic implications of the emergency on corporate image, operability and commercial position, both short and long terms and provides information to the Crisis Management Team (CMT).
- Assist the emergency site in the recovery phase of the emergency.
- Initiate an internal enquiry and investigation into the causes of the incident and assessing the implications for current operations, identifying remedial and rehabilitation actions required.

3.1.2 Checklist for EMT Activities

Checklist for EMT activities (1 of 1)	**Check Box**
Obtain full details of the emergency in terms of the threat / damage to People, Environment and Property, and actions in hand. Log details.	
Evaluate the need for, and level of EMT activation. Arrange "Call-Out" of the EMT and call out specialist support staff if required e.g. Drilling, Project.	

Provide details as known to the EMT members.	
Coordinate the overall planning and management of strategic issues and provide Tactical support to the emergency site.	
Coordinate overall emergency management operations and ensure that they are carried out in a manner which is consistent with Company policy, government requirements and the needs and concerns of the affected site.	
Develop overall response objectives to guide emergency response operations (prioritize).	
Ensure that contact is established and maintained with key players, contractors, emergency services, government agencies. Refer to relevant team member.	
Ensure all EMT members and support team are briefed and understand their Individual and team responsibilities.	
Request regular status updates (approximately every 30 minutes or as determined) from the affected site.	
Provide support to the affected site in the planning and implementation of the Recovery phase.	
Hold regular update sessions (or when there is a major change to the situation) with the EMT members in order to ascertain what support actions have been/are being provided by each member of the team, provide directions and guidance. On completion provide overall assessment.	
Ensure Support team members are regularly briefed by the appropriate person.	
Ensure that a risk analysis of the emergency is carried out.	
Assess the need for additional specialist support at the site.	
Ensure availability of adequate human, financial and technical resources.	
Liaise with appropriate National Embassies in Jakarta if required.	
Regularly review the on-going support and that action is being taken.	
Determine media strategies in consultation with the CMT. Ensure that the Media Statement and follow up reports are drafted in a timely manner. Review draft media statement for final approval by the CMT.	
Be prepared to physically brief the CMT if required.	

3.2 SPECIFIC ROLES OF EMT MEMBERS

3.2.1 Specific Roles of EMT-L

The specific roles of EMT-L includes, but not limited to:

- Provide tactical and strategic support to the affected site.
- Provide Leadership and Guidance to all members of the Emergency Management Team (EMT) and Support personnel.
- Responsible for the development and implementation of an emergency support strategy that promotes the safe, efficient and cost control of, and response to, an emergency.
- Approves the ordering and release of resources and monitors the performance of the site Emergency Response Team (ERT).

- Responsible for the development and implementation of a response recovery strategy, which will minimize the impact of the emergency on Company operability and liabilities in the future.

3.2.1.1 EMT Update Procedure

The EMT-L is responsible for ensuring this procedure is carried out:

- At the onset of the emergency, consider the appropriate intervals for updates. This should normally follow the update from the ERT-L. Updates should be brief and concise.
- Give all EMT members a 5-minute warning prior to each update.
- Check the Recorder and readiness to update the status boards.
- Invite each team member to identify key issues and report progress on any action item. Do not allow questions or debates until everyone has reported.
- Provide opportunity for clarifying questions and brief discussion.
- Summarize the update, set priorities and if necessary allocate responsibilities for actions.
- Ensure that action items / decisions taken are recorded and displayed to the team.
- Set time for the next update.

3.2.1.2 Format of Media Release / Statement

The format of Draft Media Release / Statement should be as follows:

> SUPREME ENERGY can confirm that a *(type of incident)* occurred at (*location)* at (*time / date)*.
>
> A detailed media statement will be issued as soon as more information becomes available. This is anticipated within *(...)* hours.
>
> SUPREME ENERGY has mobilized its Emergency Management Team and is in control of the Emergency. A media and public enquiry number has been opened on *(……..)*.
>
> If any member of the public is concerned about relatives, they should phone this number *(……..)*.
>
> **End of Statement**

3.2.2 Project / Drilling / Operations

The roles of the representatives from Project / Drilling / Operations are to serve as the single vocal point of situation assessment by establishing direct contact with the PIC to obtain clear and concise details on the nature and seriousness.

- Maintain regular communications (as the only PIC among the EMT members), with the PIC at the scene of the emergency.
- Assist the EMT-L with the evaluation of the emergency situation and provide specific technical support.
- Ensure that the EMT-L is informed of the status of the emergency, actions being taken at the scene, and remedial actions being undertaken and special implication.
- Note what support has been requested and ensure that this is passed to the appropriate team member.
- Obtain the latest weather forecast and monitor updates. Advise EMT members.

Checklist for EMT member activities : Project / Drilling / Operations (1 of 1)	**Check Box**
Contact the EMT-L and determine the requirement for a Call-Out of the EMT.	
Establish and maintain communications with the PIC / Company Representative at the scene of the emergency.	
Obtain full details of the emergency in terms of threat to people, damage to the environment and property and check actions in hand. Log details.	
Check what support is required at the site. Action the required support.	
Act as the EMT-L until relieved of these duties by the nominated person.	
Commence compilation of the chronological log of events. Ensure that the Recorder receives copies of completed log sheets on his/her arrival at the ECR.	
Request regular updates from the PIC / Company Representative at the Emergency Site.	
Provide updates to the EMT-L ; giving information on the likely extent and implications of damage and necessary resources to recover and control the emergency.	
Call out additional support / technical personnel as required.	
Arrange transportation of additional personnel to the affected site if requested.	
Ensure appropriate drawings, plans, charts and maps are readily available for display.	
Develop alternative / worst case scenario for the current situation and plan to mitigate this if possible.	
Consider mutual assistance from neighbouring operations.	

3.2.3 Safety, Health and Environment

The roles of the representatives from SHE are :

- Provide advice to the EMT-L on all aspects of SHE.
- Prepare written SHE reports as required by regulations.

- Organize an investigation team at an appropriate time.
- Act as the liaison team member with the Police.
- Provide support to establish communication link to EBTKE.

Checklist for EMT member activities : SHE (1 of 1)	**Check Box**
Assist other team members on matters associated with SHE.	
Prepare written reports as required by regulations.	
Liaise with the Jakarta Company Consultant doctor (if any) on associated SHE matters.	
In the case of an Oil Spill, monitor actions being taken and advise team members as appropriate.	
Prepare to brief the inspection / investigation team.	
Monitor all actions being taken by the Recorder and ensure that accurate information is being displayed on the information white board.	
Act as liaison with the Security team and ensure that the SUPREME ENERGY Office Building is secured at the 23rd floor and that remaining staff is kept advised.	
Consider the need for Search and Rescue participation and if requested by the EMT-L, alert the appropriate authorities.	
Provide support to establish the communications link between the EMT, EBTKE, and other Government agencies.	

3.2.4 Logistics

The roles of the representatives from Logistics are :

- Obtain information on the availability of any required external resources (e.g. heavy equipment, helicopter, etc) and make essential contacts to alert / mobilize them if necessary, depending on the nature of the emergency.
- Liaise with the EMT-L regarding the requirements for transport, materials and services. Ensure efficient transport of materials, etc. to the scene of emergency.
- Following directions from the EMT-L assess the availability of mutual assistance from other emergency resources around the affected site and advise the EMT-L. Track cost to the best of your ability.

Checklist for EMT member activities : Logistics (1 of 1)	**Check Box**
Have the list of major logistics support contractors complete with contact person, phone numbers, and fax numbers as required.	
Following the update from the EMT-L, provide communications link and alert related contractors (providers of transport, material, service, etc) of the emergency.	
Work with other EMT members to determine the level of support services required.	
Inform other resources of emergency for the possibility in using their equipment and manpower when needed.	

Assist with Medivac procedures by arranging transportation and liaise with HR and Consultant Doctor, if any.	
Determine the location of equipment and personnel to assist in the support of the Emergency and coordinate their deployment to the affected site.	
Liaise with the HR representative to provide transportation for relatives if required.	

3.2.5 General Services

The roles of the representatives from General Services are:

- Ensure provision of sufficient support (transport, accomodation, logistics, meals, and others) to the affected site.
- Ensure provision of necessary supports to Company employees and their families and/or support team members and/or government employees

Checklist for EMT member activities : General Services (1 of 1)	**Check Box**
Ensure sufficient transport for emergency services are available.	
Ensure sufficient logistics are provided at the affected site.	
Ensure that cash is available to assist the transportation of relatives and/or support services and/or government employees.	
Liaise with Logistics Coordinator to ensure that travel and accommodation facilities are available for relatives.	
Ensure there are sufficient members in the Support Team (e.g. IT, Receptionists, Office Boys) to assist GS roles and ensure that there is a good communications link among this GS team.	
Maintain an up-to-date log of events and pass each sheet to the recorder when completed.	

3.2.6 Human Resources

The roles of the representatives from Human Resources are:

- Advise and support the EMT on all human resources matters relevant to the emergency.
- Provide current Person-On-Board (POB) lists and lists of the addresses of employee's relatives. Ascertain if casualties are contractors or Company personnel. Advise the recorder and the EMT-L.
- Use the resources of HR Support Team to achieve your aim, if necessary.

Checklist for EMT member activities : Human Resources (1 of 1)	**Check Box**
Obtain a full briefing on the emergency paying particular attention to personnel matters. Log details.	
Provide copies of the POB lists and employees' relatives' lists.	

Liaise with the contractors HR personnel to ensure that both SUPREME ENERGY and contractor have the correct details.	
Record the addresses of SUPREME ENERGY personnel relatives. Do not inform them until approved by the EMT-L. Prompt him.	
When approved by the EMT Leader, coordinate the notification to the family of any casualty or fatality. For a fatality, discuss the matter with the EMT-L before any action is taken. This must be in a timely and compassionate manner. Do not disclose matters about fatalities on the telephone, if at all possible.	

3.2.7 Recorder

The roles of the Recorder are:

- Maintain an accurate chronological log of events as they occur.
- Maintain an up to date list of "Significant Events" and "Casualty Data" and project this data onto the Projector Screen.
- Responsible that team members pass their completed log sheets to him/her.

Checklist for EMT member activities : Recorder (1 of 1)	**Check Box**
Obtain a full briefing of the emergency.	
Take over the "Log of Events" role from the EMT-L.	
Ensure up to date information has been recorded. Check members' log sheets.	
Check main events board and ensure that information displayed is recorded in Log.	

3.2.8 Legal

The roles of the representatives from Legal are:

- Provide Legal advice to the EMT-L particularly in the drafting of Media Releases.
- Provide the EMT-L with advice on Contractual arrangements.
- Provide Legal advice to the CMT.

Checklist for EMT member activities : Legal (1 of 1)	**Check Box**
Review all draft Media Releases.	
Ensure applicable contract documents are readily available.	
Provide strategic advice to the CMT.	
Liaise with the SHE Team Member to ascertain if there are any Legal Implications regarding the emergency.	

3.2.9 External Relations (Field Relations and Business Relations)

The roles of the representatives from External Relations are:

- Following the EMT-L approval, make sure that all related Government Agencies are well informed and notified about the emergency.
- Keep Support Team Members updated on information that they can pass to incoming public telephone calls.

Checklist for EMT member activities : Relations (Field Relations and Business Relations) (1 of 1)	**Check Box**
Manage the "Outside Agencies Coordinator" to ensure that consistent and precise information is being transmitted and received. Advise the EMT-L.	
Liaise with the EMT-L to ensure that consistent information is released to the media. Prevent the release of casualty personal details until after the families have been informed.	
Accommodate and entertain the out-side's inquiries.	
Assist for the salvage & rescue of the community affected by the emergency situation.	

3.2.10 Security

The roles of the representatives from Security are:

- Following the EMT-L approval, make sure that all related Government Agencies are well informed and notified about the emergency.

Checklist for EMT member activities : Security (1 of 1)	**Check Box**
Upon request from the Site Security Supervisor or his assignee, liaise with the EMT-L on strategy on how to secure the incident location and/or prevent unauthorized entry and/or evacuate community members. When received EMT-L approval, mmanag the communication to the Site Safety Supervisor.	
Upon request from the Site Security Supervisor or his assignee, liaise with the Police and/or Army and/or Security Provider.	

3.2.11 Consultant Doctor (if any)

The roles of Consultant Doctor are:

- Provide medical opinions and expertise to the EMT-L, ERT-L and Field Medics (if any).
- Consult Field Medics, if any, with medical diagnoses of casualties.
- Liaise with Doctors / Hospitals regarding the admittance of casualties.

Checklist for EMT member activities : Consultant Doctor (if any) (1 of 1)	**Check Box**
Assist the ERT-C and Field Medics in the pre-Medivac procedures.	
Ascertain location of suitable Hospital Facilities particularly with regards of the diagnosis.	
Act as the liaison Doctor between the Field and the designated Hospital.	
Arrange for transport (ambulance / commercial flight / helicopter) of the casualties / fatalities.	
Liaise with the HR Team Member particularly with regards the description of the medical diagnoses of the casualty.	
Liaise with the HR Team Member regarding transportation of relatives.	

3.3 CRISIS MANAGEMENT TEAM STRATEGIC PLANNING CHECK LIST

The SUPREME ENERGY Crisis Management Team (CMT) has the responsibility to proactively identify and manage strategic issues associated with the emergency. The CMT will be assisted in this task by the EMT.

The EMT and CMT shall act in stategic and timely manner to manage the emergency as early as possible (i.e. shall ask itself what can it do now / today) to minimize the impact of the current emergency on SUPREME ENERGY and its joint ventures in short, medium and longer terms.

Checklist for CMT Strategic Planning (1 of 2)	**Check Box**
A. KEY CONSIDERATIONS	
• Safety and welfare of people and environment.	
• Business interruption.	
• Investment.	
• Threats to license to operate.	
• Resource and implementation of agreed strategies.	
B. LIABILITY ISSUES	
• Analyse emergency details and agree an interim basis upon which SUPREME ENERGY will respond.	
• Clarify legal relationships and ensure SUPREME ENERGY discharges all contracted obligations in these agreements.	
• Decide whether to recommend immediate shutdown of similar / connected operations pending emergency investigation.	
• Ensure accurate logging of response.	
C. INTERNAL / EXTERNAL INVESTIGATION	
• Review composition of investigation team and consider use of independent third party.	
• Gather facts and evidence (photographs, diagrams, witness statements, etc.) while fresh.	
D. MANAGEMENT OF HUMAN RESOURCES RESPONSE	
• Ensure that efficient, effective and compassionate support is given to personnel involved.	
• Ensure that efficient, effective and compassionate support is given to relatives and friends.	
• Ensure all personnel (including response personnel) are not exposed to health and safety hazards arising from the emergency.	
• Ensure that all employees are kept informed, including contractors and consultants.	
E. MANAGEMENT OF ENVIRONMENTAL IMPACT	
• Long term clean-up of Major Oil Spill.	
• Long term monitoring.	
• Cooperate with the government and regulatory bodies.	
• Ensure that rapid containment and clean-up is affected.	
• Ensure immediate and long term monitoring of affected / potentially affected area is implemented.	
• Consider how environmental agencies / pressure groups might react and implement plans to manage their responses.	
F. MANAGEMENT OF REPUTATION	
• Consider the likely response from pressure groups, regulatory agencies and neighbors.	
• Ensure the Company spokespeople receive a good briefing.	
• Ensure that the key influencers who could be approached by Media for comment are regularly briefed.	
• Proactively brief politicians - preferably by SUPREME ENERGY personnel that have pre-existing relationships.	
• Review emergency impact on pre-existing relationships and implications for future projects.	
Checklist for CMT Strategic Planning (2 of 2)	**Check Box**

• Monitor the response from Media, other outside sources and employees.	
• Consider the implications of current issues and prevailing public environment on management of the emergency.	
• Consider impact of new information on each key stakeholder prior to its release.	
G. RESUMPTION OF OPERATIONS	
• Consider the impact of shutdown on local community / colleague companies in the region - need for strategies to mitigate?	
H. CLAIMS FOR COMPENSATION	
• Publicize guidelines as early as possible, especially on how to claim compensation without prejudicing ultimate liability.	
• Commit resources to processing requests quickly.	
• Prepare public statement on the issue of compensation.	
I. CUSTOMER AND SUPPLIER IMPACTS	
• Ensure there is adequate communication regarding impacts / plans.	
• Decide on the ability to assist with alternate supply to customers.	
• Consider the inability to accept supplies or cargo in the short or long term.	
J. BOTTOM LINE IMPACTS	
• Quantify forgone revenue from lost production. Consider internal advice requirements.	
• Review the impact of expenditures to repair the damaged emergency site on other SUPREME ENERGY projects.	
• Review internal budgets and financing arrangements.	
• Assess likelihood of penalty or fine.	
• Review insurance claim options. Ensure compliance to claim procedure.	
• Consider the impact on operations (e.g. Impact on equipment and property-denial of use, consequential loss, and inability to meet demand).	
K. EMT ROLE	
• Ensure that the EMT is supportively managing the strategic and tactical response.	
• Ensure that information flow between EMT, CMT and key stakeholders is satisfactory.	
• Ensure that unaffected parts of SUPREME ENERGY operations are receiving management resources for continued unimpeded operation.	

4 APPENDIX

4.1 APPENDIX A : EMT MEMBERS

	POSITION	EXT. #	MOBILE #	HOME #
EMT LEADER				
Radikal Utama	Executive Managing Director	2002		
Victor van der Mast	Chief Operation Officer	2008	0811-9592395	
Paul Taylor	Project Manager for SEML	2076		
Ralph Hoellmann	Project Manager for SERD	2077		
TBA	Project Manager for SERB	--		
DRILLING				
Bambang Roesdyoko	Manager Drilling	2062	0811-104514	
Paul Asaari	Superintendent Drilling	2149	0811-1662989	
SHE				
M. Arief T	Sr. Manager SHE	2091	0811-858361	
Andreas Hartono	Sr. Engineer Environmental	2093	0812-13007870	
Akhmad Wahyudi A	Safety & Health Engineer	2092	0812-8563798	
SCM				
Hary Wibowo	Procurement Manager	2084	0811-865944	
Frank M Tungka	Logistics Manager (act.)	2083	0812-17287973	
GENERAL SERVICES				
Win Sukardi	VP General Service	2081	0811-1554565	
Risnia Handayani	Supervisor GS	2025	0811-1000136	
Bagus Permadi	Asst. Supervisor GS	2056	0811-1625212	
HUMAN RESOURCES				
Hardinald Aslam	Manager HR	2033	0818-488355	
RECORDER				
Faishal Dwi Ismail	Procurement	2087	0812-81168086	
Demas Seto	Procurement	2183	0817-156599	
LEGAL				
Sahala Simanjuntak	Head of Legal	2007		
Christian Limbong	Legal	2095		
EXTERNAL RELATIONS				
Yulnofris	Sr. Manager Field Rel.	2028	0818-08708888	
Ismoyo Argo	Manager Business Relations	2022	0811-188027	
SECURITY				
M. Yunus	Manager Security	2023	0811-2110468	
CONSULTANT DOCTOR				
TBA				
TELEPHONE SUPPORT				
Marissa Rizkiana	Receptionist	2100	XXX	
Security	Main Receptionist	2130		

4.2 APPENDIX B : CMT MEMBERS

	POSITION	EXT. #	MOBILE #	HOME #
CMT LEADER				
Supramu Santosa	President & CEO	2001		
Radikal Utama	Executive Managing Director	2002		
Victor van der Mast	Chief Operation Officer	2008	0811-9592395	
CMT MEMBERS				
Akio Kajimoto (for SEML & SERB)	Director / CFO SEML & SERB	2060		
Hisahiro Takeuchi (for SERD)	Director / CFO SERD	2069		
Radikal Utama	Executive Managing Officer	2002	0811-1950-28	
Prijandaru Effendi	VP Relations & SHE	2021	0811-8492-66	
Nisriyanto	VP Business, Strategy & Development	2003	0812-8136912	
Novi Ganefianto	VP Explo and Sub-surface Eng	2041		
Leksono	VP Finance	2111		
Win Sukardi	VP General Service	2081		
Paul Taylor	Project Manager for SEML	2076		
Ralph Hoellmann	Project Manager for SERD	2077		

4.3 APPENDIX C: IMPORTANT EMERGENCY TELEPHONE NUMBERS

SUPREME ENERGY OFFICES		Phone
Menara Sentraya, 23rd Floor Jl. Iskandarsyah Raya No. 1A. Kebayoran Baru, Jakarta 12160	Hunting Line	(021) 2788-2222
	Receptionist	(021) 2934-2000 / 2130
	Corporate Fax	021-5155333
	email : emergency-response@supreme-energy.com	

POSITION	NAME	PHONE #	ADDRESS
DIRECTORATE GENERAL NEW RENEWABLE ENERGY AND ENERGY CONSERVATION (EBTKE)			
Director General	Ir. Rida Mulyana M.Sc		Jl. Pegangsaan Timur No. 1A, Jakarta Pusat
Director of Geothermal	Ir. Yunus Saefulhaq MM, MT		
Head of Sub-Director of Technical and SHE	Ir. Eddy Rivai MT	0821-1192-5157	
DRILLING EMERGENCY RESPONSE PROVIDER			
Alert Disaster Control (Asia) PTE LTD	mall@alert.com.sg	+65-6545-5088	Box 5008, Block B#01-00, Loyang Offshore Suplly Base 508988
Wild Well Control Inc	wildwell@wildwell.com	+1-281-784-4700	Drilling Technology Center 2202, Oil Center Court Houston, TX 77073
Boots & Coots IWC	Danny Clayton	+1-800-blowout	7908 N. Sam Houston Parkway W., 5th Floor, Houston, TX 77064
INSURANCE			
Marsh Insurance Broker (PT. Marsh Indonesia)	Wisnu Basuki (CP)	021 5797 8177 021 5797 8250 0815 8531 0030	Sentral Senayan II, 15th Floor, Jl. Asia Afrika No. 8, Jakarta 10270, Indonesia
BANK			
Mandiri Cab Plaza Mandiri			

CUSTOMS			
SYAHBANDAR (Ka. Syahbandar, Jl. Palmas No. 1 Tanjung Priok)			
Customs Batam			
Dept. of Sea Transportation			

Dept of Air Transportation	Keselamatan Penerbangan Subdit Pelayanan & Pengamanan Darurat	021-3506551 021-3506554	
PARTNERS			
ENGIE			
Sumitomo			
Marubeni			
BASARNAS (NATIONAL SEARCH AND RESCUE)			
Communication Center Jl. Merdeka Timur No. 5, Lt. 3, Jakarta basarnas@indo.net.id	Operator on duty (24 hours)	021-3483 2901 021-352 1111	
Head of Operations		021-3483 2872	
Kepala Pusat Bina Operasi		021-3483 2873	
Head of Basarnas (Jakarta Office)		021-3483 2869	
OTHER GEOTHERMAL COMPANY			
Pertamina Geothermal Energy	Field Manager		
OTP Sorik Merapi (Sorik Marapi Geothermal)	Field Manager	021-7278 7336	
Sarulla Medco Power	Field Manager		
Chevron Geothermal Salak Field	Field Manager	0266-2255 40	
Pertamina Geothermal Kamojang	General Manager	022 -7806 882/3 0262-2332 44; 0262 -2332 20	
Chevron Geothermal Darajat Field	Field Manager	0262 -2355 67	
PT. Geodipa	Operation Manager	022 -7313 375	
PLN			
P3B Sumatera, Pekanbaru	Sudirman (PLH. General Manager Pengembangan Sistem Transmisi)	0761-6700 011 0761-6700 015 (fax)	Jl. Nangka Ujung, Pekanbaru
General Manager P3B Sumatera		0761-6700 011 0761-6700 015 (fax)	Jl. Nangka Ujung, Pekanbaru

MEDICAL PROVIDER			
Emergency Response Indonesia	Hotline	0877-7575-6886 021-3106886	RSU. BundaJakarta Lt.3 Jl. Teuku Cik Ditiro No.21, Menteng, Jakarta 10350
Pertamedika (**PT Pertamina Bina Medika)**	Dr. Pram	0817-4859615	Jl. Kyai Maja No. 43 Kebayoran Baru Jakarta Selatan 12120
	Sabar (PIC)	0812-8294599 021-7219057 021-7247006 (fax)	
Global Doctor	Dr. Agung Triyatno (Business Development Manager)	021-7182-029 021-7194-565 0811-9481-47	Jl. Kemang Raya no. 87, Jakarta 12730
Global Assistance and		021-7257-962	Jl Patimura No. 15 ,

Health Care		021-7257-961 (fax)	Kebayoran Baru , Jakarta Selatan
International SOS Medika		021-750 5973 021-750 5980	Jl. Puri Sakti no 10, Cipete, Jakarta Selatan
Medika Plaza PT Kartika Bina Medikatama	Jacky Arjono	0811-9575-57	Menara Kuningan, 5th floor Jl. HR Rasuna Said Kav. X-7 no 5, Jakarta 12940
Blue Dot Assistance		021-5696-1177 021-3041-8777	Total Bld, 6th floor Jl. LetJend S Parman
HOSPITAL			
RS. Siloam Gleaneagles (Helipad available)		021-546 0055 (hunting)	Jl. Siloam No. 6, Lippo Karawaci 1600 Tangerang 15811
RSP. Pertamina, Jakarta (Helipad available)		021-720 0290 (hunting)	Jl. Kyai Maja No. 43, Kebayoran Baru Jaksel
RS. MRCCC Siloam Hospitals		021- 2997 2789 021-2996 2777 (emergency)	Jl. Garnisun Kav 2-3, Karet Semanggi, Setiabudi, Jakarta.
RS. Pondok Indah, Jakarta		021-765 7525	Jl. Metroduta, Kav. UE, Pondok Indah, Jakarta Selatan.
RS. Medistra, Jakarta		021-521 0200 (hunting)	Jl. Gatot Subroto, Kav. 59, Jakarta Selatan
RS. Jantung Harapan Kita		021- 568 4093 021-568 2424 emergency	Jl Letjen S Parman, Kav. 87, Slipi, Jakarta Barat
RS. MMC, Jakarta		021-520 3435 (hunting) 021-527 3473 emergency	Jl Rasuna Said, Kav. C21, Kuningan, Jakarta Selatan
RS. UKI, Cawang		021-8092317 021-8092445	Jl. Mayjend Sutoyo, Jakarta Timur

