



Trans Adriatic
Pipeline

Document Title :

TAP Italy ESMS Offshore Waste
Management CCP

Document Number :

IAL00-RSK-601-Y-TTM-0019_00

Document Date :

10/06/2015

TAP ITALY ESMS OFFSHORE WASTE MANAGEMENT CCP



TABLE OF CONTENTS

1	Abbreviations and definitions	4
1.1	Defining “offshore”, “coastal” and “marine” areas	6
2	Introduction	7
2.1	Objectives	8
2.2	Scope	9
2.3	Responsibilities	10
3	Marine impact avoidance and mitigation	12
3.1	General	12
3.2	COMPANY preliminary waste study	13
3.3	Waste hierarchy	13
3.4	Waste characterization study	14
3.5	Waste identification and segregation	15
3.6	Waste receiving and storage locations	16
3.6.1	Approved waste receiving facilities and companies	16
3.6.2	Site temporary waste storage locations	17
3.6.3	Waste storage on vessels	17
3.7	Waste handling	18
3.8	Waste transportation	20
3.9	Determining the final destinations for waste	20
3.10	Waste incineration	21
3.11	Managing specific waste types	22
3.11.1	Liquid waste	22
3.11.2	Hazardous waste	22
3.11.2.1	General	22
3.11.2.2	Liquid hazardous waste	22
3.11.2.3	Medical waste	23
3.11.2.4	Contaminated sediment	24
3.11.2.5	Radioactive waste	24
3.11.3	Black water (sewage) and grey water treatment and disposal	24
3.11.4	Human waste management on board vessels	24
3.11.5	Drainage and bilge water	25
3.11.6	Ballast water discharge	25
3.12	Waste documentation	26
4	Coastal impact avoidance and mitigation	27
4.1	General	27
4.2	COMPANY preliminary waste study	27



4.3	Waste hierarchy	27
4.4	Waste characterization study	27
4.5	Waste identification and segregation	28
4.6	Waste receiving and storage locations	29
4.6.1	Approved waste receiving facilities and companies	29
4.6.2	Site temporary waste storage locations	29
4.6.3	Waste storage yards (WSYs)	29
4.7	Waste handling	30
4.8	Waste transportation	31
4.9	Determining the final destinations for waste	31
4.10	Proposing a waste incinerator	32
4.11	Managing specific waste types	33
4.11.1	Liquid waste	33
4.11.2	Hazardous waste	34
4.11.2.1	General	34
4.11.2.2	Liquid hazardous waste	34
4.11.2.3	Medical waste	35
4.11.2.4	Contaminated land/groundwater	35
4.11.2.5	Radioactive waste	35
4.11.3	Septic tanks and grey water disposal	36
4.11.4	Human waste management along the working area and other worksites	37
4.12	Waste documentation	37
5	Signage	38
6	Training	38
7	Monitoring and Inspection	38
8	Related documents	38

Table of Tables

Table 1-1 Abbreviations and definitions	4
---	---

List of Figures

Figure 1 Marine, coastal and onshore limits	7
---	---

1 Abbreviations and definitions

The following table provides definitions of acronyms and a glossary of terms used in this document.

Table 1-1 Abbreviations and definitions

ALARP	As Low As Reasonably Practicable
Battery Limit Point Italy	The location of the first dry weld of the pipeline in Italy (i.e. the dry weld closest to the sea)
Black water	Wastewater containing faecal matter and/or urine
BOD	Biological oxygen demand
CCP	Contractor Control Plan
CER	Catalogo Europeo dei Rifiuti (European Waste Catalogue)
Coastal areas	Areas located between the Battery Limit Point Italy and Mean High Water Springs (MHWS)
COMPANY	TAP AG
CONTRACTOR	Construction contractors for Italy
Cultural heritage impact	A change to cultural heritage (in this context “cultural heritage” refers to any tangible (e.g. objects, artefacts, structures, spaces) or intangible element which is of value or importance to people’s culture, history and/or identity) which has occurred as a result of Project activities. Impacts may be considered to be positive or negative
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EEZ	Exclusive Economic Zone (offshore area extending a maximum of 200 nautical miles beyond territorial waters)
EHS	Environment, Health And Safety
Environmental impact	A change to the environment (in this context the “environment” refers to any aspect of the natural or semi-natural physical environment (air, water, soil etc.)) which has occurred as a result of Project activities. Impacts may be considered to be positive or negative
ESIA	Environmental and Social Impact Assessment

ESIP	Environmental and Social Implementation Plan
ESMS	Environmental and Social Management System
EU	European Union
FOC	Fibre Optic Cable
Grey water	Wastewater generated from wash hand basins, showers and baths
HDPE	High-density polyethylene
IFC	International Finance Corporation
IFI	International Finance Institution
IMO	International Maritime Organization
KP	Kilometre Point relating to the pipeline route as per the base case described in the ESIA Italy. It is possible that the KP locations will change because of a re-routing
Marine areas	Areas located between Mean High Water Springs (MHWS) and the Italy-Albania median line
MARPOL	International Convention for the Prevention of Pollution from Ships
Median Line	An agreed marine territorial boundary separating the Exclusive Economic Zones (EEZs) of 2 or more countries
MHWS	Mean High Water Springs The mean average of the highest levels that spring tides reach over two successive high waters during those periods of 24 hours when the range of the tide is at its greatest, taken over a period of time (typically 19 years). MHWS is considered the point on this project that delineates between marine and coastal areas, which are both considered in the offshore CCPs
Microtunnel	A 3m diameter tunnel extending across the Italian landfall (approximately 1,485 m in length). The microtunnel allows the installation of the pipeline in the landfall area without the need to excavate a trench
MLWS	Mean Low Water Springs The mean average of the lowest levels that spring tides reach over two successive low waters during those periods of 24 hours when the range of the tide is at its greatest, taken over a period of time (typically 19 years)
Nearshore	For the purposes of these CCPs, the nearshore marine area in the vicinity of the pipeline landfall is defined as the area seaward from Mean Low Water Springs (MLWS) to approximately 10 m water depth

Offshore areas	Areas located between the Battery Limit Point Italy and the Italy-Albania median line. Inclusive of both coastal and marine areas
PPE	Personal Protective Equipment
Pipeline	Proposed pipeline scheme (TAP) including related facilities such as access roads etc.
Project	Proposed pipeline scheme that will bring natural gas from the Caspian region to Western and South-Eastern Europe (TAP)
Socio-economic impact	A change to the existing socio-economic environment (in this context the “socio-economic environment” refers to the combination of any existing social and economic factors) which has occurred as a result of Project activities. Social factors may include aspects such as demographics, health and wellbeing etc. and may refer to individuals, groups or wider communities of people. Economic factors may include aspects such as employment, finances, livelihoods etc. An impact may be considered to be positive or negative
TAP	Trans Adriatic Pipeline
TAP AG	Trans Adriatic Pipeline joint venture company
VIP	Ventilated improved pit
WMC	Waste Management Contractor
WMD	Waste Management Database
WSY	Waste storage yard

1.1 Defining “offshore”, “coastal” and “marine” areas

This CCP applies to all offshore areas that might be affected by the Project in Italy. “Offshore” areas include both “coastal” and “marine” areas, which are defined as follows:

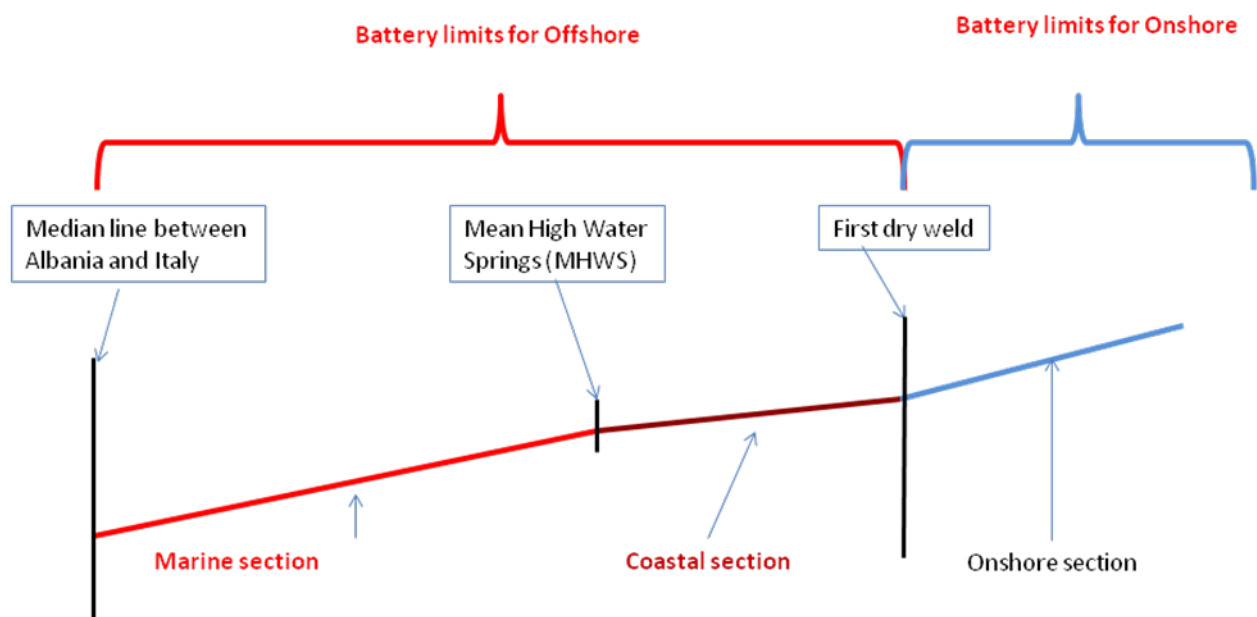
“Coastal” areas are defined as all areas located between the Battery Limit Point Italy (i.e. the location of the first dry weld) and the Mean High Water Springs (MHWS)¹. For further information on the Battery Limit Point location see the TAP Battery Limits Onshore – Offshore Sections document (CPL00-ENT-100-F-DFO-0002).

¹ In the case of the Italian landfall, pipeline construction using a microtunnel complicates the issue. Work sites within marine and coastal areas are further clarified in Section 2.2.

“Marine” areas are defined as all areas located between MHWS and the Italy-Albania median line.

“Offshore” areas include both the marine and coastal areas, and therefore include all areas located between the Battery Limit Point Italy and the Italy-Albania median line.

Figure 1 Marine, coastal and onshore limits



2 Introduction

This Contractor Control Plan (CCP) identifies the commitments made in relation to offshore waste management during the construction and commissioning phase of the Project in Italy and describes the COMPANY’s requirements of CONTRACTOR in terms of meeting these commitments. Where a specific commitment from the Italy Commitments Register is described in this CCP, it is followed by its reference number as stated on the Project Commitment Register Italy (e.g. IT0012). Additional requirements have been included within this CCP where they are deemed to be internationally accepted or best practice. These additional requirements are not followed by a reference number.

As part of its planning and readiness for construction, CONTRACTOR is required to prepare its own specific Environmental and Social Implementation Plans (ESIPs) setting out how it intends to meet and comply with specific Project commitments set out in each CCP developed by the

COMPANY. This CCP shall act as a reference from which CONTRACTOR shall prepare an Offshore Waste Management ESIP.

Deviations that involve measures different from those contained in this CCP will only be permitted upon approval of the COMPANY.

The Contractor's ESMS Framework Document (CAL00-RSK-601-Y-TTM-0001) provides an explanation of the linkage between CCPs and ESIPs.

2.1 Objectives

This CCP has been prepared to define the mitigation measures necessary to ensure a comprehensive waste management system through waste avoidance, minimization, segregation at source or other appropriate/licensed point, temporary storage collection, transport, treatment, reuse, recycling and final disposal of all Project generated waste (in full accordance with the waste management hierarchy) during the construction phase of the offshore sections of the Project in Italy. This includes the appropriate management of any hazardous wastes (e.g. used oils, lead-acid batteries) such that they are securely stored and transferred to appropriate facilities.

The objective of this CCP is to ensure that any offshore waste management is conducted in conformance with the commitments made in the ESIA Italy, international best practice and standards, Italian legislation, and European guidelines regarding waste management (IT0103). It is also the objective that any potential negative impacts that may occur as a direct result of Project activities are prevented or, where this is not possible, reduced to as low as reasonably practicable (ALARP²).

² For a risk (or impact) to be ALARP it must be possible to demonstrate that the cost involved in reducing the risk/impact further would be grossly disproportionate to the benefit gained. The ALARP principle arises from the fact that infinite time, effort and money could be spent on the attempt of reducing a risk/impact to zero. It should not be understood as simply a quantitative measure of benefit against detriment. It is more a best common practice of judgment of the balance of risk and societal benefit.

2.2 Scope

This CCP defines COMPANY requirements (i.e. the commitments and best practice) relating to offshore waste management that CONTRACTOR shall implement during construction, including hydrotesting and commissioning.

The scope of this CCP includes

- preliminary study of waste infrastructure and facilities in Italy
- waste hierarchy
- waste minimisation
- waste characterization
- waste identification and storage
- waste receiving and storage locations (including storage onboard vessels)
- waste handling
- waste transportation
- different types of waste
 - hazardous wastes (including contaminated land / sediment, medical and liquid hazardous wastes)
 - sewage treatment
 - septic tanks and grey water
 - drainage and bilge water
 - ballast water
- waste incineration
- waste documentation.

Monitoring shall occur periodically in order to ensure compliance with the COMPANY's policies and procedures with regards to minimising waste impact and adhering to the relevant national and international standards and legislation. Monitoring and inspection requirements related to this plan are detailed in the Offshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0023).

This CCP applies to all offshore areas that might be affected by the Project in Italy, including both coastal and marine areas. For a further definition as to what is defined as a "offshore", "coastal" and "marine" area, and their respective limits, see Section 1.1.

The marine areas within the scope include but are not limited to the following:

- the microtunnel
- the marine pipeline route/trench and immediately surrounding area
- the fibre optic cable (FOC) route/trench and immediately surrounding area
- Italian territorial waters and Exclusive Economic Zone (EEZ) (in terms of the potential extent of any marine impacts as a result of Project offshore construction activities).

The coastal areas within the scope include but are not limited to the following:

- the temporary worksite for the construction of the microtunnel
- the working strip for approx. 110m of terrestrial pipeline from the Battery Limit Point Italy to the start of the microtunnel
- any roads (including access roads, dirt tracks and public roads), aggregate extraction sites, spoil disposal sites, batch plants, temporary material and waste storage areas, pipe yards, maintenance areas located within the coastal zone.

