



Trans Adriatic
Pipeline

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Prevention CCP

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TAP ITALY ESMS ONSHORE POLLUTION PREVENTION CCP



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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
CCP	Contractor Control Plan
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
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
IFC	International Finance Corporation
KP	Kilometre points relating to the pipeline route as per the base case described in the ESIA. It is possible that the KP locations will change because of a re-routing
MSDS	Material Safety Data Sheets
noisy activities	Any activity that has the potential to create discomfort and or disturbance to receptors (human and fauna) due to its level of noise
PAH	Polycyclic aromatic hydrocarbon

Pipeline	Proposed pipeline scheme (TAP) including related facilities such as access roads, etc.
PMA	Environmental Monitoring Plan
Project	Proposed pipeline scheme that will bring natural gas from the Caspian region to Western and South-Eastern Europe (TAP)
PRT	Pipeline receiving terminal
Puglia ARPA	Agenzia Regionale per la Prevenzione e la Protezione dell'Ambiente - environmental regulator for the Puglia Region
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.
SRG	Snam Rete Gas
TAP	Trans Adriatic Pipeline
TAP AG	Trans Adriatic Pipeline joint venture company
TMP	Traffic Management Plan

2 Introduction

This Contractor Control Plan (CCP) identifies the commitments made in relation to onshore pollution prevention during the construction and commissioning phase of the Project 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 Onshore Pollution Prevention ESIP (IT0523).

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 that pollution to air, water and land is prevented or, where this is not possible, reduced and mitigated as low as reasonably practicable (ALARP¹) during the construction phase of the onshore sections of the Project in Italy. The objectives of the CCP are to ensure that best practice and international and EU standards are implemented to reduce impacts and that work complies with the commitments made in the Project Environmental and Social Impact Assessment (ESIA) Italy.

2.2 Scope

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

¹ 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 judgement of the balance of risk and societal benefit.

The scope of this CCP includes

- air emissions
- noise and vibration management
- liquid effluents (waste water) (excluding sanitary/grey water treatment and disposal, which are dealt with in the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008))
- lighting
- vehicle and equipment maintenance
- fuel and chemical storage and handling.

Measures for the prevention of sediment pollution of watercourses are defined in the Erosion Control and Reinstatement CCP (IAL00-RSK-601-Y-TTM-0003), as they are intrinsically linked to erosion control. Monitoring and inspection requirements related to this plan are detailed in the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006).

This CCP applies to all onshore areas that might be affected by the Project in Italy, including the working strip, construction sites of the pipeline receiving terminal (PRT), construction site of the block valve, access roads/dirt tracks, all temporary material and waste storage areas and public roads.

2.3 Responsibilities

The COMPANY's role is that of compliance assurance as described in the Compliance Assurance Plan .

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 comply with the requirements of the COMPANY Environmental and Social Management System (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 responsibility 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.

CONTRACTOR shall put these responsibilities into effect by:

- writing an Onshore Pollution Prevention ESIP that describes how will implement the requirements described in Section 3 of this CCP and other legal requirements
- implementing the Onshore Pollution Prevention ESIP by:
 - communicating the contents of the ESIP to its workers and sub-contractors and training them to ensure they understand their responsibilities with respect to onshore pollution prevention, control and management, incident reporting and adequate response
 - ensuring that adequate resources and methods are mobilised for onshore pollution prevention and control, including input from any specialist resources necessary to ensure effective planning and implementation of appropriate measures
 - ensuring compliance by its workers and subcontractors with the procedures established in the ESIP
 - implementing effective monitoring of onshore pollution prevention measures to ensure that the effectiveness of pollution control and management activities are assessed and any issues are promptly detected, in accordance with the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006)
 - ensuring that all environmental 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 issues.

CONTRACTOR shall be responsible for completing the Onshore Pollution Prevention ESIP in a timely 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 Impact avoidance and mitigation

The CONTRACTOR will ensure that all sites are maintained in a tidy condition and that all construction works are carried out in strict compliance with construction procedures and schedules. CONTRACTOR shall apply pollution prevention and control technologies that avoid, minimize or reduce adverse impacts on human health and the environment while remaining technically and financially feasible and cost-effective.

3.1 Managing air emissions

3.1.1 Dust emissions

CONTRACTOR shall exercise care to minimise emissions of dust from its activities, including traffic, at work sites and on access roads. An Onshore Traffic Management Plan (TMP) will be developed which takes into consideration air quality impacts. Dust emissions will be minimised by limiting vehicle speeds, and covering loose materials (e.g. sand) on trucks with sheeting (IT0244). Further details on the Onshore TMP can be found in the Onshore Community Safety and Security CCP (IAL00-RSK-601-Y-TTM-0009).

Where it is deemed that dust is impacting or may have an impact on human, plant or animal receptors, or where dust may cause sedimentation of watercourses/water bodies or unacceptable levels of soil loss, CONTRACTOR shall apply water spray to the area creating the dust (especially in dry weather). In order to reduce the production and propagation of dust the PRT site, and pipeline work area near receptors will be moistened daily (considering a radius of 200m from these sites). Stored topsoils and subsoils will also be moistened regularly to avoid dispersion (IT0755).