4.4 APPENDIX D : SITE TELEPHONE NUMBERS

4.4.1 Muara Laboh

SITE EMERGENCY RESPONSE GROUP - SEML

POSITION / NAME		PHONE	OTHERS
SUPREME ENERGY			
Technical Head of Mines	Asharry Sofyan	0811-150995 (021) 2934-1021	**ERT-Leader**
Site Support Manager	Asharry Sofyan	0811-150995 (021) 2934-1021	
Site SHE Representative	Syeflaizar	0812-76209170	Alternate ERT-L
	Oldwin Kurniawan	0853-6354-8861	
Drilling SHE Supervisor	Akhirul Suryaman	0813-98231103	
	Michael Dominggus T	0811-160211	
Spv. Security	AKP (purn.) Firman	0878-8620-3406	
Field Reps	Bujang Joan	0812-6739-954	Alternate ERT-L
Assistant Field Rep	M. Roza	0852-7405-5855	
Maintenance	Heri Yuliardi		
SCM	Wahyu S Amin	0813-1593-2634	
	Sofyan Handi	0813-50273699	
Subsurface	Dwi Hartanta		
	Prayudha Budi N		
Drilling Supervisor	Andre Bairawa		
LOCAL AUTHORITIES / AGENCIES			
Bupati Solok Selatan	Muzni Zakaria	0811-66xx-xxxx	
Kapolres Solok Selatan	AKBP Ahmad Basahil	081244199991	
Camat Pauh Duo	Budiman	081374138787	
Kapolsek	AKP Lijanesman	0811669672	
Kodim			
Koramil			
ESDM	Amril Bakri (Kadis)	0812-6723310	
KLH	Hapison (Kadis)	0852-6383-1475	
	Nopi Hendrik (Wasdal)	081267020645	
BPBD	Editorial (Kepala) Sumardianto (Sekretaris)	0755-7575123 08163472632	
Fire Service	M Zen (Kadis)	0813-7478-0300	

Kepala Pos Pengamatan Gn. Kerinci	Indra Saputra	0813-74781432	
Adm. Perkebunan Pekonina			

POSITION / NAME		PHONE	OTHERS
HOSPITAL			
Puskesmas Pakan Selasa- Pauh Duo	Novi Anggraini	081266878147	
RSUD Muara Labuh	Drg. Hj. Aminah Jailani MM	0852-6347-7309	
RS. Semen Padang	Dr. Miss Berlianti	081267000278	
RS Siti Rahmah, Padang	Yori Rahmadianti	0815-1937-6783 0751-463059	Jl Raya Bypass km 15, Padang
RSUP Dr. M Djamil		0751-32371 0751-32373	Jl Perintis Kemerdekaan, Padang
RS Yos Sudarso		0751-30323 0751-33230	Jl Situjuh no. 1, Padang
Hotel Umi Kulsum, Muara Labuh		0755-70068	
Hotel Mercure, Padang		0751-891891	
Hotel Pangeran Beach, Padang		0751-51333	
Hotel Grand Inna Muara, Padang		0751- 35600	
PT SEMEN PADANG			
Operations Director	Ir. Toto Sudibyo	0751-815250	
Head of Quality Control	Durain Parmanoan, ST. MT	0813-6384-6058	

4.4.2 Rajabasa

SITE EMERGENCY RESPONSE GROUP - SERB

POSITION / NAME		PHONE	OTHERS
SUPREME ENERGY			
Site Construction Manager / Technical Head of Mines (temp.)	Ismoyo Argo	0811188027	ERT – L
Site Support Manager (act.)	Ismoyo Argo	0811188027	
Site SHE Representative	TBA		
Security Manager (act.)	M. Yunus	08112110468	
Site Security Spv	Sunarno	0813-80711407	Alternate ERT – L
Field Reps (act.)	Yulnofrins Napilus	082240408008	
	Erwin P. Floris	081294816881	Alternate ERT – L
Assistant Field Rep	Rafly Satria Y	0813-7957-3800	
LOCAL AUTHORITIES / AGENCIES			
Bupati Lampung Selatan	Zainudin Hasan	08xxx	
Polres Lampung Selatan	Hotline	0727-322110	
Kapolres Lampung Selatan	AKBP. Dr Adi Ferdian	0811716457	
Polsek Kalianda	SPK	0727-322141	
Kapolsek / Kapolpos Rajabasa	Eti Fatmawati / Sarjono	081279662005 / 085269402966	
Dandim Lampung Selatan	Letkol Arm Untoro Hariyanto	08121948243	
ESDM	Sujak Prawiranegara	0821-8025-1059	
KLH / BLHD	Tamrin	0811727737	
Fire Service / BNPBD	Call Centre	0727-322244	
	Slamet (Kasi DAMKAR)	081369702308	
	Darmawan	082186558981	
BPLHD Prov. Lampung	Ir. Fahrizal Darminto MA	0811-722-516	
ESDM Prov. Lampung	Office	0721-486983	
Bina Marga Prov. Lampung	Office	0721-702684	
Administrator Pelabuhan Panjang	Office	0721-31149	
Kantor Kesyahbandaran dan OP (KSOP) Kelas V Bakauheni	Office	(0727) 331341	Fax: 331116
Ka. KSOP Bakauheni	Zubaidi	081369150124	
HOSPITAL			
Puskesmas Way Muli	Syamsudin SKM	08127935785	Jl. Raya Pesisir, Way Muli
Puskesmas Pembantu Desa Canti	Abdul Haris	0819-2781-6699	Jl. Raya Pesisir Canti

RSUD Bob Bazaar, Kalianda	Dr. Jimmy	08137775789	Jl. Lettu Rohani, Kedaton
RS Immanuel, Lampung	Dr. Budi Suanto	0813-6919-7226	Jl. Soekarno Hatta, Lampung
	Dr. Dono Endarto	0818-0455-0776	
RSUD H. Abdul Muluk, Lampung	Dr. Yusmaidi	0812-7327-6543	
HOTEL			
Hotel Grand Elty Kalianda Resort		0727-322-392 0821-8559-9770	Jl. Trans Sumatera km 45
Hotel Negeri Baru Resort		0727-3330-777 0828-80056-777	Jl. Trans Sumatra Way Arong - Merak Belantung Kalianda, Lampung Selatan
Wisma Belerang Kalianda		0727-321-189	Jl. Way Belerang
Hotel Sheraton Lampung		0721-486666	Jl. Wolter Monginsidi no.157, Bandar Lampung
Hotel Novotel Lampung			Jalan Gatot Subroto no. 136 Bandar Lampung

4.4.3 Rantau Dedap

SITE EMERGENCY RESPONSE GROUP - SERD

POSITION / NAME		PHONE	OTHERS
SUPREME ENERGY RANTAU DEDAP - SITE			
Technical Head of Mines	Frank M Tungka	021-2934-2132	**ERT – L**
Site Support Manager	Frank M Tungka	021-2934-2132	
Site SHE Representative	Dian Amali	0813-12019695	
	Rifqi Alfaizi	0813-98259769	
Site Security Supervisor	TBA	-	
Construction Supervisor	Abdi Manurung	021-2934-2131	Alternate ERT-L
	Erwin Guminda		Alternate ERT-L
Field Reps	HM. Goerillah Tan	0813-19773117	
LOCAL AUTHORITIES / AGENCIES			
Bupati Lahat	H. Saifudin Aswari Riva'i, SE	0811-xxxxxxx	
Kodim Lahat	Letkol. Srihartono (Dandim)	0813-88445688	
Polres Lahat	AKBP. Rantau (Kapolsres)	0822-77777796	Jl. Bhayangkara I, Lahat
Polsek Kota Agung	H. Lukman N (Kapolsek)	0812-73722555	
Camat Kota Agung	H. Haris	0813-73783925	
Koramil Kota Agung	Mulyadi (Danramil)	0852-54560576	
Bupati Muara Enim	H. Muzakir Sai Sohar	0811-xxxxxxx	
Kodim Muara Enim	Letkol. Jamaludin (Dandim)	0813-67074578	
Polres Muara Enim	AKBP Hendra (Kapolres)	0731-321507 0822-82221996	
Koramil Semendo Darat	Haris (Danramil)	0813-79827327	
Polsek Semendo Darat	Nusirman (Kapolsek)	0812-23744270	
Camat SDU	Tasman	0821-80903497	
Walikota Pagar Alam	dr. Hj. Ida Fitriati	0811-xxxxxxx	
Koramil Pagar Alam	Kapt. Darno (Danramil)	0813-73898292	
Polres Pagar Alam	AKBP. Panudi (Kapolres)	0813-341981996	
Distamben (Mines and Energy Office) – South Sumatera	H. Robert Heri (Kadis)	0817-03332925	
	Marwan Saragih (Kabid LPE)	0813-67757289	
	Ira Rihatini (Kasie EBT)	0856-69522960	
Dinas LH (Environmental Office) – South Sumatera	Lukitariati	0811-xxxxxxx	
Dinas Kehutanan (Forestry Office) - South Sumatera	Hendro	0813-67129864	
HOSPITAL			

POSITION / NAME		PHONE	OTHERS
Puskesmas Kota Agung			
Puskesmas Fajar Bulan	Dr. Dwi	0819-3338-9078	Jl. H Djabar, Fajar Bulan
RSUD DR. HM Rabain, Muara Enim		0734-424345 0734-422738	Jl. S. M. Badarudin II no.49, Muara Enim
	Dr. Yogi - Surgeon	0852-2000-5126	
RS PTBA Muara Enim	Ka.RS PTBA	0734-451096 ext.5008 / 5014	Jl. Raya Bukit Asam, Tanjung Enim
	Dr. Nirwan Firdaus, S.Pb	0734-451096, ext. 5018 or 5035	
RSUD Lahat		0731-322081 0731-321785	Jl. Mayor Ruslan I no.28, Lahat
RSUD Palembang		0711-354088	Jl. Jend. Sudirman, Palembang
	Dr. Yusril Hrn - Surgeon	0812-7865-7842	
RS Charitas Palembang		0711- 350426 0711-353374	
RS Pusri Palembang		0711-712024 ext 3374	
ER National Medical Concierge		0877-7575 021-3106886	
DAMKAR / BPBD			
BPBD Lahat		0731-323830 0731-323113	
BPBD Muara Enim		0734-424447 0734-421029	
HOTEL			
Hotel Grand Zuri, Lahat		0812-7534-2691	
Hotel Aston, Palembang		0711-388999	
Hotel Novotel, Palembang		0711- 369777	

supremeenergy	SAFETY HEALTH AND ENVIRONMENT EMERGENCY PREPAREDNESS	PROCEDURE
CORPORATE	EMERGENCY RESPONSE PROCEDURE	SE-MSHE-EMP-PRO-0001 Revision: 0

APPROVAL

	POSITION	NAME	SIGNATURE	DATE
Prepared by	SHE Engineer	Erwin Patrisa Floris		
Reviewed By	Sr. SHE Manager	M. Arief Tarunaprawira		
Approved By	VP Relations & SHE	Priyandaru Effendi		**17/05/2013**

REVISION HISTORY

REV	DATE	BY	REVIEWED	APPROVED	DESCRIPTION
0					For Use

TABLE OF CONTENTS

1. INTRODUCTION

SUPREME ENERGY has taken practicable steps to develop procedures to deal with emergencies which may arise at or near their facilities. This section provide information that SUPREME ENERGY operations can use to develop Emergency Response Procedure locally which may include additional detail and practical/exercises that can be used directly or modified to suit local conditions.

All staff at the facility shall be trained in the use and execute of the emergency procedures. All contractors and visitors to the facility will be advised of the site's emergency procedures and the locality of Muster Points (Safe Briefing Areas / Assemby Areas), with particular emphasis of the evacuation procedure which will be followed in the event of a fire, explosion, major H_2S release, earthquake, major plant failure, bomb threat, etc.

2. EMERGENCY RESPONSE PLAN

The key to effective response is being prepared (regardless of the size or type of emergency: release, discharge, fire, etc.), and minimizing the risk of personnel injury, environmental damage, and lost production time. This means that facilities shall maintain a comprehensive action plan that includes**:**

- Evaluation of the risk of emergencies associated with the products handled (type, size, and likelihood) at the facility or operation.
- Scenarios for large and small incidents that may occur at a facility (including equipment failure, human error, extreme weather, acts of vandalism or terrorism, fire, explosion, earthquake, volcanic activity, etc.).
- A communication system to alert all employees and emergency responders that an incident has occurred, or is likely to occur.
- Provision for a response team**,** a chain of command, and assigned personnel to make decisions and perform the functions necessary for effective team operations.
- Determination of the scope of facility response capabilities, including identified sources of additional resources if the incident increases.
- Procedures that allow response team members to develop and cultivate relationships with public emergency responders (whenever available) and community leaders so that communications during an incident will be rapid, clear, and will help expedite the response.

When developing a response plan or during an actual response, special issues need to be addressed. These issues involve human safety, environmental protection, public information, and government and country actions, shut down of facility operations, medical services, product ownership, local knowledge, and communications.

3. EMERGENCY RESPONSE TEAM

3.1 RESPONSE TEAM

For SUPREME ENERGY sites which are isolated from quick response municipal emergency services (fire, ambulance, etc.), an on-site Emergency Response Team will be set-up. The Emergency Response Team will consist of SUPREME ENERGY personnel who in addition to their normal duties have received training in:

- firefighting equipment and techniques.
- emergency rescue techniques (man-winching, etc.).
- self-contained breathing apparatus use.
- use of Muster Point's Control Board.

Emergency medical response will be provided by the site's Paramedics and trained First-Aiders.

A core number of Emergency Response Team personnel will be present at the site for each shift. The expanded team will be summoned by the Emergency Response Team Leader (ERT-L).

The team will provide the following services:

- limited fire fighting to enable personnel to safely evacuate buildings and to put out small scrub type fires.
- fire rescues of personnel trapped in a building.
- rescues of injured personnel trapped in the forest or at site (wells, cellars, H_2S releases, etc.).

An ERT-L will be appointed to coordinate and lead emergency response at site.

An Emergency Response Shift Team Leader (ERT-STL) will be appointed for each site shift to coordinate emergency response within their area during a shift.

The ERT-L will be responsible for the following items:

- arranging specialist training of new team members.
- arranging refresher training of team members.
- managing and the maintaining of the emergency response equipment.
- organizing and running training sessions.
- coordinating the team in an emergency situation.

The ERT-STL will be responsible for managing and controlling the shift team in the event of an emergency situation for which the shift team is activated. Control will be passed over to the ERT-L when he arrives at the scene.

3.2 EMERGENCY RESPONSE VEHICLE

For sites where municipal emergency services have a response time of more than 30 minutes, an Emergency Response Vehicle will be provided. This vehicle typically should, as a minimum, be equipped with the following:

- Four by four wheel drive capability
- Fire pumps - unless the site has water mains
- Fire hoses (suction and delivery)
- Ladders
- Fire extinguishers
- Nozzles, y-pieces, etc.
- Lightweight fire suits
- Self-contained breathing apparatus
- Rescue harnesses and ropes
- Man lifting gear (tripod and winch)
- Cutting equipment (power)
- Tool kit (axes, shovels, picks, etc.)
- First aid and resuscitation equipment
- Trauma kits (splints, braces, etc.)
- Rescue stretches
- Chemical resistant suits

The Emergency Response Team shall be trained in the use of the equipment on the vehicle and on the vehicle's use.

4. EVACUATIONS

4.1 GENERAL RESPONSIBILITIES

Evacuation provisions are applicable to fires and all other occurrences for which evacuation of staff from buildings to Muster Points is appropriate, such as major plant failure, major H_2S releases, etc.

All building emergency exits are labeled with the green sign EXIT.

All personnel should familiarize themselves with the locations of ALL emergency exits from their work area and the location of their nearest Muster Point.

All Muster Points are sign posted "Muster Point" and are allocated a distinct letter for identification purposes. (These tie up with marked areas on site layout maps.)

Always assemble at the designated Muster Point closest to your point of work.

4.2 EVACUATION PROCEDURES

In the event of a fire, major H_2S release, major plant failure, explosion, bomb threat or the need to evacuate the plant, the actions listed below should be followed.

- On the continuous sound of the alarm siren (bells), STOP all activities and vacate the building or area without delay, by the nearest exit.

- Site Leader to initiate appropriate Emergency Operating Procedures (EOP), and where possible, confirm the Muster Point is in safe state prior to vacating the workplaces.
- Move quickly, but do not run.
- Do not return to a work area to collect belongings.
- Keep left in corridors and stairs.
- Do not overtake others along the route.
- Assemble in the designated Muster Point.
- At Muster Point report to the responsible Warden.
- Do not enter the work area under any circumstances until the instruction of "all clear" is given by the ERT-L or ERT-STL.

All new staff, as part of their induction into the Company, shall be given instructions on the evacuation procedures for the site.

All visitors and contractors are to be advised of the site's Evacuation Procedure and the location of Muster Points when they are admitted to the site.

4.3 SPECIFIC RESPONSIBILITIES

4.3.1 Duties of Warden (Fire)

- Study and become familiar with evacuation procedure.
- Turn-off power and gas supplies.
- Check all rooms including toilets, showers, offices, etc. to ensure that all personnel are evacuated from their area/department.
- Ensure all doors are closed but not locked to partitioned areas, strong-rooms, and main doors. Do not turn off lights.
- Advise Control Centre whereabouts of fire, or threat in your area.
- Check all personnel from your area are at the Muster Point. A precise head count is very important and mandatory to cross-check among team members responsible for head count.
- Mark Evacuation Control Board at Control Centre that the area of responsibility is clear.

4.3.2 Duties of Control Officer (may be the ERT-STL)

- Report to designated Control Center Area.
- Await wardens to report.
- Review Evacuation Control Board status.
- Direct personnel accordingly.
- On all clear, issue instructions to return to work.

4.4 MUSTER POINTS

Designated Muster Points are marked on site layout maps, and are displayed on noticeboards throughout the site next to the Evacuation Procedure.

For some sites, wind socks are placed throughout the site. Observe the wind direction (sock direction) during the evacuation. Personnel should assemble at the safe upwind Muster Point.

4.4.1 All Clear

Instructions to return to work will be given by the Control Officer.

4.4.2 Control Centre

- The most senior staff member of the shift will be the Control Officer. All Area Wardens will report to the Control Officer.
- The Evacuation Control Board will be held at the Control Centre.

A flow diagram showing the Evacuation Procedure is presented in Figure 30.1. This flow diagram will be placed on noticeboards throughout the site next to the site plan showing designated Muster Points.

Regular drills (once every year) are held to ensure that staffs are familiar with the Evacuation Procedures.

5. FIRE PROCEDURES

If you discover a fire, immediately carry out the actions listed below :

- Activate the nearest manual alarm (break glass and operate the switch).
- Ring Site Security and give relevant details.
- Site Security to alert Site's Fire Service / Emergency Response Team (as appropriate to site).
- Alert other personnel in your area and remove any injured person(s) from immediate danger.
- If no personal risk is involved, an attempt should be made to extinguish the fire using nearest fire extinguisher or hoses.

  Note: In the case of electrical fires, hoses should not be used, use dry powder or CO_2 extinguishers instead.
- If in doubt, evacuate the premises and leave fire fighting to the experts.
- Evacuate building following the Evacuation Procedure.
- Go to your Designated Muster Point.
- Follow instructions from Area Warden.

Figure 30.2 presents the Fire Procedure as an action flow diagram.

Figure 30.1: Evacuation Procedures

In the Event of a Fire or the Need to Evacuate the Plant the Following Actions Should Be Taken:

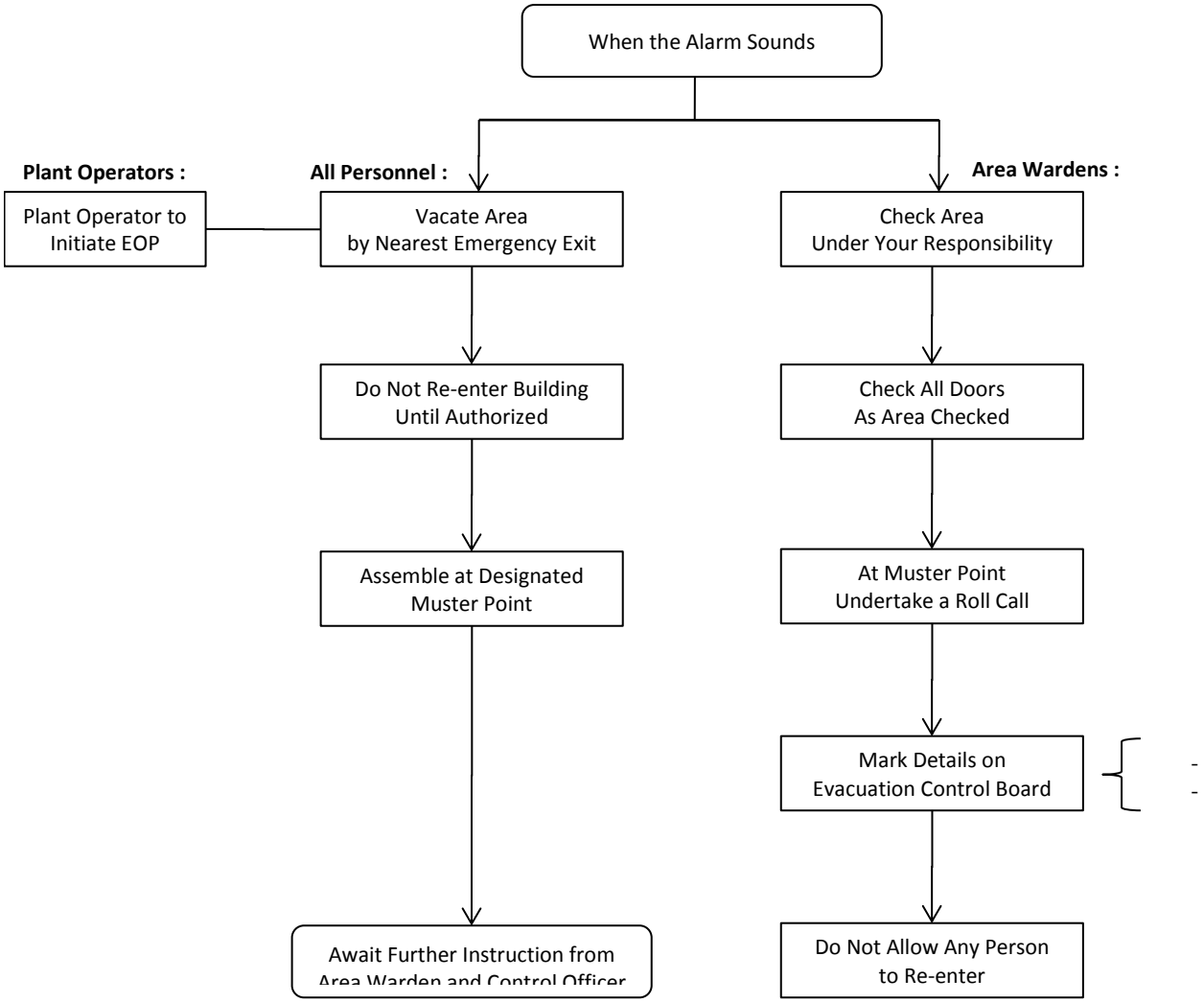
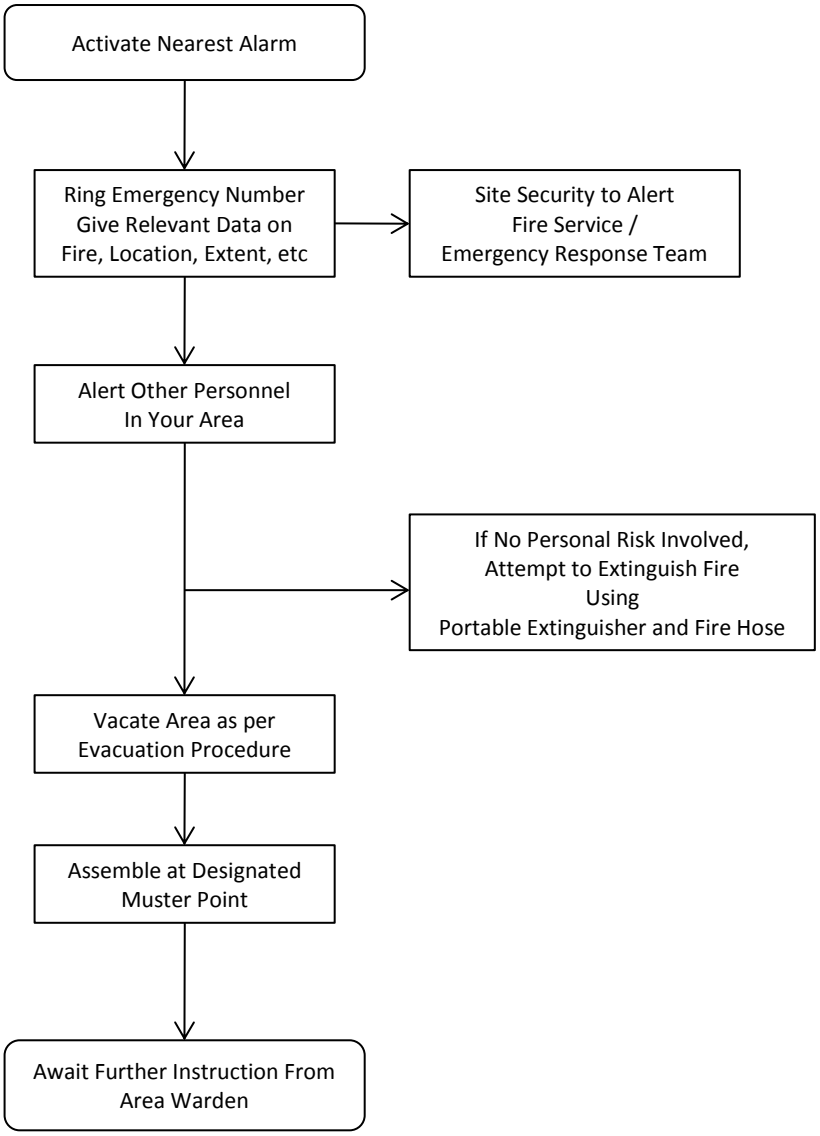


Figure 30.2: Fire Procedure

If You Discover a Fire, Immediately Carry Out the Following Actions



6. NATURAL HAZARDS

6.1 EARTHQUAKE PROCEDURE

When an earthquake starts:

- Stay calm and take cover under a desk.
- Brace yourself in a doorway (hold onto the door to prevent personal injury from the door slamming).
- Crouch behind a solid structure, e.g. wall.
- If under furniture which moves, move with it.
- Stay away from glass doors and windows, tall shelves, light fittings, or objects that might topple.
- If travelling in a lift, stop and get out at the next floor.
- Do not leave the building or try to leave the immediate area.
- If outdoors, take cover in a doorway or other safe place away from falling objects and electrical hazards.