CONTRACTOR should note that where marine-related activities occur in coastal areas (e.g. pipe storage yards for offshore pipe sections and vehicular transport of supplies/personnel), the requirements specified in the coastal impact avoidance and mitigation section of this CCP will apply. Should any offshore-related activities occur in the onshore area (including onshore roads), the requirements specified in the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008) will apply. It is CONTRACTOR's responsibility to request the onshore CCPs from the COMPANY should they be required.

2.3 Responsibilities

CONTRACTOR shall be responsible for ensuring that the Project (including all site operations, equipment and machinery) will comply with the defined Project Standards which encompass the requirements of Italian legislation, EU Directives, EBRD Environmental and Social Policy, IFC Performance Standards and IFC EHS Guidelines (IT0036). CONTRACTOR will also comply with the requirements of the COMPANY ESMS (IT0516) (including this CCP) and the ESIA Italy.

CONTRACTOR will be responsible for any adverse environmental, socio-economic and cultural heritage impacts arising from its activities and operations and for putting in place any necessary

measures to avoid or, if not possible, mitigate them. CONTRACTOR will also be responsible for promptly reacting to accidental events and mitigating any resulting adverse environmental, socio-economic and cultural heritage impacts for which CONTRACTOR is responsible as much as possible. Should any such accidental events occur, CONTRACTOR will immediately inform the COMPANY. Should these accidental events be the result of CONTRACTOR (i.e. events resulting from CONTRACTOR's activities, events in areas which CONTRACTOR is responsible for) CONTRACTOR shall consult the COMPANY on the best way to handle and/or mitigate immediate risks to Project stakeholders.

In addition, CONTRACTOR will be responsible for avoiding or minimising the generation of hazardous and non-hazardous waste materials and reducing their harmfulness as far as practicable.

CONTRACTOR shall put these responsibilities into effect by:

- writing an Offshore Waste Management ESIP that describes how it will implement the requirements described in Sections 3 and 4 of this CCP and other legal requirements
- implementing the Offshore Waste Management ESIP by:
 - communicating the contents of the ESIP to its workers and subcontractors and training them to ensure that they understand their responsibilities with respect to offshore waste control and management, incident reporting and response
 - ensuring that adequate resources are mobilised for offshore waste management, including input from any specialist resources necessary to ensure effective planning and implementation of appropriate measures
 - ensuring that the procedures established in the ESIP are complied with by its workers and subcontractors
 - implementing effective monitoring of offshore waste management measures to ensure that the effectiveness of offshore waste control and management activities are assessed and any issues are promptly detected, in accordance with the Offshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0023)
 - ensuring that all environmental, socio-economic and cultural heritage incidents are reported and dealt with effectively and that lessons are learned in accordance with the procedures outlined in the Contractor's ESMS Framework Document (CAL00-RSK-601-Y-TTM-0001)

- keeping the COMPANY fully informed of any site environmental, socio-economic and cultural heritage issues.

CONTRACTOR shall be responsible for completing the Offshore Waste Management ESIP in a timely and proper manner and submitting it to the COMPANY for review and acceptance a maximum of 30 days after Contract award. The ESIP will not be considered “accepted for construction” until all comments raised by the COMPANY have been addressed by CONTRACTOR to the satisfaction of the COMPANY. Construction will not be allowed to commence before all relevant ESIPs are accepted.

3 Marine impact avoidance and mitigation

3.1 General

CONTRACTOR will develop an Offshore Waste Management ESIP in order to minimize impacts from wastes and will cover the following key aspects (IT0116):

- develop an inventory and schedule of likely wastes
- assessment of local waste management facilities
- waste minimisation principles
- maximise reuse /recycling opportunities
- waste segregation (liquid and solid/reusable and recyclable)
- waste collection, storage and transfer
- auditing and reporting procedures
- closure process, which will include appropriate monitoring and recording.

Any waste produced will be managed and disposed of through controlled procedures, in accordance with applicable regulations (IT1010). CONTRACTOR will ensure all wastes are properly contained, labelled and disposed of in accordance with local regulations to a licensed/approved waste disposal site (IT0115). Only approved companies will be charged with the transportation, recycling and disposal of waste. This process will be closely aligned with the responsible authorities (IT0107).

3.2 COMPANY preliminary waste study

The COMPANY shall be responsible for undertaking a preliminary study designed to determine the current situation of the waste infrastructure and facilities available in Italy.

The preliminary study shall include:

- identifying potential waste infrastructure and facilities in Italy (including end destinations of different waste streams)
- identifying any gaps in the availability of appropriate waste infrastructure and facilities in Italy
- considering possible alternatives where gaps have been identified (for example where appropriate end destinations cannot be found in Italy, transboundary transport and disposal of waste may be an alternative).

The COMPANY shall complete and communicate all relevant information obtained from the preliminary study to CONTRACTOR prior to the award of the Contract. CONTRACTOR will design waste management planning taking into consideration the capacity of municipal services and infrastructure (including existing waste handling) (IT0400) available, as identified by the preliminary study.

3.3 Waste hierarchy

CONTRACTOR shall adopt a waste hierarchy that preferentially avoids or minimises waste generation at source, reduces its harmfulness as far as practicable and reduces the quantity of waste disposed to landfill, or other types of final disposal (e.g. incineration) by re-use and recycling. Where waste generation cannot be avoided but has been minimised, the waste will be reused, recycled or recovered or used as a source of energy where practicable. The COMPANY shall monitor CONTRACTOR performance in reducing the amount of waste generated.

3.4 Waste characterization study

After award of the Contract and prior to starting construction, CONTRACTOR shall carry out a waste characterization study. The study shall be based on a waste tracking philosophy of “cradle-to-grave”, which means that any Project generated waste shall be tracked from its origin to its final destination.

The objectives of the study shall be to:

- identify all potential waste streams that are likely to be generated by CONTRACTOR and any potential subcontractors hired by CONTRACTOR during construction. This will include a detailed description of the modes of working for cleaning, inspection and testing of the offshore pipeline, the methodology of chemical characterization and the disposal of the waste material collected following the operations of inspection and internal cleaning of the offshore pipeline (IT0647)
- identify the CER (Catalogo Europeo dei Rifiuti) codes for each waste stream (IT0017)
- identify opportunities for waste minimisation by means such as selecting materials for use that avoid waste generation (e.g. by purchasing in bulk, selecting products that generate less waste etc.), conducting employee training and awareness programs and establishing contracts that allow return of excess product to vendor (particularly in the case of unused hazardous materials and empty receptacles)
- identify recycling and reuse opportunities such as identifying waste materials that could be segregated for re-use (e.g. packaging wood for reuse in Project construction) or recycling (e.g. plastic bottles, cardboard, paper, metal etc.). CONTRACTOR shall ensure that all recycling facilities and companies used are approved by the COMPANY (see Section 3.6.1)
- characterize the preferred destination of those waste streams according to a hierarchical structure. Each of the waste streams generated may have several optional destinations thereby allowing for certain degree of flexibility in the final waste segregation method selected. No waste destination, whether it is deemed temporary or final, may be used without prior informing of and approval by the COMPANY.

All waste minimisation options shall be approved by the COMPANY. CONTRACTOR shall return surplus material to vendors where possible.

3.5 Waste identification and segregation

Where possible all waste shall be identified at the source. All waste materials will be segregated, collected, stored and transported separately in appropriate and COMPANY approved bins and containers (IT0104). Bins and containers will be approved by the COMPANY in line with relevant legislative requirements.

