



**Confidential**

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## EHS management plan

Wartsila will follow the Owner's EHS policies listed below in the event any of the requirements included in said policies are more stringent than Contractor's EHS management plan:

WAPA-OHS-SM-PP-002-Personal Protective Equipment Rev.1

WAPA-OHS-SM-PP-007-Welding Cutting and Hot Work Rev.1 & Hot Work Procedures  
Safety Policy HW-1

WAPA-OHS-SM-PP-008-Lockout – Tagout Rev1 & Hazardous Energy Control Program

WAPA-OSH-SM\_PP-009 – Fall Protection Rev.1

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## 1. Project information

<b>Basic information</b>	
Project name	
Project number	
Type of project	
Country, city	
Plant type	
Total output [MW]	
<b>Customer - contact information</b>	
Company name	
Address	
Postal code and city	
Country	
Contact person	
E-mail	
Phone	
<b>Wärtsilä project management team</b>	
Project Manager	
Chief Project Engineer Mechanical	
Chief Project Engineer Electrical	
Chief Project Engineer Civil	
<b>Wärtsilä site team</b>	
Site Manager	
Section Manager Mechanical	
Section Manager Electrical	
Section Manager Civil	

## 2. Introduction

It is the policy of Wärtsilä Corporation to provide, maintain and improve, so far as possible, safe and healthy conditions at each of its' operating construction sites and power plants, to install in every employee safe working habits and attitudes, and to provide training, rules and disciplines for safe working conditions on the job. No employees' life or health shall be put in danger by any procedure or standard practice.

All parties shall co-operate in the shared workplace. Attitude is the key factor in the accident prevention.

These EHS management methods apply for all items listed under Wärtsilä scope of supply and are applicable for Wärtsilä and its subcontractors and the customer. The plan is a live document and subject to changes throughout the course of the project.

All personnel shall perform their activities in strict compliance with Wärtsilä and customer safety requirements.

## 3. EHS documentation

The EHS documentation includes the following plans and guidelines:

Document	Content
EHS management plan	QEHS policy, objectives, methods and processes for managing safety at site.
EHS requirements	Basic rules and instructions for performing work tasks safely.
Environmental Management plan	Guidelines and instructions for avoiding and minimising environmental impacts.
Emergency action plan	Guidelines and instructions for handling emergency situations.
Health plan	Information on medical services, sanitation issues and health risks at site.
Site security plan	Arrangements for ensuring the construction site security.

In addition, template files are provided to help in monitoring and follow-up of implementation of EHS rules and regulations at the site.

#### 4. Wärtsilä Quality, Environmental and Health & Safety Policy

State: Approved

Public:

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## WÄRTSILÄ'S QUALITY, ENVIRONMENTAL, HEALTH AND SAFETY POLICY

Wärtsilä is a global leader in smart technologies and complete lifecycle solutions for the marine and energy markets.

Protecting the environment, enhancing customer business, and contributing to a sustainable future is the essence of what we do. Our solutions and operations are safe, reliable, efficient, environmentally sound, and compliant with regulatory and other applicable requirements.

We give the highest priority to preventing occupational injuries and illnesses by assuring safe and healthy workplaces in all of our business operations, and we authorise work to be stopped if conditions are considered unsafe, or if quality is being compromised.

We set objectives and continually improve our QEHS performance. We actively eliminate defects and hazards, and reduce QEHS associated risks.

We communicate and consult with employees and other relevant stakeholders to ensure that our QEHS practices are enforced and constantly improved.

Our skilled organization acts as a responsible global citizen.

Approved by Wärtsilä Board of Management 16.12.2019

A handwritten signature in blue ink, appearing to read "Jaakko Eskola".

Jaakko Eskola

Signed by **Jaakko Eskola**, President and CEO of Wärtsilä Corporation

## EHS objectives

Wärtsilä is dedicated to the concept that all accidents are preventable and philosophically unacceptable and committed to develop throughout all the construction activities continuous environmental, health and safety improvement practices pursuing the following objectives:

- Eliminate all injuries.
- Eliminate all preventable illnesses.
- Eliminate all environmental incidents
- Expand environmental, health and safety plans so that they are effective throughout the organization at the worksite.
- Promote safe working conditions as a priority and as a major concern.



A **ZERO ACCIDENTS** policy and a **BEHAVIOUR BASED SAFETY** shall be adopted by all subcontractors.







The following performance indicators are followed in this project:



Lost Time Injury Frequency	
Total Recordable Injury Frequency	
Amount of hazard observation reports	
Amount of Management Safety Walks	
Amount of EHS trainings	
Amount of work permits	

## Wärtsilä life-saving rules

Table 1 Wärtsilä life-saving rules

	Work with a valid work permit/JSA when required
	Verify isolation when working on energized systems

	<p>Always use equipment that is fit to its intended purpose</p>
	<p>Ensure safe conditions before entering a confined space</p>
	<p>Protect yourself against a fall when working at height</p>
	<p>Obtain authorization before overriding or disabling safety critical equipment</p>
	<p>Stay out from under suspended load</p>
	<p>Wear required personal protective equipment</p>

	Wear your seat belt
	Comply with road safety rules

### EHS disciplinary process

In case of deviation to Life Saving Rules, EHS rules, procedures, instructions and regulations, Wärtsilä has the following disciplinary process that applies both to Wärtsilä personnel and subcontractors:

1. One verbal warning.
2. One written warning.
3. Dismissal from the site according to the Site Manager's discretion.

Additionally, a severe violation may result in immediate dismissal from site.