After an earthquake:

- Stay calm, stay together. Account for everyone in the work area and immediate vicinity.
- Area Wardens take control and co-ordinate actions in areas of responsibility and:
  - assess all persons for injury
  - check for hazards, fire, gas or chemical leaks
  - move people away from windows and outside walls
  - leave doors to rooms open, pull curtains across broken windows
  - turn off and unplug all unnecessary electrical equipment.
- Do not evacuate unless the building has sustained major structural damage.
- Put signs up identifying dangerous areas.
- Do not use lifts - put signs in the lift lobby.
- Conserve water.
- Do not use the toilets. Make other arrangements that do not involve relying on the sewerage system.
- If communications system has failed, try to pass notes to rescue personnel.

Listen carefully to any announcements over Public Address or other announcement system. If an evacuation is necessary:

- proceed carefully, expect to find exit routes blocked or damaged.
- never use lifts.
- when outside, stay well away from buildings and power lines.
- stay together in your work or floor group to assist with record keeping.

- if it is safe to do so, go to your Designated Muster Point.

Remember, that there are almost always aftershocks following a major earthquake - sometimes quite significant. They can go on for weeks or even months. Be prepared for them to happen.

6.2 LANDSLIDE PROCEDURE

When a landslide starts:

- if outdoors attempt to get out of its path
- if in a building, do not attempt to leave until movement has ceased.

After the landslide:

- Stay calm, stay together, account for everyone in the work area / work team.
- Evacuate buildings caught in landslide.
- Raise the alarm by contacting Security.
- Provide details:
  - extent of landslide.
  - location.
  - buildings, equipment damaged.
  - number of persons missing / trapped, etc.
- If facilities damaged, initiate Emergency Operating Procedures to make equipment safe and to shut-down affected areas.
- Emergency Response Team to initiate search and rescue of the affected areas to find / locate missing persons.
- Isolate area affected by landslide to prevent unauthorized persons being trapped in landslide debris, etc.
- Notifying Government authorities for assistance in rescue, etc.

6.3 GEOTHERMAL ERUPTIONS

A range of hazardous events can result from geothermal activity, these include:

- explosive eruptions / blasts of rock and ash
- pyroclastic flows
- lava flow
- lahars (cold lava)
- volcanic gases (CO_2, SO_2, H_2S, water vapor and hydrogen).

In most situations, large volcanic activity is usually predictable and contingencies can be put in place to mitigate the effects on areas of population.

In the event of sudden geothermal activity take the actions listed below:

- If you are near a water body stream or base of a valley move to higher ground, as lahars and lava flows tend to flow down valleys (path of least resistance).
- Move indoors to get away from falling rocks and ash.

- Under direction from Management, evacuate the site.

6.4 FLOODING

In the event of flooding, the precautions listed below should be followed:

- Do not try to cross swollen rivers in vehicles or by foot.
- Stay indoors, move up to higher building levels if flood levels rise.
- If working in a valley with a stream, move up to higher ground, especially during periods of heavy, sudden rain.
- Before key plant items are submerged and could cause shock hazards or more severe damage, initiate Emergency Operating Procedure (EOP).
- Maintain communication where possible.
- Listen to the instruction of the responsible warden.

6.5 BLOW OUTS / H2S RELEASES

In the event of a well blow and/or a major H_2S release, the steps listed below should be followed.

- All personnel to vacate the area to upwind Muster Points. Remember to observe the direction of the wind socks.
- Roll call taken to ensure all persons accounted for.
- Essential staff to done personal protective equipment, including SCBA and attempt to shut-down well.
- If attempt to shut-down well are unsuccessful, consider initiating evacuation of site.

6.6 EXPLOSIONS

In the event of an explosion at the site:

- initiate evacuation procedure.
- all staff to assemble in Muster Points.
- account for all personnel, visitors, contractors.
- if fire, initiate fire procedure.
- Control Officer to initiate EOP to minimize plant damage, if able to do so safely.
- await further instructions from Control Officer.

6.7 PLANT FAILURES

In the event of a major plant failure:

- initiate evacuation procedure.
- account for personnel assembled in Muster Point.
- determine the need for Emergency Response Team to perform a rescue.
- if fire, follow the Fire Procedures.

- initiate EOP to limit damage to the rest of the plant.

6.8 CHEMICAL / FUEL SPILLAGE

In the event of a chemical / fuel spillage or leak, the priority actions listed below should be taken (see Figure 30.3.)

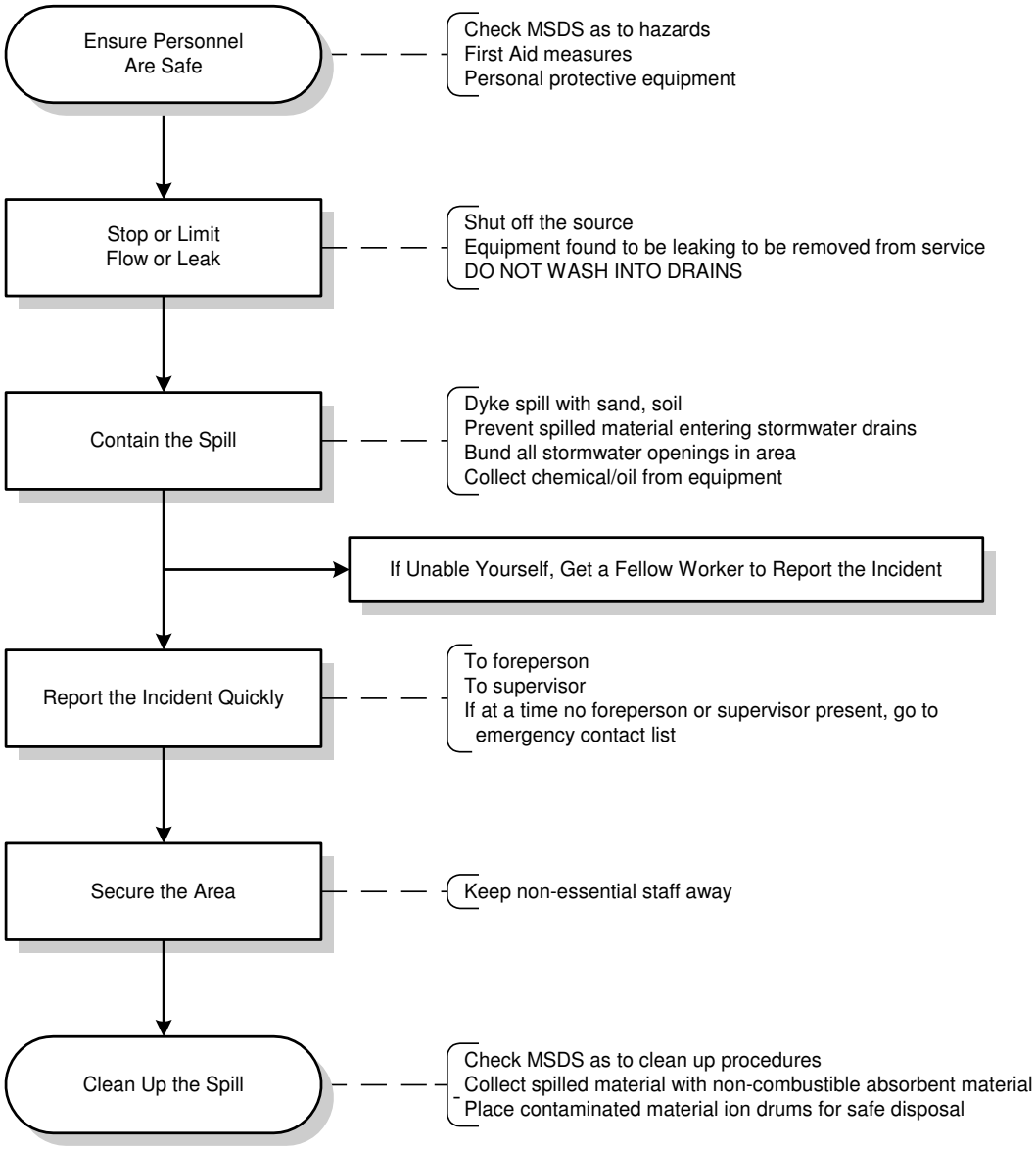
1 Ensure personnel are safe

- If personnel are injured and can be removed from the area safely, do so.
- Check Material Safety Data Sheets as to hazards and first aid measures.

2 Stop the flow of leaking material

- Reposition the drum to stop the flow.
- Shut off the source of the leak.
- Equipment filled with the material that is found leaking should be removed from service as soon as possible.

Figure 30.3: Chemical / Fuel / Oil Spillage Emergency Procedure



3 Contain the spill

- Dike / bund major spills with soil or other material.
- Protect all open grates, sumps, manholes that discharge into the drains, waterways or onto the ground.
- If the chemical has entered the drains, advise Supervisor and SHE Representative immediately.
- Where it is not possible to remove equipment from service immediately, some means of preventing the pollution and collecting the leaking material should be used, such as metal trays, buckets, polyethylene sheeting.

4 Protection of Personnel

- Personnel entering the leak or spill area shall be provided with and use appropriate protective equipment, as set out in the Material Safety Data Sheet (MSDS) for that particular chemical.

- All non-essential personnel shall be kept out of the immediate leak or spill area.

5 Report the Spill

- Report the incident once the spill is contained or get a fellow worker to report the incident to the Foreman or Supervisor.

6 Actions of Responsible Person

- The Foreman and/or Supervisor is to assess the situation quickly to determine the need for external help.

7 Clean Up

- Minor spills or leaks can be cleaned up using absorbent material, sand, or sawdust. Check MSDS to see what is the correct material.
- All liquid and contaminated material must be collected for disposal.
- Transfer contents of leaking drum to new clean drum.
- Ensure collected material is placed in a container which will not leak during transportation off site for disposal.
- Check MSDS of what safe disposal is appropriate.

8 Incident/Investigation

- Foreman / Supervisor to prepare a brief report on incident.
- Comment on contingency plans: Were they effective in dealing with the situation?
- If any improvements identified, inform the responsible personnel.
- Complete the appropriate / required report / forms from government authorities (ESDM EBTKE, etc.).
- Forward the completed report / forms to government authorities (ESDM EBTKE, etc.).

6.9 VEHICLE ACCIDENT

In the event of a vehicle accident, the actions listed below should be followed:

- Ask / call for help if anyone is injured.
- Try to prevent other accidents from happening by warning other vehicles of the vehicle accident by placing accident hazard warning signs.
- Administer first aid to injured person(s).
- As soon as possible, record details of the accident.
- Report accident to Superior, Security Supervisor and SHE Officer as soon as possible.

6.10 BOMB THREAT

Treat all bomb threats seriously. Investigation may reveal a hoax, but until certain there is no risk, act with extreme caution.

Telephone threats :

- Keep calm. It is not possible to think clearly when panicking.
- If possible, attract attention of another person, and have that person contact the Security / Police.
- Delay the caller. The more the caller talks, the more chance there is of obtaining useful information.
- Try to elicit as much information as possible.
- Note any specific characteristics of the caller, e.g. sex, accent, speech (fast, soft, well-spoken, etc.), background noises (music, street noises, aircraft, etc).
- If caller hesitates for more than a few minute, ask another question.

When caller hangs up:

- Do not hang up, keep the line open.
- Evacuate premises if there is only a short time until stated explosion time.

Suspicious object found:

- Leave the object alone. DO NOT interfere with it in anyway.
- DO NOT TOUCH JAR, OR MOVE THE OBJECT.
- DO NOT cover it with water, or put water on it.
- Inform the Security / Police.
- Open all doors and windows to minimize the blast damage.
- If appropriate, have fire extinguisher ready.
- Evacuate the premises.

Evacuation

When directed to leave the building:

- act quickly and quietly.
- leave the building via exits as directed.
- take personal belongings which are handy in work areas, but do not go to other parts of the building to collect them.
- assemble at a Safe Briefing Area.

6.11 FLOODING

In the event of a flooding, the actions listed below should be followed:

- Ask / call for help if anyone is injured.

- Administer first aid to injured person(s).
- As soon as possible, record details of the accident.
- Go to safe place or designated Safe Haven, i.e : near company's hotel or accomodation.
- Report accident to Superior, Security Supervisor and SHE Officer as soon as possible.

6.12 EMERGENCY CONTACT LIST

A contact list of key SUPREME ENERGY personnel and other organizations to contact in the event of an emergency will be made available. The list will include after-hour contact numbers, cell phones numbers, etc.

The list will include:

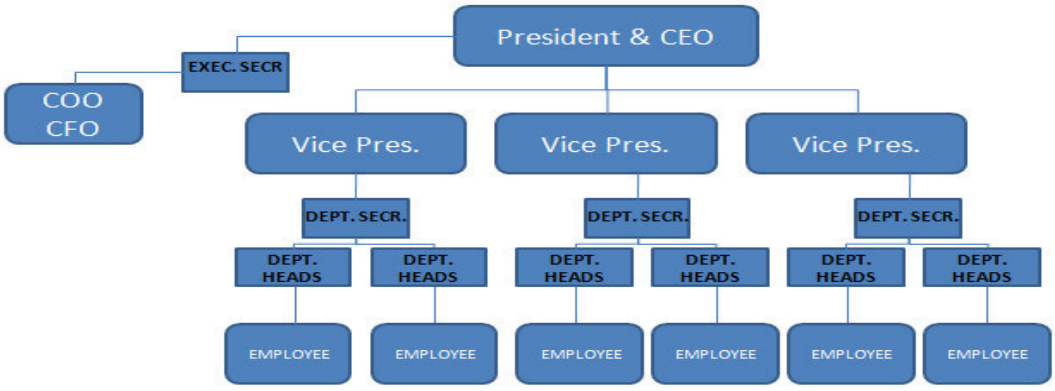
- Senior SUPREME ENERGY personnel at site and Head Office
- Paramedics / First Aid Team
- SUPREME ENERGY SHE Representative(s)
- Emergency Services
  - Fire
  - Medical (Hospital) and Ambulance
  - Police
- Statutory Government Agencies
  - ESDM EBTKE
  - Other related Government Agencies

A copy of the emergency contact list will be held at the Security gatehouse and in the Site SHE Procedures. It will be revised and updated on a six monthly interval, or as appropriate, to account for changes in personnel, etc.

6.13 EMERGENCY PHONE TREE

On occurence of the emergency that affected Jakarta Office and/or Supreme Energy's worksite, the flow for emergency phone may start from the direction of Senior Management to employees through Department Heads. The status of the emergency will be stated within the information delivered through the emergency phone tree system.

Figure 10.4 : Emergency Phone Tree



7. TRAINING

Training requirements are based on the duties and functions to be performed by each responder who participates or is expected to participate in emergency response activities. All SUPREME ENERGY personnel involved in emergency response field operations shall have a minimum of awareness training.

All levels of responders shall be trained concerning the facility or area of operations Emergency Response Plan. This training shall be given initially, annually, and/or when the responsibilities or designated actions under the Emergency Response Plan change and when the Emergency Response Plan is changed.

Administrative staff and support contract employees shall have awareness skills and knowledge about the following:

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
- The ability to recognize the presence of hazardous material in an emergency.
- An understanding of the role of first responders in the Emergency Response Plan including site security and control.

Operations and Maintenance employees and contractors shall have the skills and knowledge about the following:

- Knowledge of the basic hazards and risk assessment techniques.
- Knowledge of how to select and use proper personal protective equipment provided to Operations level responders.
- An understanding of basic hazardous materials terms.
- Knowledge of how to perform basic control, containment, and confinement operations within the capabilities of the resources and personal protective equipment available.
- Know how to implement basic decontamination procedures.
- An understanding of the relevant standard operating and termination procedures.

Safety, Health, and Environmental (SHE) support personnel, Operations and Project Supervisors shall have the skills and knowledge about the following:

- Knowledge of how to implement the facility's Emergency Response Plan.
- Knowledge of the classification, identification, and verification of known and unknown substances by using field survey instruments and equipment.
- Knowledge of how to function within an assigned role in the Incident Control System.
- An understanding of basic chemical and toxicological terminology and behavior.
- Knowledge of how to select and use proper specialized chemical personal protective equipment provided to Technician responders.
- An understanding hazard and risk assessment techniques.

- Knowledge of how to perform advanced control, containment, and confinement operations within the capabilities of the resources and personal protective equipment available.
- An understanding of how to implement decontamination procedures.
- An understanding of termination procedures.

Safety, Health, and Environmental (SHE) personnel shall have the skills and knowledge about the following:

- An understanding of classification, identification, and verification of known and unknown substances by using field survey instruments and equipment.
- Knowledge of how to select and use proper specialized chemical personal protective equipment provided to Specialist responders.
- An understanding of in-depth hazard and risk assessment techniques.
- Knowledge of how to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available.
- Knowledge of how to determine and implement decontamination procedures
- The ability to develop a site safety, health, and control plan.
- An understanding of chemical, radiological, and toxicological terminology and behavior.

ERT-L such as Site Support Manager or Manager of Operations or Project's Site Construction Manager should have the skills and knowledge level equivalent to the SHE personnel plus the following:

- The ability to implement the Incident Command System.
- Knowledge of how to implement the facility or area of operation Emergency Response Procedure.
- Knowledge of the Procedures and Response Teams of appropriate local and national governmental agencies.
- Knowledge and understanding of the hazards and risks associated with personnel working in chemical protective clothing.
- Knowledge and understanding of the importance of decontamination procedures.

Operations and Maintenance personnel shall be given an initial briefing at the facility or area of operation before their participation in emergency response operations. This briefing shall include training in the following:

- Wearing appropriate personal protective equipment.
- The chemical hazards involved.
- The duties to be performed.

Regular drills shall be conducted and documented to ensure the continued effectiveness of the Emergency Response Procedure. Properly documented and critiqued drills may serve as annual training.

supreme energy	SAFETY HEALTH AND ENVIRONMENT EMERGENCY PREPAREDNESS	PROCEDURE
SERD	SERD SITE SPECIFIC EMERGENCY RESPONSE PLAN	RD-MSHE-EMP-PRO-0001 REV.0

APPROVAL

	POSITION	NAME	SIGNATURE	DATE
Prepared by	Site SHE Representative	Rifqi Alfaizi		**06/07/2017**
	Site SHE Representative	Dian Amali		
	Site Support Manager	Frank M Tungka		
Reviewed By	Technical Head of Geothermal	Frank M Tungka		**30/08/2017**
	Sr. SHE Manager	M. Arief Tarunaprawira		
Approved By	Project Manager	Ralph Hoellman		

REVISION HISTORY

REV	DATE	BY	REVIEWED	APPROVED	DESCRIPTION
A	01 Dec'16	RA, DA	FT	RH	For Review
0	01 Jan'17				For Use

TABLE OF CONTENTS

1 INTRODUCTION, *PENDAHULUAN*

This SSERP shall address any emergencies which may occur at the facilities and define methods and techniques of emergency response for the personnel who are located at Supreme Energy Rantau Dedap (SERD) field facilities. *Rencana Tanggap Darurat Khusus Lokasi ini harus mewakili setiap kondisi darurat yang bisa terjadi di dalam fasilitas atau lokasi dan menerangkan metode dan tehnik tanggap darurat yang dilakukan oleh personel yang bekerja di lokasi fasilitas Supreme Energy Rantau Dedap (SERD).*

2 SCOPE, *RUANG LINGKUP*

This SSERP applies to all personnel temporary or permanently working at Supreme Energy Rantau Dedap field locations (including night shifts) and visitors who are present during an emergency. *Rencana tanggap darurat khusus lokasi ini berlaku untuk semua personil yang bekerja baik permanen atau sementara di Lokasi Supreme Energy Rantau Dedap (termasuk didalamnya pekerja yang bekerja malam) dan tamu yang ada saat terjadinya kondisi darurat*

The area of responsibility in site includes: *Wilayah tanggung jawab didalam lokasi antara lain;*

SERD Operation field and wells, Site Office Building, Warehouse and Yard, Well pad, Drilling Rig, and other location inside WKP Rantau Dedap. *SERD operation dan Well Test, kantor lokasi, gudang dan wilayah gudang terbuka, lokasi sumur, rig pengeboran, dan lokasi lain yang masih termasuk dalam WKP Rantau Dedap.*

3 REFERENCE, *REFERENSI*

- SHE Procedures : SE-MSHE-EMP-PRO-0001 Emergency Response Procedure -R0
- SHE Procedures : SE-MSHE-EMP-PRO-0003 Incident Command System -R1

4 DEFINITION, *DEFINISI*

Not applicable for this procedure. *Tidak digunakan dalam prosedur ini*

5 RESPONSIBILITY, *TANGGUNG JAWAB*

First Responder	Responder should remain calm and focused and always follow safe work procedures. *First responder harus bersikap tenang dan selalu fokus serta mengikuti prosedur bekerja dengan aman*.
Duties of Warden (Fire)/ On Scene Commander	• Study and become familiar with evacuation procedure. *Pelajari dan mengerti dengan prosedur evakuasi* • Turn-off power and gas supplies. *Mematikan sumber listrik dan suplai gas* • Check all rooms including toilets, showers, offices, etc. to ensure that all personnel are evacuated from their area/department. *Memeriksa semua ruangan termasuk toilet, kamar mandi, kantor dan lain sebagainya untuk memastikan semua personel sudah ter-evakuasi dari tempatnya atau departemen masing-masing.* • Ensure all doors are closed but not locked to partitioned areas, strong-rooms, and main doors. Do not turn off lights. *Memastikan semua pintu telah tertutup dan tidak terkunci* • Advise Control Centre whereabouts of fire, or threat in your area. *Memberikan masukan dan saran kepada Pusat Kendali tentang lokasi kebakaran serta jenis gangguan lainnya.* • Check all personnel from your area are at the Muster Point. A precise head count is very important and mandatory to cross-check among team members responsible for head count. *Periksa semua personil dari area anda pada area tempat berkumpul. Lakukan penghitungan jumlah kepala wajib dilakukan untuk memeriksa ulang anggota tim yang bertugas untuk menghitung jumlah kepala.* • Mark Evacuation Control Board at Control Centre that the area of responsibility is clear. *Memberikan tanda pada Papan Kontrol di ruangan Kontrol Pusat, bahwa setiap wilayah tanggung jawab sudah aman*.
Duties of Control Officer (may be the ERT-L/STL)	• Report to designated Control Center Area. *Melaporkan kepada Pusat Kendali yang bertugas* • Await wardens to report. *Menunggu laporan dari Warden* • Review Evacuation Control Board status. *Mereview status Papan Kontrol* • Direct personnel accordingly. *Mengatur personil sesuai keperluan* • On all clear, issue instructions to return to work. *Jika status sudah Aman, memberikan instruksi untuk melanjutkan pekerjaan*

Duties of External Relation	• Serve as principal advisor to ERT-L on all matters relating to external communications and interactions with external parties. *Melayani dan memberikan saran masukan kepada ERT-Leader terhadap semua hal yang berkaitan dengan komunikasi eksternal dan interaksi dengan pihak luar*. • Work with Crisis Management Team (CMT), Government, either directly or through ERT-L, to define responsibilities for dealing with government officials and media. *Bekerjasama dengan Crisis Management Team (CMT), pemerintah, baik secara langsung atau melalui ERT-Leader. Serta bertanggung jawab dalam penjabaran terhadap pemerintahan dan media massa.* • Ensure that appropriate government agencies have been notified of incident, and keep them informed about status of emergency response operations. *Memastikan bahwa departemen terkait sudah di informasikan mengenai insiden yang terjadi dan secara rutin menginformasikan situasi tanggap daruarat operasi yang sudah di lakukan.* • Advise ERT-L on public and community impacts of an incident and emergency response operations. *Memberikan saran dan masukan kepada ERT-Leader dampak yang di timbulkan terhadap masyarakat dari insiden yang terjadi serta tanggap darurat operasi.* • Delivering accurate information to affected local residents so they will understand about emergency situations. *Memberikan informasi yang akurat kepada masyarakat yang terkena dampak langsung sehingga mereka bisa mengerti dan mengetahui tentang situasi darurat yang terjadi*.
Site SHE Representative	Responsible for ensuring that all appropriate actions are taken to protect the safety and health of ERT personnel. *Bertanggung jawab untuk memastikan semua tindakan yang dilakukan oleh tim tanggap darurat sudah aman*
Control Centre	The most senior staff member of the shift will be the Control Officer. All Area Wardens will report to the Control Officer. *Setiap staff senior dari masing-masing shift di prioritaskan menjadi Control Officer, masing-masing area warden akan melapor kepada Control Officer.* The Evacuation Control Board will be held at the Control Centre. *Papan kontrol evakuasi akan di tempatkan di Ruangan pusat kontrol.* A flow diagram showing the Evacuation Procedure is presented in **Figure 30.1.** This flow diagram will be placed on noticeboards throughout the site next to the site plan showing designated Muster Points. *Diagram alur prosedur evakuasi di tampilkan dalam lampiran 30.1. Diagram alur ini di tempatkan di papan pengumuman dan juga menampilkan masing-masing tempat berkumpul yang telah di tentukan.* Regular drills (once every year) are held to ensure that staffs are familiar with the Evacuation Procedures. *Latihan rutin dilakukan setiap sekali dalam satu tahun untuk memastikan setiap staff familiar dengan prosedur evakuasi.*

6 PROCEDURE *PROSEDUR*

6.1 FIRE PROCEDURE *PROSEDUR KEBAKARAN*

If you discover a fire, immediately carry out the actions listed below: *Jika anda melihat adanya api atau kebakaran, segera melakukan hal-hal di bawah ini:*

- Activate the nearest manual alarm (break glass and operate the switch). *Mengaktifkan alarm manual (pecahkan break glass dan tekan tombol aktivasinya.*

- Ring Site Security and give relevant details. *Infomasikan kepada security dan berikan informasi yang sesuai.*
- Site Security to alert Site's Fire Service / Emergency Response Team (as appropriate to site). *Sekuriti lokasi menghubungi dinas pemadam kebakaran atau Tim tanggap darurat (disesuaikan dengan lokasi)*
- Alert other personnel in your area and remove any injured person(s) from immediate danger. *Beritahu personil yang lain di lokasi dan memindahkan segera korban luka dan bahaya yang ada.*
- If no personal risk is involved, an attempt should be made to extinguish the fire using nearest fire extinguisher or hoses. *Jika tidak ada risiko personel, coba padamkan api atau kebakaran dengan menggunakan alat pemadam api ringan yang ada di lokasi.*