Separate labelled waste bins (containers) will be in place for at least the following waste streams:

- hydrocarbon contaminated sediment
- hydrocarbon contaminated rags, plastic, containers/paint and solvents
- used filters
- used oil
- organics
- sanitary wastes
- glass
- paper and cartons
- plastics
- used emergency kits e.g. spill absorbents, fire fighting foams
- metals and welding wastes
- wood
- batteries
- photocopier/printer toner
- medical wastes (Bio Hazard)
- chemical wastes
- radioactive waste.

The management of hazardous waste including chemical waste and radioactive waste is described in Section 3.11.

To ensure good waste segregation practices, CONTRACTOR shall label all waste containers or bins and place them at convenient locations throughout worksites, onboard vessels etc. Labelling should be in an appropriate language with dual language labelling if required. In addition to being clearly labelled, CONTRACTOR should use colour code containers as appropriate for each type of waste. The COMPANY reserves the right to identify any additional required waste collection

containers and locations if it deems that a segregation, recycling, or non-conformance issue has been identified.

CONTRACTOR shall collect all waste streams from the marine working area and all vessels, and ensure that appropriate containers are available at the main worksites/vessels for segregation to be performed.

Whenever any worker cannot determine if a waste material is either hazardous or non-hazardous, the worker shall treat the waste as hazardous, cease from approaching the waste, and call upon a qualified supervisor to make the determination of proper handling and transfer of the waste material.

Non-biodegradable industrial waste and special waste (e.g. residues of lubricants and hydrocarbons) shall be stored in drums with lids to be transported by a specialist and appropriately licensed waste management company approved by the COMPANY for disposal in an authorized sanitary landfill or other appropriate means, also approved by the COMPANY.

3.6 Waste receiving and storage locations

3.6.1 Approved waste receiving facilities and companies

Any proposed waste receiving facility or company (Waste Management Contractor (WMC)) must be appropriately licensed by the relevant Italy authorities and approved by the COMPANY.

If CONTRACTOR were to identify a new facility or waste management subcontractor to receive Project-generated waste, an audit of the facility must first be performed by CONTRACTOR and the report submitted to the COMPANY for review and acceptance determination at least 30-days prior to its proposed use. The COMPANY reserves the right to perform its own independent audit of the proposed receiving facility or subcontractor. Use of new sites, facilities and subcontractors may only occur following official approval from the COMPANY.

Under no condition will waste be disposed of or abandoned in areas other than the approved waste receiving facilities. In particular this includes littering in natural areas. It is the responsibility of CONTRACTOR to ensure that this does not occur.

Details of requirements for companies transporting waste can be found in Section 3.8 below.

3.6.2 Site temporary waste storage locations

Locations for temporary waste storage and collection shall be present at worksites as necessary. CONTRACTOR shall determine the types of wastes being generated and the appropriate numbers and types of containers to be deployed. The containers shall typically be drums or other rigid walled vessels labelled and coloured for particular types of waste. For those areas with the potential for leaks or spills of hazardous liquids (i.e. fuel or chemical storage), bunded secondary containment meeting the requirements specified in the Offshore Pollution Prevention CCP (IAL00-RSK-601-Y-TTM-0015) shall be available.

Locations for temporary waste storage and collection at worksites shall be determined by CONTRACTOR, and the appropriate containers deployed to contain the wastes. Waste containers shall be emptied at regular intervals, and the contents moved to either a designated COMPANY-approved waste storage yard (WSY) (see Section 4.6.3 for details of WSYs) or transferred directly to a WMC. If hazardous waste is produced, this shall be stored separately. Details of requirements for companies transporting waste can be found in Section 3.8 below.

3.6.3 Waste storage on vessels

Solid waste from construction vessels shall be stored onboard appropriately in accordance with Annex V of MARPOL 73/78. MARPOL 73/78 states that vessels in excess of 100 gross registered tonnage are required to prepare a Garbage Management Plan, detailing how each type of waste will be stored. It is the responsibility of CONTRACTOR to ensure that all waste is stored appropriately and that storage and transfer of wastes are recorded.

It is the responsibility of CONTRACTOR to ensure that all vessels involved in the Project follow these guidelines and that vessel crews are familiar with the procedures set out in the Vessel Garbage Plan. On reaching the shore, waste will either be transferred to the nearest appropriate Project WSY or directly to a WMC (see Section 3.6.2), and the storage and transfer of wastes will be recorded onboard the vessels in a waste manifest which will detail waste streams transferred to shore, the date, the nature of the material, disposal method and responsible person.

It is recognized that there are likely to be smaller vessels employed during the marine construction works in addition to the main pipelay operations. Such vessels include crew transfer vessels and safety boats. Where possible, these CONTRACTOR employed vessels should observe the same requirements as larger commercial vessels as a matter of best practice.

3.7 Waste handling

It is strictly prohibited to abandon waste outside of the designated Project waste storage areas (e.g. worksite or vessel waste collection and storage locations or the WSYs).

Only COMPANY approved vehicles shall be utilized for transporting wastes from the vessels or worksites to the WSYs. The vehicles shall be appropriate for the waste being transported, shall be equipped to prevent leaks or spills and shall be covered to prevent blowing and loss of wastes during transit. Rigid containers such as roll-offs or drums shall be used and the storage of waste directly on the ground surface at any time shall be prohibited.

Segregation at the WSYs could include the following wastes depend on the types of disposal programs that can be established:

- oil filters
- aerosol cans
- solvents
- waste oil
- oily rags
- reusable wood products
- photocopier/printer toner
- discarded metal segregated by type (e.g. copper wire, steel, aluminium)
- excess paint
- batteries
- soil contaminated with oil
- fluorescent light bulbs
- recyclable municipal waste (e.g., plastic containers, glass, aluminium cans, paper).
- used emergency kits e.g. spill absorbents, fire fighting foams.

Daily records of the volume of waste materials at worksites and onboard vessels shall be maintained. This data shall be updated daily by CONTRACTOR and stored in an electronic Waste Management Database (WMD). The data collected shall be summarized in monthly reports that shall be submitted to the COMPANY. All workers that will be involved in the handling and management of waste shall be trained in handling waste materials and equipped with appropriate Personal Protective Equipment (PPE) (see the Offshore Employment, Training and Worksite Management CCP (IAL00-RSK-601-Y-TTM-0024)).

CONTRACTOR shall be responsible for all daily waste management activities at worksites and onboard vessels, including the collection and transfer of waste to the designated WSYs or WMC. CONTRACTOR shall make special provision for the collection of lunch waste and plastic water bottles, etc. immediately after the meals are over.

CONTRACTOR shall be responsible for cleaning its working areas on a daily basis to the satisfaction of the COMPANY. Any employee found littering the working area, or adjacent areas, is subject to request by the COMPANY for disciplinary action or Project removal.

As described in Section 3.6.3 wastes should be stored appropriately onboard the vessel according to the requirements of Annex V of MARPOL 73/78 and handled and transferred appropriately following the recognised pathways described throughout this CCP. It is CONTRACTOR's responsibility to ensure that this takes place.

CONTRACTOR shall not permit any marine disposal of solid wastes from vessels including any wastes generated during marine construction activities, with the exception of any specifically-authorized operational disposals. CONTRACTOR shall ensure that the seabed is not left with any material, equipment or debris that will present a hazard to navigation, or impact flora and fauna.