If there is considerable wind during construction, special surface protection measures will be used to protect excavated areas and reduce dust generation (e.g. plastic tarpaulins anchored to the ground until the last surface layer of vegetable soil has been spread) (IT0758).

Access roads will be kept free of dusty materials, or sprayed down with water to keep the road surface wet (IT0814). Vehicles must be washed to remove any dusty material from the bodywork and wheels right before leaving a construction area or temporary structures (IT0815).

Additionally, CONTRACTOR will consider implementing other dust control measures such as:

- the use of windbreaks, netting screens or semi-permeable fences
- controlling vehicle speeds to reduce traffic-induced dust dispersion and re-suspension by setting and enforcing speed limits (additional to those described in the Onshore Community Safety and Security CCP (IAL00-RSK-601-Y-TTM-0009)), including placing speed limit signs in sensitive areas
- suspending topsoil stripping and replacement during strong winds
- using a dust collection system for bulk materials unloading
- wet suppression (as needed, depending on the soil type) in the dry season, where unpaved roads and/or the working strip is located <200m from settlements.

CONTRACTOR may use any treated waste water for dust suppression (spraying) where this meets Italian irrigation standards.

Daily visual inspections of atmospheric emissions, especially dust and emissions from vehicles and machinery, shall be conducted in accordance with the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006). The inspections shall identify areas where the implementation of dust reduction measures is required, such as exposed soil, areas of vehicle circulation and areas for material storage. These inspections shall also verify that all workers are utilising the correct respiratory protection in high-risk work areas. Any non-compliance shall be rectified and the results of the inspections recorded.

3.1.2 Vehicle and stationary equipment emissions

CONTRACTOR shall select vehicles and equipment that are appropriate for the task required, i.e. these should be modern, well maintained and in a good working order/condition. CO₂ and pollutant gas emissions will be reduced, where possible, by using modern equipment (IT0213). No vehicle or machinery shall be allowed to continue to operate if it does not meet Project emission standards as defined by the Environmental Project Standards Italy . Any vehicles or

equipment seen to be in a poor state of repair as determined by the COMPANY or CONTRACTOR shall be sent for maintenance or replaced by CONTRACTOR.

CONTRACTOR is responsible for managing and mitigating, where possible, atmospheric emissions from vehicles and machinery involved in the Project activities.

CONTRACTOR shall use buses and multi-passenger/van vehicles to transport crew to worksites to limit traffic and related emissions.

To ensure equipment and vehicles are working as efficiently as possible, CONTRACTOR will ensure they are:

- operated as per manufacturers' instructions (IT1020)
- maintained on a regular basis in accordance with the manufacturers' standards (IT0813).

CONTRACTOR shall inspect and maintain all vehicles and stationary equipment (e.g. generators and pumps) as per the manufacturers' instructions. The frequency of vehicle and machinery inspection shall be at least in accordance with manufacturers' recommendations and more frequent if demonstrated by the results of CONTRACTOR's monitoring of performance, including observations of leaks and dirty exhaust emissions, and breakdowns. Monitoring shall be conducted in accordance with the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006).

Routine maintenance will include checking that seals, drip trays and other leak prevention methods are present and well maintained and emissions minimised). More information on vehicle maintenance is included in the Onshore Community Safety and Security CCP (IAL00-RSK-601-Y-TTM-0009).

All vehicles and equipment shall be identified by the COMPANY using a sticker system or similar to demonstrate that they have a valid maintenance and inspection certificate. Maintenance logs and records of emissions testing shall be kept and made available for inspection by the COMPANY.

CONTRACTOR shall minimise idling and turn off vehicles and equipment when not in use.

CONTRACTOR shall use diesel fuel with low sulphur content ($\leq 0.5\%$) and low aromatic (polycyclic aromatic hydrocarbon (PAH)) levels if available.

As defined in the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006):

- all vehicles and machinery shall be periodically inspected to ensure that they have current technical service certificates.
- pumps, compressors and generators shall be inspected daily for leaks and to ensure drip trays and acoustic covers are positioned and functioning correctly
- the emissions of main emission sources (generators, compressors) will be monitored.

3.1.3 Air quality monitoring

3.1.3.1 Construction monitoring

CONTRACTOR shall undertake air quality monitoring along the pipeline route; at the PRT construction site, and at sensitive receptors in the vicinity of the pipeline route and PRT (see the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006)). Construction air quality monitoring parameters will include dust, PM₁₀, particulate matter, NO₂, meteorological data (temperature, relative humidity, precipitation, atmospheric pressure, wind speed and direction) and any other parameters considered to be relevant by CONTRACTOR (to be agreed with the COMPANY prior to commencement of construction). Particular attention shall be paid to air quality at any receptors identified by CONTRACTOR as being sensitive, or any areas where air quality is anticipated to be severely impacted.

CONTRACTOR shall develop an Onshore Air Quality Monitoring Plan as part of its Onshore Pollution Prevention ESIP, specifying:

- the range of parameters to be monitored
- the locations (including identified receptor(s)) where air quality is to be monitored
- the monitoring schedule (i.e. the time period over which monitoring is to be conducted).