  Note: In the case of electrical fires, hoses should not be used, use dry powder or CO_2 extinguishers instead. ***Jika terjadi kebakaran dari instalasi listrik, fire hidran tidak boleh di gunakan, gunakan serbuk kimia kering atau CO2.***
- If in doubt, evacuate the premises and leave firefighting to the experts or fire brigade team. *Jika anda ragu untuk menggunakan pemadam api, biarkan dan berikan kepada orang yang lebih ahli atau brigade pemadam kebakaran.*
- Evacuate building following the Evacuation Procedure. *Lakukan evakuasi gedung segera dengan mengikuti prosedur evakuasi*
- Go to your Designated Muster Point. *Segera menuju tempat berkumpul*
- Follow instructions from Area Warden. *Ikuti arahan dari warden area*

Figure 1: Evacuation Procedures *Prosedur Evakuasi*

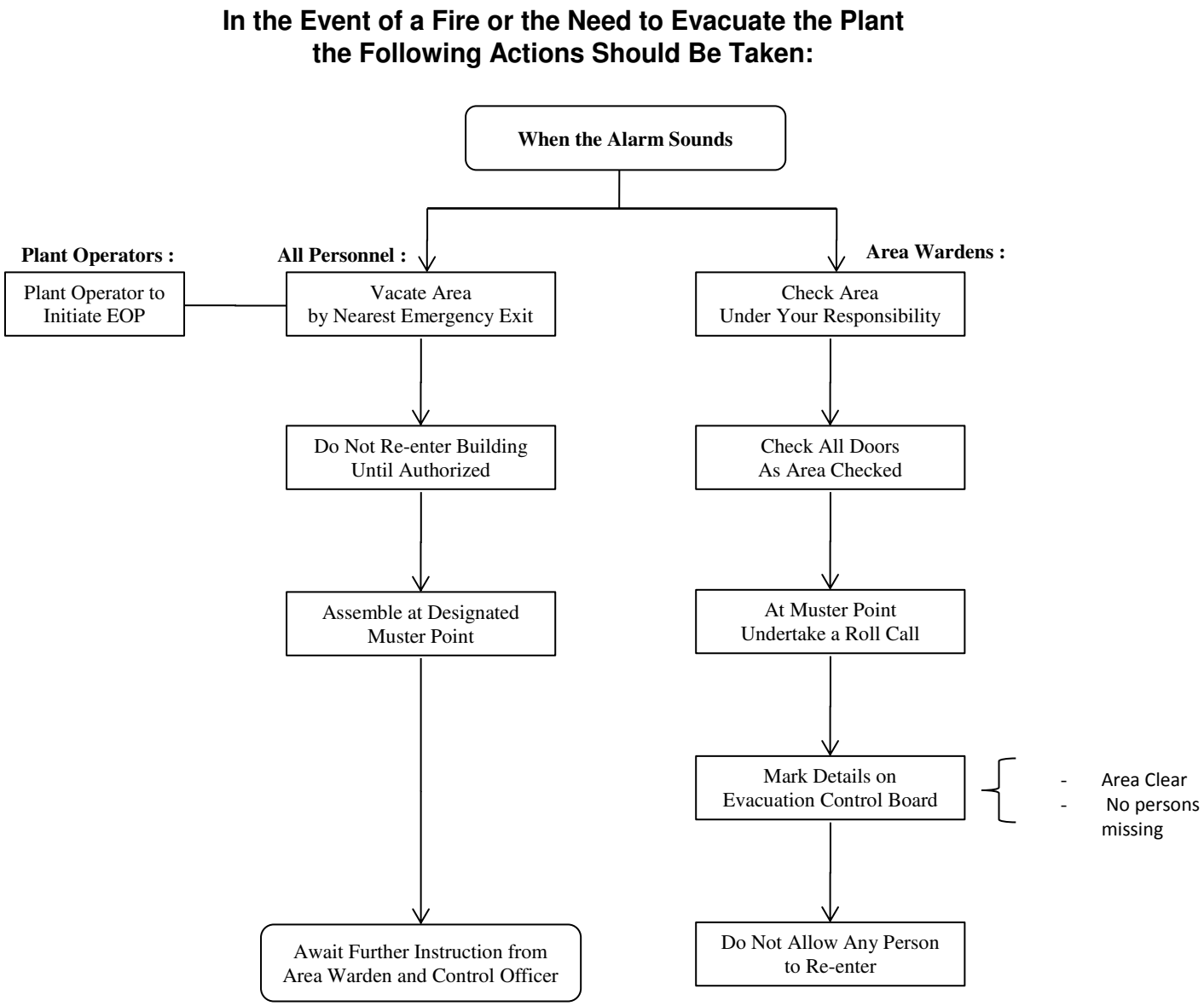
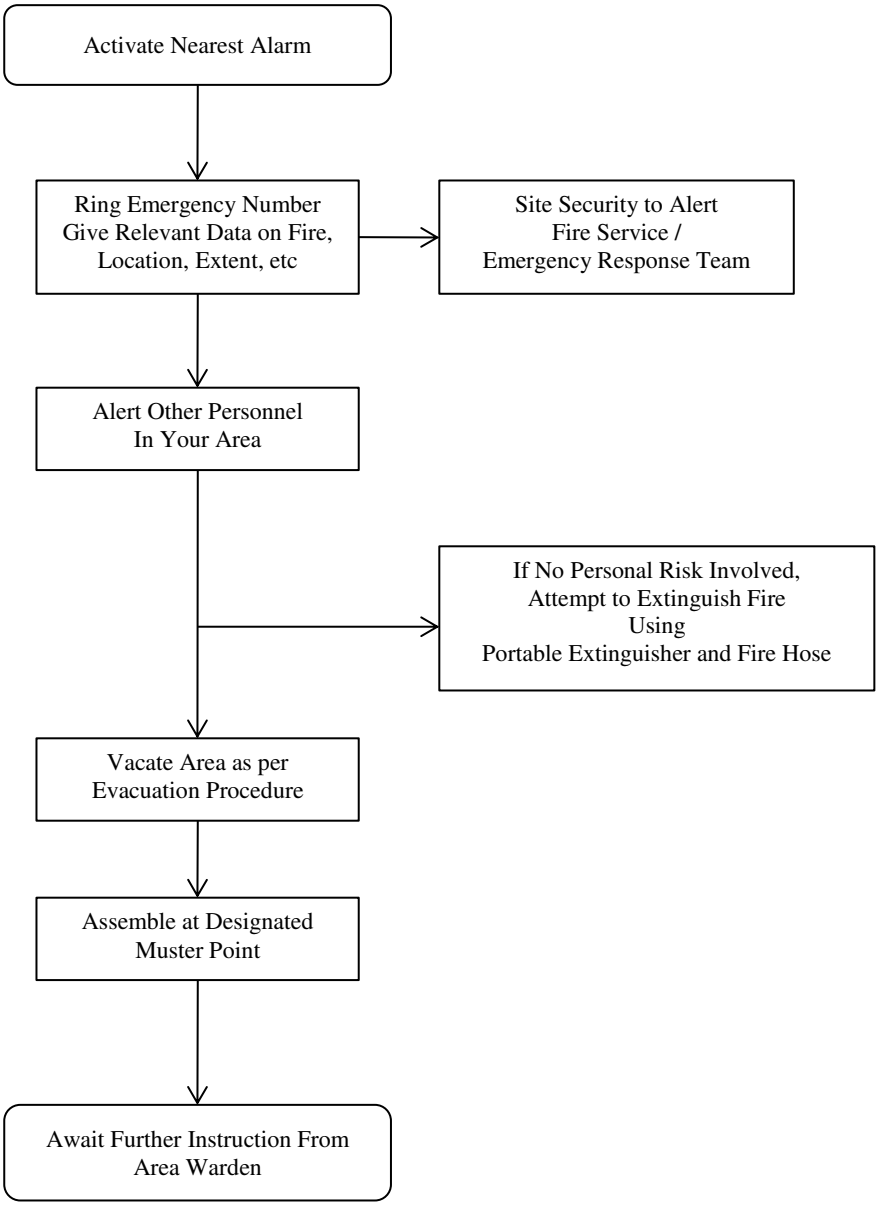


Figure 2: Fire Procedure *Prosedur Kebakaran*

If You Discover a Fire, Immediately Carry Out the Following Actions



6.2 EARTHQUAKE PROCEDURE *PROSEDUR GEMPA BUMI*

When an earthquake starts: *Apabila gempa bumi terjadi segera lakukan;*

- Stay calm and take cover under a desk. *Tetap tenang dan berlindung di bawah meja*
- Brace yourself in a doorway (hold onto the door to prevent personal injury from the door slamming). *Berpegangan di pintu (Pegangan pada pintu untuk menghindari cidera perorangan akibat bantingan pintu)*
- Crouch behind a solid structure, e.g. wall. *Tunduk di balik struktur yang kuat*
- If under furniture which moves, move with it. *Apabila berlindung di bawah furnitur yang bergerak, bergeraklah bersamaan dengan furnitur tersebut*
- Stay away from glass doors and windows, tall shelves, light fittings, or objects that might topple. *Menjauhlah dari kaca pintu dan jendela, rak yang tinggi, fitting lampu, atau benda-benda yang mudah jatuh*
- Do not leave the building or try to leave the immediate area. *Jangan meninggalkan bangunan atau terburu-buru meninggalkan lokasi.*
- If outdoors, take cover in a doorway or other safe place away from falling objects and electrical hazards. *Jika berada di luar bangunan, berlindung di dekat pintu masuk atau tempat lain yang aman dari kemungkinan benda jatuh.*

After an earthquake: *Setelah gempa bumi terjadi;*

- Stay calm, stay together. Account for everyone in the work area and immediate vicinity. *Tetap tenang dan tetap bersama-sama. Hitung jumlah semua personel yang ada di tempat kerja dan daerah sekitarnya.*
- Area Wardens take control and co-ordinate actions in areas of responsibility and: *Warden area mengontrol dan mengkoordinasikan tindakan di wilayah yang menjadi tanggung jawabnya, dan;*
  - assess all persons for injury. *Lakukan pemeriksaan apakah korban cidera*
  - Check for hazards, fire, gas or chemical leaks. *Periksa adanya bahaya lain, kebakaran, terlepasnya gas atau bahan kimia.*
  - move people away from windows and outside walls. *Pindahkan personel dari jendela-jendela dan bagian luar dinding*
  - leave doors to rooms open, pull curtains across broken windows. *Tinggalkan pintu menuju ruang terbuka, tarik tirai untuk melewati jendela yang pecah*
  - turn off and unplug all unnecessary electrical equipment. *Matikan dan cabut semua peralatan listrik yang tidak di perlukan*
- Do not evacuate unless the building has sustained major structural damage. *Jangan melakukan evakuasi jika sudah di pastikan bahwa tidak ada kerusakan bangunan yang parah.*
- Put signs up identifying dangerous areas. *Pasang tanda pada daerah yang berbahaya*
- Conserve water. *Hemat sumber air*
- Do not use the toilets. Make other arrangements that do not involve relying on the sewerage system. *Jangan gunakan kamar mandi, lakukan tindakan lain yang ada hubungannya dengan sistem saluran air kotor.*
- If communications system has failed, try to pass notes to rescue personnel. *Jika ada kegagalan sistem komunikasi, lakukan pencatatan secara manual untuk menyelamatkan personnel.*

Listen carefully to any announcements over other announcement system (handy talkie, etc.). If an evacuation is necessary: *Perhatikan dengan baik setiap pengumuman yang di sampaikan (radio tangan, dll). Jika evakuasi perlu di lakukan;*

- Proceed carefully, expect to find exit routes blocked or damaged. *Lakukan dengan lebih hati-hati, terkecuali jika rute jalan keluar tertutup atau rusak.*
- Never use lifts. *Jangan pernah menggunakan lift*
- When outside, stay well away from buildings and power lines. *Jika berada di luar, tetap berada jauh dari bangunan dan saluran listrik.*
- Stay together in your work or floor group to assist with record keeping. *Tetap bersama-sama dengan rekan kerja atau grup satu lantai untuk memudahkan catatan penghitungan personil*
- If it is safe to do so, go to your Designated Muster Point. *Jika situasi aman, segera menuju tempat berkumpul.*

Remember, that there are almost always aftershocks following a major earthquake - sometimes quite significant. They can go on for weeks or even months. Be prepared for them to happen. Ingat, selalu akan ada gempa susulan setelah gempa utama-terkadang akan sama gempa yang akan terjadi kemudian.

6.3 LANDSLIDE PROCEDURE *PROSEDUR TANAH LONGSOR*

When a landslide starts: *Jika terjadi tanah longsor, lakukan hal berikut;*

- If outdoors attempt to get out of its path. *Jika berada di luar ruangan, jauhi jalur longsoran.*
- If in a building, do not attempt to leave until movement has ceased. *Jika berada dalam bangunan, jangan mencoba meninggalkan tempat sampai pergerakan longsor sudah selesai.*

After the landslide: *Setelah terjadinya longsor*

- Stay calm, stay together, account for everyone in the work area / work team. *Tetap tenang, bersama-sama, lakukan penghitungan semua personil di tempat kerja atau rekan kerja.*
- Evacuate buildings caught in landslide. *Tinggalkan area bangunan yang terkena longsor*
- Raise the alarm by contacting Security. *Hidupkan alarm dan hubungi security*
- Provide details: *Lengkapi data-data;*
  - Extent of landslide. *Luasan dari longsoran*
  - Location. *Lokasi*
  - Buildings, equipment damaged. *Bangunan dan peralatan yang rusak*
  - Number of persons missing / trapped (if any), etc. *Jumlah orang yang hilang atau terperangkap (jika ada).*
- If facilities damaged, initiate an action to make equipment safe and to shut-down affected areas. *Jika terjadi kerusakan fasilitas, lakukan tindakan untuk memastikan setiap peralatan dalam kondisi aman dan matikan area yang terkena longsoran*
- Emergency Response Team by company and external (Local Agencies & Rescue Team) to initiate search and rescue of the affected areas to find / locate missing

persons. *Tim tanggap darurat baik perusahaan atau pemerintahan untuk segera melakukan proses pencarian dan penyelamatan terhadap orang-orang yang hilang di daerah terjadinya longsor.*

- Isolate area affected by landslide to prevent unauthorized persons being trapped in landslide debris, etc. *Isolasi wilyah yang terkena longsoran untuk menghindari masuknya orang2 yang tidak di perlukan terperangkap pada area longsoran.*
- Notifying Government authorities for assistance in rescue, etc. *Pemberitahuan kepada pemerintah lokal untuk mendapatkan bantuan penyelamatan dll.*
- Notifying local community leaders whether the landslide has potential effect to their communities. *Laporkan kepada pimpinan wilayah, apakah longsoran memberikan dampak kepada masyarakat setempat.*
- If the landslide impact resulting the road cannot be passed by any vehicle, ERT-L must take decision to overcome the landslide debris by heavy equipment. *Jika longsoran mengakibatkan jalan tidak dapat dilalui oleh kendaraan, ERT-Leader untuk mempertimbangkan penggunaan alat berat untuk membersihkan material longsoran.*

SERD has several location may have a potential landslide may occured, sucha as: *SERD memiliki beberapa lokasi yang rawan longsor, diantaranya;*

- WAC 02, Ch 4+000
- Shortcut Area
- Jalan Cendrawasih Acces to WP-C
- Jalan Ibis Acces to WP-I

Specific awareness SHALL taken due to passing the potential landslide area, especially at the rainy season. Prohibition to enter the potential landslide area if the accumulated rainfall reaching >25mm for consecutive 3 (three days) continues rain. *Tindakan atau perhatian khusus di tujukan jika melewati area rawan longsor, khususnya pada musim hujan. Larangan masuk pada daerah rawan longsor jika terjadi akumulasi tingkat hujan >25mm berlangsung selama 3 hari berturut-turut.*

6.4 GEOTHERMAL / VOLCANO'S ERUPTIONS *PANAS BUMI ATAU ERUPSI GUNUNG BERAPI*

A range of hazardous events can result from geothermal activity particularly eruption from Dempo Mountain which located at Pagaralam, these include: *Setiap rangkaian kejadian berbahaya yang muncul dari aktifitas panas bumi, terutama adalah erupsi gunung berapi dari gunung dempo yang terletak di kotamadya Pagaralam.*

- Explosives eruptions / blasts of rock and ash. *Ledakan erupsi / hamburan batu dan debu*
- pyroclastic flows. *Aliran pyroclastic*
- lava flow. *Aliran lava*
- lahars (cold lava). *Aliran lahar dingin*
- Volcanic gases (CO_2, SO_2, H_2S, water vapor and hydrogen). *Gas vulkanik (CO2, SO2, H2S, uap air dan Hidrogen).*

In most situations, large volcanic activity is usually predictable and contingencies can be put in place to mitigate the effects on areas of population. *Dalam situasi umum, aktifitas vulkanik yang besar biasanya bisa di prediksikan dan tindakan cadangan bisa dilakukan untuk mengurangi resiko terhadap populasi masyarakat.*

ERT-L and teams SHALL get update information from Local Agencies (BPBD and Head of Volcano's Observer) about the current status level. *ERT-Leader dan anggotanya HARUS mendapatkan informasi dari pihak terkait (BPBD=Badan Penanggulanan Bencana Daerah) dan kepala pengamatan vulkanologi.*

If the valid information mention that the eruption will be worse than before (AWAS- Level IV), ERT team (External Relation) SHALL helping to notifying the nearest local community leader for evacuating their occupant. *Jika mendapatkan informasi yang valid mengenai meningkatnya status gunung berapi lebih buruk dari sebelumnya (Level – AWAS IV), Tim ERT eksternal HARUS membantu menginformasikan kepada kepala pemerintahan setempat untuk melakukan proses evakuasi.*

In the event of sudden geothermal activity take the actions listed below: *Jika terjadi aktifitas mendadak dari geothermal, hal-hal di bawah ini yang harus dilakukan:*

- If you are near a water stream or base of a valley move to higher ground, as lahars and lava flows tend to flow down valleys (path of least resistance). *Jika anda berada dekat dengan aliran air atau sedang berada di lembah, segera menuju ke tempat yang lebih tinggi, seperti di ketahui bahwa lava dan lahar akan mengalir ke tempat yang lebih rendah*
- Move indoors to get away from falling rocks and ash. *Segera masuk ke dalam bangunan untuk menghindari jatuhanan batu dan abu.*
- Under direction from management (CMT), evacuate the site. *Ikuti arahan dari CMT*

SERD area is quite far away to Dempo Mountain (45 km) which categorized as Strato Type Volcano Mountain, but still have potential for ash shower. *SERD terletak cukup jauh dengan Gunung Dempo (45km) yang berada di kotamadya Pagaralam yang di kategorikan sebagai gunung dengan tipe Strato, akan tetapi masih berpotensi terkena hujan abu.*

6.5 FLOODING *BANJIR*

In the event of flooding, the precautions listed below should be followed: *Jika terjadi banjir, tindakan pencegahan yang bisa dilakukan antara lain;*

- Do not try to cross swollen rivers in vehicles or by foot. *Jangan mencoba melintasi sungai yang tergenang dengan menggunakan kendaraan atau berjalan kaki.*
- Stay indoors, move up to higher building levels if flood levels rise. *Tetap berada di dalam ruangan, berpindah ke banguan yang lebih tinggi jika level air meningkat.*
- If working in a valley with a stream, move up to higher ground, especially during periods of heavy, sudden rain. *Jika bekerja di desa yang di aliri aliran sungai, berpindahlah ke dataran yang lebih tinggi, terutama pada saat tingkat hujan dengan intensitas tinggi dan hujan mendadak.*
- Before key plant items are submerged and could cause shock hazards or more severe damage, take action to secure the assets. *Sebelum peralatan utama tenggelam dan bisa menimbulkan bahaya sengatan atau kerusakan yang lebih parah, lakukan proses penyelamatan aset jika memungkinkan*
- Maintain communication where possible. *Lakukan komunikasi dengan baik*
- Listen to the instruction of the responsible warden or your area supervisor. *Perhatikan instruksi dari warden yang bertanggung jawab atau supervisor area.*

6.6 H_2S RELEASES *TERLEPASNYA GAS H2S*

In the event of a well blow and/or a major H_2S release, the steps listed below should be followed. *Apabila terjadi ledakan sumur atau lepasan H2S yang besar, langkah-langkah di bawah ini yang harus dilakukan:*

- All personnel to vacate the area to upwind Muster Points. Remember to observe the direction of the wind socks. *Semua personel berkumpul di tempat berkumpul di area yang berlawanan dengan arah angin dengan mengacu kepada arah dari windsocks.*
- Roll call taken to ensure all persons accounted for. *Lakukan penghitungan segera personel di lokasi.*
- Essential staff to done personal protective equipment, including SCBA and attempt to shut-down well. *Staff utama segera menggunaka Alat Pelindung Diri, termasuk SCBA dan mencoba untuk mematikan atau menutup sumur.*
- If attempt to shut-down well are unsuccessful, consider initiating evacuation of site and contact CMT for problem solving and action plans. *Pada saat mencoba mematikan atau menutup sumur tidak berhasil, pertimbangkan untuk segera meninggalkan lokasi dan menghubungi CMT (Tim Management Crisis) untuk mendapatkan pemecahan masalah dan tindakan lanjutan.*

6.7 WELL BLOW-OUT DURING DRILLING OPERATIONS *BLOW OUT SUMUR SAAT OPERASI PENGEBORAN*

When the means to shut in or control flow from a well is lost, the SERD drilling Site Supervisor (Co-Man) will be The On-Scene Commander until relieved by higher authority and is to: *Dalam pengertian ini, penutupan sumur atau untuk mengontrol sumur saat terjadinya LOST, SERD Drilling Site Supervisor (Co-Man) akan menjadi OSC (On Scene Commander) sampai di serahkan kepada otoritas level yang lebih tinggi.*

- Initiate appropriate well control procedures as per Chapter 2: Safe Work Practices SHE Procedures Section 16 : Drilling Preparation, Operations and Production Testing. *Lakukan tindakan kontrol sumur yang sesuai seperti pada Bab 2 : Safe Work Practices SHE Procedur, seksi 16: Drilling preparation, operations dan Production Testing.*
- If there are injured personnel, dispatch the injured personnel to the Drilling Contractor clinic in accordance with the Emergency Medical Response Plan or call for medical assistance from the local hospital/ Clinic or by radio channel -1, call sign “emergency”. *Jika terjadi cidera pada pekerja, pindahkan korban cidera ke klinik kontraktor drilling sesuai dengan Rencana Tanggap Darurat Medis atau dengan menghubungi rumah sakit terdekat atau klinik atau dengan menghubungi melalui radio channel-1 dengan kode “Darurat”.*
- Notify Control Officer at Control Centre/ SERD site base or Security Post, especially if there is a threat to any local residents. *Informasikan Kontrol Officer pada Pusat Komando atau lokasi SERD, pos sekuriti, terutama jika ada potensi mengenai masyarakat sekitar.*
- Secure and maintain control of access roads to the area to eliminate entry of unauthorized personnel. *Amankan dan pertahankan akses kontrol jalan yang menuju lokasi kejadian dari masuknya orang-orang yang tidak berkenan.*
- Initiate any further steps which may be necessary or advisable based on consultation with the Drilling Site Supervisor (Company Man). *Lakukan langkah-langkah lain yang di perlukan dengan meminta pertimbangan dari Drilling Site Supervisor (Company Man).*
- Ascertain that all safety practices and procedures are being followed and that all members of the drilling crew are performing their assigned duties correctly. *Memastikan tindakan*

bekerja dengan aman dan prosedur sudah di ikutidan setiap personil drilling sudah melakukan pekerjaan dengan baik dan aman.

- Attempt to control the well with rig personnel and supervisors, under the direction of the Drilling Site Supervisor. *Lakukan kontrol sumur dengan tim rig dan supervisor, dalam arahan Drilling Site Supervisor*
- To control liquids accumulating at the surface, construct sumps and/or dikes as rapidly as possible. *Mengontrol ketersediaan cairan permukaan, buat kolam dan atau parit secepat mungkin.*
- Notify External and Relation Officer to inform local authorities if spillage has crossed beyond the SERD Project boundary, and coordinate with them for dissemination of the action plan to local residents. *Beritahukan fihak luar dan Relation Officer untuk menginformasikan pemerintahan lokal jika terjadi tumpahan sudah melewati wilayah SERD dan mengkoordinasikan dengan pihak terkait tindakan yang akan di lakukan terhadap masyarakat lokal.*
- Maintain a continuing inspection of the pad area immediately around the well site for erosion that may cause a failure to the drilling rig structure. Take necessary steps to limit erosion by excavation and rebuilding of the area as indicated. *Lakukan pemeriksaan secara rutin lokasi sumur dari kemungkinan terjadinya erosi yang bisa mengakibatkan kerusakan struktur rig. Ambil langkah yang perlu untuk mengurangi resiko erosi dengan melakukan proses penggalian dan memperbaiki area yang ter-erosi.*

6.8 EXPLOSIONS *LEDAKAN*

In the event of an explosion at the site: *Jika terjadi ledakan di lokasi;*

- Initiate evacuation procedure. *Segera lakukan prosedur evakuasi*
- All staff to assemble in Muster Points. *Semua personil berkumpul di tempat berkumpul*
- Account for all personnel, visitors, contractors. *Lakukan penghitungan personil, tamu dan kontraktor.*
- If fire, initiate fire procedure. *Jika terjadi kebakaran, lakukan prosedur pemadaman.*
- Control Officer to initiate EOP to minimize plant damage, if able to do so safely. *Control Officer untuk segera melakukan EOP untuk meminimalkan kerusakan, di mungkin di lakukan, lakukan dengan aman.*
- Await further instructions from Control Officer. *Menunggu instruksi lebih lanjut dari Control Officer*.