Subcontractors are responsible for monitoring and enforcing disciplinary process for their workers. Subcontractors shall monitor the work of their workers to assure unsafe conditions are not created. Failure of subcontractor management to enforce disciplinary process may result in disciplinary actions taken against subcontractor management by Wärtsilä Site Manager.

## 5. Applicable law and permit provisions

Construction site safety performance and compliance with local and Wärtsilä requirements is assessed regularly by the site management, and compliance with requirements shall be evaluated as part of the EHS inspection process.

## 6. Organisation

### Wärtsilä's roles and responsibilities

Site organization of Wärtsilä together with the customer is responsible to ensure that site activities are performed in a safe and environmentally responsible way. Responsible management requires observing several matters at the same time. Project and site management implement and enforce the safety management and safety rules for the site.



The site management shall nominate a EHS professional, which shall ensure that occupational and environmental safety are planned and carried out in daily activities. The EHS organisation administers the safety management to ensure effective compliance, and consolidates operations performed by various parties working in the construction site.

Advisors and employees are responsible to ensure that occupational and environmental safety are implemented in their organization and site. All employees have the right to stop work if conditions are unsafe or quality is compromised.

### Subcontractors' roles and responsibilities

Subcontractors shall plan and manage their activities to ensure health and safety working conditions for their employees and all stakeholders under their influence at the worksite. Subcontractor and their plans and programs shall at minimum follow these Wärtsilä EHS Plans and other local and national requirements.

This includes but is not limited to:

- Training their employees and providing necessary information
- Conducting EHS inspections and incident investigations
- coordinating their work in a safe manner in cooperation with Wärtsilä site team and other on-site contractors.

All subcontractor employees shall also:

- participate in Wärtsilä site EHS induction before starting any works at the worksite
- inform the Wärtsilä site management of hazards and dangers that their work may present to others
- report any injury, accident, near-miss or environmental incident immediately as well as monthly EHS statistics for the previous month latest on the 4th working day of the month
- participate site safety meetings and site inspections
- supply personal protective equipment for their employees according to local and Wärtsilä requirements

Subcontractor shall identify and designate competent persons for activities, when applicable to the activity. Subcontractors shall also designate a qualified EHS representative to be responsible for the administration of the subcontractors HSE Plans and programs, and all Wärtsilä, customer, local and national requirements. The designated professional shall be qualified to identify hazards and have the authority to correct them, coordinate safe work practices and submit all required documentation to Wärtsilä.

## 7. Safety training and orientation

All Wärtsilä employees and subcontractors shall be trained in their respective scope of work before any work commences. Employees and subcontractors' employees working on the site shall be adequately trained in the type of work to be performed and in relevant procedures, have the appropriate qualifications, certificates and tickets, and be under competent supervision.

## Site induction

All project personnel are required to participate in the Site EHS Induction before performing any work on the site. The participation in the training will be documented, including time, date and a signature of the individual to verify the understanding of this EHS Management Plan.

## Line management and supervisory training

The senior management, advisors and other supervisors are required to undergo training in all operational control procedures developed to control EHS risks associated with the tasks to be performed. Line management and supervisors will be instructed further with the expectations of the EHS management system.

## Craft-specific training

No work shall be allowed to commence until there is evidence of such competency based on appropriate education, training or experience. All contractors are responsible for their employee's craft-specific trainings.

All employees conducting high-risk activities shall attend craft-specific training. These trainings are designed for the specific high-risk activities that require more extensive training and, where possible, shall include practical application of controls in the field.

## Competencies required at the worksite

The following activities shall be performed by a trained and authorized competent person:

- Equipment operations, including powered industrial truck operators
- Crane operations
- Inspections and maintenance of lifting equipment
- Confined space entry
- Electrical works
- Inspection of excavations and shoring
- Fall protection: Ladder, life line, and safety harness Inspections
- Scaffolds
- Other activities determined by the company

## Visitor access

Visitors at site shall be inducted to the EHS information and routines at the site.

### Visiting for more than 8 hours

Attend site EHS induction

### Visiting for 8 hours or less

A short visitor induction will be given when entering the worksite.

Visitors shall be accompanied by an authorized person throughout the entirety of his/her visit. Authorized person is someone with project hazards training and familiarity with the project.

If the visitor cannot be accompanied by an authorized individual throughout the entire visit, the visitor shall attend the Site EHS Induction before accessing any work activity area.

## 8. EHS communication

### Site Safety Committee

Site Safety Committee is established at site, for collaboration and coordination of work safety. Safety committee shall include the site management and EHS representatives from all subcontractors. The safety committee shall be formed and chaired by Wärtsilä's Site Manager.