3.8 Waste transportation

All offshore waste and wastewater will be transported onward to suitable treatment facilities (IT0047). The transportation of all waste from Project marine vessels or WSYs to its final disposal locations shall be the responsibility of a WMC. CONTRACTOR shall propose a reputable and appropriately licensed WMC to the COMPANY for approval. The proposed WMC must be able to comply with all the requirements of this CCP.

The COMPANY reserves the right to audit the facilities and records of any WMC. Once the COMPANY has evaluated and approved the proposed WMC, CONTRACTOR shall secure its services requiring that all safety and other contractual requirements agreed between the COMPANY and CONTRACTOR are also applied to the waste management firm.

All waste transportation from marine vessels or WSYs shall be accompanied by a waste transfer note. It is the responsibility of CONTRACTOR to ensure that this occurs. Vehicles used by the WMC shall be subject to inspection by CONTRACTOR and, if required, also the COMPANY to ensure that they are appropriate for the type of waste transported and that designed load capacity is not exceeded. The vehicles shall be closed or completely covered, in order to avoid loss of waste or any kind of leakage. Appropriate maintenance of these vehicles shall be verified.

3.9 Determining the final destinations for waste

Reusable materials shall remain at the WSY until the time of their reuse. Whenever needed, the reusable materials shall be transferred and distributed for use to the appropriate location.

No waste shall be transferred offsite or disposed of until the disposal route and transport process has been approved by the COMPANY. The following are possibilities for CONTRACTOR to transfer waste offsite, subject to COMPANY approval:

- licensed recycling contractor(s)
- licensed landfill(s)
- licensed hazardous waste treatment/disposal facilities.

CONTRACTOR shall propose an appropriate disposal procedure with indications for each disposal route (transport and disposal site e.g. landfill) regarding the licensing situation and compliance with EC (European Commission) standards.

No non-hazardous or hazardous waste landfill shall be used for disposal unless it has been previously approved by the COMPANY. If CONTRACTOR proposes to use a landfill, other than those already audited and approved by the COMPANY, CONTRACTOR shall adhere to the COMPANY approval process. This shall include performing an environmental audit, the results of which shall be presented to the COMPANY for review at least 30 days before the landfill is used. The use of non-licensed or non-approved landfills for the disposal of waste is strictly prohibited. Transferral of wastes offsite shall be done frequently to avoid an increase in odours, rodents and insects. A primary objective shall be to minimize the amount of hazardous waste onsite, with transport scheduled when volumes approach 1000 kg.

No solid, semi-solid or liquid material shall be directly discharged into the sea (IT0293) without prior treatment. Discharges shall always be in compliance with Italian laws and regulations. Discharges of hydrotest water, and onshore disposal of any waste found in the pipeline, will be undertaken in accordance with all necessary permits and waste requirements from the relevant authorities (IT0772). Further discharge requirements are detailed in the Offshore Resource Management CCP (IAL00-RSK-601-Y-TTM-0014).

3.10 Waste incineration

Currently, it is not envisioned that incineration will occur during pipeline construction and the COMPANY does not encourage incineration. The COMPANY has further made a commitment that no incineration shall take place at work sites, including on board vessels.

The procedures for proposing a (coastal) waste incinerator, should CONTRACTOR identify the need for one, are described in Section 4.10.

3.11 Managing specific waste types

3.11.1 Liquid waste

All liquid waste will be collected, stored and transported separately in appropriate approved bins and containers (IT0275) (bins and containers will be approved by the COMPANY in line with relevant legislative requirements).

Requirements specific to liquid hazardous waste are described in Section 3.11.2.2.

3.11.2 Hazardous waste

3.11.2.1 General

CONTRACTOR will ensure any hazardous wastes (e.g. used oils, lead-acid batteries) are securely stored prior to transfer to a waste management site with appropriate facilities for handling, treating and disposing of hazardous wastes (IT0113). CONTRACTOR shall prevent or minimise the potential for community exposure to hazardous materials that may be released by the Project, during handling, transportation and disposal of waste. CONTRACTOR shall raise community awareness of the risks associated with hazardous waste transportation and disposal.

In cases where CONTRACTOR will have difficulty in handling hazardous wastes according to EC standards in Italy, CONTRACTOR shall propose alternative solutions for the COMPANY to check and approve, informed by the measures discussed by the preliminary study conducted by the COMPANY (see Section 3.2). Finally the COMPANY and CONTRACTOR together will align a solution with the relevant authorities.

CONTRACTOR shall ensure that all hazardous material releases (e.g. spills) are recorded in the Action Tracking System (ATS). For further information see the Offshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0023).

3.11.2.2 Liquid hazardous waste

CONTRACTOR shall design liquid hazardous waste storage areas and submit the proposed design to the COMPANY for review and approval. The following guidelines shall be applied to the design and construction of storage areas:

- used lubricant oils, hydraulic liquids and solvents shall be collected in labelled tanks, cans, metallic barrels or other approved containers, which shall be placed within an impermeable secondary containment system built or installed in the hazardous waste storage area. These containers shall be stored in a covered area with proper runoff controls until transported to a recycling site or final disposition site
- remaining hazardous wastes will be stored in sealed hazardous waste drums inside lockable cabinets or containers. All hazardous wastes containers will have a dated, colour coded label identifying the contents
- oil or lubricant changes shall be prohibited within work areas and shall only be allowed in designated areas. Fuel storage shall be allowed only at locations that have been previously approved by the COMPANY. Vessel and plant refuelling will be carried out according to the requirements detailed in the Offshore Spill Prevention and Response CCP (IAL00-RSK-601-Y-TTM-0020) and Offshore Pollution Prevention CCP (IAL00-RSK-601-Y-TTM-0015)
- paint residues, asphaltic emulsions, etc. resulting from products utilized in the work areas shall be put into labelled tightly closed containers and transported to the waste storage area. Once a sufficient quantity is accumulated, waste shall be transported to an approved landfill for special wastes.

The liquid hazardous wastes described above shall not be stored in open containers or in areas without secondary containment. Any recycling company receiving any of the above hazardous waste liquids shall be required to have all required government permits and comply with any applicable national legislation and the terms of this CCP in terms of transport, handling and disposal.

3.11.2.3 Medical waste

Wastes generated from Project sites may include medical or biohazard waste. These wastes shall be handled and disposed of separately from all the other wastes, and in accordance with the applicable legislation, either through:

- a waste handling facility at a WSY, or
- an appropriate WMC.

Medical personnel shall segregate this material in approved labelled containers at the location of production and transfer the waste to either the WSY or appropriate WMC. The WSY or WMC

shall facilitate transportation to an approved medical waste disposal facility or other facility that can safely incinerate or otherwise dispose of the items. Waste transport shall be accompanied by a manifest prepared for the materials.

The medical personnel shall assist in the development of a medical waste handling procedure.

3.11.2.4 Contaminated sediment

Any contaminated sediment will need to be properly disposed of as hazardous waste (IT0050).

3.11.2.5 Radioactive waste

Radioactive waste is a sub-category of hazardous waste that is associated with causing carcinogenic, mutagenic or teratogenic harm to organisms. It shall be managed in the same way as other hazardous wastes i.e. radioactive wastes shall be segregated, securely stored and disposed of via a disposal route and at a final disposal destination approved by the COMPANY in compliance with applicable legislation.