6.9 PLANT FAILURES *KEGAGALAN ALAT*

In the event of a major plant failure: *Jika terjadi kejadian kegagalan peralatan;*

- Initiate evacuation procedure. *Lakukan prosedur evakuasi*
- Account for personnel assembled in Muster Point. *Lakukan penghitungan jumlah personel di Tempat Berkumpul*
- Determine the need for Emergency Response Team to perform a rescue. *Berikan gambaran kebutuhan yang di perlukan Tim Respon Darurat untuk melakukan penyelamatan.*
- If fire, follow the Fire Procedures. *Jika terjadi kebakaran, terapkan prosedur pemadaman api*

- Initiate EOP to limit damage to the rest of the plant. *Lakukan Tanggap darurat operasi untuk meminimalkan kerusakan dari peralatan*

6.10 CHEMICAL / FUEL SPILLAGE *TUMPAHAN KIMIA ATAU BAHAN BAKAR*

In the event of a chemical / fuel spillage or leak, the priority actions listed below should be taken (see **Figure 30.3**.). *Jika terjadi tumpahan bahan kimia atau bahan bakar, prioritas tindakan yang harus di lakukan antara lain; (lihat 30.3)*

a. Ensure personnel are safe. *Pastikan semua personil dalam keadaan aman*

- If personnel are injured and can be removed from the area safely, do so. *Jika ada personil yang cidera, pindahkan segera dengan aman*
- Check Material Safety Data Sheets as to hazards and first aid measures. *Periksa daftar keselamatan bahan (MSDS) untuk memastikan jenis bahaya dan tindakan medis yang diperlukan.*

b. Stop the flow of leaking material *Hentikan tumpahan*

- Reposition the drum to stop the flow. *Rubah posisi dari drum yang tumpah*
- Shut off the source of the leak. *Hentikan sumber tumpahan*
- Equipment filled with the material that is found leaking should be removed from service as soon as possible. *Peralatan yang menjadi sumber tumpahan segera hentikan secepat mungkin.*

c. Contain the spill *Tampung segera tumpahan*

- Dike / bund major spills with soil or other material. *Bendung dengan menggunakan tanah atau material lain.*
- Protect all open grates, sumps, manholes that discharge into the drains, waterways or onto the ground. *Tutup semua saluran terbuka, kolam, lubang yang memungkinkan tumpahan mengalir ke saluran air dan tanah.*
- If the chemical has entered the drains, advise supervisor and SHE Representative immediately. *Jika tumpahan masuk ke saluran air, minta saran dari supervisor dan SHE Reps segera.*
- Where it is not possible to remove equipment from service immediately, some means of preventing the pollution and collecting the leaking material should be used, such as metal trays, buckets, polyethylene sheeting. *Jika tidak memungkinkan untuk memindahkan peralatan secepatnya, segera lakukan tindakan pencegahan tumpahan dengan mengumpulkan material tumpahan dengan menggunakan wadah baja, ember dan lembaran polyethylene.*

d. Protection of Personnel *Perlindungan terhadap personel*

- Personnel entering the leak or spill area shall be provided with and use appropriate protective equipment, as set out in the Material Safety Data Sheet (MSDS) for that particular chemical. *Setiap personel yang masuk ke wilayah tumpahan di haruskan untuk menggunakan APD seperti yang tertera dalam MSDS sesuai dengan jenis bahan kimianya.*
- All non-essential personnel shall be kept out of the immediate leak or spill area. *Personel yang tidak di perlukan di larang masuk ke wilayah yang terjadi tumpahan.*

e. Report the Spill *Pelaporan Tumpahan*

- Report the incident once the spill is contained or get a fellow worker to report the incident to the supervisor. *Laporkan insiden segera setelah tumpahan dapat di tangani, atau meminta rekan kerja melaporkan kepada supervisor*.

f. Actions of Responsible Person *Tindakan dari orang yang bertanggung jawab*

- The supervisor is to assess the situation quickly to determine the need for external help. *Supervisor untuk melakukan penilaian situasi dengan cepat untuk mendapatkan gambaran kebutuhan bantuan yang di perlukan*.

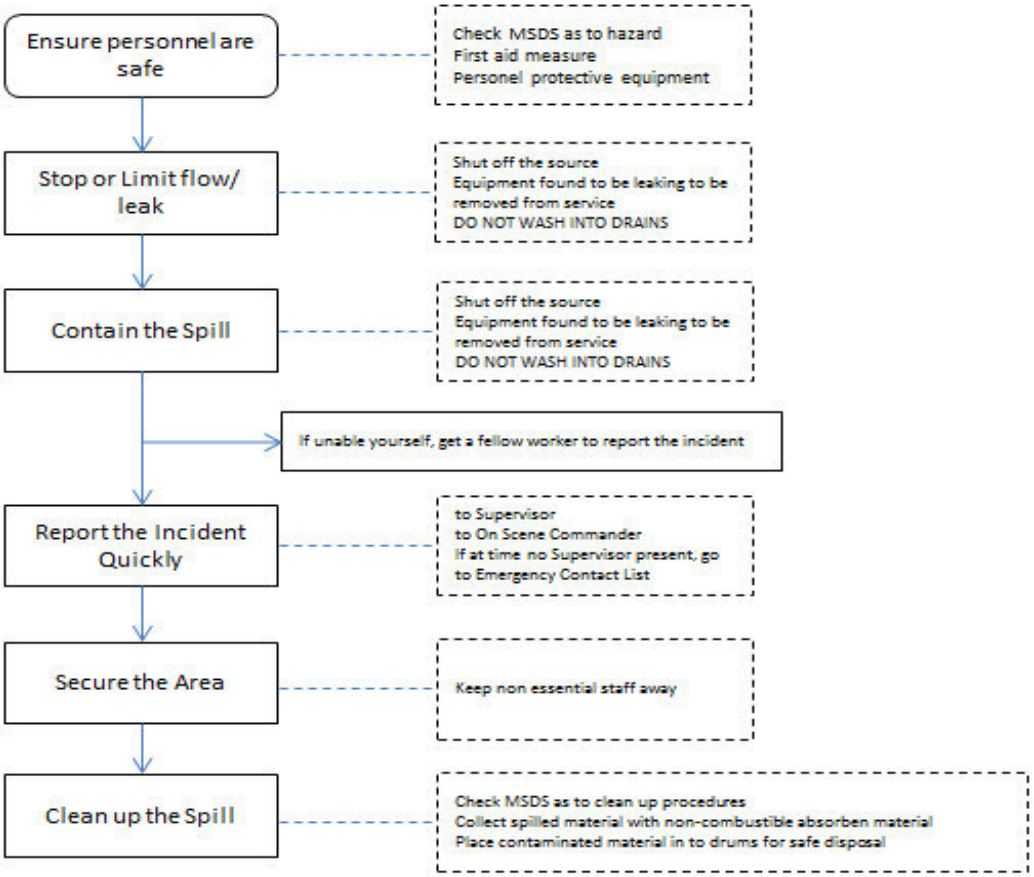
g. Clean Up *Pembersihan*

- Minor spills or leaks can be cleaned up using absorbent material, sand, or sawdust. Check MSDS to see what the correct material is. *Tumpahan kecil atau kebocoran kecil bisa segera di bersihkan dengan menggunakan material yang bisa menyerap, pasir dan atau serbuk gergaji.*
- All liquid and contaminated material must be collected for disposal. *Semua benda cair atau material yang terkontaminasi di kumpulkan untuk di buang.*
- Transfer contents of leaking drum to new clean drum. *Pindahkan material dari drum ke drum kosong lainnya.*
- Ensure collected material is placed in a container which will not leak during transportation off site for disposal. *Pastikan material yang terkumpul di tampung dalam wadah yang tidak bocor untuk di pindahkan atau di buang keluar site.*
- Check MSDS of what safe disposal is appropriate. *Periksa daftar keselamatan bahan untuk mengetahui jenis pembuangan yang sesuai.*

h. Incident Investigation *Penyelidikan Insiden*

- Site Supervisor to prepare a brief report on incident. *Supervisor site menyiapkan laporan insiden*
- Comment on contingency plans: Were they effective in dealing with the situation? *Berikan komentar terhadap rencana cadangan. Yang sesuai dengan situasi yang terjadi*
- If any improvements identified, inform the responsible personnel. *Jika ada perkembangan lebih lanjut, laporkan kepada personel yang bertanggung jawab.*
- Complete the appropriate / required report / forms from government authorities (ESDM EBTKE, etc.). *Lengkapi semua laporan dengan menggunakan format laporan dari pemerintah (ESDM/EBTKE)*
- Forward the completed report / forms to government authorities (ESDM EBTKE, etc.). *Mengirimkan laporan yang lengkap kepada lembaga terkait (ESDM, EBTKE)*

Figure 3: Chemical / Fuel / Oil Spillage Emergency Procedure



6.11 VEHICLE ACCIDENT *KECELAKAAN KENDARAAN*

If an accident occurs, remain calm and reassure the victim. If trained first aid, do the first aid efforts, stabilize victim and make them comfortable in a safe location. *Jika terjadi kecelakaan kendaraan, tetap tenang dan pastikan kondisi korban. Jika terlatih First Aid, lakukan tindakan pertolongan pertama, stabilkan kondisi korban, tempatkan pada tempat yang aman dan nyaman.*

At SERD Site *Di lokasi SERD*

- Contact SERD Control Room/ Site Base. *Hubungi SERD control Room*
- Contact Site Paramedic (if any injured person). *Hubungi paramedik jika ada korban cidera*
- Transport the victim to SERD nearest public health center (puskesmas) or clinic for medical treatment. *Pindahkan korban ke fasiltas pelayanan kesehatan terdekat dari lokasi SERD (Puskesmas/klinik) untuk mendapatkan tindakan medis*
- Site Support Manager/ KTPB or authorized person with advise from the SERD medic will decide whether victim has to be evacuated **(see Appendix 7. Medical Evacuation Flowchart).** *Site support manajer atau KTPB atau orang yang berwenang dengan masukan dari paramedik akan memutuskan proses evakuasi korban (Lihat diagram alur lampiran 7)*

- Notify employee's (victim) supervisor and advise situation. *Laporkan kepada supervisor korban dan jelaskan situasinya*

During travelling ***Saat perjalanan***

- Contact and transport victim to nearest hospital. *Hubungi dan pindahkan korban ke rumah sakit terdekat*
- In the event of major accident, local police officers may have to take action for evacuating patient so it is very important that all employees and drivers carry their identification card (ID) while traveling. *Jika terjadi kecelakaan parah, di perlukan bantuan dari kepolisian terdekat untuk mengevakuasi korban. Sehingga sangat penting bagi setiap karyawan atau driver membawa kartu identitas diri saat melakukan perjalanan.*

6.12 BOMB THREAT *ANCAMAN BOM*

Treat all bomb threats seriously. Investigation may reveal a hoax, but until certain there is no risk, act with extreme caution. *Perlakukan setiap ancaman bom dengan serius. Hasil investigasi bisa menyatakan sebagai laporan palsu, tetapi sampai dengan mendapatkan hasil yang pasti, tanggapi dengan sangat serius.*

Telephone threats: ***Ancaman melalui telfon***

- Keep calm. It is not possible to think clearly when panicking. *Tetap tenang, jangan panik*
- If possible, attract attention of another person, and have that person contact the Security / Police. *Jika memungkinkan, meminta bantuan orang lain. Pastikan orang tersebut memiliki nomor telfon sekuriti atau kepolisian.*
- Delay the caller. The more the caller talks, the more chance there is of obtaining useful information. *Ulur waktu si penelefon. Perbanyak pembicaraan di telfon, semakin lama berbicara semakin banyak informasi yang di dapat.*
- Try to elicit as much information as possible. *Usahakan mendapatkan informasi sebanyak-banyaknya*
- Note any specific characteristics of the caller, e.g. sex, accent, speech (fast, soft, well-spoken, etc.), background noises (music, street noises, aircraft, etc.). *Buat catatan khusus mengenai karakteristik dari penelfon seperti jenis kelamin, aksen bahasa, cara berbicara dll), latar belakang suara (musik, bising jalan, pesawat dan lain sebagainya).*
- If caller hesitates for more than a few minute, ask another question. *Jika penelfon malu berbicara, ajukan pertanyaan lainnya.*

When caller hangs up: ***Jika penelfon menutup telfon***

- Do not hang up, keep the line open. *Jangan menutup telfon, pastikan tetap terhubung*
- Evacuate premises if there is only a short time until stated explosion time. *Evakuasi lokasi jika hanya memiliki waktu yang sedikit sampai ledakan terjadi.*

Suspicious object found: ***Jika menemukan benda mencurigakan;***

- Leave the object alone. **DO NOT** interferes with it in anyway. *Biarkan barang tersebut pada tempatnya, jangan mencoba melakukan apapun.*

- **DO NOT TOUCH JAR, OR MOVE THE OBJECT**. *JANGAN MENYENTUH ATAU MEMINDAHKAN BENDA TERSEBUT*
- **DO NOT** cover it with water, or put water on it. *Jangan menyiram benda tersebut dengan air*
- Inform the Security / Police. *Informasika sekuriti atau polisi*
- Open all doors and windows to minimize the blast damage. *Buka semua pintu dan jendela untuk mengurangi kerusakan akibat ledakan*
- If appropriate, have fire extinguisher ready. *Jika memungkinkan, siapkan Alat Pemadam Api*
- Evacuate the premises. *Tinggalkan lokasi tersebut*

Evacuation *Evakuasi*

When directed to leave the building: *Jika di perintahkan meninggalkan gedung;*

- Act quickly and quietly. *Lakukan dengan cepat dan tenang*
- Leave the building via exits as directed. *Tinggalkan gedung memalui pintu darurat atau sesuai arahan*
- Take personal belongings which are handy in work areas, but do not go to other parts of the building to collect them. *Bawa barang yang bisa di bawa, dan jangan mengambil barang lain di bagian dalam gedung yang lain*
- Assemble at a Muster Point those already defined. *Berkumpullah di tempat berkumpul yang sudah di tetapkan*

6.13 CIVIL DISTURBANCE PROCEDURE *PROSEDUR GANGGUAN SIPIL*

General *Secara Umum*

- Convey all information about potential civil disturbance that you detect to SERD Site Security Supervisor. *Kumpulkan semua informasi yang mengenai kemungkinan terjadinya gangguan sipil yang bisa terdeteksi di wilayah SERD kepada Supervisor security SERD*
- Stay away from problem areas. Return to SERD facilities or other safe places. *Menjauhlah dari wilayah yang bermasalah, kembali ke fasilitas SERD atau ke tempat aman lainnya.*
- Report the incident immediately to SERD Site Security Supervisor / ERT. *laporkan segera setiap terjadinya insiden kepada Supervisor sekuriti SERD*
- If you cannot contact SERD Site Security Supervisor, contact the nearest Police Station. *Jika anda tidak bisa menghubungi supervisor sekuriti SERD, laporkan segera ke kepolisian terdekat*

SERD Emergency Evacuation due to civil disturbance *Evakuasi Darurat Akibat Gangguan Sipil*

In case, there is a civil disturbance approaching Rantau Dedap Field. All employees and contractors have to evacuate in accordance with suggestion by the EMT and CMT in Jakarta. *Jika terjadi potensi gangguan sipil yang mengarah ke lokasi SERD, setiap karyawan dan kontraktor harus melakukan proses evakuasi sesuai arahan dari EMT dan CMT di Jakarta.*

The main Muster area is at Main office parking area (Lower terrace) or Camp Muster Point (Upper Terrace). *Tempat berkumpul terletak di Kantor lapangan di dekat tempat parkir (Area bawah) dan Tempat berkumpul Camp (Area atas).*

Following is the detail of evacuation due to civil disturbance: ***Dibawah ini detil evakuasi jika terjadi gangguan sipil***

Muster Point #1 : Main office parking area (in front of ex LCI office), *Kantor SERD di depan bekas kantor LCI (Area Parkir)*
Muster Point #2 : Camp area *Wilayah Camp*

For SERD Muster Point Location See Appendix 3. *Lihat lampiran 3 Tempat Berkumpul SERD*

Civil Disturbance *Gangguan Sipil*

Any one becoming aware of a civil disturbance is to. *Setiap orang yang mengetahui potensi gangguan sipil;*

1. Notify Security / ERT Member. *Segera melaporkan kepada sekuriti atau anggota tim tanggap darurat*
2. Depart the area quickly to a safe location. Do not confront those at the disturbance. *Segera meninggalkan area secepatnya ke tempat yang aman.*

6.14 HIGH PRESSURE AND BRINE RELEASE PROCEDURE. *TERLEPASNYA TEKANAN YANG TINGGI DAN BRINE*

Isolate Rupture or Deformation *Isolasi bagian yang pecah atau berubah*

Once the location and condition of the pipeline failure is identified, the line will be shut down as quickly as is practical. This shutdown will include the shut-in of the primary supply wells in the area or the re-routing of steam or brine around the failure. *Jika sudah di temukan lokasi atau kondisi terjadinya kerusakan atau bocoran, jalur pipa harus segera di tutup sesuai dengan aturan. Penutupan ini termasuk di dalamnya menutup sumber utama atau sumur untuk mencegah terlepasnya brine atau pressure.*

If conditions warrant, appropriate heavy equipment may be used to stabilize the pipeline or deflect the steam or brine flow away from valve or other sensitive areas. Although this situation is unlikely, the production and maintenance departments can supply considerable manpower and equipment should the need arise. *Jika kondisi menjamin, bisa menggunakan alat berat yang ada untuk menstabilkan jalur pipa, memindahkan semprotan, aliran brine menjauh dari valve dan area yang sensitif lainnya. Meskipun kejadian ini jarang terjadi, departemen produksi atau maintenance bisa menyediakan tenaga kerja dan peralatan.*

Evacuate Area *Evakuasi Lokasi*

Should a pipeline rupture or unsafe pipeline deformation occurs, Control Room/ Centre at SERD will be notified of the location and the nature of the problem and if any injuries are involved. The immediate area of the incident will be evacuated as quickly as possible and appropriate measures will be taken to keep unauthorized personnel from entering the area until the area is declared safe. *Jika terjadi pecahnya pipa atau berubahnya jalur pipa terjadi,*

Control room di SERD akan di beritahukan lokasi terjadinya kebocoran dan jika terjadi korban cidera. Harus segera meninggalkan lokasi terjadinya insiden dengan segera dan menjaga agar orang-orang yang tidak berkepentingan masuk ke area tersebut.

Inspection and Repair *Pemeriksaan dan Perbaikan*

No attempt at repairing the pipeline shall be made until the cause of the failure is known and documented. The Engineering Manager will approve any design changes necessitated due to the failure before the line is put back into service. *Jangan melakukan perbaikan jalur pipa yang bertekanan setelah memastikan jenis kerusakan dan mendokumentasikannya.*

Returning to Work *Kembali Bekerja*

All employees or contractors can return to work or enter the area only after ERT-L declares that it is safe to re-enter the area. *Semua karyawan dan kontraktor dapat kembali bekerja atau memasuki area kerja setelah mendapatkan ijin dari ERT-Leader*

6.15 CONFINED SPACE INCIDENT *INSIDEN RUANG TERBATAS*

General Information: *Informasi Umum*

A confined space is an area which is large enough for person to work but has a limited entrance and exit, and is not designed for continuous human occupancy. The common example of confined space facilities in SERD are separators and AFT, vessels, sumps, cellars and excavated grounds. *Ruang terbatas adalah suatu ruangan yang cukup besar untuk orang melakukan pekerjaannya, akan tetapi memiliki jalur masuk dan keluar yang terbatas dan tidak di peruntukan untuk orang melakukan pekerjaan secara terus menerus. Beberapa contoh jenis ruang terbatas yang ada di SERD antara lain; separator, AFT, tangki, kolam lumpur, cellar dan lokasi penggalian tanah.*

Caution: *Perhatian*

Confined spaces have inherent hazards, such as toxic and explosive gases, oxygen deficiency, entrapment and other mechanical hazards. Nobody is allowed to enter a confined space without the required permit. *Ruangan terbatas memiliki beberapa karakteristik bahaya, antara lain; gas beracun dan mudah meledak, kekurangan oksigen, terjebak dan bahaya mekanis. Tidak seorangpun di ijinkan memasuki ruang terbatas tanpa membuat ijin yang sesuai.*

First Responder: *Pertolongan Pertama*

- Conduct initial assessment of the situation. *Lakukan pemeriksaan situasi dan kondisi*
- Notify immediately your supervisor and/or safety/security supervisors. *Beritahukan supervisor atau safety atau supervisor sekurity.*
- Prohibit any other personnel to get near the area until the site ERT arrived. *Larang personil lain mendekat ke lokasi sampai tim tanggap darurat lokasi tiba di tempat.*

ERT-L: *Pemimpin Tim Tanggap Darurat*

- Implement the Incident Command System (ICS). *Terapkan Sistem Komando Insiden*
- Activate the Emergency Management Team (EMT) if needed. *Jika di butuhkan, segera aktifkan Tim Managemen jika di butuhkan.*

- Assess the incident and submit the initial preliminary report to EMT/CMT. *Lakukan penilaian insident dan segera laporkan laporan pertama insiden kepada tim EMT*

6.16 MEDICAL EMERGENCY CASE (MEDIVAC) *KASUS DARURAT MEDIS*

The Emergency Response Team Leader (ERT-L) Rantau Dedap is responsible to ensure that this procedure is established and implemented. *Pimpinan Tim Tanggap Darurat (ERT-L) Rantau Dedap bertanggung jawab untuk memastikan semua prosedur sudah ada dan di terapkan.*

Medical Team or First Aider, assisted by ERT-L, is the field executor of Medical Evacuation. *Tim medis atau First Aider, di bantu oleh ERT-L adalah penanganan lapangan jika terjadi kasus darurat medis*

The RD employees, contractors and visitors are responsible for this procedure implementation and pro-actively to take part on training and drill program. *Karyawan Rantau Dedap, kontraktor dan tamu bertanggung jawab atas di terapkannya prosedur ini dan pro-aktif dalam di lakukannya pelatihan dan uji coba*

6.16.1 Process *Proses*

First responder ***Orang yang pertama merespon***

- Assess situation; note all details of injury/illness. *Lakukan penilaian lokasi, catat semua rincian jenis cidera dan sakit*
- Notify anyone nearby, possibly to get help. *Beritahukan orang-orang yang terdekat, jika memungkinkan minta bantuan mereka.*
- Notify Site Base/ Control Room (radio group), SHE and/or nearest Security Post. *Beritahukan kantor lokasi/control room melalui radio, SHE dan atau pos sekuriti terdekat*

State: **“I HAVE A MEDICAL EMERGENCY“**
Katakan: “SAYA MENGALAMI DARURAT MEDIS”

- If qualified and safe, perform First Aid to victims. *Jika mampu dan aman, lakukan tindakan pertolongan pertama terhadap korban*
- Remain at scene until medical assistance arrives or the scene becomes safe. *Tetap berada di lokasi sampai bantuan medis datang dan lokasi sudah aman.*

Control Room / Site Base ***Kontrol Room / Kantor Lokasi***

- Record all necessary information: *Catat semua jenis informasi:*
  - Name of first responder. *Nama penolong pertama*
  - Location of emergency (the nearest emergency “location sign”). *Lokasi terjadinya kondisi darurat atau ciri-ciri yang mudah di kenali di lokasi tersebut*
  - Number (and name, if possible) of people injured, *Jumlah korban, atau nama jika memungkinkan*
  - Determine, if possible, who the injured persons are employed by. *Beri gambaran orang yang cidera dan dari departemen mana atau kontraktor mana;*

  - Description of Conditions/Extent of injuries. *Jenis cidera yang di alami*
  - Advise if other hazards exist (i.e., fire, spill, H_2S). *Beri masukan dan gambaran bahaya dan jalur keluar masuk.*
- Inform KTPB or Deputy, as the Emergency Response Team leader (thru Operation/Maintenance Supervisor), about the emergency situation. *Menginformasikan kepada KTPB atau yang mewakili sebagai ERT-Leader, melalui supervisor yang bersangkutan mengenai situasi darurat yang sedang terjadi.*
- Keep monitoring on field emergency progress. *Tetap memantau kondisi darurat di lapangan.*

For details of flow process can be seen at **APPENDIX 7. Medical Emergency Evacuation Flowchart.** ***Untuk lebih jelasnya, lihat lampiran 7. Diagram alur kondisi darurat***

Training and Drills. ***Pelatihan dan Uji Coba***

All RD personnel on site including contractors assigned by RD Supervisors, will have appropriate training that, at minimum, and include: *Semua karyawan Supreme Rantau Dedap termasuk kontraktor harus mengikuti setiap pelatihan yang dilakukan;*

- How to act as the first responder on medical emergency. *Bagaimana menjadi perespon pertama dalam situasi darurat.*
- Reporting medical emergency incident. *Melaporkan terjadinya insiden darurat medis.*
- First Aid. *Pertolongan Pertama*
- Emergency Management Plan. *Manajemen Tanggap Darurat*

Advanced First Aid, Cardio Pulmonary Resuscitation (CPR), Victim Evacuation and Triage training will be provided to designated Rantau Dedap employees. *Pertolongan lanjutan, CPR, evakuasi korban dan pelatihan Triage akan di sediakan bagi karyawan yang bertugas di Rantau Dedap.*

Medical Evacuation drill shall be conducted at least once per year. *Pelatihan Evakuasi Medis harus di lakukan minimal sekali dalam satu tahun.*

The Emergency Response Team Leader (ERT-L) is responsible for implementation and organizing the training associated with this plan. *ERT-L bertanggung jawab atas di terapkannya dan mengatur training yang harus dilakukan sesuai dengan rencana ini.*

6.17 OTHER EMERGENCY CONDITION. *KONDISI DARURAT LAINNYA*

Emergency condition unlimited to mentioned condition above, SERD site also has to develop site specific emergency response guideline which separates by this procedure. *Kondisi darurat tidak hanya tercakup dalam penjabaran di atas saja, lokasi SERD juga harus mengembangkan Panduan Tanggap Darurat Khusus Lokasi yang terpisah dari prosedur ini.* But in case the emergency situation happened and the guideline not captured into this procedure, general emergency procedure can be applied. *Jika terjadi kondisi darurat dan panduan ini tidak termasuk di dalamnya, tanggap darurat secara umum bisa di terapkan.*

6.18 EMERGENCY CONTACT LIST. *DAFTAR KONTAK DARURAT*

A contact list of key SUPREME ENERGY personnel and other organizations to contact in the event of an emergency will be made available. The list will include after-hour contact numbers, cell phones numbers, etc. *Daftar Telfon karyawan kunci Supreme Energy dan organisasi lainnya harus tersedia. Daftar ini juga harus mencantumkan nomor telfon di luar jam kerja yang aktif.*

