



**Environment, Social, Health and Safety (ESHS)
Management System (MS)**

[Enlace a Versión en Español](#)

**Health and Safety
Plan**

**Document Number:
02/HS/PJ/PN/003/A02**

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1.0 Introduction

The Health and Safety (HS) Plan describes PERU LNG S.R.L.'s program for ensuring workplace health and safety wherever PERU LNG S.R.L. operates. It identifies:

- The health and safety responsibilities of PERU LNG S.R.L. and contractor workers, and
- PERU LNG S.R.L.'s general workplace health and safety practices and procedures for conducting activities that presents a potential risk to worker health and safety.

The HS Plan is not a definitive guide to safe work practices and procedures wholly applicable under every circumstance or jurisdiction. Appropriate government regulations, contractor-specific work practices, company-specific work practices, and equipment manufacturer's instructions must be consulted and applied with due diligence.

Note: The references throughout this document to PERU LNG or PLNG means PERU LNG S.R.L. or any of its affiliates in which employees, contractors, or consultants perform their work.

2.0 Purpose

The purpose of the Health and Safety (HS) Plan is to provide all employees and contractors with a clear understanding of PLNG's workplace health and safety expectations.

PLNG is committed to providing a healthy and safe workplace by ensuring its workers:

- Understand and follow the best work practices, guidelines, and procedures necessary to complete their work safely,
- Comply with all company policies and government regulations,
- Are trained to recognize and control or eliminate workplace hazards,
- Wear and use the required personal protective equipment (PPE), and
- Report all incidents and unsafe conditions or acts to their supervisor.

All PLNG employees and contractors are expected to read their respective company HS Plans and apply the health and safety best practices and principles contained therein when performing their daily work activities.

3.0 Application

The HS Plan is a core business practice and applies to all employees and contractors, including all affiliated companies and joint ventures in which PLNG or one of its subsidiaries owns a majority interest or is the operator.

In instances where PLNG is not the operator, PLNG and its subsidiaries will only participate in those joint ventures with companies whose operations recognize and protect the environment and the health and safety of all workers in a manner that is consistent with PLNG's HS policies.

The HS Plan includes essential and discretionary language that conforms to PLNG's HS Governance. Sentences with essential requirements contain the verb "**must**", "**shall**" or "**will**", which

means the requirement is mandatory. Words used to imply or suggest discretionary requirements include “**recommend**”, “**might**”, “**should**”, or “**may**”.

4.0 PLNG Health and Safety Policy (reduced to fit page)



HEALTH & SAFETY POLICY

At PERU LNG S.R.L. we are committed to conducting business safely and continually improving our policies and practices for the future. Our aim is to create a workplace culture to integrate safety into all activities, everyday. We strive to maintain our corporate goal of an accident-free workplace and will continue our pursuit of excellence in health and safety through the following practices.

HEALTH AND SAFETY MANAGEMENT

We will:

- Conduct our operations in a manner that protects the health and safety of our employees and the public.
- Require employees from all levels of the organization to participate in our Health and Safety Program and both individually and collectively take responsibility to work safely.
- Provide our employees with the required job-related training and safety-related education.
- Seek compliance with all applicable legal and regulatory requirements.
- Investigate incidents and accidents to determine root cause.
- Ensure contractors that work for PERU LNG S.R.L. are committed to conducting all business operations safely and in compliance with all applicable laws and regulations.

CONTINUOUS IMPROVEMENT

We will:

- Employ regular audits to enhance successful accident prevention programs as well as to identify, if possible, areas for further improvement.
- Implement measures to minimize or eliminate all identified hazards, company-wide.
- Maintain safety statistics for both employees and contractors to track improvement.
- Annually review the overall Health and Safety Program to ensure its on-going effectiveness.

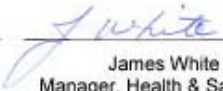
COMMUNICATION

We will:

- Ensure all workers, whether contractors or employees, are aware of their right to refuse work that they determine to be unsafe.
- Inform employees and contractors of potential safety hazards on a continual basis.
- Encourage all workers to report immediately and, where appropriate, remediate any unsafe work conditions or activities.
- Openly communicate hazards and emergency response plans throughout the company to affected stakeholders.
- Conduct general safety meetings and job-specific safety meetings as required.

26-Sep-06

Date



James White
Manager, Health & Safety for
Compañía Operadora de
LNG del Perú S.A.C.,
the operator of
PERU LNG S.R.L.



Barbara Bruce
General Manager

5.0 PLNG Environmental Policy (reduced to fit page)



ENVIRONMENTAL POLICY

At PERU LNG S.R.L. we are committed to protecting the environment in which we operate and take pride in conducting our business in a safe and responsible manner. We recognize and accept our responsibility to develop our resources with an awareness of the environmental, economic and social needs and expectations of stakeholders. Our commitment is embodied in the following statement of the company's environmental policy

ENVIRONMENTAL MANAGEMENT

We will:

- Integrate environmental integrity, social equity and economic viability into our business processes
- Provide staff with the resources to make environmentally sound decisions
- Comply fully with environmental legislation and regulations
- Carefully manage our use of natural resources and improve energy efficiency
- Assess the environmental sensitivity of lands, identify impacts and propose mitigation, where appropriate
- Conduct our operations in a manner intended to prevent pollution, conserve resources and deal responsibly with past environmental issues
- Minimize our overall land disturbance on new developments
- Ensure corporate preparedness with an effective emergency response program

CONTINUOUS IMPROVEMENT

We will:

- Promote innovative thinking in the development and implementation of new ideas relating to environmental integrity
- Measure our performance using comprehensive audits
- Establish environmental targets and objectives to improve our performance

COMMUNICATION

We will:

- Respond to the concerns and views of stakeholders in a timely and open fashion
- Engage interested parties, when necessary, to discuss our business operations and their relationship to affected communities and the environment
- Provide clear and candid environmental information about our products, services and operations to customers, employees, government agencies and the public, as appropriate.

26-Sep-06

Date



Juan Lince
Manager of Environmental &
Community Affairs for
Compañía Operadora de
LNG del Perú S.A.C.,
the operator of
PERU LNG S.R.L.



Barbara Bruce
General Manager

6.0 PLNG Community Relations Policy (reduced to fit page)



The Environmental, Social, Health and Safety policies are communicated to all PLNG employees and are available to contractors, visitors, and stakeholders. They are reviewed periodically to ensure that they remain relevant and appropriate to the company. Copies of the policies will be prominently displayed at the work site and will have the dated signatures of PLNG's executive management.

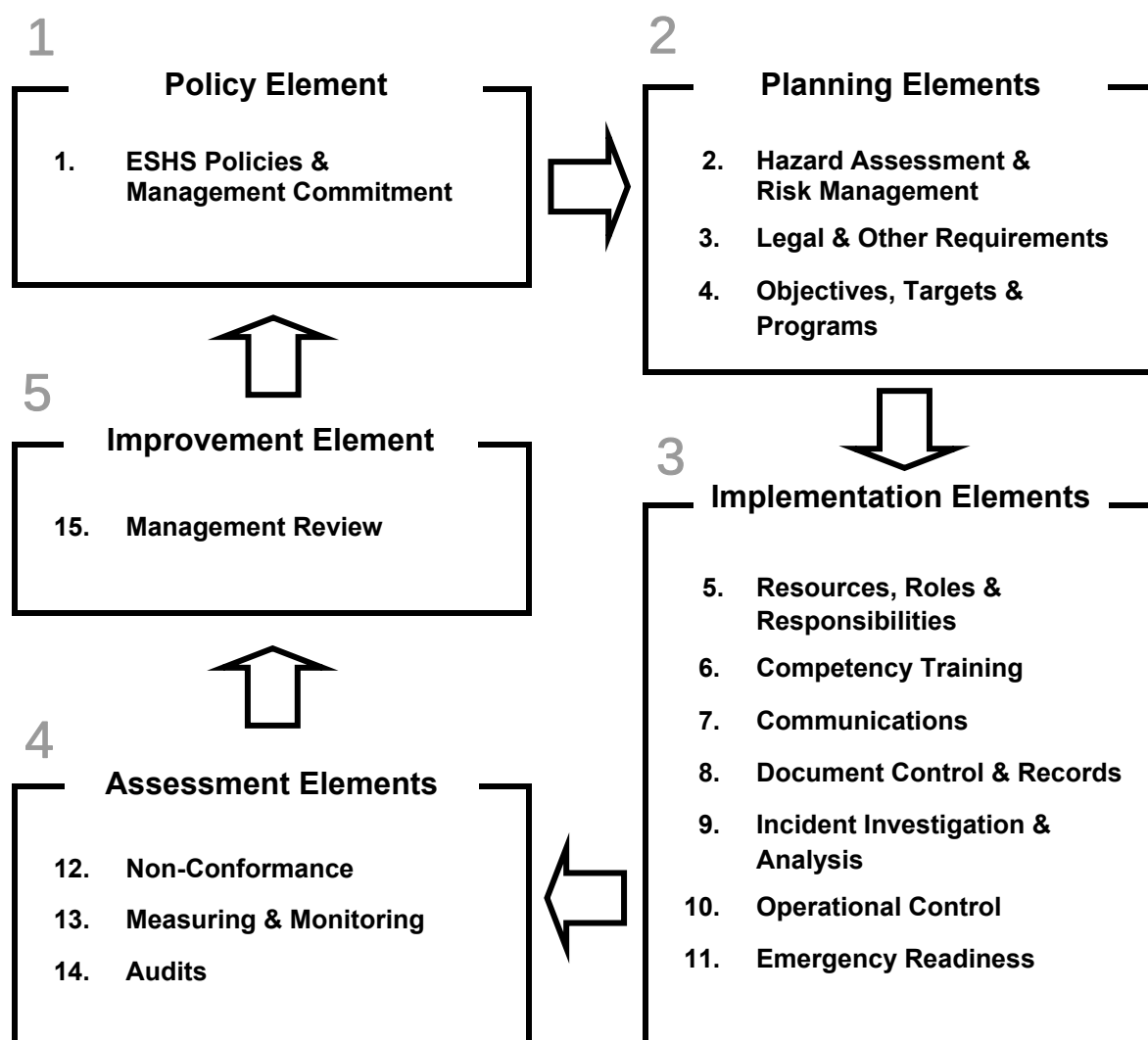
7.0 Reference Documents

The Health and Safety (HS) Plan is a core business practice which is referenced in Element 10 – Operational Control of PLNG's ESHS Management System, Document Number [01/GP/PJ/PY/001](#).

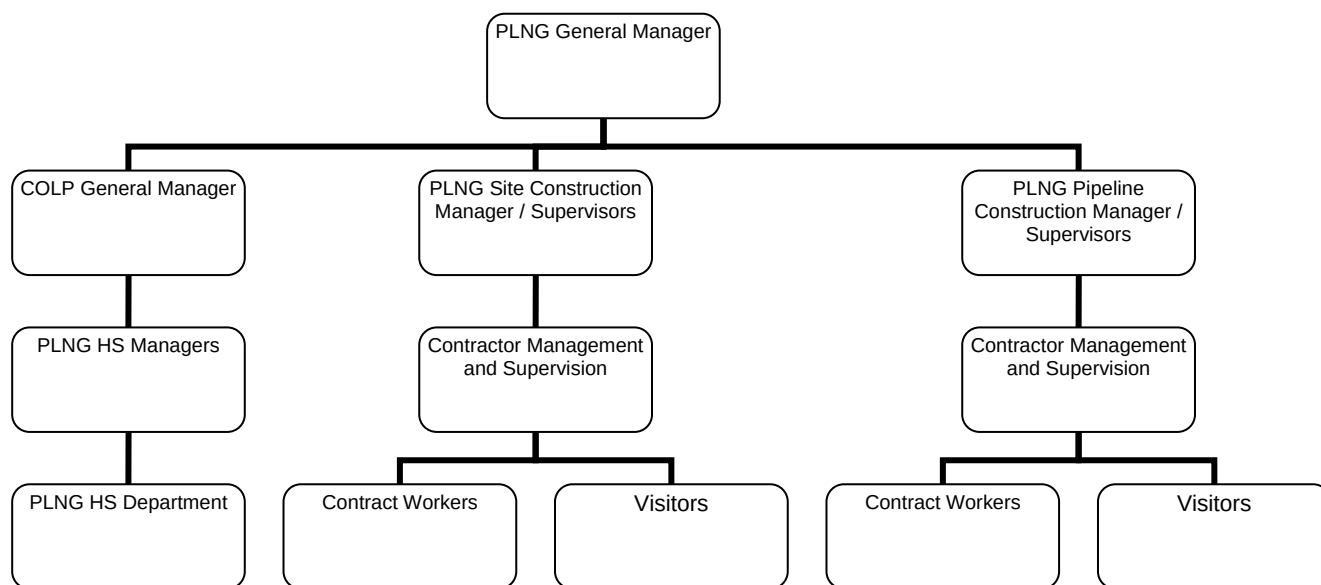
Other HS reference documents include:

- Contractor Management Plan - Document Number [02/HS/PJ/PN/001](#)
- Hazard Assessment and Risk Management - Document Number [02/HS/PJ/PR/001](#)
- Transport Management Plan - Document Number [02/HS/PJ/PN/002](#)
- Training Program - Document Number [02/HS/PJ/PN/004](#)

The following flow chart illustrates the various elements which make up PLNG's ESHS Management System.



8.0 Responsibilities



8.1 PLNG Managers and Supervisors

Key responsibilities include:

- Taking a visible and proactive leadership role in developing a strong HS culture in their area of responsibility.
- Ensuring those applicable Elements of the ESHS Management System are communicated, implemented, and maintained within their area of responsibility.
- Leading by example and demonstrating the importance PERU LNG places on the environment, health and safety of its workers (both employees and contractors).
- Immediately correcting and disciplining those workers who do not follow company policy or are demonstrating unsafe work habits.
- Effectively communicating HS standards and best work practices across PLNG through safety meetings and during their daily work activities.
- Attending HS meetings and reinforcing company policies and standards with emphasis on hazard awareness and following safe work procedures.
- Ensuring that all incidents (includes near misses) and accidents are reported and investigated according to the Incident Investigation Procedure.
- Ensuring the contractor is conducting regular emergency response drills in their areas of responsibilities and submitting reports to the HS Department.
- Ensuring those workers in their area of responsibility are competent and have received the required training as identified in the Training Matrix.
- Establishing goals and expectations as part of the leadership's performance contract.

- Assigning responsibility and accountability for all levels of management, employees, and contractors for implementing health and safety.
- Encouraging worker involvement in the HS Plan by demonstrating management's commitment to safety.
- Taking all reasonable measures to protect workers by identifying, evaluating, and minimizing risks.
- Investigating any situation that is potentially hazardous according to an worker, member of the Safety Committee, or HS Department.
- Taking immediate action in case of any hazard reported.
- Carrying out work site inspections (i.e., daily, monthly or yearly) as required by their assigned responsibilities and duties.
- Ensuring resources are in place for executing an effective HS Plan.
- Reporting and investigating accidents/incidents and implementing corrective actions.
- Obtaining worker expertise to identify hazards, develop safe work practices, and investigate incidents.
- Ensuring workers are informed and understand their right to refuse unsafe work.

8.2 PLNG Health and Safety Manager

Key responsibilities include:

- Developing and assisting with the implementation of the HS Policy and HS Management System and ensuring that business activities are carried out without undue risk to personnel, the environment, or PLNG-operated assets.
- Assisting PLNG or contractor managers and supervisors in the implementation of the HS Plan.
- Identifying and communicating applicable HS laws, regulations, and international standards to workers, supervisors, and managers.
- Ensuring the company is in compliance with all applicable HS government laws and regulations.
- Communicating to respective managers and supervisors their performance against assigned HS objectives, targets, and goals for their area of responsibility.
- Reviewing all accident/incident investigations and recommending actions to identify trends or areas of high risk at work sites.
- Revising and updating the reports for rate of accidents and incidents, and all documents related to the HS Plan.
- Providing Senior Management with a summary of all accident/incident investigations and recommending actions and identifying trends or areas of high risk.

- Providing assistance and direction to the on-site supervisor and/or manager for accident/incident investigation.
- Developing and maintaining the Emergency Response Planning (ERP) System.
- Assisting with company interface with the Authorities and the Lender's environmental and social representatives.

8.3 PLNG HS Department

Key responsibilities include:

- Assisting PLNG or contractor managers and supervisors in the implementation of the HS Plan.
- Monitoring the effectiveness of the HS Plan.
- Taking a visible and proactive leadership role in developing a strong HS culture in their area of responsibility.
- Assisting with the implementation of all HS commitments and providing assurance that all applicable HS requirements, goals, and objectives are being met and operating in accordance with the Project's commitments.
- Providing technical support for all health and safety commitments to ensure that all HS commitments are being met.
- Liaising with the communities and general public in matters of HS hazards, controls, recruitment, and social issues.
- Ensuring risk assessments are completed and maintained according to the PLNG's Risk Management Program.

8.4 Contractor Manager and Supervisor Responsibilities

A contractor is an independent person or organization retained by PLNG to conduct specified activities at a PLNG work site under the general direction of PLNG. Key responsibilities include:

- Ensuring their workers are competent to do the work properly and have the appropriate tools and equipment.
- Reviewing PLNG's HS Plan and confirming they will comply with all PLNG's operating standards, safe work practices, and rules.
- Ensuring their safety program and operating standards comply with contractual requirements and government regulations.
- Immediately notifying PLNG of non-compliance or potential non-compliance including any government regulatory or accident investigation.
- Providing PLNG's with a copy of their health and safety manual (contractors with no safety manual will comply with PLNG's requirements).

- Ensuring that Pre-Job Hazard Assessments are completed for non-routine work at all PLNG work sites and that they are discussed during the pre-job safety meetings.
- Attending all work site HS meetings required by PLNG.
- Reporting any unsafe practices, hazards, gas leak, spill or release of hazardous chemicals, accidents, incidents or near misses that come to their attention to the PLNG's work site manager or supervisor.
- Inspecting the work site regularly (as determined by PLNG's HS Department or the contract) and maintaining appropriate documentation.
- Ensuring the cleanup and remediation of any spills they cause.
- Ensuring the safe storage, transportation, and disposal of all wastes they generate.
- Keeping records of all waste materials and method of disposal.
- Providing PLNG with current copies of Material Safety Data Sheets for all controlled WHMIS products used at the work site.

Note: Contractors are responsible for managing and executing their activities in accordance with PLNG's Project HS requirements and providing the necessary resources to ensure that HS contractual obligations are fully implemented.

8.5 PLNG and Contractor Workers

A worker is any PLNG employee or personnel employed by a contractor, retained by PLNG, or a subcontractor involved with any work-related activity at a PLNG work site. Workers are responsible for:

- Carrying out their duties with the highest regard to health and safety issues.
- Working according to the instructions of their supervisors and always complying with PLNG's Project HS rules, procedures, and good work practices. **No shortcuts!**
- Alerting their supervisor if they feel they are not competent or inadequately trained for a task.
- Protecting their own health and safety as well as the health and safety of others at the work site.
- Co-operating with PLNG and/or their employer in protecting the health and safety of themselves and others who may be present at the work site.
- Reporting to their supervisor or senior employee:
 - a) All accidents, incidents, or near misses,
 - b) Any gas leak, spill, or accidental release of hazardous chemicals,
 - c) Any unsafe practices, hazards, conditions, or acts which may come to their attention,
 - d) Any poorly maintained or incomplete equipment (i.e., missing guards),

- e) All acts and conditions that could have a negative environmental or social impact,
- f) Any prescribed or over-the-counter medication they are using that could impair their work performance, or
- g) Any co-worker who is impaired or under the influence of alcohol or illegal substances.
- Wearing all personal protective equipment (PPE) required by PLNG, their employer, or by government regulation.
- Checking all tools, vehicles, and safety equipment for hazards and knowing each tool's operational limitations before using them.
- Tagging defective equipment "Do Not Use" and notifying their supervisor.
- Operating all vehicles and other equipment in a safe manner and within their rated capacities.
- Refusing unsafe work and participation in practical jokes or horseplay at a work site.
- Knowing the emergency response procedures found in this Health and Safety Plan, the PLNG Emergency Response Plan (ERP), and being knowledgeable of any site-specific ERP's and their assigned responsibility within them.
- Knowing the location, type, and operation of all emergency equipment.
- Knowing the evacuation procedures when working at facilities or work sites.
- Following good housekeeping practices at all times.
- Always leaving kitchen and toilet facilities in good sanitary condition for others.
- Assisting their supervisor, the Project Manager, or a Government Officer in charge of an investigation for any accident, incident, and workplace hazard.
- Attending all HS meetings and training courses as required by their supervisor.

8.6 Visitors

Visitors are responsible for:

- Obtaining permission from the work site manager or supervisor to enter PLNG facilities or leases.

Attending a work site safety orientation if required or requested.

- Following the instructions of the work site manager or supervisor.
- Wearing PPE (i.e., high-visibility clothing) as required by the work site manager or supervisor.
- Not entering a work site unescorted unless the work site manager or supervisor has provided authorization.

- Asking permission to carry and operate any electronic equipment at the work site.

Notes: Additional information on responsibilities is found in the following reference documents:

- PLNG ESHS Management System – Document Number [01/GP/PJ/PY/001](#)
- Contractor Management Plan – Document Number [02/HS/PJ/PN/001](#)

9.0 Worker's Right to Refuse Unsafe Work

Workers have the right to refuse unsafe work and have the authority to correct unsafe conditions up to and including stopping the work until the unsafe condition is corrected.

All workers (including contractors) are expected by PLNG to stop any work or task they consider unsafe to themselves or to the safety of other workers, the public, the environment, or company property.

If a worker refuses to perform work, they are responsible for immediately notifying their supervisor and explaining the circumstances of their refusal.

It is the responsibility of PLNG and its contractors to ensure that all their workers are adequately trained for the job to be performed, that all potential hazards are reviewed, and that all measures are taken to eliminate or minimize the hazards prior to starting the job.

10.0 Legal and Regulatory Requirements

Legal and other regulatory requirements for environment, health and safety provide the basis for which company policies, procedures, and standards are developed. PLNG has developed a program to ensure ongoing compliance with existing and emerging government laws, regulations, and industry standards.

PLNG expects employees and contractors to be aware of legislation which affects health and safety including but not limited to the following:

Institutional Framework	
Constitución Política del Perú, Art. 1,2,7,10,22 and 23	
S.D. 009-2005-TR	Rules for Occupational Health and Safety at Work
Mining Industry	
S.D. 014-92	Mining Act
S.D. 046-2001-EM	Safety and Health Mining Code
Law 27474	Prosecution of Mining Activities Act
S.D.049-2001-EM	
S.D. 043-2001	Rules for Mining Contractors
Handling of Hydrocarbons	
S.D. N° 052-93-EM	Safety Rules for Hydrocarbon Storage
D.S. N° 036-2003	
D.S. N° 052-2003	
D.S. N° 054-93	Safety Rules for Fuel Stations
D.S. N° 020-2001	
D.S. N° 017-2004	
Law N° 26221	Hydrocarbons
Law N° 27377	Hydrocarbons Act
Traffic and Vehicles	
S.D. N° 003-2003-MTC	Regulations to Traffic
S.D. N° 034-2001-MTC	Regulations to Vehicles
S.D. N° 009-2004-MTC	Regulations to Transport Administration
Handling of Chemicals and Hazardous Materials	
L.D. N° 28305	Rules to Control Chemical Products
Law N° 28256	Rules to Transport Dangerous Materials and Waste
PPE Standards	
NTP 399.010-1-2004	Peruvian Technical Norms for Personal Protective Equipment
Health and Social Insurance	
Law N° 26842	General Health Act
Law N° 26790	Modernization of Social Insurance Act
Law N° 26121	Health Compensation Act
D.S. 003-98-SA	Complementary Insurance for Works at Risk

Note: All applicable jurisdictional government acts, regulations, laws and codes must be followed including the licensing of workers, where applicable, and the inspection and certification of equipment when required.

11.0 Worker Training and Safety Orientation

PERU LNG has developed and implemented a documented training program that provides employees and contractors with the necessary skills and knowledge to perform their work in a safe and environmentally sound manner.

This training includes new or transferred worker orientation (includes employees and contractors), regulatory required training, and operator skills training. The level of training required shall be based on the degree of risk and the complexities of the actions required to control or mitigate the particular risk.

PLNG's Training Program includes the following:

- An HS Training Matrix is in place for all workers and is based on a "Needs Assessment" that is updated annually or when required by new legislation or industry standards.
- All new or transferred workers will receive a work site orientation.
- All new or transferred workers will receive on-the-job or formal training prior to being assigned work requiring HS training.
- All new contractors undertaking a project for PLNG will receive an orientation of the HS expectations prior to starting a new construction project.

Note: For additional information, refer to the **"Training Plan"** – Document Number [02/HS/PJ/PN/004](#)

11.1 Training and Certification

Most incidents occur because of the way people work. Thus, a high worker skill and knowledge level is crucial if PLNG intends to maintain a very low incident frequency rate along with steady production. This also lowers the company's operating costs.

Job-specific and the HS Plan training are essential for providing a safe, environmentally responsible, and productive work environment. Well-trained workers contribute by completing their jobs safely and efficiently while protecting the environment at the same time. Developing and implementing site-specific training standards also provide management with performance benchmarks and the opportunity to objectively evaluate performance. Such standards include:

- Displaying safe working behavior,
- Complying with safety and environmental rules and regulations,
- Recognizing, identifying, and correcting hazardous and potentially hazardous situations and conditions,
- Reducing or eliminating unsafe acts and conditions, and
- Retraining and educating personnel who display inappropriate work methods.

11.2 Training Policy

All workers (includes employees and contractors) shall be informed and trained to perform their job competently, efficiently, and safely. PLNG's training policy will ensure the following:

- Every new worker is instructed in PLNG's safety policies, procedures, and rules.
- New or transferred workers will complete on-the-job training under supervision until deemed competent by their supervisor.
- Managers and supervisors with assigned safety responsibilities are provided with adequate training to meet these responsibilities.

11.3 Employee Training and Certification

Supervisors shall ensure all workers are adequately trained to legislated, company, and industry standards. This training may include but is not limited to the following:

- Orientation training,
- Safety training as applicable to the worker's duties,
- Personal protective equipment checks,
- Critical job procedures including codes of practice (e.g., confined space entry, lockout, blinding, trenching, working at heights, grinding welding, etc.), and
- Any other training that is required for the employee to perform their job competently.
- Certifications such as Power Engineer, electrician, etc as required by company policy or legislation.

11.4 Work Site Orientation

To communicate PLNG's safety policies and safe work practices, an orientation will be provided to all new or transferred workers (includes contractors and visitors).

1. The purpose of an orientation is to ensure all new or transferred workers understand:

- PLNG's safety policies, operating standards, rules, and government regulations,
- The potential hazards at the work site or facility,
- Their roles and responsibilities for workplace health, safety, and emergency response, and
- Proper personal protective equipment (PPE) for the job or task.

2. Orientations are provided by:

PLNG or approved contractor HS representatives who have demonstrated their knowledge and competency of PLNG's HS Program or approved Contractor HS Program.

3. Orientation topics for workers on their first day of employment at the work site will cover:

- PLNG's HS Policies and worker responsibilities,
- Workplace hazards and critical tasks,
- Identification of restricted areas,
- General information about safe work procedures relevant to their assigned duties or the tasks to be performed,
- Workers right to refuse unsafe work,
- Identification of authorized smoking areas,
- Location of fire protection equipment and procedures,
- Emergency signals/alarms and Emergency Response Plans (ERPs),
- Evacuation or escape routes and safe assembly locations,
- Reporting procedures for:
 - a) All accidents, incidents, or near misses,
 - b) Any gas leak, spill, or accidental release of hazardous chemicals,
 - c) Any unsafe practices, hazards, conditions, or acts which may come to their attention,
 - d) Any poorly maintained or incomplete equipment.
- Environmental protection, and
- Worker certification requirements.

Notes:

1. Address issues of primary importance and then follow up with a location walk around pointing out potential hazards.
2. Instruct the worker that all jobs can and must be done safely.

11.5 Training Matrix (example only):

See HS Training Plan for detailed Matrix.

	Leadership and Commitments	Supervisor	Risk Assessments	Orientation	PPE	Excavation	Advanced Driving	Ladders	Confined Space	Toxic and Hazardous Subs	Signs, Signals, and Barricades	Contingency Plan	Fire Protection	First Aid	CPR	Handling of Waste Oil	MSDS
Project Manager	√	√	√	√	√	√				√		√	√	√		√	√
QA/QC Manager	√	√	√	√	√	√						√	√	√	√	√	√
HS Manager	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Contract Administrator	√	√	√	√	√							√	√	√			
Construction Manager	√	√	√	√	√	√	√	√	√			√	√	√	√	√	√
Field Eng. Manager	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√
Administrator	√	√	√	√	√							√	√	√			
Equipment Manager	√	√	√	√	√					√	√	√	√	√	√	√	√
Supervisors and Fields Engineers	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√	√
Heavy Equipments Operators			√	√	√		√	√		√	√	√	√	√	√	√	√
Light Equipments. Operator			√	√	√		√			√	√	√	√	√	√	√	√
Flaggers			√	√	√					√	√	√	√	√		√	
Security Personnel			√	√	√					√	√	√	√	√	√	√	√
Visitors				√													

12.0 Safety Committee and Safety Meetings

12.1 Safety Committee

The PLNG or contractor representative will establish a Safety Committee as required by PLNG. One representative should be elected for every 50 workers. They should be determined by popular vote and will serve for 1 year on the Safety Committee. The elected representatives will receive proper training on the HS Plan, first aid, firefighting, and hazardous work training such as confined space, excavation, lockout/tag out, etc.

Minutes of the safety committee meetings shall be documented and copies distributed as per the guidelines determined by [PLNG's ESHS Management System](#) Element 7.

12.2 Safety Meetings and Communications

PERU LNG has implemented a communication process to facilitate internal communications on HS-related issues throughout the company and includes the following types of meetings and correspondence:

- **Monthly Safety Meetings** - Held at PLNG's office to communicate HS concerns between PLNG management and contractor management and carry out the monthly "look ahead".
- **Weekly Safety Meetings** - Held at each work site to communicate HS concerns between workers and management.
- **Daily or Pre-job Tailgate Meetings** - Held at each work site to review existing or potential hazards and other HS information appropriate for the work site.
- **HS Management System Meetings** - Held to determine policies, operating standards, etc.
- **Training Sessions and Orientations.**
- **Safety Bulletins** that are distributed or posted on bulletin boards.
- **Safety Alerts** that are sent to applicable work sites or to adjacent landowners.

The key methods of internal HS communication, as a minimum, are:

- Meetings, as specified in [Table 1](#),
- Reports, as specified in [Table 2](#),
- Internal newsletters,
- Staff briefings and tool box talks,
- HS notice boards at PLNG and contractor offices and construction camps, and
- Letters, e-mail, and memoranda.

Note: For additional information on Safety Meetings and Communications, refer to "Element 7 – Communications of PLNG's ESHS Management System" – Document Number [01/GP/PJ/PY/001](#).

12.3 Monthly Safety Meetings

Safety meetings will be conducted once per month, headed by the Project Manager and with the participation of the personnel noted in [Table 1](#). Items of health and safety, environmental issues, community relation issues, operating procedures and other pertinent subjects shall be discussed. Within 2 days after each meeting (see [Table 2](#)), a copy of the minutes of the meeting will be distributed for information purposes.

Since the active participation of all levels of management in health, safety and environmental meetings is a long-term objective, their participation should be scheduled accordingly.

Health, safety, social and environmental meetings are more productive and motivating if members of the team, with the guidance of management, are asked to lead the meeting. However, they must first be given a framework for the subjects under discussion. They should also be told the objectives of the meeting. Record conclusions and concerns and act upon them. Communicate the results to everyone who might benefit.

The primary objectives of these meetings are to:

- Seek ways to eliminate unsafe or hazardous practices and conditions,
- Convey health, safety and environmental information to all workers,
- Get input from workers,
- Get people to participate and commit to the HS Plan, and
- Decide how to implement the HS Plan and associated performance measures.

When concerns and suggestions arise during the meeting, provide feedback as soon as possible. In this way, people know what is being done and by whom.

A major management objective is to consider how well people at all levels understand the company's health, safety, and environmental effort.

13.0 Communications

The effective management of health, safety, social and the environment and the management of any related losses rely heavily on effective communications techniques.

One of the keys to success lies in establishing communication links internally at all levels across the organization. Methods may include e-mails, reports, news sheets, promotional activities, recognition and reinforcement schemes, and personal contacts. Two-way communication of shared learning's from incident investigations is a critical component of the Management System.

The following communication tools are implemented within the site:

- Posters, bulletins, magazines, or other written media to inform personnel on the results of internal safety measures, accident statistics, environmental information, and public health campaigns.
- Radio for appropriate communication.
- Visible and legible signs posted at working places regarding the health and safety standards and policies.

- Sound, visual, and smell emergency signals installed for quick and safe response in case of accidents and emergencies.
- Suggestion boxes placed around the work sites for appropriate feedback of the HS System.

14.0 Look Ahead

PLNG will hold a monthly “Look Ahead” (see [Table 1](#)) meeting to review the upcoming events, activities, the expected progress to be achieved as well as identify the expected Kilometer Point (KP) to be reached during the coming month. This look ahead meeting will also help identify all health and safety constraints, river crossing points, working under or crossing elevated high voltage line, ground or road conditions, etc. and any other issues of concern. The one-month “Look Ahead” shall be carried out as a joint exercise with other Project Departments, including Security and Transport.

The “Look Ahead” allows the necessary planning to be put into place for the health and safety constraints and gives the construction contractor time to prepare for any adjustments to scheduling or routing.

15.0 Document and Data Control

PLNG will produce and maintain site-wide HS procedures and records which will ensure compliance to safety requirements. This documentation is to be maintained so that all personnel have easy access at all times to all the documents they need to perform their work; and that only the most current, up-to-date version of each and every document is available to users.

A Records Management System will assure that vital records are maintained as required by local law, PLNG, the HS Plan, and ESHS Management System. Records are to be stored and maintained so they are readily retrievable and protected.

Table 1 – Minimum Formal HS Meetings

Meeting	Frequency	HS Topics included in Meeting	Direct Attendees (or designed personnel)
PLNG / Contractors Meeting	Weekly	• Health and Safety Issues • Recent Incidents • Near Misses • Safety Compliance Breach • Oil Spills – Land and Water • ESHS MS Breach • Permit Breach • CAR, WIN, & TSWs	• PLNG Field HS Representatives • PLNG Construction Manager or Representative • Contractor’s H&S Manager • Contractor’s Field Supervisor

PLNG / Contractors Meeting	Monthly	• A monthly summary of all the items discussed in the weekly meeting. • Complaints from the project-affected communities along the pipeline route. • One-month look ahead.	• PLNG Project Manager • PLNG Health and Safety Manager • Contractor's Construction Manager • Contractor's Project Manager • Contractor's H&S Manager
One-Month Look Ahead Meeting	Monthly	• HS constraints and other concerns expected during future construction works	• Same as PLNG / Contractor's Monthly Meeting
ESHS MS Management Review (see Element 15 of this Document)	Every 6 months	• Continuing relevance of the HS Policies. • Suitability, adequacy and effectiveness of the ESHS MS. • Results of audits since the last review if any. • Suitability of designated responsibilities and organizational arrangements. • Continuing provision of financial resources.	• General Manager PLNG • Office Managers and Supervisors • HS Managers and key staff

Table 2 – Minimum Formal HS Reports

Report	Generated by	Generated for	When sent
Weekly HS Meeting Minutes	H&S Department	HS Department	2 working days after meeting.
Monthly HS Meeting Minutes	H&S Department	HS Department	2 working days after meeting
Monthly HS Statistical Report	H&S Department	PLNG Management	Monthly – by 8 th
KPI Report	HS Department	PLNG Management	Monthly – by 8 th
Weekly Activity Reports	HS Field Technicians	H&S Manager	By Monday of each week
Audit Reports	HS Auditors	H&S Manager	As conducted
WINs & TSWs	Field HS Technicians / Contractor	H&S Manager	As required
CARs	HS Managers and Supervisors / Contractor	H&S Manager	As required
Incident Reports	Field HS Technicians / Contractor	H&S Manager	As required
		Lenders	
		Partners	

16.0 Safety Performance Measurement

16.1 Safety Inspections

Inspections are systematic observations carried out to identify workplace hazards which might otherwise be overlooked. The target of the inspection program will be to provide full coverage to more critical areas or items.

Supervisors are obliged to carry out daily inspections in their working areas and instruct on the necessary safety measures. Once a month, a report of the inspections undertaken shall be forwarded to PLNG's HS Department.

Joint walk-through inspections between PLNG and contractors will be carried out. The Project Manager will determine the timing and frequency of such inspections.

The Safety Committee will carry out unexpected inspections at any time.

The Project Manager should ensure the follow-up of control measures of hazards arising out of safety inspections and that control measures will be expedited and become effective, (thus avoiding the existence of many substandard conditions and preventing the natural frustration arising out of feeling that useless activities are being carried out) or that a positive change is made to the physical conditions.

Note: For additional information, refer to “**Element 13 – Inspections and Audits of PLNG’s ESHS Management System**” – Document Number [01/GP/PJ/PY/001](#).

16.2 Safety Audits

PERU LNG will review and audit the Health and Safety Plan at intervals of 12 months or as otherwise directed by the HS Manager, and the contractors will be provided with a written report in this regard.

The objective is to verify the implementation of the HS Plan, to verify the Plans effectiveness to achieve defined health and safety objectives. Specifically, and the audit will ensure that effective controls are in place, as follows:

- The Company has a clear understanding of, and follows the health and safety policy, and also promotes a positive health and safety culture.
- The Company has introduced systems and planning processes, which identify objectives and set health and safety performance standards.
- The Company has identified and provided the resources required for implementing, maintaining and improving health and safety.
- Performance standards in place are actively monitored and lessons learned are used to improve health and safety standards across the Project.
- The performance standards are understood and followed by all Company and Contractor staff within the Project.

Furthermore the audit will allow managers to demonstrate due diligence and to identifying areas of good practice that may be used elsewhere in the Company.

Safety Audits will follow the protocols as outlined in Partnership Program and Inform Audit Protocol.

16.3 Performance Indicators

In the event that contractor safety procedures are not adequate, PLNG's procedures will be followed. Where breaches of the safety rules occur, PLNG's work site representative will be responsible for taking the proper corrective or disciplinary actions.

The following performance indicators will be assessed:

- Number of fatalities and injuries,
- Number of days lost as a result of an accident, and
- Incident rates based on the hours worked.

Other indicators are:

- Management commitment,
- Written safety program,
- Training programs and employees' qualifications,
- Emergency plans and procedures,
- Accident reporting protocol, and
- Regular safety meetings and inspections.

16.4 Appointed Duty Holders

The following duties will be fulfilled only by appointed persons who have achieved an appropriate or statutory level of competence through experience and relevant training.

- Risk assessment coordinator
- Safety officer or supervisor
- Material assessments
- Noise assessments
- Scaffold erection and statutory inspection
- Lifting appliance inspections
- Excavation inspections
- Crane driving
- Spotter
- Hoist operation
- Gas detection equipment supervisor
- First aiders
- Demolition operatives
- Woodworking equipment operatives

Records shall be maintained to document the names of appointed persons and their training achievements. Where appropriate, approved schemes for the certification of competence will be considered.

17.0 Hazard Assessment and Risk Management

PERU LNG has implemented a Hazard Assessment and Risk Management Program at its work sites to eliminate or reduce hazardous conditions.

Hazard Assessment and Risk Management consist of the following three processes:

1. **Hazard Assessments** are proactive measures used to:
 - Identify existing or potential hazards associated with a particular job, a process, or equipment operation.
 - Formulate specific procedures to eliminate or control hazards in order to protect workers from injury and/or occupational disease and to prevent or mitigate equipment or production losses.
 - Analyze and manage the risk associated with the work or operational process.
2. **Risk Management** is the collective assessment of potential risks/hazards so that supervisors and workers can gain a clear understanding of the mechanisms and conditions that may lead to chance of injury, occupational disease, or loss.
3. **Risk Control** are the strategies, processes, tools, etc. that are implemented to manage the risk exposure down to an acceptable level. Risk controls either reduce the severity/impact of a hazard or the likelihood of a hazard occurring.

17.1 Hazard Assessments

Hazard assessments must be completed for but are not limited to the following:

- Daily work activities or operational processes at all PLNG work sites:
 - a) At intervals (daily or as required) to prevent the development of unsafe working conditions,
 - b) When a new work or operational process is introduced or changed, or
 - c) As required by a regulatory requirement.
- Drilling and service rig operations by PLNG and its contractors.
- The construction, commissioning, operating, and decommissioning or abandonment stages of work sites.

17.2 Risk Management

The Risk Management Process should be used to:

- Identify the potential risks associated with a procedure or task associated with the work or process at the work site or facility.
- Evaluate the risks for workers, the public, surrounding communities, and the environment.

- Identify the controls (engineering, substitution, administrative, and personal protective equipment) to eliminate or minimize risk.
- Formulate the standards and processes to manage the residual risk level associated with the task or operation at the work site or facility.

18.0 Risk Assessment for Tasks

The risk assessment process should be used to:

- Identify the potential risks associated with a procedure or task associated with the work or process at the work site or facility.
- Evaluate the risks for workers, the public, surrounding communities, and the environment.
- Identify the controls (engineering, substitution, administrative, and personal protective equipment) to eliminate or minimize risk.
- Formulate the standards and processes to manage the residual risk level associated with the task or operation at the work site or facility.

The risk assessment process should **not be used**:

- When the task or operation is not in compliance with government regulations.
- When the probability of an occurrence is very high.

19.0 Characteristics and Classification of Risk

Risk is comprised of two elements:

1. Probability of Occurrence

How often is the event likely to occur?

2. Severity of Consequence

If the event occurs, what are the consequences and how severe are the results if no preventive actions are taken?

The probability of occurrence and severity of consequence are plotted on the [Risk Assessment Matrix](#) to determine, in a consistent manner, the risk level associated with an event.

Note: For additional information, refer to “Hazard Assessment and Risk Management” – Document Number [02/HS/PJ/001](#).

19.1 Criteria for Evaluating Probability of Occurrence

Probability of Occurrence	Potential Frequency		
	Inside the Field	Within the Company	Within the Industry
Frequent	Has Occurred Previously	Long History	Common Occurrence
Occurs repeatedly during the 50 - year life cycle; more than once per year. Example – hydraulic hose failure	Once a year or more frequent	Most similar facilities have experienced the problem.	Not even reported due to very high frequency
Occasional	Limited Experience in a New Facility	Reasonable Experience	Common Industry Experience
Will likely occur; once every 1-3 years. Example - a moderate size product spill	Older facilities will have some experience	The event occurs once every few years somewhere in the company.	- Taken for granted - No negative impact on the industry as a whole
Remote	Possible Experience	Some Experience	Reasonable Experience
Incident is not expected to occur more than once or twice during the life cycle; every 3-20 years. Example - a major pipeline rupture	Older facilities may have some experience	The incident has occurred a few times in the company.	Usually covered by local news
Unlikely	No Field Experience	Lack of Experience	Some Experience
Not likely to occur, (possibly once in life of facility). Example - a major vapor cloud explosion		Incident has probably not occurred in the company but may occur sometime.	- Has occurred in industry - National news; some international exposure

Note: Situations where the probability of occurrence is determined to be less than once in 10,000 years are considered low risk regardless of severity of consequences. However, the probability must be determined based on quantitative statistical data and/or Fault Tree Analysis, rather than based on a subjective estimate.

19.2 Criteria for Evaluating Severity of a Situation

Severity of Consequence	Potential Consequences			
	Health Impact (Illness or Injury)	Financial Impact (Property or Earnings)	Environmental Impact	Company Impact (Reputation or Image)
Catastrophic	Fatality or high likelihood of fatality Permanent Disabling Injury	Entire Facility Shutdown - One month or longer interruption - Plant-wide damage - Major impact on operation	Long Term Impact 20-year effect - Active remediation - Legislative intervention	National Attention - Continuing media focus - Impact on share price - Drop in market share
Critical	Loss time injury or threat to public or Severe Occupational Illness	Critical Process Shutdown - One week or longer interruption - Major damage but limited to one process unit - Sub-optimal facility operation	Medium Term Impact - Active remediation (5 to 10 years) - Regulatory intervention - Prosecution and/or fines	Province-wide Impact - Active media interest - Promotional efforts to maintain market share
Moderate	Recordable injury or Minor Occupational Illness	Major Equipment Shutdown - One week or longer interruption - Facility is largely unaffected - Sub-optimal unit operation	Short Term Impact - Requires timely remediation - May invite control order	Community Issue - Local media coverage - Good citizen image is negatively impacted
Minor	First Aid Injury Only	No Impact on Operation - Minor component damage - Equipment operates at lower efficiency - Unit capacity is unaffected	No Immediate Impact - Requires situation monitoring - Will require cleanup at some time in future	Individual Concern - No media coverage - No damage to company image

19.3 Risk Assessment Matrix

Potential Severity	Probability of Occurrence			
	Frequent (4)	Occasional (3)	Remote (2)	Unlikely (1)
Catastrophic (4)	Extreme (9)	Extreme (8)	High Risk (7)	* High Risk (6)
Critical (3)	Extreme (8)	High Risk (7)	Medium Risk (5)	Medium Risk (5)
Moderate (2)	High Risk (7)	Medium Risk (5)	Medium Risk (4)	Low Risk (3)
Minor (1)	Medium Risk (4)	Low Risk (3)	Low Risk (2)	Low Risk (1)
Notes: * These high risks may be acceptable if the design, operations and management controls are consistent with industry practices, and there is no cost-effective option to reduce the risk. A more detailed score-based 'Risk Assessment Methodology' may be required. If a risk falls between two or more categories, the selected risk ranking should reflect business sensitivity/priority and industry practice. Numbers in brackets provide a method of rating risk on a 1-9 scale in order to prioritize mitigating activities/measures.				
Potential Severity (How severe could this Incident have been if no preventative measures were introduced?)		Probability of Occurrence (What is the chance of happening if existing hazards or conditions are not corrected?)		
Catastrophic Fatality or permanent disabling injury, Loss greater than \$500K, Legislative – facility closure		Frequent Occurs repeatedly during the 50 - year life cycle; More than once per year. Example – pump seal failure		
Critical Lost time injury, threat to public, Loss less than \$500K, Legislative – fines / charges		Occasional Will likely occur between unit turnarounds; once Every 1-3 years. Example - a moderate size product spill		
Moderate Modified work or medical treatment, Loss less than \$25K, Legislative – reporting required		Remote Incident is expected to occur 'outside turnarounds' but during the life cycle; every 3-20 years. Example - a major pipeline rupture		
Minor Minor injury, no threat to public, Loss less than \$10K, Legislative - no reporting required		Unlikely Not likely to occur, (possibly once in life of facility) Example - a major vapor cloud explosion		

19.4 Instructions for Using the Risk Assessment Matrix

To use the Risk Assessment Matrix, proceed as follows:

1. Identify and evaluate all the hazards associated with a specific task or project.
2. Identify the hazards, situations, or substandard conditions based on your experience where you have a history of losses (e.g., pipeline failures, injuries related to the task/project, premature equipment failure, high associated maintenance costs, etc.).
3. Review potential hazards that are known because of the history of losses in the company or the industry (e.g., a fire in and around a Propane/NGL bullet may be something you have not experienced in this area or in the company's operations, but it has occurred in the industry).
4. Determine **potential severity** and **probability of occurrence** associated with the hazards of specific tasks.
5. Determine if you get several **extreme** or **high-risk** tasks from your analysis.
6. Address **extreme/high-risk situations** and do so in a timely manner. Some high risks may be acceptable since the risk cannot be reduced any further with the current state of technology and knowledge (e.g., NGL storage bullets are a high risk, but there is a limited amount you can do to reduce the risk).
7. Once you have assessed the hazards and ranked them from the matrix, prioritize your tasks/project activities according to the number arrived at from the risk matrix.
8. Use this as a guide to establish the necessary controls for your highest risk tasks/projects (i.e., top 20%). With this risk matrix, all 9's become priority 1's and these should be addressed first.
9. Once controls have been developed for the critical tasks, re-evaluate the remainder of the task inventory.

20.0 Risk Controls

The mitigation or elimination of work site hazards and risks may require both engineering and administrative controls, in combination with the use of personal protective equipment (PPE).

Engineering controls can include the following:

- Use of barricades or other restraining/warning devices to prevent worker contact around or under dangerous or hazardous operations.
- Installation of sensors, backup alarms, ground-fault circuit interrupters, and emergency shutdown devices.
- Isolation or enclosure of the worker or process, fall protection systems, railings, and guards.
- Pressure regulators, relief valves, and exhaust ventilation.
- Substitution of a less harmful material or using specialized materials.

Administrative controls can include the following:

- Developing or updating operating standards, safe work practices, and rules (includes enforcement and discipline).
- Limiting the time of worker exposure to a hazard, job rotation, and supervision.
- Implementing preventative maintenance programs, a Permit System, an Environment, Social, Health and Safety (EH&S) Management System, inspections, and audits.
- Using a safety watch for critical tasks (i.e., fire watch, traffic control, hoisting activities).
- Providing worker training, orientation, and supervision.

Personal Protective Equipment (PPE) is used in conjunction with engineering and administrative controls. PPE is the worker's last line of defense and should not be used as the sole hazard control.

Note: For additional information, refer to “**Personal Protective Equipment**” – Document Number 02/HS/PJ/PR/002.

21.0 Health and Safety Method Statements

Health and Safety Method Statements are developed to allow coordination of hazardous works. Likewise, as a result of a risk assessment study, Safe Job-Specific Procedures or Responsible Operating Guidelines (ROG's) are developed to ensure that the works are carried out as efficiently and as safe as possible. It involves all employees and subcontractors of PERU LNG S.R.L...

ROG'S establish and evaluate hazards during the execution of tasks carried out by each area and they keep a record of hazards and risk assessment. Once drafted and approved, they will be disseminated to the workers involved in the task and must be readily available in the work place.

ROG'S must be revised on a regular basis to ensure their safe and practical application in the performance of tasks. Each work site will keep a Record of Hazards and ROG'S in their working areas.

22.0 Accident Reporting and Investigation

The purpose of accident reporting is to allow the line of command to get information on accidents and incidents that take place in their area of responsibility in order to correct immediate or direct causes, indirect causes and real or root causes, and to prevent both repetition and the effects that these problems have on production, operation costs, and quality.

The accident investigation must be managed by a level of the line of command and will be dependent on the seriousness of losses and/or injuries or potential loss as determined by risk assessment. It will involve the identification of causes and monitoring to prevent a new occurrence of the event.

A follow-up system will be established and maintained to check for the compliance of control measures recommended in the reports of accident investigation.

PLNG employees and contractors will immediately and verbally report all accidents, incidents, and near misses to the PLNG Representative or Project Manager. A copy of all written reports will be provided within 48 hours.

PLNG will provide all reports as required by OSINERG within the required time frame.

PLNG Representatives will be present when the Government Authority conducts an accident investigation which may have occurred in their area of operations.

PLNG will utilize a near miss/unsafe condition reporting scheme to allow workers to identify potential unsafe conditions or near misses in an effort to develop controls or to remove hazards before an incident occurs. These near misses or unsafe conditions will be handled in the same manner as an actual incident. If the near miss is of a high potential nature, then an investigation into the near miss will be conducted.

For serious incidents involving contractor workers, contractor management may wish to conduct a separate internal incident investigation. PLNG's strategy is to respect the wishes of contractors, but to encourage completion of a joint investigation in a cooperative manner with representatives of both PLNG and affected contractors.

PLNG requires that all Extreme incidents and High Potential Incidents be reported to Senior Management as soon as possible, but at most within 24 hours to the appropriate management.

Notes: Additional information on incident reporting and investigation is found in the following reference documents:

- PLNG ESHS Management System – Document Number [01/GP/PJ/PY/001](#)
- Contractor Management Plan – Document Number [02/HS/PJ/PN/001](#)
- Incident Investigation and Analysis – Document Number [02/GP/PJ/PR/004](#)

22.1 Incident Report Form (reduced to fit)

Double-Click Here to Insert Pictures			
GENERAL INFORMATION			
LOCATION:		TASK BEING CONDUCTED:	
DEPARTMENT:		PROJECT SPECIFIC:	
REPORTED BY:		PHONE#:	
NOTIFIED BY:		PHONE#:	
WITNESSES:		PHONE#:	
DATE OF INCIDENT:	TIME:	DATE REPORTED:	
PHOTOS TAKEN?	YES ☐ NO ☐	IF YES, SENT TO:	
INCIDENT:	PLNG ☐ CONTRACTOR ☐	CONTRACTOR/OTHER:	
IDENTIFY INCIDENT			
INJURY:	PROPERTY DAMAGE:	ENVIRONMENTAL:	
Injured Party: _____	☐ Equipment Failure	☐ Spill Volume _____	
Injury Type: _____	☐ Equipment Damage	☐ Spill Recovered _____	
Lost Days (if applicable): _____	☐ Fire	☐ Water	
Date Returned to Work (if applicable): _____	☐ Theft	☐ Hydrocarbon	
PROCESS LOSS: _____	☐ Vandalism	☐ Emulsion	
Other (Specify) _____	☐ Chargeable Vehicle Accident	☐ Gas	
	☐ Non-Chargeable Vehicle Acc	☐ Gas Leak Volume _____	
	☐ Unsafe Condition	☐ Public Impact / Complaint _____	
	☐ Near Miss	☐ Emission Limit Type _____	
	☐ Violation	☐ Regulatory Action	
	☐ Security	TERRAIN AFFECTED: _____	
	☐ EHS Non Conformance		
	☐ CAR Report		
PERSONNEL/GOVERNMENT AGENCIES NOTIFIED (IF MORE SPACE REQUIRED, PLEASE LIST ON SEPARATE SHEET)			
DATE NOTIFIED:	AGENCY CONTACT PERSON:	CONTACT PHONE#:	AGENCY/PLNG DEPARTMENT:
DETAILED DESCRIPTION OF INCIDENT			
Clearly describe how the incident occurred (ex: who, what, when, where, why and how). Include all relevant information immediately prior to, during, after the incident, and all remedial actions taken in chronological order. Address all items checked above. Include recent trends based on risk assessments and observations. Update this section as information becomes available. Attach separate sheet if necessary:			
Date	Description		
ANALYSIS:			
RISK ASSESSMENT (of actual events)			
Severity		Probability	Risk Ranked
RISK POTENTIAL:			
RISK ASSESSMENT (of what could have happened)			
Severity		Probability	Risk Ranked
Comments (Optional): _____			
REMEDIAL ACTIONS SECTION			
REMEDIAL ACTIONS (to reduce or eliminate the direct and indirect causes)			
	Target Date:	Completed Date:	Action By:
Please E-Mail Completed Form to ehs@humbil.com or fax to (511) 707-2499 attn: EHS Dept.			
Double-Click Here to Insert Pictures			

23.0 Operational Control

Documented company policies and programs have been developed and maintained that describe the approved safe work procedures that workers must follow for hazardous work. The programs typically include controls for the significant risks identified in the risk assessment process.

PERU LNG operates under a common set of HS Programs that include:

- Company Policies
- Safe Operating Standards
- Code of Conduct
- Site-Specific Operating Procedures
- Contractor Management Plans
- Occupational Health Operating Procedures
- Environmental Operating Procedures
- Engineering Operating Standards

During the construction phase, operational control shall be through the various construction contractors.

Operational control is achieved through the development of a number of management plans as identified during the ESIA process; some of which are managed directly by PLNG and others which are implemented by the contractors.

24.0 Personal Protective Equipment (PPE)

Aspects of the work for which Personal Protective Equipment (PPE) is to be prescribed have been defined according to the risk assessments and a specific procedure that has been developed.

The procedure for PPE ensures the appropriate quality, the correct use, and availability of PPE. This involves all employees of PLNG, subcontractors, and visitors.

All workers who carry out works, transit, or visit the facilities or operational areas must use the basic PPE, which includes:

- Hard hat
- Safety glasses
- Steel-tip or steel-toed boots
- Reflective outerwear
- Hearing protection

A Storage and Inventory System for PPE has been established. A Database is kept with the sizes of PPE for each employee and records of the delivery of PPE to employees and contractors, including: size, date of delivery, date of change, reason for replacement, and signature of employee for each piece of equipment delivered.

- PPE for special works and emergency response will have a special management system. This PPE may only be inspected or used by authorized personnel.
- PPE must be kept in an appropriate condition, cleaned, and properly stored, and should be inspected periodically.
- Training on PPE is part of the [worker training](#) program. Records of this training are kept as part of the report for the safety meetings.
- The Project Manager, Operational Managers, and the HS Department are able to and will impose written disciplinary actions for workers who do not use PPE.

Note: For additional information, refer to “**Personal Protective Equipment**” – Document Number [02/HS/PJ/PR/002](#).

25.0 Hazardous Materials Controls

25.1 General

PLNG secures safe and controlled handling of hazardous substances and provides an appropriate response procedure to avoid damages to property or personal injuries.

PLNG must be informed in writing of all substances intended for use on site, which are classified as toxic, very toxic, corrosive, flammable, highly flammable, or explosive.

For more details, written procedures for the handling, application, storage, and disposal of hazardous products have been compiled in the Hazardous Materials Management Plan (Reference 02/GP/PT/PN/001/A01).

Material Safety Data Sheets must be current, available and workers must be trained. See Workplace Hazardous Materials Information System for further details.

25.2 Asbestos

No asbestos is likely to be encountered during construction. However, should any asbestos or asbestos containing materials be encountered (such as asbestos roofing sheets fly tipped on the right of way) contractors must immediately notify PLNG. No attempt will be made to remove the asbestos; it will be left undisturbed until further instructions are given by PLNG. Warning notices will also be posted.

25.3 Hazardous Material Assessments

A material assessment shall be carried out for every substance brought onto the work site. Copies of the assessment and Material Safety Data Sheets (MSDS) will be available for PLNG to examine. No chemical or any other hazardous material may be brought onto the work site unless approved in writing by PLNG.

All personnel shall have access to this assessment and it will be available in the event of an incident that requires first aid medical treatment or firefighting.

Material risk assessment and procedures will consider the possible effects of products such as fumes, sprays, or dust, etc., both on and off the work site.

When necessary, an operating procedure shall be prepared for the safe handling, storage, use, and disposal of a particular substance with a copy submitted to PLNG.

25.4 Handling Chemicals and Hazardous Substances

Personnel who would come in contact with chemicals must wear the appropriate Personal Protective Equipment (PPE) which must be routinely inspected and maintained in good working condition.

After handling hazardous substances, personnel shall wash their hands prior to eating, drinking, and smoking. They shall not eat, drink, or smoke in the proximity of stored hazardous substances.

26.0 Traffic Safety Regulations

PLNG has established strict regulations to control the traffic of vehicles, machinery, and mining equipment in the project area.

1. Regulations:

- Reglamento Nacional de vehículos: Decreto Supremo N° 058-2003-MTC (12.OCT.2003).
- Manual de Dispositivos de Control del Tránsito Automotor en Calles y Carreteras: Resolución Ministerial: RM-210-2000 MTC/15.02

2. Light Vehicles (LV) (Drivers minimum age 17 years)

A Light Vehicle is a motor vehicle with a maximum authorized mass not exceeding 3,500 kgs and with the capacity equal to or less than 7 seats (excluding the driver). It is combinations of towing vehicles and trailers where the maximum authorized mass does not exceed 3,500 kgs and the maximum authorized mass of the trailer does not exceed the unladen weight of the towing vehicle.

3. Large Goods Vehicles (LGV) (Driver's minimum age 21 years)

A Large Goods Vehicle is a rigid vehicle designed to carry commercial goods which have a gross weight of at least 3,500 kgs. It is combinations of vehicles where the towing vehicle and its trailer have a maximum authorized mass of over 750 kgs, provided that the maximum authorized mass of the combination thus formed does not exceed 12,000 kgs and the maximum authorized mass of the trailer does not exceed the unladen weight of the towing vehicle.

4. Passenger Carrying Vehicles (Driver's minimum age 21 years)

A vehicle which contains between 9 and 40 seats.

Note: For additional information, refer to the “**Transport Management Plan**” – Document Number [02/HS/PJ/PN/002](#).

27.0 Safe Driver's Code

These essential behaviors are expected of all drivers of vehicles:

- Be familiar and comply with the laws and ordinances of the county in which the vehicle is being operated.
- The operating condition of a vehicle is the responsibility of the worker driving the vehicle. Unsafe conditions are to be repaired promptly.
- Windshield, door glasses, rear glass, and a rear-view mirror are to be properly maintained at all times.
- All glass is to be kept clean and free of stickers, except for those required by law.
- Windshields that have breaks, cracks, or shattered spots that obscure vision are to be replaced immediately.
- Daily maintenance of the vehicle should include an operational and/or visual check of the brakes, lights, horn, tires, windshield wipers and washers, rear-view mirror, windows, and steering assembly.

Note: If any of these items are not in good condition, they are to be replaced, cleaned, or repaired as required for the safe operation of the vehicle.

- The driver is responsible for maintaining the proper level of fuel, lubricants, and coolant in company vehicles.
- When parking vehicles, the driver is to take positive steps to ensure that the vehicle does not roll out of control while unattended.
- All vehicles will be positioned in such a manner that ensures the equipment's exhaust does not enter buildings or vent intakes.
- Steps to take to control an unattended vehicle should include leaving the transmission in low, reverse, or park with the engine off or chocking the wheels. Do not depend on the emergency brake alone, especially on an incline.
- Observe all road signs. Construction signs may change frequently and traffic patterns may have been altered.
- Headlights must be on at all times while performing work for PLNG/COLP unless security concerns dictate otherwise.
- Use the horn to warn, not to annoy.
- Respect passengers and all road users including pedestrians.
- Signal your intentions; allow the other driver time to react.
- Do not follow too closely.
- Move only when doors are closed and locked and after everyone's seat belt is fastened.

- Rest 30 minutes after 3 hours of driving and 12 hours after 10 hours of driving.
- Complete pre-use vehicle checks and keep vehicle clean.
- Plan the journey, use a map, and inform the base.
- Before beginning any trip, you must be fit, alert, and have the following documents in your vehicle:
 - a) Driver's License
 - b) Insurance (SOAT)
 - c) Registration
 - d) Private Vehicle Insurance
- Hand-held cell phones and radios are not to be used by the driver while driving.
- Only approved access routes shall be used.
- Use the radio only when stationary; keep your radio/telephone talks to a minimum and never initiate calls while driving.
- Follow the law 100% when driving (neither PLNG nor the contractor will pay fines).
- Drive at a maximum speed of 100 km/hour unless road signals, road conditions, and/or weather conditions dictate lower speeds.
- Respect passengers and all road users including pedestrians.
- Report all collisions and faults promptly and specify all details for effective investigation.

28.0 Safe Passenger's Code

The following essential behaviors are expected of all passengers of PLNG, the contractor, and/or subcontractor's vehicles:

- Before riding in company vehicles, all non-company personnel must have the approval of a supervisor.
- Always wear seat belts and be certain they are accessible and in good condition.
- Secure your cargo; loose objects can become dangerous projectiles.
- Be on time to avoid rushing the driver.
- If in doubt, confirm that the vehicle has received a pre-use inspection and has safety equipment on board.
- Warn the driver if he is traveling too fast for road/weather conditions or demonstrates other unsafe driving practices, or shows non-compliance with the Safe Driver's Code.

- Never distract the driver while the vehicle is in motion. As well, do not smoke inside the vehicle.
- Be prepared to provide clear directions/instructions to the driver when/if necessary.
- When traveling outside the city, confirm that the driver has filed a Journey Management Plan (JMP) with rest breaks included.
- Assist the driver when maneuvering/backing/parking in hazardous or confined areas as required.

29.0 Night Driving Restrictions

The intent of this section is to minimize the hazard to personnel of vehicles exposed to third party traffic and to the poor condition of roads that are not visible in hours of darkness.

Driving during hours of darkness is not permitted except in the following circumstances:

- In response to an emergency, and
- For urgent operational purposes with prior approval by the PLNG Manager and subject to a journey-specific risk assessment.

30.0 All-Terrain Vehicles (ATV's)

PLNG expects all personnel to operate ATVs in a safe and responsible manner in compliance with the manufacturer's instructions and applicable regulations. ATVs include 4-wheel truck quads, 8-wheel muskeg buggies, snowmobiles, and motorcycles.

- Appropriate PPE must be worn including approved headgear (motorcycle helmet) with approved face shield, glasses, or goggles, safety-toed boots, gloves, and appropriate protective clothing. Goggles must fit well, be scratch free and allow for ventilation. Sunglasses may not provide adequate protection. Consider the wind chill factor and dress appropriately for the weather.
- Never carry a passenger on an ATV (unless allowed by the manufacturer).
- Do not operate an ATV at an unsafe speed and ensure that the ATVs limitations are understood for climbing, turning, and crossing obstacles and water (e.g., frozen lakes and shallow streams). Proceed cautiously in unfamiliar territory (e.g., rough terrain).
- Always start your trip with a full tank of fuel. Check your oil and inspect the ATV for oil or fuel leaks.
- Look ahead for obstacles such as fence lines or tree branches.
- Follow working alone procedures when traveling long distances to remote areas.

Every ATV used outside of work sites should be equipped with a cellular phone or radio. Prior to taking it out, ensure that the ATV is in good operating condition and is well equipped with supplies, gas and other equipment (first aid kit, air horn, flashlight, survival kit, and fire extinguisher, etc.).

31.0 Towing

Non-emergency towing must only be by vehicles fitted with approved rigid towing fitments.

- Equipment being towed must have its own independent braking system.
- Towing must be confined to local in-field areas only.
- Maximum towing speed is 50 kph.
- Any towed equipment which is wider than the towing vehicle must have flashing indicators and brake lights powered by the towing vehicle.
- The towed vehicle must not be heavier than the towing vehicle.

32.0 Vehicle Loading

- Vehicle loads must not exceed the weight limitations indicated on the vehicle registration document.
- Vehicle loads must not extend over the sides of the vehicle. If this is unavoidable as a result of the configuration of the equipment being transported, PLNG will utilize pilot and chase vehicles to warn oncoming traffic of the dangers.
- Any load, which extends beyond the rear of the vehicle, must be marked with a red flag and a red light.
- Vehicle loads must be properly secured. Loose tools or equipment must not be carried inside the passenger compartment. They must be placed behind a protective screen or lashed down.
- Jerricans of approved metal construction must be carried outside the vehicle passenger compartment and must be secured in external holders.
- The following color coding must be used for jerricans:
 - a) Petrol = Red
 - b) Diesel = Yellow
 - c) Water = White
 - d) Lubricant Oil = Green

33.0 Vehicle Parking

Contractors and employees will be allowed to park vehicles (at their own risk) in designated areas only, as directed by the PLNG on-site supervisor. PLNG requires that all contractor and company vehicles be backed into parking spaces, and/or parked for emergency egress. This safe driving practice has been proven to prevent many backing-up accidents when leaving parking sites.

- Care should be taken to ensure that fires are not ignited due to parking in grassy or brushy areas.

- Leaving a vehicle running when parked is not recommended. However, when it becomes necessary to do this, the transmission must be in park (automatic) or in neutral (standard) and the parking brake set.

34.0 Workplace Violence and Harassment

Incidents of workplace violence or harassment must be reported immediately to the on-site supervisor.

- **Violence means** the attempted or actual exercise of any physical force, threatening words or behavior by a person so as to cause injury to another person or damage to property.
- **Harassment** is any behavior that demeans, embarrasses, or verbally abuses a person and that is known, or would be expected, to be unwelcome. This includes words, gestures, intimidation, bullying, or other inappropriate behavior based on a person's gender, marital status, sexual orientation, race, religion, age, or disability.

PLNG will not, and its employees must not, condone behavior in the workplace that is unacceptable and likely to undermine work relationships or productivity

35.0 Security

Security is a condition that is greatly dependant on everyone's active involvement and supportive participation. This commitment, in turn, ensures the most secure environment for all. By assuming a proactive approach to potential threats and incidents, one can possibly prevent or mitigate the results of a security threat. The primary objective of security awareness is to prevent an incident as opposed to reacting after one has occurred.

The following proactive actions are expected of all personnel:

- Maintain a general awareness of your surroundings and anticipate potential threatening situations.
- Always report any suspicious activity or information that you become aware of.
- Do not attempt to evaluate the importance of information or rumors that you learn. Oftentimes, this information, when considered with other intelligence that the Security Department possesses, may in fact be very valuable.
- Assume your personal responsibility to proactively create and maintain your secure environment.

Familiarize yourself with reporting procedures and important telephone numbers to contact in case of emergency.

PERU LNG's Security Management Strategy document includes the specific commitments of the COMPANY to manage security risks in full compliance with the laws of Peru and international best practices.

36.0 Working Alone

PLNG may have situations where individuals are required to work alone and are isolated from other workers. Working alone means that you are working by yourself at a work site where assistance is not readily available in the event of an injury, illness or emergency. A hazard assessment must be completed and appropriate plans developed to identify and control hazards and to meet any applicable regulatory requirements.

1. Communication Plans

An effective means of communication (radio, telephone, or other electronic communication device) must be established to comply with working alone situations. A communications plan must be in place for workers to contact persons capable of responding when assistance is needed. As well, an overdue worker procedure should be in place for locating workers who fail to report on time.

2. Contact Procedures

Time intervals between the lone worker and the designated contact should be established at the onset of the situation, but should not exceed a specific period of time (e.g., one hour – potentially dangerous working conditions/two hours – relatively safe work). Higher risk activities require shorter time intervals between checks.

Each worker should be accounted for while at work in isolated areas from the time of initial reporting for duty to the end of the work period, and during any call-out or non-routine work.

All communications should be logged to prove requirements were met.

37.0 Man Lost Procedure

The purpose of this procedure is to rescue the driver and passenger(s) who fail to get to their destination or place their check-in calls by the ETA designated on the Journey Management Plan. This is an essential part of the journey and the basic principles are:

- A full-scale search will start if the driver is 2 hours late for a check call or arrival at the destination. The Incident Commander in Lima should be notified immediately.
- The Site Emergency Response Team will be activated at the nearest site location.
- No assumptions should be made, no debate started, nor blame for overreaction given.
- The search will use all means of rescue, including air and local emergency services.
- The senior managers at the departure site and the arrival site will both personally investigate the Journey Management Plan.
- A man lost incident counts as a serious near miss and an investigation will always be carried out.
- The system should default to overreaction, not under reaction.

38.0 Journey Management Procedure

Operations on and around PLNG's transport routes represent the most frequent exposure to extreme risks in the routine work during the Project. Similarly, since a Permit is required to carry out works in dangerous areas, the same system is applied to PLNG's most frequent risk of vehicle operations.

The trip's driving principles will be used as a guide to operate the controls as follows:

- The trip should be necessary and related to business.
- The driver must be in good condition, rested, and alert.
- The driver must complete the Daily Inspection Form on vehicle pre-operation.
- The driver must complete a Journey Management Form (JMF) whenever he/she goes to a place other than Pampa Melchorita, Cañete or Chinchá.
- If the driver is 2 hours late, a man lost procedure will be initiated.
- Trips shall be recorded on the Journey Management Form (see following page) and checked by the passenger stating the following details:
 - a) Full name of driver and his/her mobile phone number,
 - b) Names of the passengers and their mobile phone numbers,
 - c) Vehicle plate or fleet number,
 - d) Estimated departure time (EDT) and estimated time of arrival (ETA),
 - e) Check-in calls (hour and location) made by the driver (3 hours as maximum interval between calls), and
 - f) Scheduled stops (maximum travel time is 3 hours with a 30-minute break).
- Information regarding the trip is relayed to the Transportation Coordinator.

Note: All travel deviations should be reported to the Transportation Coordinator immediately.

39.0 Journey Management Form

This Journey Management Form (JMF) is a checklist to be completed for all trips outside the urban area of Lima, for both business and personal trips, during the business week, and on weekends and holidays. It must be reviewed by Security, the Department Manager, a Health and Safety Representative, and the Transportation Coordinator before commencing the journey.

Trip Details

1. Organizer of Journey: _____

Name of Traveler(s) and Telephone Number(s):

Driver's Name:	_____	Telephone Number:	_____
Passenger Name:	_____	Telephone Number:	_____
Passenger Name:	_____	Telephone Number:	_____
Passenger Name:	_____	Telephone Number:	_____
Passenger Name:	_____	Telephone Number:	_____
Passenger Name:	_____	Telephone Number:	_____

2. Reason for Travel: ☐ Work Related ☐ Personal

3. Description of Travel:

4. Destination: _____

5. Route Description:

6. Route Times:

Date of Departure:	_____	Time of Departure:	_____
Expected Travel Time:	_____ Hours		
Rest Locations:	1. _____	2. _____	3. _____
	4. _____	5. _____	6. _____

Date of Return:	_____	Time of Return:	_____
Expected Travel Time:	_____ Hours		
Rest Locations:	1. _____	2. _____	3. _____
	4. _____	5. _____	6. _____

Review and Approval:

1. Review this checklist with the Security Manager and revise as advised.

Security Manager: Review proposed journey and provide security risk assessment of proposed journey.

☐ ☐
 N/A Approved _____

 Print Name Date: mm-dd-yy Signature

2. Review this checklist with the Health and Safety Representative and revise as advised.

H&S Representative: Review proposed journey and provide health and safety risk assessment of proposed journey and issues PPE as required.

☐ ☐
 N/A Approved _____

 Print Name Date: mm-dd-yy Signature

3. Review this checklist with the Department Manager and revise as advised.

Department Manager: Review proposed journey and authorize the proposed journey.

☐ ☐
 N/A Approved _____

 Print Name Date: mm-dd-yy Signature

4. Review this checklist with the Transportation Coordinator.

Transportation Coordinator: Acknowledge receipt of the Journey Management Form and determine required communication checks.

☐ ☐
 N/A Approved _____

 Print Name Date: mm-dd-yy Signature
 Contact #'s _____

Communication Checks:

Departure		
Date	Time	Contact
		☐
		☐
		☐
		☐

Return		
Date	Time	Contact
		☐
		☐
		☐
		☐

Your journey has now been lodged with the JMP. In accordance with PLNG's Transport Management Plan, if you do not contact the Transportation Coordinator within 1 hour of your planned communication check-in times, the Transportation Coordinator will initiate the Emergency Response System to search for you.

Therefore, in undertaking your journey, it is YOUR responsibility to ensure that either:

- You complete the journey as detailed above and keep in touch; or
- Contact Dispatch as soon as you know that you may need to change your planned journey arrangements and seek Security's advice.

40.0 Safety Signs and Color Code

PLNG ensures the execution, identification, and marking of areas and roads as well as the display of signs and symbol signs according to the color code. Color of safety signs are defined by Peruvian Technical Standard NTP 399.009. On general public roads, the provisions contained in the National Traffic Regulations, Supreme Decree D.S. N-033-2001-MTC must be enforced. These standards establish and identify the use of colors, signs, and signals allowing a quick recognition of information and hazards in the various work areas.

Safety signs must be posted in strategic spots and must be visible both day and night.

Safety signs must be made from weather-resistant materials and shall be diamond grade.

Safety signs must be kept clean and in good condition. In the event of wear and/or discoloration, signs must be removed and replaced immediately.

It is obligatory to:

- Sign risk areas where explosive items, mechanical and electrical materials, and chemical reagents are located, and where there are potential power risks.
- Ensure a continuous and efficient production cycle, marking the vehicle and pedestrian traffic areas.
- Continuously train all personnel regarding information on colors, symbol signs, and their use.
- Care for and maintain the signaling and marking system.
- Maintain the signaling system visible.

41.0 Safe Work Permits

The Safe Work Permit is an agreement between, Peru LNG and the worker/contractor, which has been designed to prevent or minimize the possibility of loss to People, Equipment, Materials, Reputation and the Environment.

The Safe Work System:

- applies equally to all employees and contractors engaged in any work activity at Peru LNG work sites, and
- Will be used in conjunction with other applicable Contractor Management Plans and Procedures previously reviewed and approved by Peru LNG.

The Safe Work System will aid in the identification and control of hazards, but will not by itself make the job safe.

Working permits should be coordinated by the contractors HS Department and should be completed by the worker's supervisor or those individuals trained and designated as authorized to complete the Permit. Within the Project Area, the following duties will require Working Permits from PLNG's Project Manager. See Safe Work Procedure for further detail.

- Confined spaces
- Excavations and openings being entered by workers
- Hot works on live facilities
- Electrical equipment

- Working at heights above 9 meters

Where the assessment conducted identifies other high-risk activities, which demand the strict application of an approved safety system, PLNG will implement appropriate control measures, which may include a Work Permit. These Work Permits will be granted only by authorized personnel who are trained to supervise the type of work that will be carried out.

42.0 Housekeeping

Housekeeping is very important for a safe workplace. The principle of *one place for each thing and each thing in its place* is endorsed and must be followed by all workers at all times.

Measures to maintain a clean, tidy, and safe work site include the following:

- Each area must have a process of scheduled housekeeping inspections. This process may be part of the scheduled health and safety inspections.
- Keep the working areas free from materials not being used, such as wastes and residues, in order to facilitate free transit and eliminate the risk of falling.
- Keep the working areas free from fuel and lube spills in order to prevent slips and contamination to the environment.
- Keep stairs, halls, and ramps clean and free from foreign materials such as wastes, hoses, wires, cables, and others that prevent free and easy transit of workers.
- Cabins, hopper, and handrails of vehicles and equipment must be free from oils, greases, wastes, and unnecessary materials.
- Tools must be stored or kept in special boxes or on boards.
- Material storage must be carried out in authorized and signaled places and good stockpiling practices must be followed.
- Wastes must be stored by type in containers or vessels, properly located, and tagged for easy and daily disposal. Disposal arrangements must be approved by PLNG.
- Always leave washing and toilet facilities in good sanitary condition for others.

43.0 Construction Equipment Maintenance

43.1 General Safety Guidelines

The installation, operation, and maintenance of construction equipment must be carried out according to the specifications of manufacturers, focusing on their maintenance program, discharge of contaminant gases, quality of spare parts and lubrication. The Equipment Manager will be responsible (when appropriate) for issuing a Permit to work prior to any commissioning or maintenance operations. This will ensure that all operations follow a strict safe system of work.

Prior to any plant, equipment, or service being placed into use, PLNG will ensure that it is not used for purposes other than those for which it has been specifically designed.

Any mechanical, electrical, or electrical-mechanical stationary equipment will be operated by trained and duly authorized workers only.

The facilities, where stationary machines operate, will have an appropriate size for the installation of several devices and will have enough space around it for the safe mobilization of workers responsible for its management and repair.

Before starting maintenance or repair works lock out the equipment and ensure it is in a correct and safe position.

All heavy mobile equipment and Large Goods Vehicles shall have an audible warning device greater than 92 dBA that operates automatically when in reverse and is recommended to have a flashing yellow hazard warning beacon. This equipment must have the proper lighting for operations at night at all times and safety belts shall be in good operating condition.

Operators and drivers will make pre-use inspections before starting operations in each shift and correct any failure affecting the safety of the equipment.

A spotter will be provided whenever plant or equipment is being moved in the vicinity of other personnel, when there is a possibility of personnel being in the vicinity, or when the operator does not have a clear view around this item of plant or equipment.

Note: For additional information, refer to the following documents:

- Transport Management Plan (02/HS/PJ/PN/002/D02)
- Safe Work System Guideline (02/HS/PJ/OG/004/R01)
- Electrical Safety (02/HS/PJ/OG/013/A01)
- Hazardous Materials Management Plan (02/GP/PT/PN/001/A01)
- Workplace Hazardous Materials Information System (02/HS/PJ/OG/016/D01)

Note: During the Construction Phase, contractors are to provide us with their Maintenance Programs and their Pre-Use Inspection for each specific equipment they operate.

43.2 Hygiene

Developing and setting mandatory occupational safety and health standards involves determining the extent of employee exposure to hazards and deciding what is needed to control these hazards, thereby protecting the workers. Health and Safety inspection shall be performed on a regular basis to anticipate, recognize, evaluate, and recommend controls for environmental and physical hazards that can affect the health and well-being of workers.

The inspectors shall analyze, identify, and measure workplace hazards or stressors that can cause sickness, impaired health, or significant discomfort in workers through chemical, physical, ergonomic, or biological exposures. Two roles of the H&S inspector are to spot these conditions and help eliminate or control them through appropriate measures.

Persons engaged in maintenance operations shall give due consideration to the work to be done before starting, so adequate precautions are taken to prevent contamination from all foreseeable sources (flakes of paint, dust, bolts, screws, gaskets, oils, lubricants, etc.).

44.0 Ergonomics and Back Injury Prevention

Ergonomics considers the physical and mental capabilities and limitations of people as they interact with tools, equipment, work methods, tasks, and the environment. PLNG expects that personnel will evaluate their own capabilities and will exercise appropriate judgment to reduce work-related injuries (i.e., lifting) and illnesses (i.e., musculoskeletal or cumulative trauma injury).

- Personnel should not lift heavy or awkward loads (i.e., barrels or drums, boxes, crates, office furniture and file cabinets, etc) heavier than 88 lbs (40 kg) without assistance.

- Workstations should be individualized or arranged to allow for comfort and reduce musculoskeletal disorders (MSD's) or cumulative trauma injury.

Musculoskeletal Disorders (MSD's) are injuries or illnesses that result from repeated stress to the body and can affect muscles, nerves, ligaments, or tendons. They are also known as Cumulative Trauma Disorders or Repetitive Motion Injuries.

Activities that may cause MSD's include the following:

- Awkward working postures or prolonged static positioning of the body (e.g., lifting or moving equipment, kneeling, stooping, crouching, working at the computer or driving).
- Exposure to vibration (e.g., using hand tools or operating heavy vehicles).
- Frequently repeating an activity or motion (e.g., turning valves, using a keyboard or mouse).
- Forceful exertion (e.g., lifting, carrying, pushing, pulling or gripping).
- Prolonged exposure to heat or cold.

Symptoms of MSD's include discomfort, stiffness, tingling, pain, swelling, fatigue, and numbness.

To reduce the risk exposure to MSD's, workers should:

- Take breaks when driving or operating heavy equipment for long periods.
- Change their posture by taking short "mini-breaks" of stretching, hand exercises, shoulder shrugs, or neck rotations to improve circulation and reduce stress on the body.
- Adjust their grip and position to relieve stress to the wrists, forearms, neck, and back.
- Alternate or mix job tasks to prevent discomfort and fatigue.
- Arrange their workstation so everything is within easy reach, and the furniture is adjusted and positioned so the work can be performed comfortably.
- Perform the task or job at a comfortable height, in a well-lighted and warm environment.

Early detection of symptoms can prevent the progression and severity of MSD's. It is the worker's responsibility to report MSD symptoms, follow workplace health and safety rules, and practice safe work procedures related to their job.

45.0 Provision and Use of Work Equipment

All work equipment identified for use during the Project, including the construction plant, is designed, selected, procured, used, and maintained so as to enable the task to be safely completed.

General requirements that each worker must ensure include:

- Equipment is selected to be suitable for its intended purpose, particularly with regard to the site conditions in which the equipment will be used.
- Appropriate maintenance is carried out according to the Maintenance Plan and any associated logs will be kept up to date according to the procedure.

- Specific health and safety risks associated with the equipment are considered in the respective PETS.
- Use of the equipment is restricted to competent and authorized persons.
- Records of plant and equipment inspections are maintained and available to PLNG and its contractors.
- Persons who will use, supervise, and manage equipment will receive specific instructions in accordance with the Safety Training Program. This Training will cover:
 1. The conditions and circumstances in which the equipment may be safely used.
 2. The methods by which the equipment is to be used including operating procedures.
 3. Actions to be taken in case of abnormal situations including emergencies.

46.0 Noise Protection

Sources of noise shall be eliminated where practicable. Use of suitable hearing protection by employees and subcontractors is ensured by PLNG.

Refer to Occupational Noise Monitoring Procedure for allowable exposure levels and monitoring requirements.

47.0 Compressed Gas Cylinders

Compressed gas cylinders must be supported at all times. Gas cylinders will be maintained in an upright position securely fastened to prevent accidental tipping. Protector caps will be in place on all gas cylinders which are not currently being used and subsequently connected to the equipment. Only trained and authorized personal will manipulate them.

Flammable gases and oxidizing gases will be kept strictly separate.

48.0 Excavations and Openings

All excavations and openings shall be maintained with adequate structural support, access and egress (exits), and provisions made for fences and handrails.

All excavations with a potential fall of 1.2 meters or greater will have a protective barrier installed to alert workers of the potential hazard. Acceptable barriers will be approved by PLNG's HS Representative.

Lights or some other means of identification shall be used to mark the edge of excavations and openings at night.

Work permission must be obtained before any excavation commences.

49.0 Electrical Equipment

Safety measures to be taken when handling electrical equipment are the following:

- Supplies to portable, electrical, and powered tools and temporary site lighting must be of the right voltage.
- Workers should ensure that all tools and distribution equipment including cables, plugs, etc. are complete and examined for signs of damage or wear prior to use.
- Trailing cables across operational or public areas are not permitted.
- Worn or damaged equipment shall not be used.
- Any non-compliant equipment found on site must be immediately removed.
- All cables must be routed and adequately supported to avoid creating hazards on site or damage to the cable or equipment.
- All equipment must be adequately grounded.

50.0 Emergency Response Plan

An Emergency Response Plan (ERP) is developed as an integrated part of the Environmental Management Plan. All workers in the working area must be aware of the ERP and know what to do in case of an emergency. This ERP will be reviewed by PLNG and its contractors to ensure that procedures do not conflict with their own arrangements.

51.0 Medical and First Aid Services

51.1 Medical Program

PERU LNG requires that pre-occupational medical evaluations, annual control evaluations, and retirement evaluations be carried out for all employees. The objective is to ensure that personnel are physically capable of performing their and to contribute their best to the Project. Employment will only be permitted if an individual has the physical capacity to perform his or her tasks safely and effectively.

Should the health of an individual change during the course of the Project, alternative roles may be considered if they are available; otherwise it may be necessary to demobilize the person in question. Should illegal drugs be detected and verified by testing, employment is likely to be denied or terminated.

An inoculation strategy has been implemented by the Company to protect staff and local people. All workers involved in the Project will be required to carry proof of inoculation.

A preventative occupational hygiene program addressing personal and environmental hygiene, vision, noise, and ergonomics, etc. has also been established by the Project.

Further details about these initiatives can be found in the Employee Health Plan.

51.2 First Aid Services

Use and availability of first aid kits are promoted in the equipment, vehicles, and work areas of the company and its sub-subcontractors, as well as first aid training. Key personnel are to be trained as first aiders and have a current training certificate with a clear identification.

First aid stations will be clearly marked and regularly checked. Monthly inventories will be taken of all first aid stations.

When the treatment of an injured or sick person requires the use of a first aid room, the facilities provided for this purpose will be used. PLNG's HS Department must be notified immediately if these facilities are used.

All uses of first aid services will be documented on the PLNG Incident Report Form and submitted to PLNG within 48 hours.

Additional information can be provided in PLNG's Work Site Contingency Plan.

51.3 Welfare Facilities

Restrooms are strategically placed about the work sites to allow ease of use. An adequate number of restrooms will be placed according to the size and gender of the workforce.

Trash cans with caps are provided at appropriate places to dispose of food scraps and related materials. They must be frequently emptied and kept in good condition and cleaned according to Waste Management Plans.

Consumption or storage of food and beverages in any area exposed to toxic or hazardous material is strictly forbidden.

Note: Always leave welfare facilities in good sanitary condition for use by others.

52.0 Heat and Cold Stress

Exposure to heat during the summer and cold during the winter can result in stress to the body that, if not managed, can result in serious health effects. The guidelines outlined below are recommended best work practices that will help workers manage heat and cold stress on the job. Workers who are exposed to heat or cold stress will be trained to identify potential high-risk situations. Workers will receive information on Heat and Cold Stress either during First Aid/CPR training sessions or during one of their regularly scheduled safety meetings.

52.1 Heat Stress

In general, an environment is "hot" if it is very humid and above 29.5° C. Environmental factors of temperature, humidity, and air movement affect the body's ability to dissipate heat. This combined with human factors, such as clothing and body weight, and job factors, such as heat generation from work activity, can result in a heat imbalance thereby elevating the body's core temperature and causing heat stress. The following are examples of actions that can be taken to reduce potential for heat stress:

- Workers must adapt to working in the heat by pacing themselves until they become adequately acclimatized to the hot environment.

- Drink plenty of fluids in order to replenish the fluids the body loses through perspiration and evaporation from the skin.
- Take rest breaks as appropriate for the work being done. If a worker is feeling faint, experiencing cramping or becoming fatigued, the body is warning of potential heat stress and the worker should move to a cooler area to rest (work-rest cycle). Schedule work for the coolest periods of the day.
- If workers will be working in an enclosed or confined area without natural air movement, obtain fans or other means of ventilating the work area to provide for cooling.
- Workers should recognize the potential physical disorders possible from exposure to heat. They include:
 - a) **Heat stroke:** total shutdown or failure of the body's thermal regulatory system.
 - b) **Heat exhaustion and heat cramps:** excessive loss of salt from the body and water imbalance.
 - c) **Heat fatigue:** behavioral disorder.
 - d) **Heat rash:** disorder and blockage of the sweat glands.
- Personal protective approaches that can reduce heat stress include:
 - a) Wide-brimmed hat or other type of head cover,
 - b) Absorptive undergarments (removes perspiration from the skin promoting cooling),
 - c) Shirt or light-skin cover in preference to bare skin, and
 - d) Cooling vests in extreme cases.

52.2 Cold Stress

In a cold environment, body heat must be conserved to maintain a core temperature at normal levels and to ensure adequate blood flow to the brain and extremities. Environmental factors affecting conservation of body heat are temperature and wind chill. This combined with human factors, such as protective layers of clothing, and job factors, such as work activity determine whether one is adequately protected from the extremes of cold weather. The following are examples of actions that can be taken to reduce potential for cold stress:

- Workers must adapt to working in the cold by pacing themselves until they become adequately acclimatized to the cold environment.
- Prior to working outside or in unheated buildings, determine the wind chill index and check the weather forecast for possible changes.
- Plan work so that a heated location, such as a vehicle, is available for warm-up if needed.
- Schedule rest breaks regularly, so workers can warm up and replenish their fluids.
- Ensure a means of communication is available when working in a wind chill below - 30° C so a rescue can be effected in case of an accident.

- Provide thermal cushioned insulation on tool handles.
- Workers should recognize the potential health problems from working in cold environments. They include:
 - a) **Frostbite** – freezing of the skin, loss of sensation, cold pale and waxy skin.
 - b) **Trench foot/Immersion foot** – intense pain in foot with swelling. Discoloration of the skin may be caused by long immersion in cold water. Water temperature does not need to be below freezing to cause trench foot.
 - c) **Hypothermia** – cold extremities which are numb and clumsy; severe shivering along with reduced mental alertness with irritability and lack of concentration. Note that the normal shivering process stops in severe hypothermia.
- Personal protective approaches that can reduce cold stress include:
 - a) Mittens and gloves should have removable insulated liners. Liners that cannot be removed and dried every day will gradually absorb moisture, which will speed up the loss of body heat.
 - b) Boots should be of the insulated type and have a removable insole. They should be worn with wool, nylon blend, or chlorofiber socks.
 - c) Have a spare change of clothing available during cold weather. Clothing that has become wet from perspiration or weather-related precipitation should be changed as soon as possible. If heavy perspiration has taken place, the worker should exercise caution before removing outer clothing while resting outdoors in order to prevent chilling and possible hypothermia.
- **Three layers** of clothing have been found to be effective in managing cold stress.
 - a) The **inner layer** absorbs moisture and keeps it away from the skin. Long underwear or wool or chlorofiber is ideal.
 - b) The **second layer** is an insulating one, which keeps a layer of air trapped around the body. Wool, synthetic insulation, or down are suitable fabrics.
 - c) The **third layer** protects the previous layers from dust, dirt, wind, and moisture. Waterproofed cotton twill is ideal for this layer. Although nylon and/or other synthetics are also suitable for thermal use, they can develop electrostatic charge and, therefore, fire-retardant outwear (Nomex 111A) may still be required.

The potential for accidental exposure to severe cold must be included in plans to control exposures. If a worker complains of symptoms of cold stress, he/she must be removed from the exposure and assessed by appropriate medical personnel.

53.0 Alcohol and Drugs

According to the Health and Safety Mining Code DS-046-2001-EM Clause 39, PLNG recognizes that alcohol and drug abuse is a serious problem and expects that no alcohol and/or drugs shall be consumed by any worker at any time.

Those workers who need to use drugs for medical reasons shall inform their supervisors before starting their labor.

Unexpected inspections will be performed in the dressing rooms, in vehicles, at offices, or work sites. Those persons reporting for duty and believed to be under the influence of alcohol and/or drugs shall be refused entry.

Failure to comply with these requirements will be considered as a serious fault to PLNG's working regulations and cause for disciplinary action which could lead to possible dismissal.

54.0 Fire Prevention and Protection Program

PLNG provides means to prevent injuries caused by fire and minimize losses in case of fire. The following rules are applicable to all employees, subcontractors, and visitors:

- Identify all fire hazard areas; define the hazard degree and the importance of the effects of a fire at each area.
- Identify the equipment required and the training of personnel required for the area in order to fight fires; keep records of the use of equipment, maintenance, and training.
- Carry out a monthly inspection to check for the condition of fire equipment.
- Training on use of fire extinguishers is held periodically.
- All combustible materials shall be stored in a position and in a manner approved by the HS Department.

Fire risk assessment and emergency procedures will be approved by PLNG's Project Manager and fire precautions will be determined prior to commencement of the works. See the Emergency Response Plan (SMA-PLA-003) integrated to the Environmental Management Plan.

55.0 Access for Emergency Services

Areas are set aside for the access of firefighting equipment or other like appliances, including ambulances. These areas shall be maintained, kept clear from obstructions at all times, and marked/signed accordingly.

56.0 Hot Work

Hot work includes all types of work involving naked flames or sparks within 3 meters of a hydrocarbon source. Prior to any hot work being carried out, a Hot Work Permit shall be obtained. The Permit will carry endorsements as to the type of firefighting equipment to be provided and the authorizing person will enter the start and completion times for the hot work. Upon the completion of the work, the Permit must be returned to the issuer for cancellation.

57.0 Site Welding

No welding shall be carried out on the site without the correct personal protective equipment and to prevent the effects on persons immediately adjacent to the operation.

The area is checked and cleared of any combustible items. If the combustible item cannot be moved, it must be protected. A worker trained in firefighting will be designated as a fire watch during the welding procedure and will be equipped with a hand-held extinguisher. In the event of a fire, the fire watch will alert the welder to evacuate and will then proceed to extinguish the fire.