The Onshore Air Quality Monitoring Plan shall be aligned with the applicable requirements of the Italy Environmental Monitoring Plan (PMA) (IAL00-ERM-643-Y-TAE-1028), which is subject to approval by the relevant authorities. This includes the requirement for a continuous monitoring campaign at specified locations along the pipeline route and the PRT site. Further details can be found in the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006).

3.2 Managing noise and vibrations

Sources of noise and vibration during construction works include site clearance, soil stripping, blasting, hydrotesting (pumps continuously running), construction of access roads/tracks, commissioning (including nitrogen venting) and operation of vehicles, other machinery and equipment.

If possible, heavy truck traffic supporting construction activities will be routed away from noise sensitive receptors (IT0180).

CONTRACTOR shall limit noisy construction activities to the least noise-sensitive times of day (IT0178) and when feasible schedule different noisy activities to occur concurrently, since the combined noise levels produced may not be significantly greater than the level produced if the operations were performed separately (IT0177). Activities that generate noise in close proximity to any areas of human habitation will be conducted during regular business hours only, unless otherwise agreed with the COMPANY. The COMPANY may specify any monitoring required if consent is given to extended working hours and the COMPANY reserve the right to rescind any approval to extended working hours. Where necessary to allow for specific construction processes (for example due to the continuous nature of the planned pre-commissioning activities) CONTRACTOR shall request permission to work outside regular working hours from the relevant authorities.

CONTRACTOR shall inform the COMPANY before undertaking any noisy activities that:

- could disturb or alarm people or animals
- take place outside normal working hours where CONTRACTOR has assessed the work will be in close proximity to communities or individual dwellings.

Upon acceptance of this activity by the COMPANY, CONTRACTOR CLOs will then inform local residents and landowners in advance. Advance warning to all stakeholders will allow individuals who may have noise or health concerns to take appropriate action, leave during the construction period or undertake other necessary measures prior to construction. The notification shall include details of routing, work locations and the construction schedule.

CONTRACTOR shall adhere to the Project noise and vibration limits as defined by the Environmental Project Standards Italy . Vehicles used will be certified in line with the requirements of Directive 2000/14/EC (on the noise emission in the environment by equipment for use outdoors) and the Italian Legislative Decree 262, 4th Sept 2002 which implements it (IT0674).

All construction activities will be carried out between 6 am and 10 pm (7 days a week) (IT0806). If construction or testing activities have to be carried out before 6 am or after 10 pm, either another noise evaluation or monitoring of the noise on site will be performed (particularly with respect to hydrostatic testing and pressure testing of the PRT) (IT0807). Vehicles going from and to the site will move only during the normal working hours established unless they are authorised by the competent authority (IT0809).

In addition to the general mitigation measures applied for the Project, the noise impact on receptors during the construction phase from noise sources/equipment will be specifically reduced by CONTRACTOR's promoting the use of low nuisance (noise) equipment (including vehicles). Standard noise abatement equipment shall be fitted to equipment by CONTRACTOR, used and maintained in accordance with manufacturers' instructions (e.g. acoustic covers, mufflers, doors on generators shall be closed). Noise limits set by Italian regulations will be observed by using properly soundproofed machinery and silencers. In particular, all pneumatic equipment used near residential areas will be fitted with silencers (IT0845). Mobile sound protection barriers will be used during construction of the pipeline close to sensitive receptors (IT0759). Noise absorptive barriers with a minimum height of 4m will be installed surrounding all units, and placed in between single units (IT1027). All fixed sources of noise will be soundproofed during construction of the PRT (IT0760).

All noise sources/equipment will be switched off when not in use (IT0176). CONTRACTOR shall locate stationary equipment (such as power generators and compressors) as far as possible from nearby receptors (e.g. worker resting areas, populated areas and environmentally sensitive areas) (IT0179). Equipment known to emit noise strongly in one direction will be orientated so that the noise is directed away from sensitive receptors. Dampers should be used when possible.

Suitable measures to reduce vibration must be adopted during construction of the Project (IT0779).

3.2.1 Noise control measures to be applied during specific activities

3.2.1.1 Hydrotesting

Regarding hydrotesting CONTRACTOR will:

- once the exact location of the hydrostatic compressor is determined, evaluate the noise at the closest point sensitive to the noise (IT0808)
- due to exceedance of regional noise limits (during hydrotesting), apply for an exceptional permission from the municipal administration for the pre-commissioning activities (IT0999)
- schedule the dewatering process (during hydrotesting) for the off-season (e.g. in the wintertime), to keep the number of persons concerned as low as possible (IT1000).

During the hydrotest, major noise emitting equipment will be surrounded by noise barriers/sound proof barriers with a minimum height of 4 m. The sound proof panel elements will be closed completely with no gaps (IT0961). The sound power levels of all machinery used for the hydrotesting will meet the requirements of Directive 2000/14/EC (on the noise emission in the environment by equipment for use outdoors). Air dryers will need to be provided with extra blow-out silencers to guarantee a reduced sound power level (IT0960). The equipment used for pipeline dewatering will be set on the smallest possible area to maximize the distance between noise emitting sources and sensitive receptors. The machinery layout will consider possible directional characteristics of the noise emissions (IT0962).