3.11.3 Black water (sewage) and grey water treatment and disposal

Black water and grey water produced on marine vessels will be collected and transported to the support port and then sent for disposal. CONTRACTOR shall provide acceptable holding containers on each vessel to collect and store such water in. The containers shall be of an appropriate design so as to ensure that there are no leaks and that odours are minimized as far as possible.

3.11.4 Human waste management on board vessels

CONTRACTOR shall ensure that all marine vessels have an adequate number of properly maintained toilet facilities available. Records of maintenance (i.e. pump and clean) shall be available at each toilet facility.

Final treatment and disposal of human waste shall adhere to the instruction in Section 3.11.3.

3.11.5 Drainage and bilge water

During construction, support and installation vessels/barges may occasionally discharge limited volumes of drainage water and bilge water (potentially containing traces of hydrocarbons) to the marine environment.

Drainage systems will collect water generated from the washing and storage areas. These with bilge water will enter a drainage system where the effluent will be treated to be discharged with less than 15ppm oil in water in accordance with MARPOL Annex I - Regulations for the Prevention of Pollution by Oil (IT1024).

All water discharge will be conducted in accordance with the relevant MARPOL 73/78 requirements.

CONTRACTOR shall avoid drainage and bilge water discharges as far as is practicable in areas that have been identified as being environmentally or ecologically sensitive (see the Offshore Ecological Management CCP (IAL00-RSK-601-Y-TTM-0017)).

3.11.6 Ballast water discharge

Ballast tanks will be separated from any hydrocarbon storage areas onboard vessels and no potentially contaminated drain systems will be routed to the ballast tanks.

De-ballasting shall be undertaken in accordance with International Maritime Organization (IMO) guidelines, and away from sensitive environmental areas (see the Offshore Ecological Management CCP (IAL00-RSK-601-Y-TTM-0017)). In order to limit the potential for the introduction of alien and invasive species, CONTRACTOR shall avoid the discharge of any water into the Mediterranean Sea that was picked up outside of the Mediterranean Sea, and shall adhere to the harmonized voluntary arrangements for ballast water management in the Mediterranean region as specified in the IMO Circulation BWM.2/Circ.35, 15 August 2011 (see the Offshore Ecological Management CCP (IAL00-RSK-601-Y-TTM-0017) for more information on the control of invasive species).

CONTRACTOR should ensure that applicable vessels engaged on the Project operate a Ballast Water and Sediments Management Plan in accordance with the IMO Ballast Water Directive, and

carry a Ballast Water Record Book, which will contain records of locations and quantities of ballast water that has been transferred. Completed Ballast Water Record Books are to be made available onboard vessels for inspection by the COMPANY.

3.12 Waste documentation

All necessary documentation including the Waste Loading/Unloading Register and Waste Identification Form will be completed when disposing of waste materials (IT0019). In addition when disposing of waste materials (including surplus rocks if required), the following information will be reported and submitted to the competent authorities by CONTRACTOR (IT0017): CER codes identifying the nature of the materials that are sent for disposal.

CONTRACTOR shall require from each facility that receives Project generated and transported waste a certified copy of each permit or other authorization pertaining to the operation of the treatment or disposal facility to which the waste will be brought issued by each governmental entity having jurisdiction over that facility.

Companies responsible for final disposal are required to submit final disposal certificates issued by an authorized landfill to CONTRACTOR with a copy to the COMPANY.

All waste entering temporary storage areas shall be accompanied by delivery notes. All wastes shipped offsite require a waste manifest. Copies of the waste manifest shall be maintained onsite with data entered into CONTRACTOR's WMD. The manifest shall indicate the quantity, transporter and final destination (authorized landfill, recyclers, bioremediation, incineration, etc.) of all waste.

Waste manifests shall be prepared for each shipment of waste to a certified disposal facility. The manifest shall be signed when the waste leaves the site and at its arrival at the final disposal site. Approved routes for transporting such wastes must be used by the waste transporter. CONTRACTOR shall submit all waste manifests in their original form to the COMPANY on a monthly basis.

Vessels will have a Garbage Management Plan, and Sewage Pollution Prevention certificate in line with the requirements of MARPOL 73/78. In addition vessels will have Ballast Water and

Sediments Management Plans as well as detailed logs of all discharges, tank washings, refuelling etc. CONTRACTOR will ensure that these documents are maintained and are available to view in the event of a request from the COMPANY as per the requirements of the Offshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0023).

4 Coastal impact avoidance and mitigation

4.1 General

CONTRACTOR will develop an Offshore Waste Management ESIP in order to minimize impacts from wastes and will cover the following key aspects in line with the requirements stated in Section 3.1 (IT0116). The general requirements regarding coastal impact avoidance and mitigation will be the same as described in Section 3.1.

4.2 COMPANY preliminary waste study

The coastal COMPANY preliminary waste study shall have the same requirements as described in Section 3.2, but shall be applicable to coastal areas.

4.3 Waste hierarchy

The coastal waste hierarchy requirements shall be the same as described in Section 3.3, but shall be applicable to coastal areas.

4.4 Waste characterization study

After award of the Contract and prior to starting construction, CONTRACTOR shall carry out a waste characterization study in the same way as described in Section 3.4.

The objectives of the study shall be the same as described in Section 3.4, but with the additional objective to identify opportunities for waste minimisation, for example by implementing waste minimisation techniques such as the maceration, dewatering and composting of food waste, sludge, and vegetation (e.g. small twigs, branches, pieces of vegetation), and treatment prior to transport from site.

All waste minimisation options shall be approved by the COMPANY. CONTRACTOR shall return surplus material to vendors where possible.

4.5 Waste identification and segregation

Where possible all waste shall be identified at the source. This shall be accomplished by having separate labelled waste bins (containers) for at least the waste streams listed in Section 3.5 and the additional waste streams of hydrocarbon contaminated soil and rubber tyres.

The management of hazardous waste including chemical waste and radioactive waste will be as described in Section 4.11.1.

To ensure good waste segregation practices, CONTRACTOR shall label all waste containers or bins and place them at convenient locations throughout work sites, storage yards, etc. Labelling and colour coding requirements shall be as described in Section 3.5. The COMPANY reserves the right to identify any additional required waste collection containers and locations if it deems that a segregation, recycling, or non-conformance issue has been identified.

CONTRACTOR shall collect all waste streams from the pipeline working strip and ensure the appropriate containers are available at the main work sites for segregation to be performed by the worker who has generated or first collected the waste from the working strip.

Whenever any worker cannot determine if a waste material is either hazardous or non-hazardous, the worker shall proceed as described in Section 3.5.

Non-biodegradable industrial waste and special waste (e.g. residues of lubricants and hydrocarbons) shall be stored, transported and disposed of as described in Section 3.5.

4.6 Waste receiving and storage locations

4.6.1 Approved waste receiving facilities and companies

Coastal requirements for approved waste receiving facilities and companies shall be the same as described in Section 3.6.1, but shall be applicable to coastal areas.

4.6.2 Site temporary waste storage locations

Locations for temporary waste storage and collection along the working strip shall be determined by CONTRACTOR, and appropriate containers deployed to contain the wastes. Typically containers and storage requirements shall be as described in Section 3.6.2. All waste containers shall be emptied on a daily basis, and before leaving a work front location, and contents moved to the designated COMPANY-approved WSYs. If hazardous waste is produced, this shall be removed immediately and stored separately at a COMPANY-approved WSY, never on the working strip.