The list will include: *Daftar ini mencakup:*

- Senior SUPREME ENERGY RANTAU DEDAP personnel at Site. *Staff senior SERD*
- Paramedics / First Aid Team. *Tim Paramedis, Firts Aid*
- SUPREME ENERGY SHE Representative(s). *Perwakilan SHE*
- Emergency Services. *Layanan Darurat*
  - Fire *Pemadam Kebakaran*
  - Medical (Puskesmas, Clinic, Hospital) and Ambulance. *Puskesmas, klinik, rumah sakit dan ambulan.*
  - Police (District & Region). *Polsek dan Polres*
  - BPBD *Badan Penanggulangan Bencana Daerah*
- Statutory Government Agencies. *Lembaga Terkait seperti;*
  - ESDM/ EBTKE. *ESDM/EBTKE*
  - KLH, *KLH*
  - Other related Government Agencies. *Kantor pemerintahan lainnya*
- Local Community Leader / Traditional Leaders. *Pimpinan desa dan kecamatan setempat*

A copy of the SERD emergency contact list (**see Appendix 1**) will be held at the security guardhouse house and in the Site SHE Procedures. It will be revised and updated on a six monthly interval, or as appropriate, to account for changes in personnel, etc. *Daftar nama dan nomor telfon SERD dapat di lihat pada lampiran q, dan akan di tempatkan di pos sekuriti dan Prosedur SHE lokasi. Daftar tersebut akan di revisi dan di perbaharui setiap 6 bulan sekali untuk mengetahui jika terjadi pergantian atau perubahan personil.*

6.19 CALL OUT AND NOTIFICATION. *PENCABUTAN PEMBERITAHUAN*

Supreme Energy Rantau Dedap has developed a recommended Incident Notification and Activation Process (see Figure 4 and 5). Notifications/ Call Out procedure can be for information purposes alone, or they can result in the activation of a Site Emergency Response Team (ERT), Supreme Energy Emergency Management Team (EMT), and/or the Installation EMT – Crisis Management Team (CMT). *SERD telah mengembangkan diagram alur pelaporan insiden dan proses aktivasi (Gambar 4 dan 5). Pemberitahuan dan pencabutan kembali hanya sebagai proses informasi tersendiri, atau terjadi jika di aktifkannya tim tanggap darurat (ERT), SE EMT, serta CMT.*

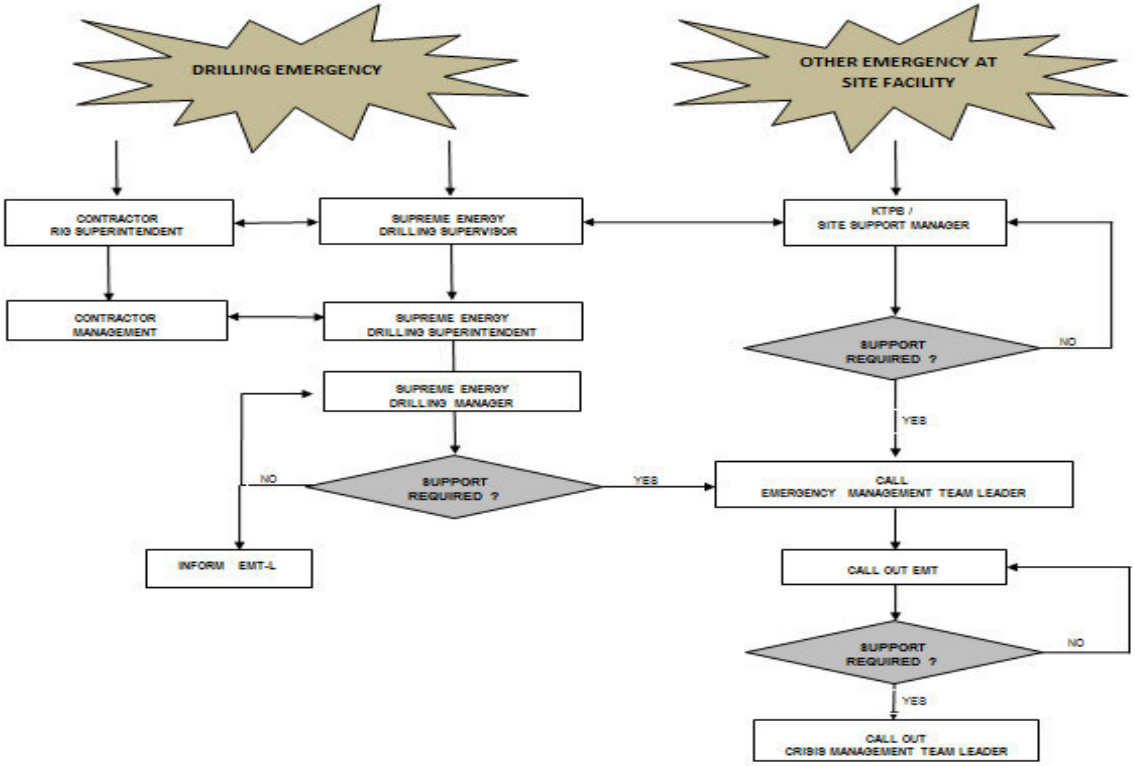


Figure 4. Emergency Call Out Procedure ***Prosedur Pencabutan Status Darurat***

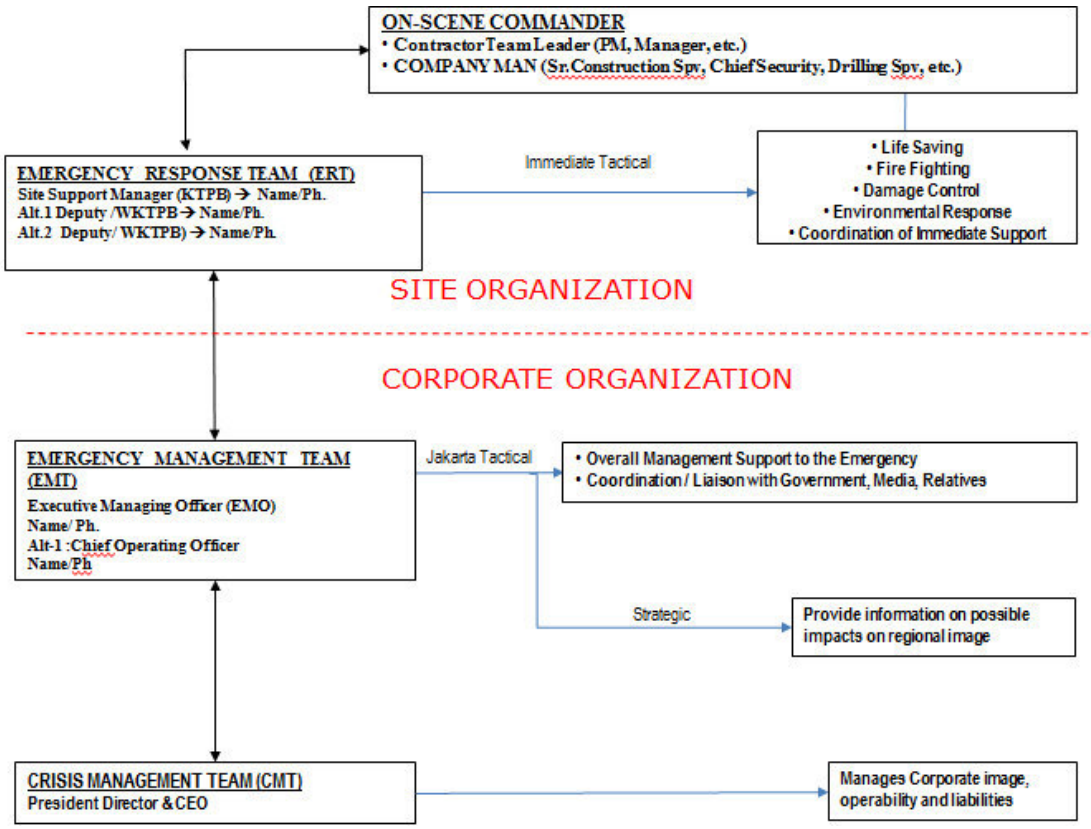


Figure 5. Sample of SERD Emergency Response Flowchart. ***Diagram Alur Tanggap Darurat SERD***

6.20 TRAINING *PELATIHAN*

Training requirements are based on the duties and functions to be performed by each responder who participates or is expected to participate in emergency response activities. All SERD personnel involved in emergency response field operations shall have a minimum of awareness training. *Diperlukannya pelatihan berdasarkan tugas fungsi kerja yang di lakukan oleh masing-masing pekerja yang di harapkan mengikuti aktifitas tanggap darurat. Setiap karyawan atau kontraktor, minimal telah mengikuti sesi pelatihan pengetahuan.*

All levels of responders shall be trained concerning the facility or area of operations Emergency Response Plan. This training shall be given initially, annually, and/or when the responsibilities or designated actions under the Emergency Response Plan change and when the Emergency Response Plan is changed. *Setiap level responder harus mendapatkan pelatihan yang berkaitan dengan Rencana Tanggap Darurat Operasi, apabila terjadi perubahan dalam rencana tanggap darurat*

Administrative staff and support contract employees shall have awareness skills and knowledge about the following: *Staff administrasi dan karyawan kontrak khusus harus memiliki pengetahuan dan keahlian dibawah ini;*

- An understanding of what hazardous substances are, and the risks associated with them in an incident. *Pemahaman mengenai bahan berbahaya dan resikonya jika terjadi insiden*
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present. *Pemahaman mengenai kondisi darurat yang akan terjadi akibat bahan yang berbahaya*

- The ability to recognize the presence of hazardous material in an emergency. *Kemampuan untuk mengenali keberadaan bahan berbahaya jika terjadi kondisi darurat.*
- An understanding of the role of first responders in the Emergency Response Plan including site security and control. *Memahani aturan sebagai perespon utama dalam rencana tanggap darurat di lokasi termasuk di dalamnya pengontrolan dan sekuriti.*

All Company department employees and contractors shall have the skills and knowledge about the following: *Setiap karyawan departemen dan kontraktor harus memiliki keahlian dan pengetahuan mengenai hal-hal berikut;*

- Knowledge of the basic hazards and risk assessment techniques. *Pengetahuan dasar mengenai bahaya dan penilaian risiko*
- Knowledge of how to select and use proper personal protective equipment provided to Operations level responders. *Pengetahuan memilih dan menggunakan Alat Pelindung Diri yang tersedia*
- An understanding of basic hazardous materials terms. *Pemahaman mengenai bahan-bahan berbahaya*
- Knowledge of how to perform basic control, containment, and confinement operations within the capabilities of the resources and personal protective equipment available. *Pengetahuan untuk melakukan kontrol dasar, penampungan dan pengendalian operasi di sesuaikan dengan kemampuan, sumber daya serta alat pelindung yang tersedia.*
- Know how to implement basic decontamination procedures. *Mengetahui proses prosedur dekontaminasi*
- An understanding of the relevant standard operating and termination procedures. *Memahami standar yang terkait dengan pengoperasian dan pemberhentian.*

Safety, Health, and Environmental (SHE) support personnel, Operations and Project Supervisors shall have the skills and knowledge about the following: *Personil SHE, operasi dan supervisor project harus memiliki pengetahuan seperti di bawah ini;*

- Knowledge of how to implement the facility's Emergency Response Plan. *Pengetahuan untuk menerapkan rencana tanggap darurat fasilitas*
- Knowledge of the classification, identification, and verification of known and unknown substances by using field survey instruments and equipment. *Pengetahuan mengenai klasifikasi, identifikasi dan verifikasi bahan-bahan yang di gunakan untuk instrumen lapangan dan perlatannya.*
- Knowledge of how to function within an assigned role in the Incident Control System. *Pengetahuan bagaimana menggunakan fungsi tanggung jawab yang di berikan dalam proses kontrol insiden.*
- An understanding of basic chemical and toxicological terminology and behavior. *Mengetahui dasar-dasar kimia dan toksikologi*
- Knowledge of how to select and use proper specialized chemical personal protective equipment provided to Technician responders. *Pengetahuan bagaimana memilih dan menggunakan APD khusus bahan kimia yang tersedia untuk di gunakan oleh pe-respon pertama.*

- An understanding hazard and risk assessment techniques. *Memahami identifikasi bahaya dan tehnik penilaian risiko.*
- Knowledge of how to perform advanced control, containment, and confinement operations within the capabilities of the resources and personal protective equipment available. *Mengetahui bagaimana melakukan tindakan lanjutan dalam mengontrol, menyimpan dan membatasi sistem operasi di sesuaikan dengan sumber daya yang ada dan alat pelindung diri yang tersedia.*
- An understanding of how to implement decontamination procedures. *Memahami proses dekontaminasi material*
- An understanding of termination procedures. *Memahami proses me-non-aktifkan paralatan.*

Safety, Health, and Environmental (SHE) personnel shall have the skills and knowledge about the following: *SHE personnel harus memiliki kemampuan dan pengetahuan mengenai hal-hal berikut dibawah ini:*

- An understanding of classification, identification, and verification of known and unknown substances by using field survey instruments and equipment. *Memahami klasifikasi, identifikasi dan verifikasi materian yang di gunakan oleh alat instrumen lapangan dan peralatan lainnya.*
- Knowledge of how to select and use proper specialized chemical personal protective equipment provided to Specialist responders. *Pengetahuan bagaimana memilih dan menggunakan APD yang tepat yang harus tersedia bagi tim penanganan khusus*.
- An understanding of in-depth hazard and risk assessment techniques. *Pemahaman lebih dalam mengenai bahaya dan tehnik penilaian risiko.*
- Knowledge of how to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available. *Pengetahuan mengenai bagaimana untuk melakukan kontrol khusus, menampung dan atau pembatasan operasi di sesuaikan dengan sumber daya yang ada.*
- Knowledge of how to determine and implement decontamination procedures. *Pengetahuan untuk menentukan dan menerapkan prosedur proses dekontaminasi.*
- The ability to develop a site safety, health, and control plan. *Memiliki kemampuan untuk membuat rencana kontrol safety dan health.*
- An understanding of chemical, radiological, and toxicological terminology and behavior. *Pemahaman mengenai bahan kimiam radiologi dan terminologi toksikologi serta sifatnya.*

ERT-L such as Site Support Manager or Manager of Operations or Project's Site Construction Manager or Technical Head of Geothermal (KTPB) should have the skills and knowledge level equivalent to the SHE personnel plus the following: *ERT-L seperti SSM atau Manajer Operasi atau KTPB harus memiliki kemampuan dan pengetahuan selevel dengan personil SHE, ditambah dengan hal-hal sebagai berikut:*

- The ability to implement the Incident Command System. *Kemampuan menerapkan Sistem kontrol insiden*.
- Knowledge of how to implement the facility or area of operation Emergency Response Procedure. *Pengetahuan untuk menerapkan prosedur tanggap darurat operasi*.

- Knowledge of the Procedures and Response Teams of appropriate local and national governmental agencies. *Pengetahuan mengenai prosedur dan tim tanggap darurat berskala lokal dan nasional.*
- Knowledge and understanding of the hazards and risks associated with personnel working in chemical protective clothing. *Pengetahuan dan pemahaman mengenai bahaya, dan risiko yang berhubungan dengan personil yang bekerja dengan bahan kimia dan pakaian pelindungnya.*
- Knowledge and understanding of the importance of decontamination procedures. *Pengetahuan dan pemahaman mengenai pentingnya prosedur dekontaminasi.*

Operations and Maintenance personnel shall be given an initial briefing at the facility or area of operation before their participation in emergency response operations. This briefing shall include training in the following: *Personil operasion dan maintenance harus mendapatkan pengarahan di lokasi mengenai sistem operasi sebelum di libatkan dalam tim tanggap darurat operasi. Pengarahan ini harus mencakup didalamnya antara lain;*

- Wearing appropriate personal protective equipment. *Cara menggunakan APD yang sesuai dengan baik.*
- The chemical hazards involved. *Bahaya dari bahan kimia yang di gunakan*
- The duties to be performed. *Tugas yang harus di jalankan*

Regular drills shall be conducted and documented to ensure the continued effectiveness of the Emergency Response Procedure. Properly documented and critiqued drills may serve as annual training. *Latihan rutin harus di lakukan dan di dokumentasikan untuk memastikan efektifitas dari prosedur tanggap darurat tersebut. Pendokumentasian yang baik serta pelatihan bisa di anggap sebagai pelatihan*.

4. APPENDIX. *LAMPIRAN*

APPENDIX 1 : SERD Emergency Contact List & ICS

APPENDIX 2 : General Site Emergency Evacuation Layout Plan

APPENDIX 3 : Evacuation Plan Talang Pisang Basecamp

APPENDIX 4 : Evacuation Plan WP-B

APPENDIX 5 : Evacuation Plan WP-C

APPENDIX 6 : Evacuation Plan WP-I

APPENDIX 7 : Medical Emergency Evacuation Flowchart

APPENDIX 1. SERD EMERGENCY CONTACT LIST

EMERGENCY COMMAND CENTER

JAKARTA EMERGENCY RESPONSE		PHONE / FAX
Emergency Command Center **Board Room Supreme Energy** **Menara Sentraya, 23rd Floor** **Jl. Iskandarsyah Raya No. 1A, Kebayoran Baru** **Jakarta 12160 - Indonesia** **Phone : +62-21-27882222 (Hunting)** **Fax : +62-21-27882333**	• Direct line 1 • Direct line 2 • Direct line 3 Direct Line Extension • Receptionist • Direct Fax • Email	**021-2934 2101** **021-2934 2102** **021-2934 2103** **021-29342130** **021. 27882333** **Emergency-response@supreme-energy.com**
SITE EMERGENCY RESPONSE		**PHONE / FAX / RADIO**
Command Center Administration Building Office **Dusun Talang Pisang** **Desa Tunggul bute** **Kecamatan Kota Agung** **Kabupaten Lahat** **WAC 03 CH 1+700**	Direct Line Radio Base Station	021 – 27882222 Ext; 2131 or 2132 (direct line) Radio Channel “Emergency” (Channel 5)
	Site Support Manager & KTPB Frank M Tungka	0812-878820164 Radio Channel “Emergency” or “Project”
	WKTPB Erwin Guminda Abdi Manurung	08128935813 085220303708 Radio Channel “Emergency” or “Project”
	Jaga Nusantara Security Coordinator Aan Sunardi Ismail	081255785738 081279109110 Radio Channel “Emergency” or “General”
	Construction & Maintenance Ridha Mulia Erwin Guminda Abdi Manurung Guntur Hadiansyah	08117517717 08128935813 085220303708 081268004045 Radio Channel “Project”
	SCM Barlian	082186804621 085384530505 Radio Channel “Project”
	Relation & Site Support Goerrilah Tan	08131977311
	Sub Surface Prayudha Budi N	08112549797 Radio Channel “Sub-Surface”
	Mechanical Engineer Chaerudin	081383049081 Radio Channel “Project”
	Site SHE Reps Dian Amali Rifqi Alfaizi	081312019695 081318762475 Radio Channel “SHE”

LOCAL AUTHORITIES, HOSPITAL & MEDICAL ASSISTANCE

LOCAL AUTHORITIES / AGENCIES			
Bupati Lahat	H. Saifudin Aswari Riva'i, SE	0811-xxxxxxx	TBA
Kodim Lahat	Letkol. Srihartono (Dandim)	0813-88445688	
Polres Lahat	AKBP. Rantau (Kapolsres)	0822-77777796	Jl. Bhayangkara I, Lahat
Polsek Kota Agung	H. Lukman N (Kapolsek)	0812-73722555	
Camat Kota Agung	H. Haris	0813-73783925	
Koramil Kota Agung	Mulyadi (Danramil)	0852-54560576	
Bupati Muara Enim	H. Muzakir Sai Sohar	0811-xxxxxxx	TBA
Kodim Muara Enim	Letkol. Jamaludin (Dandim)	0813-67074578	
Polres Muara Enim	AKBP Hendra (Kapolres)	0731-321507 0822-82221996	
Koramil Semendo Darat Ulu	Haris (Danramil)	0813-79827327	
Polsek Semendo Darat Ulu	Nusirman (Kapolsek)	0812-23744270	
Camat Semendo Darat Ulu	Tasman	0821-80903497	
Walikota Pagar Alam	dr. Hj. Ida Fitriati	0811-xxxxxxx	TBA
Koramil Pagar Alam	Kapt. Darno (Danramil)	0813-73898292	
Polres Pagar Alam	AKBP. Panudi (Kapolres)	0813-341981996	
Distamben (Mines and Energy Office) – South Sumatera	H. Robert Heri (Kadis)	0817-03332925	
	Marwan Saragih (Kabid LPE)	0813-67757289	
	Mulyadi (Kasie EBT)	0852-67008382	
Dinas LH (Environmental Office) – South Sumatera	Lukitariati	0811-xxxxxxx	TBA
Dinas Kehutanan (Forestry Office) - South Sumatera	Hendro	0813-67129864	
HOSPITAL			
Puskesmas Kota Agung			
Puskesmas Pajar Bulan	Dr. Dwi	0819-3338-9078	Jl. H Djabar, Fajar Bulan
RSUD DR. HM Rabain, Muara Enim		0734-424345 0734-422738	Jl. S. M. Badarudin II no.49, Muara Enim
	Dr. Yogi - Surgeon	0852-2000-5126	
RS PTBA Muara Enim	Ka.RS PTBA	0734-451096 ext.5008 / 5014	Jl. Raya Bukit Asam, Tanjung Enim
	Dr. Nirwan Firdaus, S.Pb	0734-451096, ext. 5018 or 5035	
RSUD Lahat		0731-322081 0731-321785	Jl. Mayor Ruslan I no.28, Lahat
RSUD Palembang		0711-354088	Jl. Jend. Sudirman, Palembang
	Dr. Yusril Hrn - Surgeon	0812-7865-7842	
RS Charitas Palembang		0711- 350426 0711-353374	

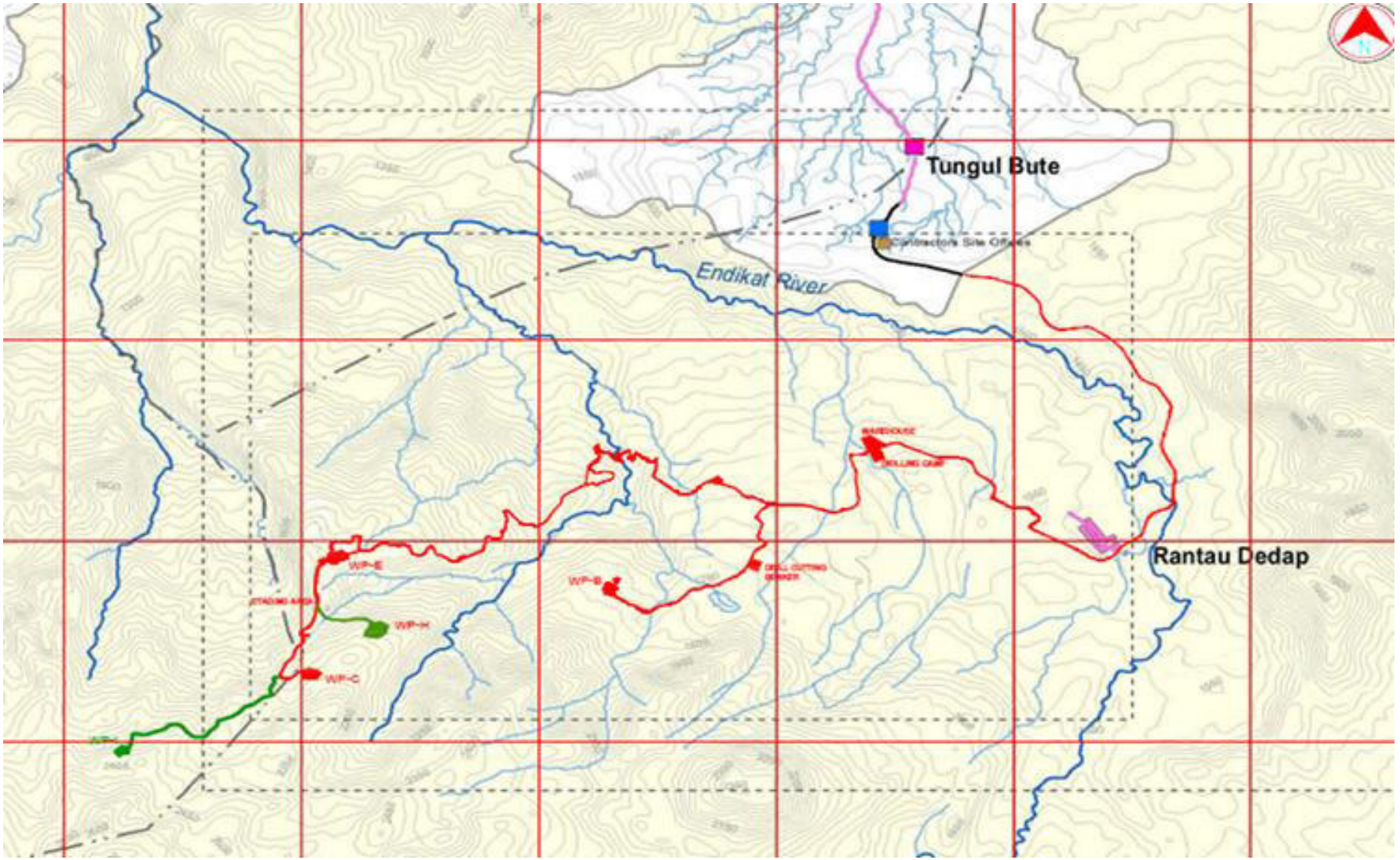
RS Pusri Palembang		0711-712024 ext 3374	
ER National Medical Concierge		0877-7575 021-3106886	
DAMKAR / BPBD			
BPBD Lahat		0731-323830 0731-323113	
BPBD Muara Enim		0734-424447 0734-421029	
HOTEL			
Hotel Grand Zuri, Lahat		0812-7534-2691	
Hotel Aston, Palembang		0711-388999	
Hotel Novotel, Palembang		0711- 369777	

LOCAL COMMUNITY LEADERS (KADES and KADUS)

LOCAL COMMUNITY LEADERS RANTAU DEDAP		PHONE / FAX
Kades Kota Agung	Selpis	TBA
Kades Sukarami	Ujang	TBA
Kades Lawang Agung	Syafril	TBA
Kades Karang Endah	Imam Pribadi (Badi)	085366914542
Kades Tunggul Bute	Jutawan	TBA
Kadus Talang Pisang	TBA	TBA
Kadus Rantau Dedap	Markun	TBA