3.2.2 Construction noise and vibration monitoring

CONTRACTOR shall undertake weekly noise monitoring during construction at receptors identified by CONTRACTOR as being potentially affected by general construction noise (taking into account the sensitivity of the receptor, and the level of noise that it is anticipated to be subjected to as a result of planned construction activities) (see the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006)).

CONTRACTOR shall develop an Onshore Construction Noise Monitoring Plan as part of its Onshore Pollution Prevention ESIP, specifying:

- the locations (including the identified receptor(s)) where noise is to be monitored

- the monitoring schedule (i.e. the time period over which noise monitoring is to be conducted).

The Onshore Construction Noise Monitoring Plan shall be aligned with the applicable requirements of the Italy Environmental Monitoring Plan (PMA) (IAL00-ERM-643-Y-TAE-1028), which is subject to approval by the relevant authorities. This includes the requirement for one monitoring campaign at various receptors along the pipeline route and at the PRT boundary; and one long-term (24hr) measurement near the pre-commissioning area. Further details can be found in the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006).

Before starting construction an initial continuous monitoring of vibration in the area will be carried out by CONTRACTOR in order to define the baseline. Real-time monitoring of vibration generated by the activities near the sensitive sites will be carried out for the entire duration of construction. Monitoring will ensure that the maximum thresholds are not passed, or that construction site activities are remodulated in order to not go past the thresholds (IT0989).

3.2.2.1 Hydrotesting and pipe drying noise monitoring

CONTRACTOR will monitor noise during hydrotesting and pipe drying (see the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006)). Monitoring will be undertaken at receptors with the potential to be affected by the noise produced (to be identified by CONTRACTOR and agreed with the COMPANY prior to commencement of activities). Noise readings will be continuous throughout hydrotesting, and noise levels shall be compared with the standards established in the Environmental Project Standards Italy . Any non-compliances identified will be communicated to the COMPANY, and addressed as described in the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006).

3.2.2.2 Noise monitoring during the construction of the PRT

During commissioning of the PRT, noise readings shall be taken at the nearest noise sensitive receptor to confirm that the facility will comply with the Environmental Project Standards Italy (see the Onshore Compliance Monitoring CCP).

Should any non-compliance with the Environmental Project Standards Italy be recorded, CONTRACTOR will communicate this information to the COMPANY in a timely manner, and

shall undertake appropriate mitigation measures in order to rectify the non-compliance before commencing operation.

3.3 Water resource pollution prevention

To minimise sediment run-off to watercourses, maximum permitted vehicle speed will be reduced in the proximity of watercourses (IT0284).

CONTRACTOR shall prohibit its workers and subcontractors from bathing or washing equipment, vehicles or machinery within 50 m of any surface watercourses (IT0257) (see Section 3.4.2).

Abstraction of water shall be undertaken only in accordance with the Onshore Resource Management CCP (IAL00-RSK-601-Y-TTM-0001).

Water resource pollution prevention measures concerning waste water are detailed in Section 3.4)

3.3.1 Water resource control measures to be applied at specific locations

3.3.1.1 Not used

3.4 Wastewater resource management

No effluent shall be discharged to watercourses/water bodies or the ground without prior authorisation from the COMPANY and any necessary permit/licence/consent from applicable regulatory authorities.

All discharges arising from construction works, including black and grey water, shall be treated and discharged in accordance with the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008).

CONTRACTOR shall avoid discharging water in a manner that may cause erosion or sedimentation of watercourses/water bodies. Erosion/sediment control measures shall be agreed

with the COMPANY and installed/applied prior to discharge. Further details are contained in the Onshore Erosion Control and Reinstatement CCP (IAL00-RSK-601-Y-TTM-0003).

3.4.1 Site effluent including dewatering discharges

CONTRACTOR shall pump out waste water from bunded areas (e.g. maintenance areas, waste storage yards, hazardous liquid waste storage areas and oil/chemical storage areas) and store on-site in accordance with the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008).

CONTRACTOR shall provide an effective collection and disposal systems for storm water from all paved areas and buildings. Drainage shall be designed so as to prevent any contaminated wastewater streams (e.g. vehicle wash area) from entering drainage systems (IT0258).

CONTRACTOR will identify all other sources of waste water generated on any Project area (e.g. vehicle cleaning areas) and agree with the COMPANY methods for preventing the discharge of any contaminated water to ground or watercourses, or, where not possible, for treating it to comply with Environmental Project Standards Italy . Any necessary permits shall be obtained before discharges commence.

3.4.2 Vehicle and equipment washing

CONTRACTOR shall prohibit vehicles, machinery and equipment from being washed within 50 m of any surface watercourse at all times (IT0257). Vehicles and equipment shall be washed off-site in an appropriately licensed public wash bay or in a COMPANY-approved designated vehicle washing area only. Such a vehicle washing area shall be bunded with wash water draining to the level of the graded surface. Only water shall be used (i.e. no detergents or other additives) for washing vehicles in the designated vehicle washing area.