4.6.3 Waste storage yards (WSYs)

CONTRACTOR shall establish an easily identifiable WSY within each COMPANY-approved Project support facility. Waste produced in the coastal Project areas shall be transferred to and stored at the WSY before undergoing disposal.

The size of the WSY shall be determined by CONTRACTOR, subject to approval by the COMPANY. The size of a WSY shall be large enough to account for unforeseen circumstances (e.g. inclement weather, additional personnel).

CONTRACTOR shall submit plans to the COMPANY for review and acceptance. These plans shall include the size and locations of WSYs (including any sewage treatment plants (STPs)). Working areas and all emergency installations and escape routes shall be kept free from wastes. Safety areas shall be established and equipped with fire extinguishers and spill recovery equipment. All wastes shall be transported to the WSYs from all coastal worksites in the vicinity prior to distribution to the final disposal sites or to approved third parties for recycling. WSYs will serve as a collection and transfer station for both hazardous and non-hazardous wastes. The facilities shall comply with the following requirements:

- WSY areas shall be constructed as a minimum on a clay lined pad, underlain with high-density polyethylene (HDPE) 60 sheet (concrete pads may also be utilized on approval of the COMPANY)
- no drums or containers shall be stored directly on the soil
- facilities shall be designed to prevent any ground contamination
- liquid wastes shall be stored within a bund that will contain 110% of the volume of the largest container, or 25% of the total volume of substances which could be stored in the bunded area
- collection areas shall be covered to avoid rain ingress and the deterioration of materials
- vehicle access shall be maintained
- areas shall have directional ventilation³
- dedicated and clearly marked areas for hazardous and non-hazardous wastes shall be provided
- segregation of recyclable and reusable materials from those items intended for disposal will be provided
- signage shall be installed informing employees about the hazards and PPE requirements within the WSY. All signage shall be in the working language of CONTRACTOR's personnel.

4.7 Waste handling

Wastes from all temporary storage locations, including the working area, shall be collected on a daily basis and transported to the nearest COMPANY approved WSY. It is strictly prohibited to place overnight or abandon waste outside of the designated waste collection locations or the WSYs.

Only COMPANY approved and appropriate vehicles shall be utilized for transporting wastes from the temporary waste storage locations to the WSYs. The vehicles shall be appropriate for the waste being transported, shall be equipped to prevent leaks or spills and shall be covered to prevent blowing and loss of wastes during transit. Rigid containers such as roll-offs or drums shall be used and the storage of waste directly on the ground surface at any time shall be prohibited.

³ natural corridors can be considered as directional ventilation as they use wind corridors created by the terrain

Segregation at the WSYs could include the same wastes as described in Section 3.7, depending on the types of disposal programs that can be established.

Daily records of the volume of waste materials on site shall be maintained and reported as described in Section 3.7. Workers in the facility shall be trained in handling waste materials and equipped with appropriate PPE (see the Offshore Employment, Training and Worksite Management CCP (IAL00-RSK-601-Y-TTM-0024)).

CONTRACTOR shall be responsible for all daily waste management activities at its working areas, including the collection and transfer of waste to the designated WSYs. CONTRACTOR shall make special provision for the collection of lunch waste and plastic water bottles, etc. from the working area immediately after the meals are over. If security guard sheds are present on the working area they shall be equipped with waste containers. Where necessary waste containers shall be secured and fencing put in place to discourage wildlife or domesticated animals from spilling or reaching the waste.

CONTRACTOR shall be responsible for cleaning its working area on a daily basis to the satisfaction of the COMPANY, as described in Section 3.7.

4.8 Waste transportation

The requirements for coastal waste transportation from WSYs shall be the same as described in Section 3.8, but shall be applicable to coastal areas.

4.9 Determining the final destinations for waste

Reusable materials shall remain at the WSY until the time of their reuse. Whenever needed, the reusable materials shall be transferred and distributed for use to the appropriate location.

No waste shall be transferred offsite or disposed of until the disposal route and transport process has been approved by the COMPANY. The possibilities described in Section 3.9 shall also be applicable to coastal areas, subject to COMPANY approval.

CONTRACTOR shall propose an appropriate disposal procedure as described in Section 3.9.

No non-hazardous or hazardous waste landfill shall be used for disposal unless it has been previously approved by the COMPANY. If CONTRACTOR proposes to use a landfill, other than those already audited and approved by the COMPANY, CONTRACTOR shall adhere to the COMPANY approval process (as described in Section 3.9). The use of non-licensed or non-approved landfills for the disposal of waste is strictly prohibited. Transferral of wastes offsite and measures to minimize the amount of hazardous waste onsite shall be as described in Section 3.9.

No solid, semi-solid or liquid material shall be directly discharged into surface water bodies (including watercourses, wetlands etc.) or soil (IT0293) without prior treatment. Discharges shall always be in compliance with Italian laws and regulations. Discharges of hydrotest water and disposal of any waste found in the pipeline will be undertaken in accordance with all necessary permits and waste requirements from the relevant authorities (IT0772). Further discharge requirements are detailed in the Offshore Resource Management CCP (IAL00-RSK-601-Y-TTM-0014).

Contaminated soil arising from hydrocarbon spills may be treated in areas designated for land-farming or bioremediation. Any area proposed for use in hydrocarbon land-farming or bioremediation must first be approved by the COMPANY and all the necessary regulatory permits for operation obtained. Treated soil may be integrated into final reinstatement works subject to approval by the COMPANY.

4.10 Proposing a waste incinerator

Currently, it is not envisioned that an incinerator will be utilised during pipeline construction and the COMPANY does not encourage incineration. The COMPANY has further made a commitment that no incineration shall take place at work sites.

If CONTRACTOR were to identify the need for an incinerator as part of its Waste Characterization Study (see Section 4.4), the unit must be designed, built, and operated to comply with national and EU regulations as well as international best practice such as IFC, EBRD etc.

CONTRACTOR shall submit the incinerator design and specifications, as well as a description of the necessary permitting process including timelines, to the COMPANY for acceptance. Once accepted, CONTRACTOR has the responsibility for obtaining all necessary permits in accordance with national and EU legislation to install and operate an incinerator. Monitoring requirements on air emissions as well as ambient air quality, meeting as a minimum regulatory requirements, shall be proposed by CONTRACTOR for acceptance by the COMPANY prior to the installation of an incinerator. If applicable, the Offshore Waste Management ESIP shall be revised to consider scrubber and residual waste from the incineration unit.

The COMPANY reserves the right to veto any proposed incinerator unit.

4.11 Managing specific waste types

4.11.1 Liquid waste

Coastal requirements regarding liquid wastes shall be the same as described in Section 3.11.1, but shall be applicable to coastal areas.

CONTRACTOR will implement the following additional requirements:

- all liquid waste will be collected, stored and transported separately in appropriate approved bins and containers (IT0275) (bins and containers will be approved by the COMPANY in line with relevant legislative requirements)
- surface water from potential polluted areas will be carried to an oil separator and then into the sewage system (IT1012). The sewage system used for surface water from polluted areas will also be used for the discharge of sanitary waste water (IT1013). The surface run off from potential polluted areas and the sanitary waste waters will be treated in a small waste sewage works and will be discharged into the public waste water network (IT1019)

Requirements specific to liquid hazardous waste are described in Section 4.11.2.2.

4.11.2 Hazardous waste

4.11.2.1 General

CONTRACTOR will ensure any hazardous wastes (e.g. used oils, lead-acid batteries) are securely stored prior to transfer to a waste management site will appropriate facilities for handling, treating and disposing of hazardous wastes (IT0113). CONTRACTOR shall prevent or minimise the potential for community exposure to hazardous materials and shall raise community awareness as described in Section 3.11.2.1.

In cases where CONTRACTOR will have difficulty in handling hazardous wastes according to EC standards in Italy, CONTRACTOR shall propose alternative solutions for the COMPANY to check and approve, informed by the measures discussed in the preliminary study conducted by the COMPANY (see Section 4.2). Finally the COMPANY and CONTRACTOR together will align a solution with the relevant authorities.

CONTRACTOR shall ensure that all hazardous material releases (e.g. spills) are recorded in the ATS. For further information see the Offshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0023).

4.11.2.2 Liquid hazardous waste

CONTRACTOR shall design liquid hazardous waste storage areas and submit the proposed design to the COMPANY for review and approval. The storage guidelines applicable to coastal areas, as described in Section 3.11.2.2, shall be applied.

Any recycling company receiving any hazardous waste liquids shall be required to have all required government permits and comply with any applicable national legislation and the terms of this CCP in terms of transport, handling and disposal.

4.11.2.3 Medical waste

Wastes generated from Project sites may include medical or biohazard waste. These wastes shall be handled and disposed of separately from all other wastes and shall be managed through a waste handling facility at each WSY in accordance with applicable legislation.

Medical personnel shall segregate this material in approved labelled containers at the location of production and deliver the waste to the WSY waste handling facility. The waste handling facility shall facilitate transportation to an approved medical waste disposal facility, or other facility that can safely incinerate or otherwise dispose of the items. Waste transport shall be accompanied by a waste manifest prepared for the materials.

The medical personnel shall assist in the development of a medical waste handling procedure.

4.11.2.4 Contaminated land/groundwater

Special measures will be required if the pipeline crosses contaminated land. Any contaminated soil will need to be properly disposed of as hazardous waste, and pumped groundwater, if contaminated, will need to be treated by mobile treatment units before discharge (IT0050).

For any identified areas of contaminated land, a Coastal Contaminated Lands Crossing Plan will be developed by CONTRACTOR prior to commencement of activities in the area, and submitted to the COMPANY for acceptance.

Currently, no areas of contaminated land have been identified in the offshore section of the Project in Italy.

4.11.2.5 Radioactive waste

Coastal requirements regarding radioactive hazardous wastes shall be the same as described in Section 3.11.2.5 but shall be applicable to coastal areas.

4.11.3 Septic tanks and grey water disposal

Currently no construction camps are planned within areas affected by the Project in Italy. As such, this section is only applicable to any worksite septic tank facilities that may be required.

Grey water is here defined as wastewater generated from hand wash basins and showers. Grey water shall be treated by separating solids in a grease trap and gravel filter to a soak away.

Domestic wastewater shall be treated in septic tanks and associated leach fields. The design of the septic tanks shall meet hygiene requirements and technical specifications so that they operate safely and hygienically.

Grey water and septic systems such as Ventilated Improved Pit (VIP) latrines shall be located at least 15 m from any water source and water body and 30 m from any groundwater source utilized for drinking water.

The soil and climatic characteristics shall be considered for the construction of VIP latrines. As a general rule, in fine soils, a minimal vertical distance of 2 m from the bottom of the VIP latrines to the ground-water level must be considered. This distance could have variations according to the specific site conditions (soil type and rainfall quantity). Soils with low permeability, such as clay and silty clay (with percolation rates of no more than 2.5 mm per hour), are acceptable for use as long as no expansive clays (vertisols) are present.

Protective measures shall be taken as a precaution on inconsistent soils to prevent the risk of the VIP latrines collapsing. This precaution is essential during periods of heavy rain. Ventilation ducts shall be provided to prevent the concentration of gas and unpleasant odours, and the VIP latrines shall be designed so as to allow air to circulate through the ventilation ducts. Pit latrines shall be used solely for the disposal of urine and faeces. Inorganic waste and other items such as rags and packaging must not be thrown into the latrines. VIP latrines shall be kept in an adequate state of hygiene, with the interior and surroundings of the interior properly cleaned. The door shall be kept shut and lime shall be added daily to prevent contamination. When the septic tank is almost full, it shall be covered with earth and tamped down when the material reaches 40-50 cm from the surface.

4.11.4 Human waste management along the working area and other worksites

CONTRACTOR shall provide and adequately maintain portable toilets along pipeline working strip work fronts and other work sites. A minimum of one portable toilet shall be installed for every 15 workers with, at a minimum, a biweekly maintenance schedule. Records of maintenance (i.e. pump and clean) shall be available at each portable toilet. Workers must use the portable toilets provided and are prohibited from relieving themselves at other locations including on trees, bushes, grass, buildings etc.

Portable toilets shall be especially needed and maintained in environmentally sensitive areas (e.g. where water bodies are at risk) or work sites with intensive or prolonged labour activity. The COMPANY may at its own discretion designate areas requiring additional portable toilets.

4.12 Waste documentation

All necessary documentation including the Waste Loading/Unloading Register and Waste Identification Form will be completed when disposing of waste materials (IT0019). In addition when disposing of waste materials (including surplus soil and rocks), the following information will be reported and submitted to the competent authorities by CONTRACTOR (IT0017):

- CER codes identifying the nature of the materials that are sent for disposal
- for soil disposal:
 - references to legislative requirements for outsourced approved disposal facilities where soil will be allocated
 - references to companies specialising in completing transportation of soils from construction sites to disposal facilities.

Additional coastal waste documentation shall have predominantly the same requirements as described in Section 3.12, but shall be applicable to coastal areas, and with the exception that the Vessel Garbage Management Plan, Sewage Pollution Prevention Certificate and Ballast Waters and Sediments Management Plan shall not be applicable.

5 Signage

Clear signage will be provided to reduce contamination of source segregated waste streams and to identify bins and corresponding materials. All waste awareness signage will be developed to reinforce the key messages of waste avoidance, minimisation and source separation, and will be prominently displayed at strategic locations. All signage shall be in the working language of CONTRACTOR's personnel.

6 Training

The training requirements relating to offshore waste management can be found in the Offshore Employment, Training and Worksite Management CCP (IAL00-RSK-601-Y-TTM-0024).

7 Monitoring and Inspection

CONTRACTOR shall put in place processes to ensure all emissions, effluents and wastes are inventorised and monitored on an ongoing basis. CONTRACTOR shall maintain an inventory of the quantity of each type of waste held at waste storage areas.

CONTRACTOR shall regularly monitor and audit all contracted waste management companies. This shall also include waste transportation service providers (waste haulage) and waste facility management.

The monitoring and inspection requirements relating to offshore waste management can be found in the Offshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0023).

8 Related documents

The following is a list of documents which, amongst others, have content relevant to this CCP:

- Contractor's ESMS Framework Document (CAL00-RSK-601-Y-TTM-0001)
- Offshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0023)
- Offshore Employment, Training and Worksite Management CCP (IAL00-RSK-601-Y-TTM-0024)

- Offshore Pollution Prevention CCP (IAL00-RSK-601-Y-TTM-0015)
- Offshore Spill Prevention and Response CCP (IAL00-RSK-601-Y-TTM-0020)
- TAP Battery Limits Onshore – Offshore Sections (CPL00-ENT-100-F-DFO-0002)
- Offshore Ecological Management CCP (IAL00-RSK-601-Y-TTM-0017).