Safety meeting shall cover the following areas at a minimum:

- A review of the tasks assigned to the participants in the last meeting.
- An evaluation of performed safety inspections and occurred accidents, if any since last meeting
- A recommendation of the safety topics and work schedule up to the next meeting
- Before the weekly safety meeting, a site inspection shall be conducted.

The findings of the inspection committees shall be assembled into a report and shall be included in the minutes of meeting for distribution. Results of inspection shall be discussed in the safety meeting.

### Accident/incident reporting

All hazard observations, near misses, incidents, occupational injuries, environmental incidents and fires, security events, commuting injuries and occupational diseases shall be recorded, investigated and reported properly. After the investigation, the preventive and/or corrective actions shall be implemented. Site Manager is responsible to conduct the incident and accident investigation and the reporting.

**Note:** For all incidents and serious near-miss cases, the investigation and reporting shall start in 24 hours, and preliminary information shall be entered to the reporting system. Investigation shall be conducted and reported during one (1) week.

The occupational injury, environmental incident and fire, security event and hazard observation/near-miss reporting is made using Wärtsilä's reporting and classification instructions and tools. Tools are based on DNV Synergi Life -software.

### LTI and TRI rate reporting

Lost Time Injury (LTI) rate and Total Recordable Injury (TRI) rate reporting are mandatory, and it is the responsibility of the site management. The LTI and TRI rates are an international method to inform the safety level.

## Site safety files

Site safety files set up categories for documentation. All needed documentation, including plans, procedures, programs, instructions, templates, reports, records and registers, shall be collected to site Safety Files in DCM 365 – Site - EHS under categories shown in the following table.

Table 2 Example of categories and documents to be stored in categories

No.	Site Safety File	Wärtsilä Site File
00	External requirements	Contractual requirements, legal requirements
01	EHS management	Wärtsilä EHS management plan, Life-saving rules, Code of Conduct, EHS Objectives for the project
02	Wärtsilä EHS guidelines	EHS guidelines, EHS procedures and instructions
03	Environment and health	Environmental monitoring plan, Health plan, Waste management info, Chemical register, MSDS's
04	Emergency management	Emergency action plan and its appendixes, contact details, emergency drill templates
05	Site security	Site security plan, ID card template
06	Training and promotional items	Training materials, EHS posters and other promotional materials
07	Employee, tool and equipment records	Tools and equipment inspections, records and information related to tools and equipment on site, training records, contact details
08	Task-specific plans	Approved Work Permits, JSAs and risk assessments
09	Follow-up and monitoring	Minutes of meetings, incident reports

## 9. Hazard and risk analysis

Risk assessments shall be performed before the commencement of any construction work. All the hazards and risks posed by activities carried out by Wärtsilä personnel will be considered, as well as those hazards and risks arising from the activities of subcontractors and visitors, and from the use of products or services supplied by others. Hazard identification, risk assessment, and risk control processes shall be carried out as proactive measure, rather than reactive. Opportunities, and beneficial or positive impacts enhancing proactive management actions shall also be identified in the processes.

All new, revised activities or procedures shall be subjected to the risk assessment process. Risk assessments will also be reviewed whenever a significant incident occurs.

### Job Safety Analysis (JSA)

Job Safety Analysis (JSA) shall be performed and documented for all tasks at the worksite.

JSA shall be changed to reflect new conditions in tasks being performed or new hazards not identified previously.

## 10. Work Permit

All work requiring the permit shall be carefully reviewed and properly approved by the authorized and/or competent persons to ensure the safety and health of the employees during the designated work period.

### Work Permit procedure

Installations and any work that contains substantial high-risk potential must be permitted before work commences. In Wärtsilä construction sites, the following works require Work Permit:

- hot work
- excavation work
- work in confined spaces
- electrical installations
- using man cages
- working at heights
- Chemical works: pickling and flushing
- radiographic testing
- other high-risk activities.

Work Permit shall be accompanied by a task-specific Job Safety Analysis (JSA). In JSA, work is split into tasks and their associated hazards, and methods to mitigate risks. Work Permit by itself is not applicable but JSA and risk assessment identifies risks and explains how they are mitigated.

Electrical installations need a drafted switching plan prior to commencing work.

Work Permit document must be placed during the work on a visible place near the location where the work will be done.

### Responsibilities

The team/employee performing the job and its responsible superior is responsible for planning and documenting the plan by using JSA and Work Permit procedure. Wärtsilä EHS organization approve all safety criteria and require the usage of applicable safety equipment, but each Wärtsilä section managers shall approve the overall ways of working per each discipline. Section Managers shall also inspect and ensure routinely and randomly that Work Permit requirements are followed.

LOTO responsibilities also apply to all the responsible persons mentioned when hazardous energy is present in the work

## 11.Change management

EHS objectives and site EHS performance shall be reviewed by the project management team members at least once per year, or more often as deemed necessary. Also changes in regulatory and other requirements, lessons learnt, or shortages noticed in best practices shall be reviewed regularly.

### Project specific items

Chapter	Topic