3.4.3 Hydrotesting water

The Onshore Resource Management CCP (IAL00-RSK-601-Y-TTM-0001) describes hydrotest water abstraction requirements and the need for CONTRACTOR to develop an Onshore Hydrotesting Water Sourcing and Disposal Plan.

CONTRACTOR will ensure hydrotesting water is tested prior to discharge and local treatment provided if necessary. Testing performed on hydrotesting water prior to discharge shall include obtaining information on a range of physio-chemical parameters, sufficient to ensure compliance with Environmental Project Standards Italy .

Water used for hydrotesting will not be chemically treated, where practicable. Should CONTRACTOR believe that the use of chemical treatment is necessary; it will inform and require permission from the COMPANY. Before beginning the works, material safety data sheets (MSDS) must be presented by CONTRACTOR to the COMPANY and to ARPA Puglia for any additives proposed to be used in the hydrotest water for the onshore sections of the pipeline (IT0649). Abstraction and discharge 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).

3.5 Managing visual pollution

CONTRACTOR will manage the visual impact of general construction work by:

- using temporary visual screens to minimise the visibility of construction activities and lighting in site locations where the receiving landscape is a visually exposed lowland
- introducing fencing to protect the landscape and visual amenity if necessary. Developments for which fencing is anticipated to be necessary include the PRT, the block valve station and similar above ground installations.

Any land modifications must be authorised in advance by means of a Landscape Permit through the ESIA Procedure (IT0041). CONTRACTOR will avoid displacing wherever possible dry stone walls (IT0367). In addition, when planning work CONTRACTOR will take into account the predicted landscape and visual amenity impacts, as detailed in the ESIA Italy, and implement the associated measures to address the impacts.

CONTRACTOR will neatly store materials and machinery during the works (IT0826). On completion of construction activities, CONTRACTOR will remove posters, barriers, traffic management and temporary signs when they are no longer necessary (IT0824).

3.5.1 Light emissions

The construction site will be illuminated in accordance with the recommendations provided by the Region of Apulia in Regional Law n. 15 of 23 November 2005, "Urgent Measures for the Containment of Light Pollution and Saving Energy", Art. 5 (IT0144).

Reduction in obtrusive light during construction will be achieved (IT0148):

- through using specifically designed lighting equipment that minimises the upward spread of light near to or above horizontal
- by not 'over lighting'
- by diming or switching off lights when the task is finished
- minimising glare to potential observers by ensuring that main beam angle of lights is not more than 70 degrees

Night-time lighting during construction works will directional type to minimise light spill to the surrounding area and avoid disturbance of local residents. Lighting will be restricted to that required only for security outside agreed working hours (IT0143).

Lighting at permanent facilities will be kept to the minimum required for safe operations. It will be designed and operated to avoid light pollution and disturbance of nocturnal animals (IT0151). At the PRT hooded side lighting will be used on the pathways. Lights will be applied directly to buildings and pole lighting will only be used where strictly necessary (IT0153).

3.5.2 Visual impact of the PRT

CONTRACTOR will manage the visual impact of at the PRT by implementing the following:

- introducing hoardings to visually screen construction activities
- maintaining an unobtrusive colour scheme
- planting the PRT area with native trees and shrubs (IT0312).

CONTRACTOR will ensure that:

- the proposed landscape planting is viable as a long-term feature within the landscape (e.g. through proposed sustainable management and cost-effective maintenance techniques)

- appropriate species (i.e. native, indigenous to the area, visually in keeping with existing vegetation, tall enough to provide adequate screening) are utilised. A polyculture is encouraged, in order to increase biodiversity
- adequate planting density is maintained to ensure a viable landscape screen
- amenity grass areas are established within the proposed planting areas, and maintained regularly to ensure a vegetation exclusion zone, maintaining an aesthetic appearance and preventing encroachment
- routine maintenance of vegetation (e.g. weed removal, pruning, pest control, replacement of dead vegetation) is performed.

With a view to making the PRT facility fit well into the environment, CONTRACTOR will implement the following:

- a dry stone wall will be constructed as the site boundary (IT0165)
- materials normally used in rural architecture will be adopted in the PRT construction (administrative offices and technical and security rooms). Projecting walls will be covered with natural rough-cut stone while rendered walls will be finished with hydraulic lime render (IT0167)
- in order to reduce the impact on overhead views (IT0156):
 - green roofs will be installed in the PRT office area
 - a layer of assorted crushed stone (taken from local quarries) will be placed around the two vent stacks in a non-uniform way and using various colours that resemble topsoils present in the area
- outside the office area, the remaining stone surfaces will be of a colour similar to green so that they fit well into the overhead setting (IT0157)
- the fire protection water storage tank at the PRT will be camouflaged by a soil embankment on which grass will be sown and shrubs planted (IT0163)
- technological elements of the PRT (horizontal pipes, cold vent stacks, safety valves, etc.) will be coloured such that they are a similar colour to their surrounding environment (camouflage) (IT0169)
- climbing plants will be planted at the base of the internal security fencing at the PRT (IT0166)
- the internal road surfaces of the PRT will be constructed using asphalt of colours resembling those of the local topsoils. External road surfaces (security boundary road) will be constructed using stabilised stone to resemble farm roads in the area (IT0158)

- the following will be planted outside the exterior wall (IT0171):
 - tall trees, such as eucalyptus, to provide a shielding barrier
 - medium height species, such as olive trees, in an irregular pattern to provide both a shielding barrier and reduce the overhead visual impact.only native species listed in Appendix 1 of Annex 8 of the ESIA will be used in the planting.

To reduce visual impact, the Snam Rete Gas (SRG) above-ground infrastructures above will be built inside the PRT perimeter of the Project (IT0990).

For technical and safety reasons, no trees or shrubs will be planted within a radius of 90 m from each PRT vent stack (IT0145).

3.5.3 Visual impact of the block valve station

CONTRACTOR will manage the visual impact of the block valve station ensuring that block valve station area is planted with native trees and shrubs (IT0312). CONTRACTOR will ensure that:

- the proposed landscape planting is viable as a long-term feature within the landscape (e.g. through proposed sustainable management and cost-effective maintenance techniques)
- appropriate species (i.e. native, indigenous to the area, visually in keeping with existing vegetation, tall enough to provide adequate screening) are utilised. A polyculture is encouraged, in order to increase biodiversity
- adequate planting density is maintained to ensure a viable landscape screen
- amenity grass areas are established within the proposed planting areas, and maintained regularly to ensure a vegetation exclusion zone, maintaining an aesthetic appearance and preventing encroachment
- routine maintenance of vegetation (e.g. weed removal, pruning, pest control, replacement of dead vegetation) is performed.

3.6 Fuel and chemical selection, storage, handling and transport

CONTRACTOR shall develop an Onshore Chemical and Hazardous Materials Management Plan in order to detail procedures for working with chemical products (IT0524) and hazardous

materials. The Onshore Chemical and Hazardous Materials Management Plan will form part of the Onshore Pollution Prevention ESIP.

As a requirement of the Onshore Hazardous Materials Management Plan, prior to the start of work, CONTRACTOR shall perform a full risk assessment for hazardous liquids. This shall include assessing risks to the workforce, the environment and, where deemed necessary, the community, and shall include all stages of use (i.e. sourcing, handling, transport, storage and use). An individual risk assessment will be performed for each type of hazardous liquid used, and appropriate risk minimisation and mitigation measures put into place. CONTRACTOR shall submit the risk assessments and minimisation and mitigation measures developed to the COMPANY for acceptance prior to commencing work. The COMPANY retains the right to request further risk minimisation and mitigation measures from CONTRACTOR should it feel that the current measures are inadequate.

CONTRACTOR shall maintain regularly updated records of all hazardous liquids used. This shall include recording information on the sourcing of hazardous liquids, the type and quantity stored and used, the location and method of storage and use, and any spills or other incidents that occur. These records shall be submitted to the COMPANY on a quarterly basis for review (see the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006)).

Hazardous materials are those that pose a potential risk to human health or the environment and include cleaning chemicals, solvents, fuels and lubricants.

The sections below detail the mitigation measures that shall be employed when handling fuels and hazardous materials. Please refer to the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008) for requirements concerning hazardous waste storage and disposal.

3.6.1 Storage and handling

Fuel and hazardous chemicals/materials shall be stored in designated areas, as defined by CONTRACTOR, except for quantities generated or required for the daily construction activities. Underground storage tanks will not be used for fuel storage (IT0252). Fuel, oil or hazardous materials required to be stored onsite shall be stored within double-walled tanks or containment bunds (IT0253).

Fuel and hazardous chemical storage areas shall not be allowed within 30 m of a minor watercourse, within a floodplain or where there is the potential for spilled fuel to enter groundwater.

All fuel and hazardous chemical storage facilities shall be located only on flat ground and shall be contained within a bund designed to contain at least 110% of the total capacity of the storage containers (IT0254) plus 10% of the aggregate tank volume within the containment area or as otherwise specified by regulatory requirements. The bund walls and floor shall be constructed of concrete or other suitably impermeable material. The filling connection must be within the bund. No drain valves or other connections through the bund walls shall be permitted. Tanks shall be fitted with a gauge to allow the fill level to be monitored during refilling and preferably with a high-level alarm.

The loading and offloading area shall be hard standing (e.g. concrete) or on an impermeable material and fully kerbed/bunded to collect spills.

Any contaminated rainwater or spills within the bund shall be pumped out, collected, and stored in accordance with the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008).

Individual drums of fuels or hazardous chemicals shall be stored under cover on drip trays designed to hold 110% of the capacity of the largest container.

CONTRACTOR shall store chemicals (small volume containers) on shelves or pallets in covered, lockable, ventilated, flameproof storage buildings/containers. Chemicals shall be stored and segregated in accordance with the manufacturers' MSDS requirements. Cupboards and buildings should be bunded (internally or externally) to ensure that any spills or leaks are contained and recovered.

Chemicals and hazardous material shall be appropriately labelled for worker protection during handling and incident response and MSDS shall be available at each storage area. MSDS for all chemicals should be available in the working language of CONTRACTOR's personnel.

All fuel and chemical storage areas shall be secured by CONTRACTOR to prevent unauthorised access or use.

3.6.1.1 Pumps and generators

All pumps shall be provided with secondary containment (bund) by CONTRACTOR (e.g. polyethylene or other similar material) to contain 110% of the pump/generator fuel/oil inventory if they are located within 100 m of surface water bodies or vulnerable unconfined aquifers

All refuelling of pumps must be done within the containment bund.

CONTRACTOR shall ensure that there is 100% standby capacity immediately available to replace pumps and hoses that fail. Appropriate preventive measures should be taken in order to avoid any leakage from the damaged pump/hose. In the case of any leakage due to a damaged pump/hose, this should be immediately reported to the COMPANY by CONTRACTOR and dealt with according to the Onshore Spill Prevention and Response CCP (IAL00-RSK-601-Y-TTM-0010).

Containment shall be provided by CONTRACTOR for all diesel generators to prevent the release of any leaks or spills onto the ground.

Spill kits will be present and all personnel will be familiar with the Onshore Spill Prevention and Response CCP (IAL00-RSK-601-Y-TTM-0010) and the relevant Construction Emergency Response Plan .

3.6.2 Chemical selection and inventory

CONTRACTOR will identify the chemical products to be used (e.g. paints, radiography chemicals, coatings) and wherever possible avoid the need for its use (where consistent with other Project requirements) or propose replacement of environmentally harmful chemicals with less harmful alternatives. This shall include, where possible, using biodegradable and eco-friendly oils in equipment.

CONTRACTOR shall avoid the manufacture, trade, and use of hazardous substances and materials subject to international bans or phase-outs due to its high toxicity to living organisms, environmental persistence, potential for bio-accumulation, or potential for depletion of the ozone

layer. CONTRACTOR shall prevent or minimise the potential for community exposure to hazardous materials that may be released by the Project, including during transportation.

CONTRACTOR shall maintain a comprehensive chemical inventory for each fuel and hazardous chemical storage area. In addition CONTRACTOR will have procedures for inventory control to reduce stored volumes, and track incoming and outgoing chemical materials in a chemical control register. MSDS for all chemicals will be retained.

CONTRACTOR will take all measures practicable for the avoidance of any releases of chemicals to the environment by following recognized best practice for use of paints, coatings and other chemicals particularly when working over water.

3.6.2.1 Pesticides

CONTRACTOR shall not use products that fall in the World Health Organisation Recommended Classification of Pesticides by Hazard Classes Ia (extremely hazardous) and Ib (highly hazardous); or Class II (moderately hazardous).

3.6.3 Refuelling

Diesel fuel will be delivered via approved fuel road tankers to the construction site (IT1018). Refuelling will only be carried out or supervised by workers trained in refuelling, spill containment and clean-up procedures.

Procedures for vehicle/equipment refuelling will be implemented by CONTRACTOR to prevent spillage (IT0278). These shall include but not be limited to:

- funnels shall be used where topping up is done with jerry cans or similar, and the operation will be carried out within a drip tray or other contained area
- all fuel nozzles shall be equipped with automatic shut-off refuelling guns on dispensers. Any fuel remaining in the hose shall be returned to the storage facility
- attendants shall not be allowed to leave refuelling equipment without supervision. Operators shall be stationed at both ends of the hose during fuelling unless the ends are visible and are readily accessed by one operator
- workers in charge of transfers shall monitor levels to prevent overfilling
- appropriate spill containment equipment will be available at refuelling sites (IT0256)

- if mobile fuel tankers are used, the fuel tank shall be double walled and the fuel dispenser shall be housed in a protective casing. Appropriate spill kits (content to be agreed with the COMPANY, see the Onshore Spill Prevention and Response CCP (IAL00-RSK-601-Y-TTM-0010)) shall be carried by each team. The wheels of all vehicles involved in in-field refuelling shall be chocked while refuelling is in progress.

Refuelling of construction vehicles and equipment will not be allowed outside designated refuelling areas (IT0255). Refuelling and lubrication changes for all mobile equipment shall be carried out at least 100 m away from any surface water bodies and vulnerable unconfined aquifers. Non-mobile equipment within this zone shall have a lined bund appropriate for containing any spills and spill clean-up materials.

CONTRACTOR shall prohibit the discharge of oily materials of any kind into waterways or channels leading to waterways.

3.6.4 Transport

Hazardous materials will only be handled by trained personnel (including trained drivers). Vehicles transporting hazardous materials will carry spill kits appropriate for the hazardous materials being transported, and the location of its transportation (content to be agreed with the COMPANY, see the Onshore Spill Prevention and Control CCP (IAL00-RSK-601-Y-TTM-0010)).

CONTRACTOR will comply with hazardous material requirements of each jurisdiction through which the materials travel.

Hazardous waste materials such as used paint, spent batteries, oil, methanol, ethylene glycol, cleaning agents, and water contaminated by freezing depressants shall be managed in accordance with the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008).

3.6.5 Bulk products

CONTRACTOR shall implement the following procedures for safe loading and unloading of bulk products:

- service vehicles will be equipped with automatic shut-off valves
- brakes will be set

- wheels will be chocked
- the vehicle will be grounded/earthed if the product is flammable
- the operator will observe loading and unloading operations at all times
- when complete, the operator will examine outlets for leakage and take corrective action if required.

3.6.6 PRT pipework chemical cleaning

As part of the Onshore Chemical and Hazardous Materials Management Plan (see Section 3.5.3) CONTRACTOR will develop a Pipeline Receiving Terminal Chemical Cleaning Plan, to be submitted to the COMPANY for approval, prior to commencement of PRT pipework chemical cleaning during commissioning. The Pipeline Receiving Terminal Chemical Cleaning Plan shall include:

- an assessment (including a risk assessment) of the types and quantities of chemicals identified for use and disposal

measures for chemical disposal. Where practicable, preference is to be given to neutralisation as a disposal method. Should neutralisation be undertaken, CONTRACTOR shall provide all necessary resources and personnel, in order to design and implement the neutralisation process.

3.7 Maintenance/workshop areas/maintenance vehicles

If planned maintenance and inspection work is to be carried out on-site CONTRACTOR shall make proposals for the establishment of workshop areas, as necessary, at construction yards. These shall be located at least 100 m away from any surface water bodies and vulnerable unconfined aquifers.

As lubricants, fuel and other potentially hazardous substances will be handled in these areas, they shall be stored on an impermeable base (membrane or concrete pad), roofed and kerbed, with internal drainage allowing any spills to be collected within the area. Efficient oil and grease trap(s) or sump(s) should be installed and maintained. Any drain valves shall be locked off to prevent incidental or unauthorised releases. Any contaminated rainwater or spills shall be collected and stored in accordance with the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008). Appropriate spill kits shall be positioned adjacent to the workshop area.

Where unplanned maintenance has to be carried out at temporary working areas (i.e. due to equipment breakdown and where the equipment is not recoverable to the maintenance area), the area shall be covered by tarpaulin and spill kits positioned adjacent to the work area. Any unplanned maintenance activities within 100 m of surface water bodies and vulnerable unconfined aquifers shall only be undertaken with the approval of the COMPANY.

Spent oils, lubricants, filters etc., will be managed in accordance with the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008).

3.7.1 Maintenance vehicles

Vehicles, equipment and containers used shall be capable of safely transporting petroleum products or hazardous materials in compliance with Italian legislation and international best practice.

3.7.2 Road cleaning

CONTRACTOR shall implement measures to clean the roads promptly of mud, dirt or debris deposited by Project traffic and activities.

3.8 Contaminated land/water

Should any areas of contaminated land be encountered by CONTRACTOR, CONTRACTOR shall develop an Onshore Contaminated Land Crossing Plan as part of the Onshore Pollution Prevention ESIP, to be agreed with the COMPANY prior to undertaking any works in that area.

Contaminated soil, rock and water will be treated (see Section 3.8.3) and disposed of as described in the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008).

3.8.1 Not used

3.8.2 Spills

Immediate emergency response procedures for spills are detailed in the Onshore Spill Prevention and Response CCP (IAL00-RSK-601-Y-TTM-0010).

3.8.3 Remediation standards for soil and groundwater contamination

Where areas have been contaminated as a result of spills caused by the Project, CONTRACTOR will undertake an assessment of the impact and recommend appropriate remediation measures. Remediation shall be carried out in accordance with the Environmental Project Standards Italy on permitted levels of contaminants in soil and water.

All clean-up shall be progressed until the COMPANY is satisfied.

The disposal of any contaminated material off-site shall be undertaken in accordance with the Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008).

4 Training

The training requirements relating to onshore pollution prevention can be found in the Onshore Employment, Training and Worksite Management CCP (IAL00-RSK-601-Y-TTM-0012).

5 Monitoring and inspection

The monitoring and inspection requirements relating to onshore pollution prevention can be found in the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006).

6 Related documents

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

- Contractor's ESMS Framework Document (CAL00-RSK-601-Y-TTM-0001)
- Onshore Resource Management CCP (IAL00-RSK-601-Y-TTM-0001)
- Onshore Erosion Control and Reinstatement CCP (IAL00-RSK-601-Y-TTM-0003)

- Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006)
- Onshore Waste Management CCP (IAL00-RSK-601-Y-TTM-0008)
- Onshore Community Safety and Security CCP (IAL00-RSK-601-Y-TTM-0009)
- Onshore Spill Prevention and Response CCP (IAL00-RSK-601-Y-TTM-0010)
- Onshore Employment, Training and Worksite Management CCP (IAL00-RSK-601-Y-TTM-0012)
- Compliance Assurance Plan
- Environmental Project Standards Italy
- Construction Emergency Response Plan
- Region of Apulia, Regional Law n. 15, “Urgent Measures for the Containment of Light Pollution and Saving Energy”, Art 5
- Environmental Monitoring Plan (PMA) (IAL00-ERM-643-Y-TAE-1028).