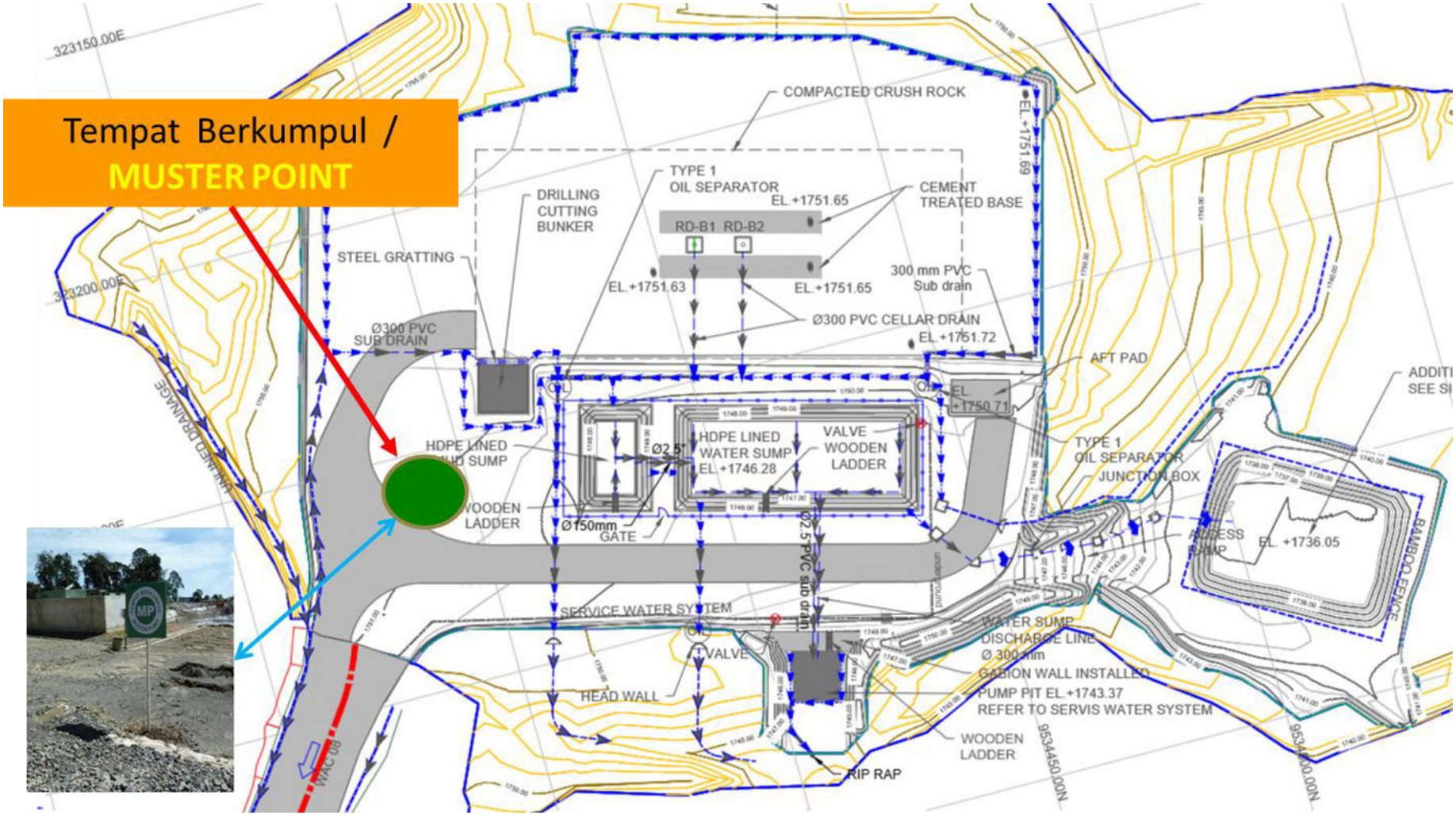
Note :
This emergency contact number shall be updated frequently if any changed of organization structure and personnel

APPENDIX 2. GENERAL SERD EMERGENCY LAYOUT PLAN

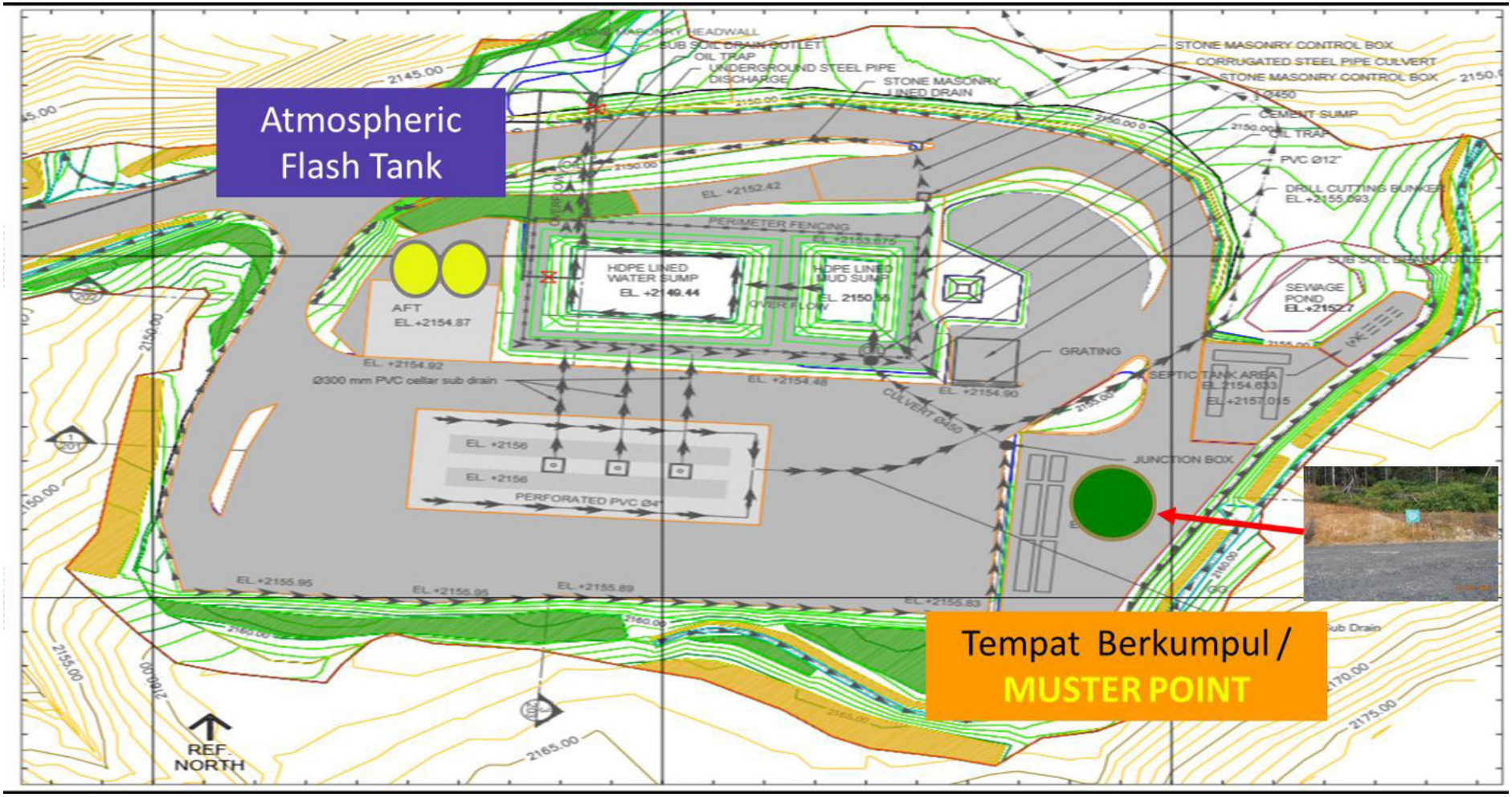


APPENDIX 3. SITE OFFICE EVACUATION LAYOUT PLAN

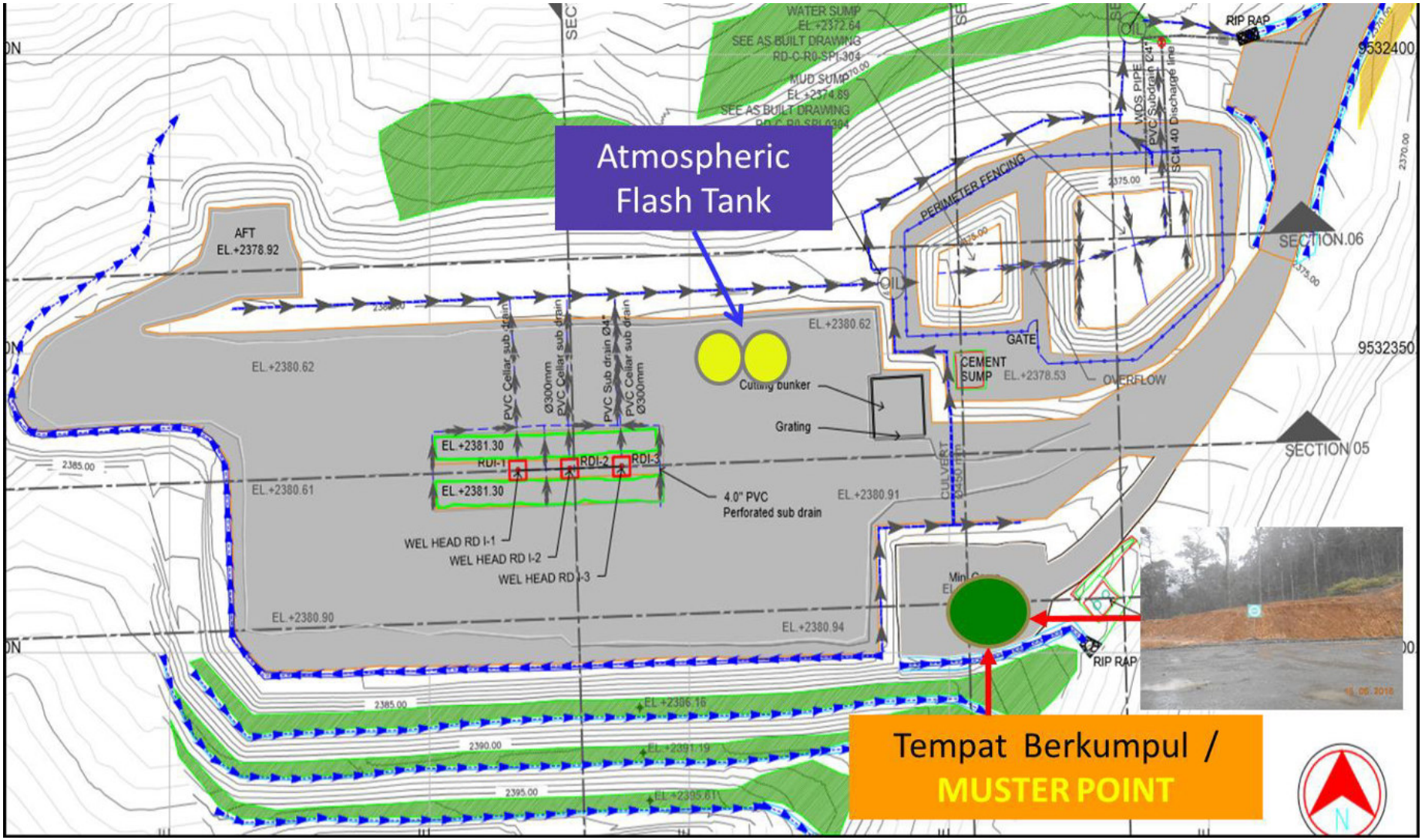
APPENDIX 4. WELL PAD-B EVACUATION LAYOUT PLAN



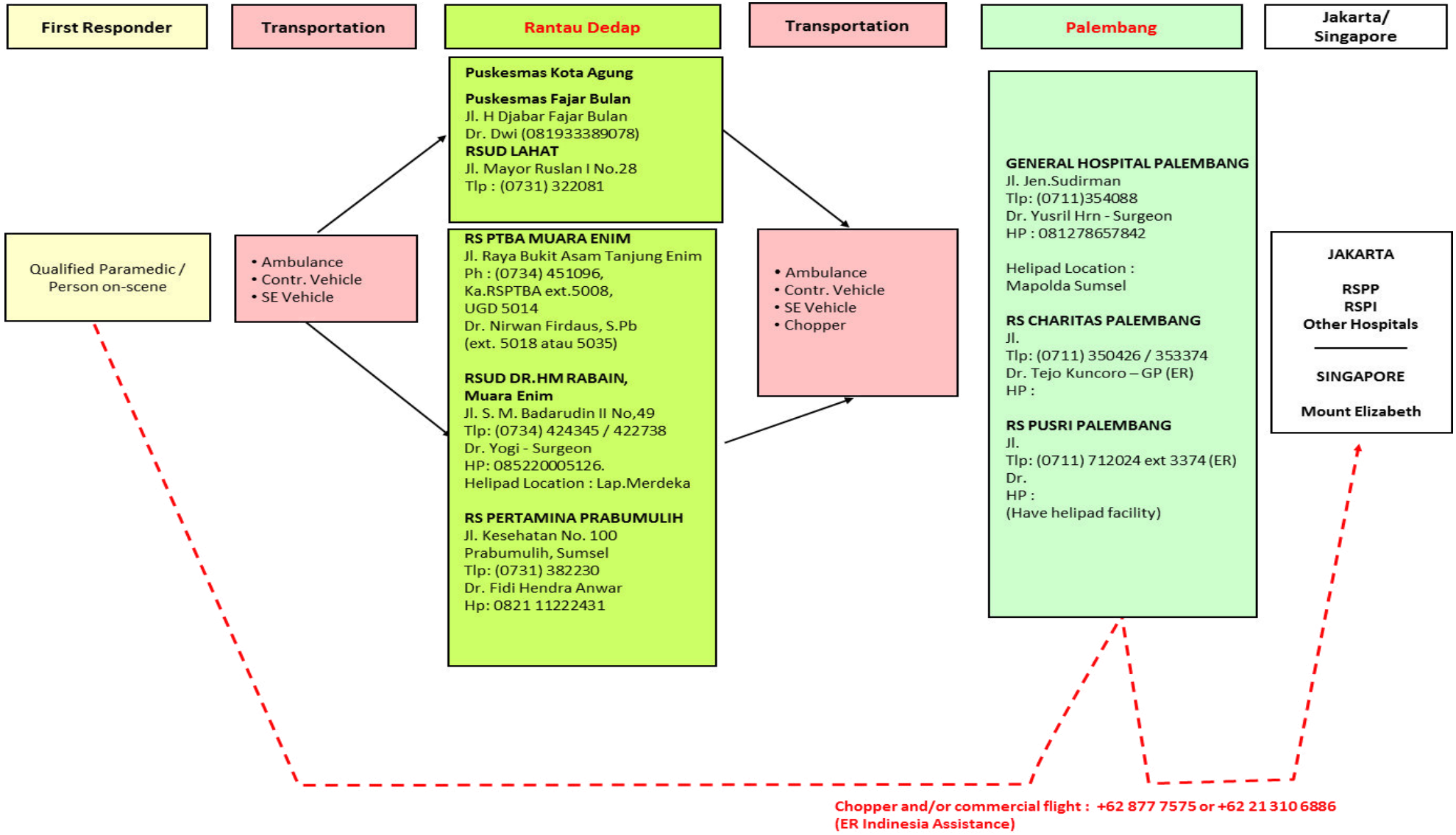
APPENDIX 5. WELL PAD-C EVACUATION LAYOUT PLAN



APPENDIX 6. WELL PAD-I EVACUATION LAYOUT PLAN



APPENDIX 7. MEDICAL EMERGENCY EVACUATION FLOWCHART



supremeenergy	SAFETY HEALTH AND ENVIRONMENT WORK RULES	PROCEDURE
CORPORATE	HYDROGEN SULPHIDE (H_2S)	SE-MSHE-WOR-PRO-0007 Revision: 0

APPROVAL

	POSITION	NAME	SIGNATURE	DATE
Prepared by	SHE Engineer	Erwin Patrisa Floris		
Reviewed By	Sr. SHE Manager	M. Arief Tarunaprawira		
Approved By	VP Relations & SHE	Priyandaru Effendi		**17/05/2013**

REVISION HISTORY

REV	DATE	BY	REVIEWED	APPROVED	DESCRIPTION
0					For Use

TABLE OF CONTENTS

1 INTRODUCTION

Hydrogen Sulfide (H_2S) is a highly toxic chemical compound that is heavier than air in its gaseous form. It is a colorless and a sweetish taste, flammable gas with a pungent odor at low concentrations. Despite its characteristic odor, sense of smell cannot be relied upon to detect the presence of H_2S because the gas rapidly deadens the sense of smell by paralyzing the olfactory nerve. Exposures to H_2S at concentrations as low as 600 parts per million (ppm) can cause death in a matter of minutes due to paralysis of the respiratory system.

H_2S is a naturally occurring gas that arises from the decomposition of organic material (animal or vegetable) by microorganisms (bacteria). It is found in regions of geothermal activity, occurring around sulphur springs and lakes. It is also found in areas of oil and gas exploitation, in foul sewers and in cesspools (stagnant water) as found in swamps. Along with carbon dioxide it is one of the main hazardous components of the non-condensable gas phase associated with geothermal steam. It is possess a significant risk to personnel working in and around geothermal power generation facilities.

2 CHARACTERISTICS

H_2S is a colorless, flammable gas that may be liquefied under pressure. It can occur in a variety of oil and gas exploration and production operations, and has the following properties:

- **Toxicity.** H_2S is extremely toxic. The lethal concentration is 600-700 ppm
- **Heavier than Air.** H_2S is approximately 19 percent heavier than air (vapor density = 1.19). It tends to accumulate in low or enclosed places such as pits, trenches, enclosed well bays and cellars, sumps, the tops of floating roof tanks, buildings, shale shakers and portable containers. However, H_2S mixed with natural gas may form a lighter-than-air mixture.
- **Soluble in Liquids.** High concentrations of H_2S may be present in crude oil, molten sulfur, tank and pit-bottom sludge, produced water, etc., all which may release H_2S when agitated, heated, or depressurized.
- **Odor.** At very low concentrations, H_2S has a characteristic odor suggestive of rotten eggs. However, smell cannot be used as an adequate means of detecting its presence because hydrocarbon vapors in asphalt, banker fuel and some crude oils can mask the rotten egg odor.

  Additionally, at higher concentrations (>100 ppm), H_2S deadens the sense of smell, leading people to believe falsely that no H_2S is present. Consequently, sense of smell is not dependable as a means of detection.
- **Flammable.** H_2S is an extremely flammable gas with a wide range of flammability (4.3-45.5% by volume in air). When burned, H_2S forms sulfur dioxide (SO_2), which is a colorless, highly toxic and very pungent gas.
- **Highly Corrosive.** H_2S accelerates corrosion, producing a general loss of metal and strength, deformation, and cracks. Copper alloys corrode rapidly in H_2S service.
- **Reactive.** In an oxygen-deficient atmosphere, iron and steel will react with H_2S to form iron sulfide deposits on the surface of the metal. Some iron sulfides (known as pyrophoric iron sulfide) are unstable and when exposed

to air will undergo a rapid chemical reaction creating an ignition source that should be considered during equipment shutdowns.

3 HEALTH EFFECTS/TOXICITY

3.1 HEALTH EFFECTS AND EXPOSURE STANDARDS

- Depending on the concentration, the effects of acute exposure to H_2S may range from detecting a recognizable odor to causing death.
- H_2S oxidizes rapidly in the body, and there are normally no permanent aftereffects from acute exposure if the victim is rescued promptly and resuscitated before experiencing prolonged oxygen deprivation.
- Symptoms from repeated exposures to low concentrations usually disappear after not being exposed for a period of time.
- There is little or no data on the effects of chronic exposure; however, frequent exposures to low concentrations that do not produce effects initially may eventually lead to irritation of the eyes, nose, and throat.

3.2 GENERAL PROPERTIES

- colorless gas having an offensive odor (rotten eggs) and sweetish taste
- slightly heavier than air with a specific gravity of 1.19 (air = 1.00@15^{o}C)
- highly flammable (auto ignition temperature of 500^{o}F)
- explosive limits in air 4.3% (lower explosive limit) to 46% (upper explosive limit). (43,000 ppm to 460,000 ppm volume/volume)
- moderately soluble in water and alcohol
- boiling point - 60.2^{o}C
- flash point - 83.8^{o}C
- corrosive to metals and to a lesser extent masonry and concrete materials
- toxic to humans.

3.3 HUMAN HEALTH EFFECTS AND TOXICITY

Table 7.1-A (ppm) and Table 7.1-B (**mg/m^3**) presents human health effects for exposures to a range of H_2S concentrations, based on ANSI Standard No.237-2-1972.

Table 7.1-A: Human Health Effects for Exposures to a Range of H_2S Concentrations (ppm)

H2S in Air By Volume		Health Effects
ppm	%	
0.13	0.000013	Minimum concentration, where H_2S gas can be smell
4.60	0.00046	Easy to detect, the odor can be smell
10	0.001	A small percentage of workers may experience eye irritation. Threshold Limit Value (TLV) for an eight-hour Time-Weighted Average (TWA) recommended by the American Conference of Governmental Industrial Hygienists (ACGIH).
20 - 27	0.002 - 0.0027	Strong unpleasant odor, could not be tolerate and possible stay in the area in 15 minutes (STEL).
100	0.01	Deadens sense of smell in 2 to 5 minutes (IDLH) and may cause coughing, and burning of the eyes and respiratory tract.
200	0.02	Immediate loss of sense of smell. Marked eye and respiratory irritation.
300	0.03	The maximum concentration from which one could escape within 30 minutes without a respirator and without experiencing escape-impairing or irreversible health effects. Generally recognized Immediately Dangerous to Life and Health (IDLH) concentration.
500	0.05	Respiratory disturbances in 2 to 15 minutes. Dizziness, collapse, and unconsciousness after half to one hour
700	0.07	Loss of consciousness quickly. Breathing will stop and death will result if not rescued promptly.
1000	0.10	Immediate unconsciousness. Death in three to five minutes.

Note: 1% = 10.000 ppm

H_2S causes nuisance from its unpleasant odor at concentrations well below those that cause physical health effects. However, continuous exposure to H_2S reduces a person's sensitivity to it.

Table 7.1-B: Human Health Effects for Exposures to a Range of H_2S Concentrations (mg/m^3)

H_2S Concentrations mg/m^3	Health Effects
0.0002 - 0.002	Level of human detection (depending on H_2S purity).
0.016 - 0.02	Smells like rotten eggs.
15	Eye irritation.
70	Permanent eye damage.
225	Paralyses olfactory so odor is no longer a warning signal of the presence of H_2S.
400	Over stimulates the central nervous system, causing rapid breathing, followed by cessation of breathing, convulsions and unconsciousness.
1400	It is lethal (Immediate unconsciousness, death in three to five minutes)

Little information is available on the effect of chronic exposure to H_2S. Adverse effects have been observed in occupationally exposed populations at average concentrations of 15 to $30mg/m^3$. Symptoms include restlessness, lack of vigor, and frequent illness. In occupationally exposed groups, at concentration of $30mg/m^3$ or more, 70% complained of fatigue, somnolence, headache, irritability, poor memory, anxiety, dizziness, and eye irritation.

4 OCCUPATIONAL HEALTH EXPOSURE STANDARDS

Occupational health exposure standards for individuals exposed in the workplace to various chemical compounds have been set by a range of governmental organizations. These standards are commonly referred to as Threshold Limit Values or Workplace Exposure Standards.

The American Conference of Governmental Industrial Hygienists (ACGIH) *Threshold Limit Values and Biological Exposure Indices* is regarded by most western international occupational safety and health organizations as the benchmark document for the setting of occupational health standards for worker exposure to chemicals.

The 1993-94 Threshold Limit Values for hydrogen sulfide are as follows:

- TLV-TWA 10ppm ($14mg/m^3$)
- TLV-STEL 15ppm ($21mg/m^3$)

The TLV (Threshold Limit Value - Time Weighted Average) is defined as the time weighted average concentration for a normal eight hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day after day, without adverse health effects.

The TLV-STEL (Threshold Limit Value - Short Term Exposure Limit) is defined as the 15 minute time average which should not be exceeded at any time during the work day even if the eight hour time-weighted average is within the TLV-TWA. Exposures for the TLV-STEL should not be longer than 15-minutes and should not be repeated more than four times per day, with at least 60-minutes between successive exposures to the STEL.

A worker will be required to wear respiratory protective equipment for exposures to hydrogen sulfide concentrations exceeding 50% of the published Threshold Limit Values.

Steps in determining what respiratory protection is required to protect against a known H_2S concentration are presented in **Table 7.2**.

Table 7.2: Hierarchy of Respiratory Protection For H_2S Exposure

Concentration	Activity	Respiratory Equipment Requirements
10 ppm	• Entry for work or rescue, < 8 hours only • Emergency egress	Respiratory protection not required but personal exposures should be continuously monitored whenever H2S hazards may exist.
> 10 ppm, < 300 ppm	• Entry is permitted for work or rescue • Emergency egress	• Self-contained, positive-pressure breathing equipment (SCBA) • Positive-pressure/pressure-demand air-line breathing equipment coupled with a SCBA rated for a minimum of fifteen minutes • Positive-pressure/pressure-demand air line breathing equipment with an auxiliary self-contained air supply rated for a minimum of 5 minutes if the air-line is connected to a source of breathing air
> 300 ppm	No entry except for rescue • Emergency egress	Requires the same equipment as above (>10 ppm) but also with a second SCBA-equipped person nearby in a safe area for rescue.
Note: Gas mask canister-type or air purifying (negative pressure) respirators are not recommended for controlling exposures to H2S.		

5 H_2S HAZARDOUS ACTIVITY

5.1 HAZARDOUS AREAS

There are areas/activities at each site where hydrogen sulfide could be encountered at a concentration that poses a significant hazard to workers, for which safe work practices and permit-to-work systems will need to be rigorously adhered to.

These areas should be identified as part of the sites hazard identification and assessment process, and recorded on the Site's Hazard Identification Register (see **SE-MSHE-WOR-PRO-0023 Hazard Identification, Assessment and Control**).

- process vessels and related equipment, condensers, cooling towers and boilers
- spaces and areas located below ground such as basements, hot well pits, wellhead cellars, vaults, excavated ditches and holes
- enclosed spaces such as steam-lines, sewers, sewer manholes, wet wells, and vessels
- areas near to lines, rock mufflers, silencers, etc. which vent gases which may contain hydrogen sulfide
- any ditch or opened topped vault where air circulation is poor so hydrogen sulfide can accumulate at the bottom.

5.2 DESIGNATED HAZARDOUS AREAS

Areas where there is potential for hydrogen sulfide to accumulate and pose a risk to worker safety will be identified at the site.

Personnel trained in working in areas where hydrogen sulfide may be present and holding the appropriate permits-to-work, shall be authorized to undertake work in the hydrogen sulfide Designated Hazardous Areas. Specific actions with regard to work control and for entering a confined space are detailed in **SE-MSHE-WOR-PRO-0018** ***Permit to Work Systems*** and **SE-MSHE-WOR-PRO-0013** ***Confined Space*****.**

5.3 WORK IN AND AROUND AN AREA WITH HYDROGEN SULFIDE PRESENT

The following general safe work practices should be observed by all personnel working in an area where a hydrogen sulfide gas hazard may be present. Specific safe work practices shall be adhered to for work in Designated Hazardous areas.

- When approaching a job site, check for any obvious sources/signs/smells of hydrogen sulfide.
- Check the general condition flags, sign posted at the site:

RED	Condition III - extreme danger to life. H_2S has reached injurious levels (above 50ppm). Do not enter area (drilling).
GREEN	Safe to work/enter.
YELLOW	Condition I - caution, possible H_2S hazard.

- Condition II - moderate danger to life is indicated by the display of yellow/black format signs with the words ‘Danger’ and ‘Poison Gas’. This condition is when H_2S is 10 to 49ppm. Non-essential personnel shall proceed to Safe Briefing Areas.
- Identify the location of the nearest ‘Safe Briefing Areas’ which will be sign posted.
- Check the wind direction by observing the wind socks and streams which are located throughout the site. Wind socks should be checked on a regular basis

throughout the working shift, to ensure changes in wind direction are not overlooked.

- Remember H_2S is heavier than air, so avoid low lying areas. If an area or trench is suspected of containing H_2S gas, do not enter without following permit-to-work procedures. Gas testing must be performed before entering.
- Observe all warning signs at the site (as specified above).
- Do not attempt to enter any restricted Designated Hazardous Area without the appropriate authorization.
- Be aware of the location of emergency escape breathing apparatus (ELSA).
- In the event of an emergency, follow the site's excavation drills, which you must know.

Emergency Action:

- Should you encounter someone overcome by H_2S, **DO NOT ATTEMPT TO RESCUE THE PERSON.** Only persons wearing Self Contained Breathing Apparatus should enter the area.
- As quickly and as safely as you can, raise the alarm.
- Advise emergency personnel of the location of the incident and number of personnel involved.
- Let the personnel trained in emergency rescue etc. carry out the rescue.

5.4 SPECIFIC SITE WORK PRACTICES

For all personnel entering Designated Hazardous Areas or equipment where hydrogen sulfide is a known potential hazard, the permit-to-work system shall be followed at all times.

For entry into confined spaces, the requirements of the confined space permit-to-work and entry permits shall be followed. These permits and the steps required in actioning them are detailed in **SE-MSHE-WOR-PRO-0018** ***Permit to Work Systems*** and **SE-MSHE-WOR-PRO-0013** ***Confined Space*****.**. Please refer to these sections.

6 HYDROGEN SULFIDE DETECTION/MONITORING

Hydrogen sulfide levels should be monitored in any work area that may reasonably be expected to exceed an atmospheric concentration of 5 ppm (one-half of the Threshold Limit Value). Two broad categories of monitoring devices available: fixed systems and portable units. There are three types of monitoring systems currently used to detect/monitor hydrogen sulfide concentrations.

6.1 FIXED MONITORING SYSTEM

This system is commonly used in a process or drilling environment and is used to detect leaks/failures from process equipment, e.g. condenser. The main features of the system are listed below.

- Fixed monitoring systems, which continuously measure the concentration of H_2S in an atmosphere, should be installed in facilities containing process equipment handling steam/gases or fluids containing H_2S when the locations are both an enclosed area (room, building, or space) and are inadequately ventilated. (Inadequately ventilated is defined as ventilation that is not sufficient to prevent the accumulation of H_2S in concentrations exceeding 10 ppm.)
- A number of electronic sensors are placed at strategic locations in the workplace.

- The sensors send an electronic signed to a master control system which, via a computer terminal or screen, displays the H_2S concentration recorded for each sensor.
- The H_2S concentration is usually measured as parts per million (ppm) and alarm points can be set, so when H_2S concentration exceed the Workplace Exposure Standard (10ppm), a Hi alarm is activated with a general evacuation alarm (Hi Hi) set when the H_2S concentration exceeds 20 ppm.

A single Hi indication will initiate a control room alarm and two Hi's or a single Hi Hi will initiate appropriate automatic shutdown of wells or production train, as appropriate.

Audio visual alarms will be installed in areas where fixed monitors are installed (wellheads, condenser area). The audio visual alarms will coincide with alarm signals generated by the fixed H_2S monitoring system. They will be distinct in sound and color from all other alarms at the site.

The drawback of such a system is that it is primarily designed to detect process leaks and covers only a small percentage of the workplace. The positioning of sensors is critical if one is to use such a system for personnel protection.

Note: In all instances, one should manually test the atmosphere using a personal H_2S monitor or personal gas detector prior to entry, to verify that the Fixed Monitor System reading is correct.

6.2 PERSONAL PORTABLE H_2S MONITOR

- Personal electronic monitors are small devices designed to fit in a shirt pocket or attach to a belt to provide personnel with monitoring and early warning of an H_2S release in their immediate work area
- Personal electronic monitors should be used when the atmospheric concentration of H_2S in a person's immediate work area could exceed 10 ppm and fixed monitoring systems are not installed or do not provide adequate coverage of the immediate area
- These units are electronic, using electrochemical cells and are usually hand-held or belt mounted.
- The measure H_2S concentrations continuously, providing a digital read out of the concentration in ppm.
- They are fitted with audible alarms which are activated when concentration exceed a predetermined action level, (usually TLV-TWA).

- Monitors should be held or worn as low as possible, definitely no higher than the waist.

6.3 PERSONAL DETECTORS

There are a number of personal detectors that can be used. These units are usually supplied with a hose extension which allows the base of wells, sumps, cellars, etc. to be tested without the testing personnel having to enter the potentially contaminated work area.

Portable H_2S Detectors use a battery-operated pump to pull air/gas samples to a sensor. They can be used with an extendable wand and hose to test an atmosphere without requiring a person to enter the area.

Portable H_2S detectors are generally used to test spaces for the presence of H_2S before conducting work in the area and to search out release sources.

Two common type of devices are listed below.

i) Colorimetric Tape Detector Units.

This unit takes a sample of gas, passes the gas onto a reaction chamber and, via a reaction mechanism, and produces a stain on a tape. The color and depth of the stain indicates the concentrations of H_2S.

These units are not suitable for high concentrations, as they are primarily used to measure low concentrations of H_2S in ambient air.

ii) Colorimetric Gas Tube Detectors.

This type of unit incorporates a pump, colorimetric detector fuse and a scale for reading of three concentrations of H_2S detector. There are a number of commercial types available, with the most common being Drager and Gastec.

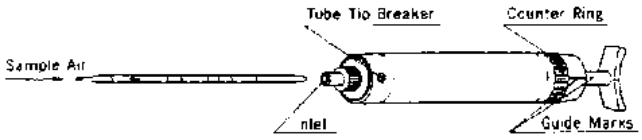


Figure 7.2 Typical Colorimetric Tube Gas Detector

6.4 PROCEDURE FOR USING COLORIMETRIC TUBE GAS DETECTOR

Set Up

The sampling and measurement procedure for the Gastec system is detailed below.

1. Break tips off a fresh detector tube by bending each tube end in the tube tip breaker of the pump.
2. Insert tube securely into pump inlet with arrow on tube pointing toward pump.

To Sample Air

3. Make certain pump handle is all the way in. Align guide marks on pump body and handle.
4. Pull handle out to desired stroke volume. Handle can be locked on either ½ pump stroke (50ml) or one pump stroke (100ml).
5. Read concentration at the interface of stained-to-unstained reagent when staining stops. Unlock handle by making ¼ turn and return it to starting position.
6. Where more pump strokes are indicated in the instruction sheet included in each box of tubes, take additional sample by repeating pump strokes without removing tube.

An extension hose can be used to detect gas concentration in vessels and sumps etc. Measurements shall be carried out by only persons trained in the correct use of the gas detector.

7 MAINTENANCE AND CALIBRATION OF H_2S MONITORS

Due to the hazard poised by equipment failure, all H_2S monitoring equipment will be inspected on a regular basis for defects and corrosion. This work will be undertaken by SUPREME ENERGY equipment technicians.

Fixed and portable monitors will be routinely calibrated and maintained in accordance with manufacturer's requirements to ensure that H_2S monitoring and alarm systems continue to operate properly.

Calibration records will be kept to show when the unit was calibrated, by whom and the results of the tests. Only trained personnel should calibrate, test, and conduct maintenance on monitoring equipment. Since known concentrations of H_2S are utilized to calibrate monitoring equipment, such work should only be carried out in well-ventilated areas.

8 VENTILATION

Hydrogen sulfide is one to two times heavier than air and does not readily dissipate. It tends to accumulate in low lying areas and confined spaces. As stated earlier, these areas must be tested for H_2S concentrations before entering.

If areas are found to contain H_2S, forced ventilation can be applied to remove the accumulated gas and make the areas safe for entering. See **SE-MSHE-WOR-PRO-0013** *Confined Space* for further details.

9 TRAINING

All employees subject to H_2S exposure in their work areas should receive appropriate initial and periodic training that addresses the following,
(general requirements refer to Chapter 3, Section …: Safety Training):

- Hazards, characteristics, and properties of H_2S
- Sources of H_2S
- Proper use of H_2S detection methods used in the workplace
- Symptoms of H_2S exposure

- Rescue techniques and first aid to victims of H_2S exposure
- Proper use and maintenance of breathing equipment including fit testing and demonstrating proficiency by donning equipment.
- Workplace practices and relevant maintenance procedures that have been established to protect personnel from the hazards of H_2S
- Wind direction awareness and routes of egress
- Recognition of and proper response to warning signals or alarms and procedures to follow during an alarm condition
- Locations of emergency assembly areas and shelter-in-place locations
- Employees should also participate in periodic drills to practice using breathing apparatus and rescuing workers. Contractors should be required to provide training to their employees unless the company agrees to do so.

H_2S trained personnel should receive badge-sized plastic laminated certificates that should be shown when entering H_2S restricted areas.

INSTRUKSI PRESIDEN REPUBLIK INDONESIA

NOMOR 6 TAHUN 2017

TENTANG

PENUNDAAN DAN PENYEMPURNAAN TATA KELOLA PEMBERIAN IZIN BARU HUTAN ALAM PRIMER DAN LAHAN GAMBUT

PRESIDEN REPUBLIK INDONESIA,

Dalam rangka menyelesaikan berbagai upaya untuk penyempurnaan tata kelola hutan dan lahan gambut yang tengah berlangsung dalam rangka upaya penurunan emisi dari dan deforestasi degradasi hutan dan untuk perbaikan tata kelola hutan alam primer dan lahan gambut sampai dengan tersedianya akses kesiapan penataan pengelolaan hutan, dengan ini menginstruksikan:

Kepada:

1. Menteri Lingkungan Hidup dan Kehutanan;
2. Menteri Dalam Negeri;
3. Menteri Agraria dan Tata Ruang/Kepala Badan Pertanahan Nasional;
4. Menteri Pertanian;
5. Menteri Pekerjaan Umum dan Perumahan Rakyat;
6. Sekretaris Kabinet;
7. Kepala Badan Informasi Geospasial;
8. para gubernur; dan
9. para bupati/walikota.

Untuk:

KESATU:

Melanjutkan penundaan pemberian izin baru hutan alam primer dan lahan gambut yang berada di hutan konservasi, hutan lindung, hutan produksi yang meliputi hutan produksi terbatas, hutan produksi biasa atau tetap, dan hutan produksi yang dapat dikonversi, serta areal penggunaan lain sebagaimana tercantum dalam Peta Indikatif Penundaan Pemberian Izin Baru.

KEDUA:

Penundaan pemberian izin baru sebagaimana dimaksud dalam Diktum KESATU berlaku bagi penggunaan kawasan hutan alam primer dan lahan gambut, dengan pengecualian diberikan pada:

a. permohonan yang telah mendapat persetujuan prinsip dari Menteri Kehutanan sebelum Instruksi Presiden Nomor 10 Tahun 2011 tentang Penundaan Pemberian Izin Baru dan Penyempurnaan Tata Kelola Hutan Alam Primer dan Lahan Gambut;
b. pelaksanaan pembangunan nasional yang bersifat vital, yaitu panas bumi, minyak dan gas bumi, ketenagalistrikan, dan lahan untuk program kedaulatan pangan nasional antara lain padi, tebu, jagung, sagu, dan kedelai;
c. perpanjangan izin pemanfaatan hutan dan/atau penggunaan kawasan hutan yang telah ada sepanjang izin di bidang usahanya masih berlaku; dan
d. restorasi ekosistem.

KETIGA:

Khusus kepada:

1. Menteri Lingkungan Hidup dan Kehutanan:
   a. Melanjutkan penundaan terhadap penerbitan izin baru hutan alam primer dan lahan gambut yang berada di hutan konservasi, hutan lindung, dan hutan produksi yang meliputi hutan produksi terbatas, hutan produksi biasa atau tetap, dan hutan produksi yang dapat dikonversi berdasarkan Peta Indikatif Penundaan Pemberian Izin Baru;
   b. Melanjutkan penyempurnaan kebijakan tata kelola bagi izin pinjam pakai dan izin usaha pemanfaatan hasil hutan kayu pada hutan alam;
   c. Melanjutkan peningkatan efektivitas pengelolaan lahan kritis dengan memperhatikan kebijakan tata kelola hutan dan lahan gambut yang baik antara lain melalui restorasi ekosistem;
   d. Melakukan revisi terhadap Peta Indikatif Penundaan Pemberian Izin Baru pada kawasan hutan setiap 6 (enam) bulan sekali;
   e. Menetapkan Peta Indikatif Penundaan Pemberian Izin Baru hutan alam primer dan lahan gambut pada kawasan hutan yang telah direvisi; dan
   f. Melakukan upaya pengurangan emisi dari hutan alam primer dan lahan gambut melalui perbaikan tata kelola pada kegiatan usaha yang diusulkan pada hutan alam primer dan lahan gambut yang ditetapkan pada Peta Indikatif Penundaan Pemberian Izin Baru melalui izin lingkungan.
2. Menteri Dalam Negeri:

   Melakukan pembinaan dan pengawasan terhadap gubernur dan bupati/wali kota dalam pelaksanaan Instruksi Presiden ini.
3. Menteri Agraria dan Tata Ruang/Kepala Badan Pertanahan Nasional:
   a. Melanjutkan penundaan terhadap penerbitan hak-hak atas tanah antara lain hak guna usaha dan hak pakai pada areal penggunaan lain berdasarkan Peta Indikatif Penundaan Pemberian Izin Baru; dan
   b. Melakukan percepatan konsolidasi Peta Indikatif Penundaan Pemberian Izin Baru ke dalam revisi peta tata ruang wilayah sebagai bagian dari pembenahan tata kelola penggunaan lahan melalui kerja sama dengan gubernur dan bupati/walikota.
4. Menteri Pertanian:
   a. Melakukan penyempurnaan kebijakan tata kelola bagi izin pertanian dan izin usaha perkebunan;
   b. Melakukan peningkatan efektivitas pengelolaan lahan kritis dengan memperhatikan kebijakan tata kelola hutan dan lahan gambut yang baik antara lain melalui restorasi ekosistem; dan
   c. Melakukan penundaan terhadap penerbitan izin pertanian dan izin usaha perkebunan baru pada kawasan hutan, lahan gambut, dan areal penggunaan lain berdasarkan Peta Indikatif Penundaan Pemberian Izin Baru.
5. Menteri Pekerjaan Umum dan Perumahan Rakyat:

   Melakukan penundaan pembangunan atau konstruksi bangunan pada areal penggunaan lain berdasarkan Peta Indikatif Penundaan Pemberian Izin Baru, kecuali telah berkoordinasi dengan Menteri Lingkungan Hidup dan Kehutanan, gubernur, dan bupati/wali kota sebelum berlakunya Instruksi Presiden ini.
6. Kepala Badan Informasi Geospasial:

   Melakukan validasi dan integrasi peta tutupan hutan dan lahan gambut sesuai Peta Indikatif Penundaan Pemberian Izin Baru pada kawasan hutan dan areal penggunaan lain setiap 6 (enam) bulan sekali melalui kerja sama dengan Menteri Lingkungan Hidup dan Kehutanan serta Menteri

Agraria dan Tata Ruang/Kepala Badan Pertanahan Nasional.

7. Para gubernur:

   Melakukan penundaan penerbitan rekomendasi dan izin lokasi baru pada kawasan hutan, lahan gambut, dan areal penggunaan lain berdasarkan Peta Indikatif Penundaan Pemberian Izin Baru.

8. Para bupati/walikota:

   Melakukan penundaan penerbitan rekomendasi dan izin lokasi baru pada kawasan hutan, lahan gambut, dan areal penggunaan lain berdasarkan Peta Indikatif Penundaan Pemberian Izin Baru.

KEEMPAT:

Peta Indikatif Penundaan Pemberian Izin Baru pada areal penggunaan lain yang merupakan hasil validasi dan integrasi sebagaimana dimaksud dalam Diktum KETIGA angka 6 ditetapkan oleh Menteri Lingkungan Hidup dan Kehutanan.

KELIMA:

Perpanjangan penundaan pemberian izin baru, rekomendasi, dan pemberian izin lokasi sebagaimana dimaksud dalam Diktum KETIGA dilakukan selama 2 (dua) tahun terhitung sejak Instruksi Presiden ini dikeluarkan.

KEENAM:

Pelaksanaan Instruksi Presiden ini dilaporkan oleh Menteri Lingkungan Hidup dan Kehutanan kepada Presiden setiap 6 (enam) bulan atau sewaktu-waktu apabila diperlukan.

KETUJUH:

Sekretaris Kabinet melakukan pemantauan pelaksanaan Instruksi Presiden ini dan melaporkan hasilnya kepada Presiden.

KEDELAPAN:

Melaksanakan Instruksi Presiden ini dengan penuh tanggung jawab.

Instruksi Presiden ini mulai berlaku pada tanggal dikeluarkan.

Dikeluarkan Di Jakarta,

Pada Tanggal 17 Juli 2017

PRESIDEN REPUBLIK INDONESIA,

Ttd.

JOKO WIDODO

supremeenergy

PT. SE ML/RD/RB

Employee Grievance Policy & Procedure

October 2016

ML/RB/RD-SSE/HR-PLY-010 –Rev 0

Issued for Use

Internal Use Only

Approval

SE Muara Laboh & SE Rajabasa

	Position	Name	Signature	Date
Prepared By	HR Manager	Hardinald Aslam		13/10-16
Reviewed By	Exec. Mgt Officer	Radikal Utama		20/10 2016
Approved By	COO	Victor Van Der Mast		8/11/16
	CFO	Akio Kajimoto		16/11/2016
	CEO	Supramu Santosa		20/12/2016

SE Rantau Dedap

	Position	Name	Signature	Date
Prepared By	HR Manager	Hardinald Aslam		13/10-16
Reviewed By	Exec. Mgt Officer	Radikal Utama		20/10-2016
Approved By	COO	Victor Van Der Mast		8/11/16
	CFO	Hisahiro Takeuchi		15/11/2016
	CEO	Supramu Santosa		20/12/2016

Revision History

Rev	Date	Prepared By	Approved By	Issued For

P.T. Supreme Energy [ML/RD/RB]
Menara Sentraya 23rd FL, Jl. Iskandarsyah Raya No. 1A
Kebayoran Baru, Jakarta 12160, Indonesia

P +62-21-2788-2222
F +62-21-2788-2333
W www.supreme-energy.com

The Supreme Energy project companies - PT Supreme Energy Muara Laboh, PT Supreme Energy Rajabasa and PT Supreme Energy Rantau Dedap are independent companies developing geothermal projects in Sumatra, Indonesia. Based on the agreement of the shareholders of the individual project companies, the Supreme Energy companies are managed in an integrated way in order to maximize the synergies in terms of use of resources and organization of their core and supporting processes. Consequently, important portions of the documentation body developed and applied within each company (manuals, procedures, description of processes, guidelines etc.) are common to all project companies. The applicability of each document to one or several project companies is reflected in the reference of each document.

Any document applicable to PT Supreme Energy Muara Laboh contains the characters "ML" in the document reference.

Any document applicable to the PT Supreme Energy Rajabasa project company contains the characters "RB" in the document reference.

Any document applicable to the PT Supreme Energy Rantau Dedap project company contains the characters "RD" in the document reference.

If a document applies to all three Supreme Energy companies, the term "Supreme Energy" may refer to any and all of these companies.

Within each document, for any reference to the project company, the term "Company" will be used. This term will refer to those companies the names of which are referred to in the document reference. The term Project refers to the project developed by the Company.

Contents

1. Purpose of This Document

The purpose of this document is to provide guidance on employee grievancesettlement in line with the applicable Laws and Company Regulations.

2. General

In order to develop a conducive and positive working environment, the Company considers it is essential that all Company's regulations should be implemented correctly and fairly. Employees therefore have the right to have fair treatment pursuant to the existing and prevailing Company regulations.

Grievances are the source for restlessness and if not taken care can cause discontent, frustration and furthermore labor dispute. To reduce incidents which would lead to labor disputes every efforts are made by Company that grievences brought up by employees are properly resolved. Basically any grievance from Employee is resolved in a fair manner and as soon as possible.

Meant as grievance is a disagreement or a misunderstanding on work condition or regulation applicable in Company.

Grievances are resolved by discussion using Company's regulation as the basis.

It is expected that, through proper handling, grievances brought up because of incorrect or untactful implementation and/or lack of understanding of regulation can be resolved by Company.

The expected results achieved in resolving grievances are :

1. Maintain good relation between Supervisor and Subordinate.
2. Avoid possible resentment.
3. Provide direct communication between Supervisor and Subordinate in settling work related matters.

Grievances are resolved with a goodwill from parties involved using Company's regulation as its basis.

3. Grievance Settlement Procedure

Prior to officially escalate any grievance or dispute, an employee may contact HR for consultation at the following numbers:

Officer Number : (021) 2788-2222 ext. 2033, 2032, 2035
Mobile Number : 0811-8040181 (HR Manager)

3.1. First Escalation

3.1.1. Escalation to Direct Supervisor

If an Employee has an issue with work related matters, such as safety, work equipment and facility, business ethics or feels treated unfair or contrary to the Company policy, the Employee may escalate the problem to their Direct Supervisor by filling up The Grievance form attached.

The supervisor must chair a discussion with the Employee to find out the real problem and gain mutually accepted solution.

When the solution has been gained, both parties must sign out the form to declare that the grievance has been closed. The form shall be submitted to HR for filing.

If the problem is not solved within 10 working days, the Direct Supervisor needs to escalate the issue to the respective Vice President and copy to Human Resources Manager (refer to Article 3.2.1)

3.1.2. Escalation to Independent Parties

If an Employee has an issue with work related matters, such as safety, work equipment and facility, business ethics or feels treated unfair or contrary to the Company policy, and the Employee feel uncomfortable to escalate the problem to their direct Supervisor, the Employee may filling up the Grievance Form and use one the following channels:

- Sending the form via email to Business Ethics Committee (if the problem is suspected relates to ethical issues)
- Sending the form via email to HR Manager
- Dropping the form in the grievance drop box in the office/site

The Company encourages that all Grievance Form are officially submitted with identity of the Employee, however anonymous escalation of the grievances is

acceptable as long as the reports are supported with valid facts or data and not based on rumours.

In case the report suspected related to violation of business ethics, HR will work together with Business Ethics committee on the actions to be taken. A proper investigation may be conducted if required. The process therefore may take longer than 10 working days. The Business Ethics Committee will then escalate the report and propose action to the Board of the Directors (BOD).

When the solution has been gained, the Employee must sign out the form to declare that the report has been closed. The form shall be submitted to HR for filing.

3.2. Second Escalation

If the problem cannot be settled by Employee's Direct Supervisor within 10 working days, the respective Vice President and Human Resources will be involved in the report. Meeting will be chaired with the purpose to find satisfactory settlement on the grievance, attended by the Employee, Direct Supervisor, representative from Human Resources and the Vice President.

When the solution has been gained, both parties must sign out the form to declare that the grievance has been closed. The form shall be submitted to HR for filing.

3.3. Third Escalation

If the grievance is still unsolved, the problem will be brought to Bipartite/Grievance Committee, to find the mutual acceptable solution for both parties.

The Bipartite/Grievance Committee consists of representatives of the Employees and the Company (Managers/Supervisors). The Committee will be formed regularly every two years.

3. Custodian

This procedure is developed and maintained by HR.

Original and amendment(s), if any, shall be kept and done by HR. Distributed copies may not be the most updated version, so please consult to HR for cross checking and confirmation.

Matters which are not stipulated in this document will be decided by the Board of Directors of the three companies upon consultation and discussion with HR.

4. Effective Date

This procedure will be in effect as of 1 November 2016 and valid otherwise revoke or revise by Human Resources.

Formulir Pengaduan Keluhan
(Grievance Escalation Form)

Nama/Name	:	
No Pekerja/Employee ID	:	
Departemen/Department	:	
Lokasi Kerja/Work Location	:	
Date	:	

1. Keluhan Pekerja / Concern of Employee

Laporan harus dilengkapi dengan data dan/atau fakta, sedapat mungkin tanpa opini pribadi dan fitnah
Report must be supported with data and/or facts and minimize personal opinion and rumours.

Tanda Tangan Pekerja /
Employee Signature:

2. Kesepakatan yang Dicapai / Resolution Gained

Tanda Tangan Pekerja
Employee Signature

Tanda Tangan Atasan
Direct Supervisor Signature

Tanggal / Date:

Tanggal / Date:

3. Keluhan Dibawa ke Otoritas Lebih Tinggi/Escalate to the Higher Authority

Tanda Tangan Pekerja
Employee Signature

Tanda Tangan VP/Business Ethics Committee
VP/Business Ethics Committee Signature

Tanggal / Date:

Tanggal / Date: