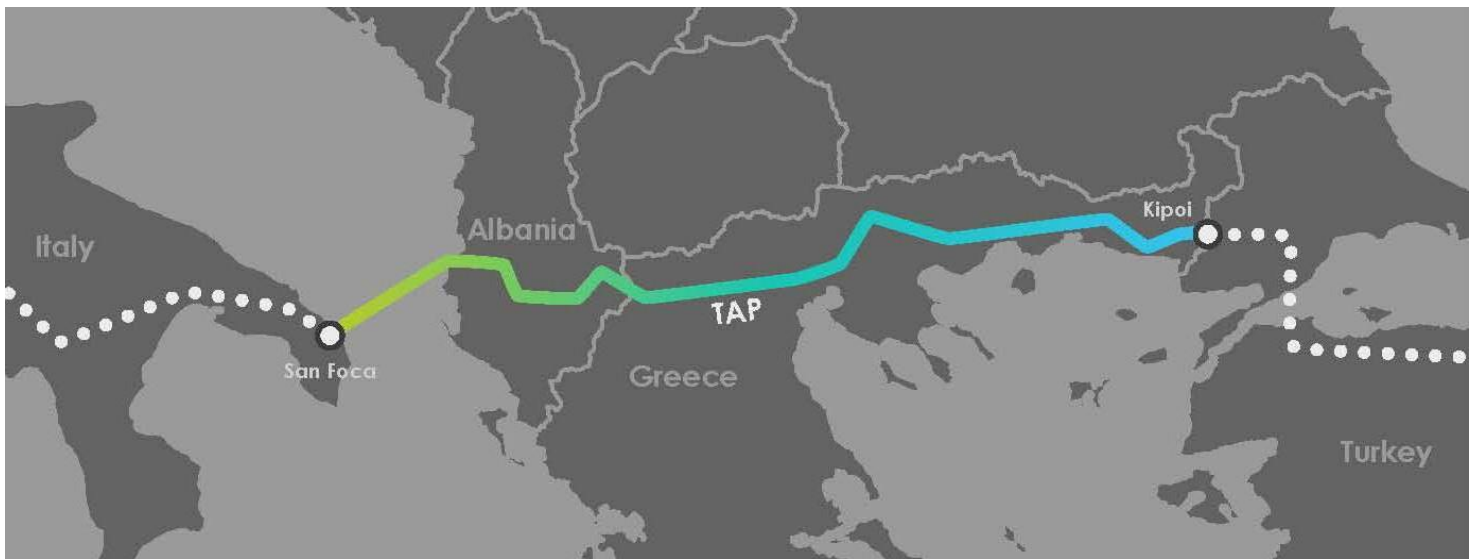





Trans Adriatic
Pipeline




Waste Management Plan

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	2 of 63

Contents


Glossary of Terms	4
List of Acronyms and Abbreviations.....	5
1 Introduction.....	6
1.1 Objectives	6
1.2 Scope.....	6
1.3 Reference documents and Links with other Plans	6
1.3.1 References.....	7
1.4 Responsibilities	8
1.4.1 TAP Responsibilities	8
1.4.2 Contractor Responsibilities.....	11
2 Project Waste Management Principles and Standards	12
2.1 TAP ESCH Standards and Specifications	13
2.2 TAP Waste Management CCPs.....	14
2.3 Contractor Waste Management ESIP	14
2.4 Waste Management Hierarchy	15
2.5 TAP Preliminary Waste Studies	16
3 Contractor Waste Management System.....	18
3.1 Contractor Waste Characterisation Studies	18
3.2 Contractor Waste Management Resources	20
3.2.1 Contractor Resources	20
3.2.2 Waste Management Services Providers.....	20
3.3 Contractor Waste Management Procedures	20
3.3.1 Waste Minimisation	21
3.3.2 Waste Identification and Segregation.....	21
3.3.3 Waste Receiving and Storage Facilities	22
3.3.4 Waste Transfer / Transportation.....	23
3.3.5 Management of Specific Waste Streams.....	23
3.3.6 Waste Tracking and Monitoring.....	25
3.3.7 Contractor Waste Management Reporting.....	26
4 Waste Management Compliance Assurance	27
4.1 Project Compliance Assurance Processes.....	27

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	3 of 63

4.2	Contractor Self-Verification	27
4.2.1	Compliance Monitoring of Onsite Activities	27
4.2.2	Compliance Monitoring of WSPs	27
4.2.3	Monitoring and Reporting	28
4.3	TAP Oversight	28
4.3.1	Joint Inspections and Audits	29
4.3.2	Daily Oversight.....	29
4.3.3	Monthly Inspections.....	29
4.3.4	Oversight Interface and Reporting.....	30
4.4	TAP ESCH Assurance	30
4.4.1	ESCH Quarterly Management Reviews.....	31
4.4.2	ESCH Audits.....	31
	APPENDIX 1 – Convergence of EU Directives into National Legislation of TAP Host Countries.....	32
	APPENDIX 2 – Project Waste List	37
	APPENDIX 3 - Waste Management Services Providers in TAP Host Countries.....	40
	APPENDIX 4 – Project Waste Management Chart	44
	APPENDIX 5 - Example Waste Transfer Note	58
	APPENDIX 6 - Example of Waste Inventory	59
	APPENDIX 7 – Monthly Waste Report	60
	APPENDIX 8 – Inspection Checklist for Third Party Waste Service Provider.....	61
	APPENDIX 9 – Project Waste Management Focused Inspection Checklist	62


List of Figures

Figure 2-1 – Project Waste Management Framework.....	12
Figure 2-2 – Project Waste Management Hierarchy	15
Figure 3-1 – Overview of Waste Management Process.....	19

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	4 of 63


Glossary of Terms

Black water	Wastewater containing faecal matter and/or urine
Contractor	Engineering, Procurement and Construction (EPC) contractors and their sub-contractors
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 identify) which has occurred as a result of Project activities. Impacts may be considered positive or negative.
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 may occur as a result of Project activities. Impacts may be considered to be positive or negative.
ESMS Project Standards Documents	Documents detailing the Project Standards as applicable in each of the three TAP host countries
Grey water	Wastewater generated from wash basins, showers and baths
Pipeline	Trans Adriatic Pipeline including related facilities such as access roads, compressor stations etc.
Project	Trans Adriatic Pipeline Project
Socio-economic impact	A change, or potential change, to the existing socio-economic environment which occurs because of Project activities. Social factors may include aspects such as demographics, community structure and relationships, health and wellbeing etc. and may refer to individuals, groups or wider communities of people. Economic factors may include, for example, employment, government or household finances, livelihoods etc. An impact may be positive or negative.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	5 of 63

List of Acronyms and Abbreviations

ATS	Action Tracking System
CCP	Contractor Control Plan
EBRD	European Bank for Reconstruction and Development
EBRD PR	European Bank for Reconstruction and Development Performance Requirement
EFM	Environmental Field Monitor
EIB	European Investment Bank
ESCH	Environment, Social and Cultural Heritage
E&S	Environmental and Social
ESIA	Environmental and Social Impact Assessment
ESIP	Environmental and Social Implementation Plan
ESCH MD	Environmental, Social and Cultural Heritage Management Document
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
EU	European Union
EWC	European Waste Catalogue
H&S	Health and Safety
IFC	International Finance Corporation
IMO	International Maritime Organisation
IPMT	Integrated Project Management Team
ISO	International Organization for Standardisation
KPI	Key performance indicator
NCR	Non-conformance report
PPE	Personal protective equipment
ROW	Right of Way
STP	Sewage treatment plant
TAP	Trans Adriatic Pipeline
TAP AG	Trans Adriatic Pipeline joint venture TAP
VIP	Ventilation improved pit
WEEE	Waste Electrical and Electronic Equipment
WSP	Waste management Service Provider
WMP	TAP Waste Management Plan (this plan)
WSY	Waste storage yard
WTN	Waste Transfer Note

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	6 of 63

1 Introduction

This Waste Management Plan has been prepared to describe the requirements and best practices for the minimisation and management of Project waste implemented by TAP and its Contractors to ensure compliance with Project commitments and standards and national and EU legislation during construction and commissioning phases of the TAP Project.

This Plan is subordinate to and should be read in conjunction with TAP ESMP (referenced in Section 1.3.1) which provides an overview of all TAP environmental, socio-economic and cultural heritage aspects and how impacts will be identified, avoided, mitigated or managed in accordance with Project ESCH standards and specifications.

1.1 Objectives

The primary objectives of this Plan are:

- to demonstrate the arrangements implemented on the project by TAP and Contractors to ensure comprehensive waste management system through systematic application of Project Waste Hierarchy
- to document and clarify waste management procedures, including waste minimisation, waste identification and segregation, collection, handling and storage, waste transfer/transportation, reuse and recycling and disposal of wastes applied across the Project sites
- to detail Contractor self-verification and oversight and assurance measures exercised by TAP throughout the lifecycle of Project waste.


1.2 Scope

This Plan is applicable to all onshore and offshore activities during the construction and commissioning phases of the Project that inherently generate hazardous and non-hazardous wastes. Onshore areas include, but are not limited to the working strip, construction sites of compressor stations, construction sites of block valve station, access roads, aggregate extraction sites, spoil disposal sites, batch plants, all temporary material and waste storage areas, camps, pipe storage and maintenance areas and public roads. Offshore areas include both 'marine' and 'coastal' areas as defined by the Offshore Waste Management CCPs.

The scope of this Waste Management Plan includes construction and commissioning stages of the Project. A revised version will be issued to support start up and operation stages of the Project 6 months prior to introduction of hydrocarbons into TAP facilities.

1.3 Reference documents and Links with other Plans

This Plan is part of TAP over-arching ESCH Management System and as such interfaces with several other TAP ESCH management documents. TAP ESCH Management Documents (ESCH MDs) detail the management and implementation processes required to achieve Project ESCH


 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	7 of 63

standards and specifications. The management documents include information on the TAP ESCH oversight, compliance and assurance of the Contractors' activities.

This document also supports and complements TAP Waste Management Contractor Control Plans and (CCPs) and Contractors' Waste Management Environmental and Social Implementation Plans (ESIP) that have been developed for this Project.

1.3.1 References

	Document Number	Document Name
Project	CAL00-RSK-601-Y-TTA-0002	TAP Environmental and Social Management Plan
	CAL00-PMT-601-Y-TTM-0005	Environmental and Social Compliance Assurance Plan
	TAP-HSE-PR-0011	H&S and ESCH Data, Incident Reporting & Investigation Procedure
	CAL00-PMT-000-V-TPQ-0001	Non-conformity Management Procedure
	CAL00-PMT-601-Y-TSP-0001	Consolidated ESMS Project Standards Document
Albania	Environmental and Social Impact Assessment Albania	
	AAL00-URS-600-Y-TRY-0005	Albania Construction Waste Management Study
	AAL00-PMT-601-Y-TLX-0001	ESIA Commitments Register (Albania)
	TAP-PRO-OPLA-0003-14	Onshore Waste Management CCP
	TAP-PRO-ITT-OFI-0003-14 Rev. A	Offshore Waste Management CCP
	AAL00-C10766-000-Y-TAT-0003	ESIP Waste Management Plan (Albania) Spiecapag Entrepouse - ONPL
	AAL00-C1448-601-Y-TTM-0016	ESIP Waste Management Albania Renco Terna Joint Venture - CS
Greece	Environmental and Social Impact Assessment Greece (East)	
	Environmental and Social Impact Assessment Greece (West)	
	GAL00-C5577-601-Y-TTM-0001	Greece Construction Waste Management Study
	GAL00-ENT-642-Y-TLX-0001	ESIA Commitments Register (Greece)
	GAL00-ENT-601-Y-TTM-0008	Onshore Waste Management CCP
	GAL00-SPIGR-000-Y-TAT-0003	ESIP Waste Management Plan (Greece) Spiecapag Entrepouse – ONPL
	GPL00-C9136-601-Y-TAT-0005	ESIP Waste Management Bonatti JP Avax - ONPL
	GCS00-C1449-601-Y-TTM-0006	ESIP Waste Management Greece Renco Terna Joint Venture – CS
Italy	Environmental and Social Impact Assessment Italy	
	IAL00-C5577-601-Y-TTM-0001	Italy Construction Waste Management Study
	IAL00-ENT-643-B-TLX-0001	ESIA Commitments Register (Italy)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	8 of 63

Document Number	Document Name
TAP-PRO-ITT-OPLI-0003-14 – Rev A	Onshore Waste Management CCP
TAP-PRO-ITT-OFI-0003-14 – Rev A	Offshore Waste Management CCP
IAL00-C5521-601-Y-TTM-0005	Onshore Waste Management ESIP Italy
IPL00-C5522-601-Y-TAG-0008	Onshore Waste Management ESIP

1.4 Responsibilities

1.4.1 TAP Responsibilities


TAP is ultimately responsible for ensuring that all project activities comply with the Project ESCH standards and specification and provisions of this Plan. TAP remains responsible for the implementation of this Plan by:

- fulfilling its responsibilities under the Onshore and Offshore Waste Management CCPs
- providing the Contractors with information and guidance throughout Project execution
- communicating the contents of this Plan to its own staff and Contractors and ensuring that they understand their responsibilities with respect to waste management
- undertaking ongoing monitoring and review of waste management activities across Project sites
- undertaking formal oversight monitoring of Contractors' waste management activities and communicating the results to Contractors for continual improvement.


The main roles and responsibilities of key TAP personnel in the implementation of this plan are summarised in the Table 1-1.

Table 1-1 – TAP roles and responsibilities


Role	Responsibility
Project Director	Implementation of this plan across TAP Project. Provision of adequate and appropriate resources to IPMT teams for the implementation of this plan.
TAP E&S Manager	Review of the Project ESCH Management System, including this plan, on a regular basis or after any significant change to the Project. Managing the E&S resources across TAP Project for the implementation of the Project ESCH Management System, including this WMP. Responsible for implementation of TAP's E&S compliance and assurance program Communication changes to Project E&S standards to the in-country teams Supplying and managing technical support from third party specialists as required assisting the implementation of this plan

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	9 of 63

Role	Responsibility
	<p>Providing functional support to the in-country E&S teams for the implementation of this plan.</p> <p>Sharing monitoring/audit findings and lessons-learnt between In-country E&S Managers and Environmental Experts.</p> <p>Ensure oversight of the compliance by Contractors of the national, EU regulations and Project Standards</p>
In-country Project Manager (IPMT)	<p>Implementation of this plan at country level as related to TAP IPMT and providing the resources to do so.</p> <p>Providing resources to promptly react to E&S incidents arising from Project activities.</p>
Senior Site Representative	<p>Implementation of this plan at asset (pipeline; compressor stations etc.) level as related to TAP IPMT and providing the resources to do so.</p> <p>Providing resources to promptly react to E&S related incidents arising from Project activities.</p> <p>Support the EFMs to discharge their duties in relation to this plan</p>
In-country E&S Manager (IPMT)	<p>Communicating the contents of this plan and any changes to the TAP IPMT team and Contractors and providing any necessary training to ensure that they understand their responsibilities with respect to this plan.</p> <p>Management of the resources provided for the implementation of this plan at country level, as related to TAP IPMT.</p> <p>Managing the review and acceptance of Contractors' ESIPs and associated sub-plans.</p> <p>Managing effective Contractor oversight in accordance with this plan across all Project activities.</p> <p>Managing TAP resources to promptly react to E&S related incidents arising from Project activities when required.</p>
In-country Environmental Expert (IPMT)	<p>Oversight of the Contractors' Waste Management ESIPs and their implementation of this plan's requirements in coordination with the EFMs.</p> <p>Review of Contractors' Waste Management ESIPs and associated sub-plans.</p> <p>Participating in Contractors' inspections of third party waste management transport and facilities, or allocating an EFM to participate in the inspection.</p> <p>Assist in training of Contractors.</p> <p>Reviewing assessment reports of Contractors' waste facilities and providing comment or acceptance as appropriate.</p> <p>Organising and participating in TAP in-country audits of the Contractors' Waste Management ESIPs and Contractors' performance with respect to the requirements of this WMP.</p>

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	10 of 63

Role	Responsibility
	<p>Reporting Contractors' compliance to the in-country E&S Manager and Contractors' Environmental Manager(s) as required and implementation of corrective action.</p> <p>Communications and notifications to stakeholders on waste management matters as required in coordination with the in-country Social Expert (IPMT).</p> <p>Liaising with the Contractors' Environmental Manager(s) on waste management issues.</p>
Environmental Field Monitor(s) (EFM)	<p>Oversight of the Contractors' Waste Management ESIPs and their implementation of this plan's requirements.</p> <p>Reporting all waste related non-compliances in daily environmental reports and providing information to the in-country Environmental Expert and communicating to Contractor.</p> <p>Reviewing Contractors' waste tracking log and spot checking waste transfer notes.</p> <p>Participating in Contractors' inspections of third party waste management transport and facilities as needed.</p> <p>Recording waste related incidents and following up formal reporting by Contractors.</p>
In-country Site Health & Safety Coordinator	<p>Providing support to the TAP and Contractors environmental teams where non-compliant waste management or waste related incidents may have health and safety implications.</p> <p>Providing resources to participate in Contractors' inspections of third party waste transport and facilities as requested.</p> <p>Providing health and safety input into waste management audits when required.</p> <p>Assisting in emergency response where waste related incidents present a health and safety risk to the workforce or third parties.</p>
Health & Safety Field Monitor(s)	<p>Participating in Contractors' inspections of third party waste management transport and facilities as needed.</p> <p>Providing health and safety input into waste management audits when required.</p> <p>Assisting in emergency response where waste related incidents present a health and safety risk to the workforce or third parties.</p>
In-country Permitting Lead (IPMT)	<p>Obtaining necessary licenses and permits before construction as required, with the exception of those provided by Contractors as part of the Contract.</p> <p>Reviewing the Contractors' selection of waste facilities to check the correct permits are in place during the assessment process.</p>
In-country Social Expert (IPMT)	<p>Assisting the in-country Environmental Expert with the communication and notification to stakeholders on waste management matters as required.</p> <p>Engaging the Social Field Monitors when required.</p>


 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	11 of 63

1.4.2 Contractor Responsibilities

The Contractors are responsible for ensuring that project waste is managed, segregated, stored, transported and disposed of in accordance with Project ESCH standards and specifications and national and EU legislative requirements applicable within the country of operation. The Contractor is responsible to implement the provisions of this plan through:

- fulfilling its responsibilities under applicable Onshore/Offshore Waste Management CCPs
- making full use of the guidance, support and technical information provided by TAP
- developing its own required procedures and supporting self-verification processes to verify compliance to legislative and project requirements on waste management
- performing waste characterisation studies for its own scope within the Project, i.e. assessing, classifying and quantifying waste generated by its activities
- identifying and proposing to TAP best practices and disposal routes for wastes generated by its activities
- implementing the waste hierarchy throughout the contract execution
- identifying and developing waste facilities, as needed, for:
 - collecting waste
 - segregating waste
 - processing
 - storing
 - accumulating and transferring
 - recycling or re-using waste whenever possible
- exercising due diligence verification, control and assurance over third parties engaged in provision of waste management services
- maintaining documented evidence of compliance to Project Standards pertaining to all wastes generated by its activities.

Processes put in place by Contractors to attain the above requirements are described in Section 3 of this document.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	12 of 63

2 Project Waste Management Principles and Standards

This section details the performance standards and requirements adopted by the Project, to which Contractors are required to align and adhere throughout the execution of their contracts.

The relationship between the Project performance drivers, standards and the Contractor waste management system are represented in Figure 2-1.

TAP shall continuously exercise verification of Contractors' performance against the below requirements through the processes detailed in Section 4 of this document, in the ESMP and E&S Compliance Assurance Plan.

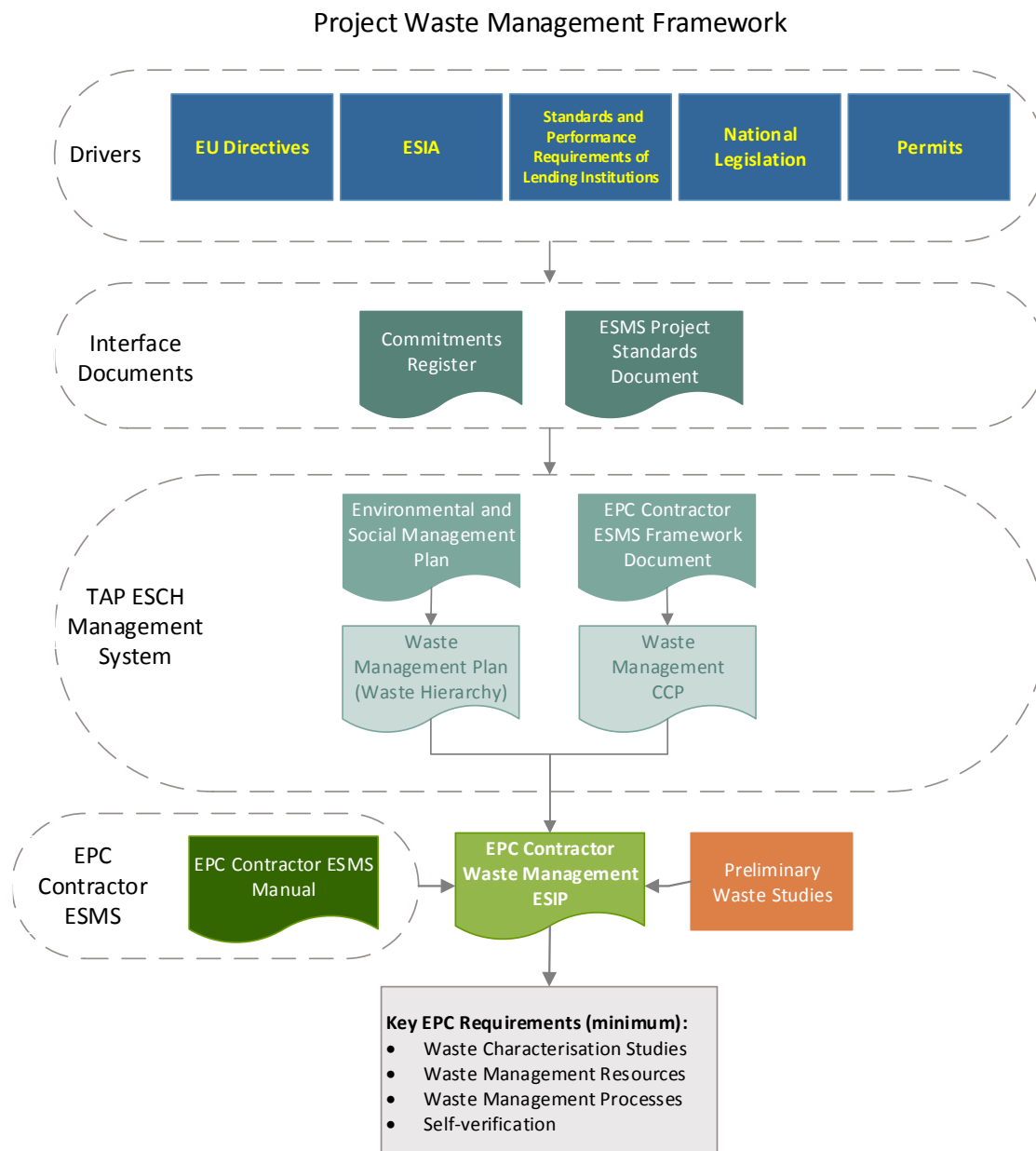



Figure 2-1 – Project Waste Management Framework

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	13 of 63

2.1 TAP ESCH Standards and Specifications

TAP ESCH Standards and Specifications detail specific design, procurement, construction and operational controls and general requirements for Contractors and TAP teams defined within the Contractor Control Plans, Consolidated ESMS Project Standards Document and design and construction specifications. For further details see Section 2.5 and Table 2 in Section 5.2 of the ESMP (referenced in Section 1.3.1).

The TAP Project is committed to operate in compliance with the applicable regulations throughout all its activities including waste management.

As defined in the ESMP, TAP has adopted the following standards:

- Applicable national environmental and social laws and regulations
- EU Directives relating to waste generation, handling and disposal
- EBRD Performance Requirements (PRs 1 through 6 and 8 through 10)¹ as per EBRD's Environmental and Social Policy (2014)
- EIB Environmental and Social Practices and Standards (2013)
- IFC Performance Standards (PS 1 through 6 and 8)² (January 2012)
- IFC EHS General Guidelines (2007)
- IFC Industry-specific Guidelines
 - the IFC EHS Guidelines for Onshore Oil and Gas Development (2007)
 - the IFC EHS Guidelines for Offshore Oil and Gas Development (2015)
- The Equator Principles III (2013)
- OECD Common Approaches (2012).
- ISO 14001 Environmental Management System Standard


In addition to the above for the offshore scope of work the following standards will also apply:

- Annex I, IV and V of MARPOL 73/78
- IMO Ballast Water Directive
- Mediterranean Region Voluntary Ballast Water Management Regulations (2012)

As EU member-states, Greek and Italian national legislation on waste management incorporates requirements of the EU legislation and is aligned with relevant EU Directives. Albania has made considerable progress in Environmental Legislation including waste management since the signature of the Stabilisation and Association Agreement for joining the EU. The convergence of the EU waste management legislation into national statutory instruments in all three host countries is presented in Appendix 1 APPENDIX 1.

¹ EBRD PR 7 is a performance requirement in relation to Indigenous Peoples and is not applicable to TAP Project.

² IFC PS 7 is a performance standard in relation to Indigenous Peoples and is not applicable to TAP Project.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	14 of 63

TAP has developed the ESMS Project Standards Document (as referenced in Section 1.3.1) which details the Project Standards derived from the requirements, standards and principles listed above. Whenever applicable, the most stringent requirements of the above standards and guidelines were considered to form the ESMS Project Standards Document. The purpose of this ESMS Project Standard Documents is to communicate applicable threshold levels and performance standards to Contractors.

The Contractors are required to ensure their waste management systems conform to ESMS Project Standards Document in relation to air emissions and discharge of sanitary and industrial wastewater in each TAP host country.

2.2 TAP Waste Management CCPs

To ensure the Contractors develop appropriate processes to implement and self-verify compliance with Project ESCH standards and specifications, TAP has developed and provided the Contractors with Waste Management Contractor Control Plans (CCPs) as applicable to their scopes of work (referenced in Section 1.3.1). These CCPs specifically define waste management-related requirements. The Contractors are contractually bound to fulfil their obligations prescribed by relevant TAP Waste Management CCPs and the Project ESCH standards and specifications.


2.3 Contractor Waste Management ESIP

As part of its planning and readiness for construction, each Contractor has prepared its own specific Waste Management Environmental and Social Implementation Plans (ESIPs) setting out how it intends to meet and comply with corresponding Waste Management CCP. The Waste Management CCPs provided a reference from which Contractors have prepared their ESIPs (referenced in Section 1.3.1).

The Contractor's Waste Management ESIPs represent the key operational control documents that include details of the Contractor waste management system such as:

- organisational roles and responsibilities for ESIP implementation
- technical detail together with design, equipment and operating procedures to direct implementation of the commitments of the corresponding Waste Management CCP and address site specific requirements
- monitoring objectives and specific details of monitoring programs, including parameters to be measured, methods used, locations, frequency, detection limits and thresholds for corrective action
- assurance and self-verification processes
- procedures and protocols for reporting to TAP.

The Contractor Waste Management ESIPs are subject to TAP review, approval and compliance verification.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	15 of 63

2.4 Waste Management Hierarchy

In line with above Project Standards, the Project has adopted a waste management hierarchy (Figure 2-2) that preferentially avoids or minimises waste generation at source, reduces its harmfulness as far as reasonably practicable and reduces the quantity of waste disposed to landfills or other final types of disposal.

The Contractors are required to align their waste management practices with the waste hierarchy as part of impact avoidance and mitigation.

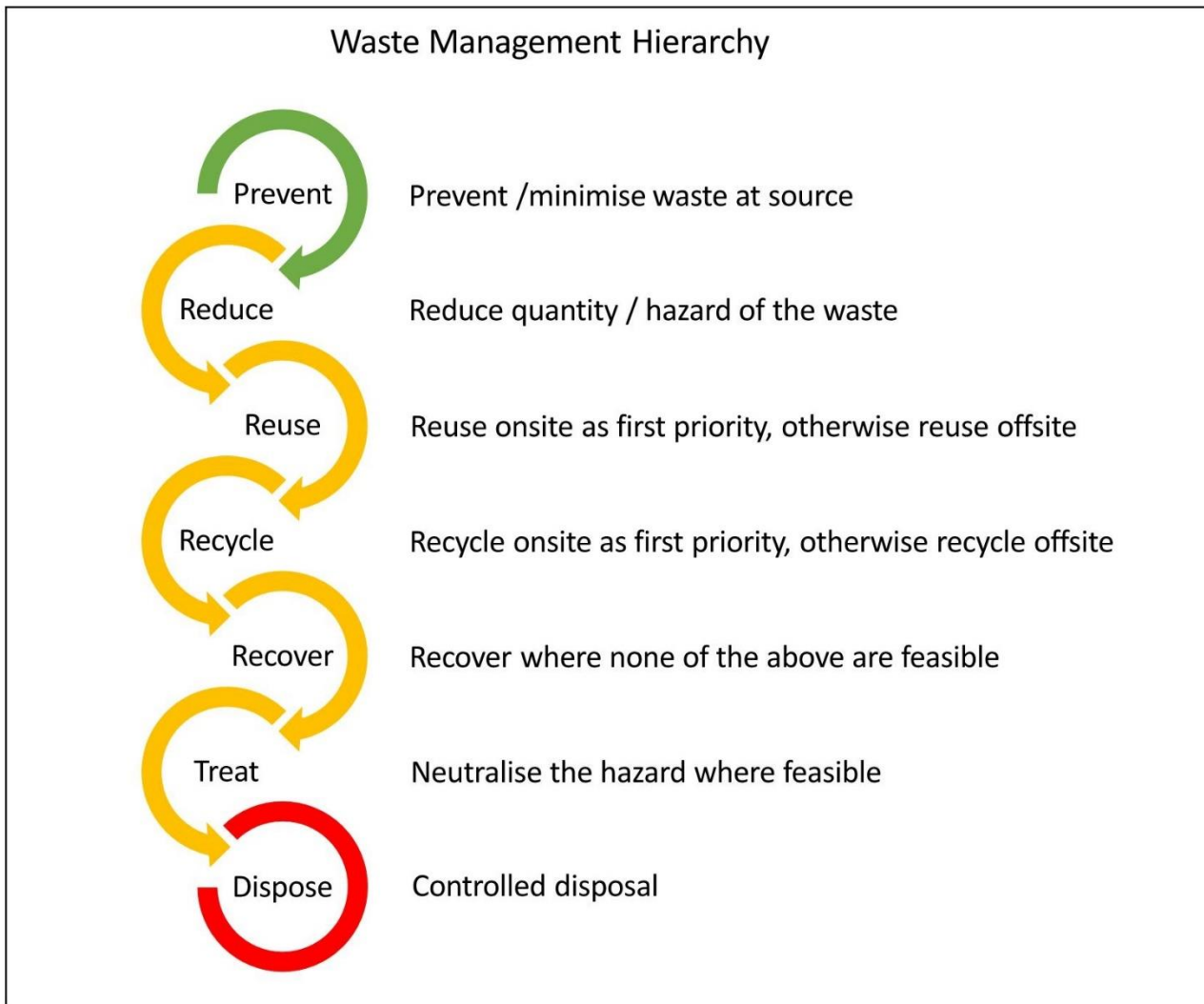



Figure 2-2 – Project Waste Management Hierarchy

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	16 of 63

2.5 TAP Preliminary Waste Studies

To provide information and support to Contractors in defining their waste management system TAP has commissioned preliminary waste studies in Albania, Greece and Italy at an early stage in the Project. The objectives of these studies were to:

- enable TAP to understand the typical types and quantities of wastes which will be generated by the construction of the pipeline in each host country
- to plan for the handling and disposal/ recycling of these wastes in accordance with European and national legislation and accepted international best practice.

The scope of work for each study fell into four main areas:

- waste legislation and policy
- waste inventory
- waste handling, management and disposal techniques and practices and
- recommendations for the disposal and recycling of the project wastes.


The findings were presented as separate studies relevant to each country (as referenced in section 1.3.1) namely:

- Construction waste management study in Albania
- Greece construction waste management plan
- Italy construction waste management plan


These preliminary studies identified for each TAP host country:

- the applicable waste management regulatory framework
- the types of wastes expected to be generated and their estimated quantities
- the applicable duty of care including minimisation, handling, storage, reuse/recycle/disposal, tracking and reporting
- the available waste management services providers and facilities to be potentially considered during construction
 - selected based on an initial high-level compliance assessment:
 - with consideration of their location in relation to the Project
 - with indication of their capacities.

Italy and Greece: the studies indicated no constraints in terms of availability of EU-compliant waste management service providers and facilities for all types of Project generated wastes to be potentially considered during Project implementation in Greece and Italy.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	17 of 63

Albania: at the time of the study (2014) the host country was in relative early stages of transposing the provisions of the EU waste legislation. The study indicated limited availability of EU-compliant landfills, recommending incineration of non-hazardous, non-recyclable waste as a potential alternative to be implemented in parallel with waste minimisation and shipment to available compliant facilities. Similarly, due to limited availability of compliant hazardous waste management services providers, for disposal of hazardous wastes the study recommended using a facility in Greece (also employed for the Greek section of the pipeline), in accordance with the provisions of Basel Convention on the control of transboundary movements of hazardous waste. These recommendations were considered and implemented by the Contractor. No constraints in terms of availability of compliant recyclable waste services providers were identified by the Albania study. TAP communicated the preliminary waste studies to the Contractors prior to the award of contract to enable them to align and scale their waste management systems accordingly.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	18 of 63

3 Contractor Waste Management System

This section details the Contractor key requirements on waste management derived from the Project ESCH standards and specifications and incorporated into Contractor ESIPs for implementation on project sites. The typical process of waste management across Project sites is represented in Figure 3-1. Each project site may have additional steps within the process to address site specific requirements.

All of the ESIP elements including all aspects of waste management process represented in Figure 3-1 are subject to TAP review, approval and compliance verification as defined in the ESMP, the E&S Compliance Assurance Plan and Section 4 of this document.


3.1 Contractor Waste Characterisation Studies

Upon contract award the Contractors have carried out waste characterisation studies for their respective scopes of work in each host country using the information provided in TAP Preliminary Waste Studies.

Main objectives of the Contractor Characterisation Studies and which were attained by the Contractors included:

- identification and estimated quantification of all potential waste streams anticipated from the Contractor during execution of the contract, broken down by Contractor worksites following EWC codes for each waste stream
- identification of the minimisation, reuse and recycling opportunities and preferred disposal methods and facilities consistent with project Waste Hierarchy and recommendations made in TAP preliminary waste studies
- due diligence verification, assessment and selection of available waste management services providers (WSP) identified by TAP preliminary waste studies.

The outcomes of the Contractor Waste Characterisation Studies were incorporated into Contractors' Waste Management ESIPs and were subject to TAP review and approval. The list of expected waste streams on the Project is provided in Appendix 2.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	20 of 63

3.2 Contractor Waste Management Resources

3.2.1 Contractor Resources

Each Contractor is required to ensure allocation of adequate human and financial resources dedicated to waste management and to scale its organisation accordingly. Organisational roles and responsibilities are identified and recorded as part of the waste management system. Contractor is also responsible to provide awareness and specific waste management training to its staff and subcontractor personnel appropriate for their role and duties performed.

3.2.2 Waste Management Services Providers

The Contractors have established service agreements with third parties engaged in provision of waste transportation, off-site reuse, recycling and recovery, waste treatment and waste disposal services. These waste management service providers (WSP) are subject to Contractor's subcontractor assessment process and were selected from the list provided in TAP preliminary waste studies. The selection of the WSPs is based on:

- due diligence checks
- compliance with applicable national legislation in the country of operation
- technical capacity and capability to provide the relevant waste management service in a manner compliance to Contractor's own ESMS and Project ESCH standards and specifications
- compliance to requirements of the relevant Waste Management CCPs and ESIPs


Suitability and sufficiency of the Contractor's internal and external waste management resources is subject to compliance verification by both TAP and Contractor on ongoing basis in forms of joint and independent audits and inspections of WSP facilities (Section 4.2.2).

The list of waste management services providers engaged by the Contractors in each TAP host country is provided in Project Waste Receiving Facilities List (Appendix 3). The list is subject to update as new waste receiving facilities are identified, assessed and approved by the Contractor and Company.

3.3 Contractor Waste Management Procedures

Following their own waste characterisation studies Contractors have developed and implemented waste management procedures as part of their Waste Management ESIPs addressing the following aspects:

- waste minimisation
- waste identification and segregation
- waste receiving and storage facilities
- waste transfer / transportation
- managing specific types of waste

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	21 of 63

- waste tracking documentation
- waste reporting

Operational procedures for these aspects of waste management system form basis of the individual Contractor Waste Management ESIPs developed and implemented across the project sites. These are summarised within Sections 3.3.1 – 3.3.6 of this document.

3.3.1 Waste Minimisation

The Contractors are required to develop and implement waste minimisation programme as part of the overall waste management system in line with Project Waste Hierarchy. The waste minimisation procedures address the following:

- alignment with the relevant Project Procurement Plan aimed at minimising waste through procurement practices, product and/or reusable packaging specifications and return of surplus materials to vendors
- provision of employee training and awareness programmes on onsite and offsite waste minimisation opportunities and benefits
- use of onsite waste minimisation techniques such as maceration, de-watering, crushing, composting etc.
- continual exploration of opportunities to reuse and recycle wastes and reduce amount of waste sent for disposal.

The Contractors have established procedures to measure their own performance in relation to waste minimisation (Section 4.2.3) as part of self-verification process.

3.3.2 Waste Identification and Segregation


Expected waste streams from each project site have been identified using the EWC codes, quantified and classified in individual Waste Management ESIPs as part of Contractor's waste characterisation study.

Contractors waste identification and segregation procedures are outlined in corresponding ESIPs for their respective sites. These procedures aim for 'at-source' segregation with the objectives to:

- eliminate potential health and environmental hazards associated with storage and handling of mixed incompatible wastes
- enable further reuse and recycling of wastes to the maximum
- comply with Project ESCH standards and specification and legislative requirements for waste handling and temporary storage

The ESIP waste segregation procedures are designed to ensure:

- availability of adequate number of waste storage containers throughout the sites to enable correct segregation
- that wastes that are not discarded to skips or containers are suitably packaged to facilitate loading and safe onward handling

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	22 of 63

- that secondary containment with a capacity of 110% of the largest container in storage for all liquid waste is provided;
- correct labelling of waste containers in English and host country language with indication of the contents and known hazards and colour coding where applicable

Waste segregation procedure also include guidance and steps to follow in the event a worker or supervisor is unable to classify a waste stream.

3.3.3 Waste Receiving and Storage Facilities

The requirements for waste receiving facilities are specified in Section 3.2.2 of this document. TAP and the Contractor prohibit disposal or abandonment of waste at any locations other than approved waste receiving facilities. Any new proposed waste receiving facility is subject to approval by TAP prior to acceptance of any Project waste.

The Contractor temporary site waste collection points (WCP) and Waste Storage Yards (WSY) are designed to meet the Project ESCH standards and specifications and are subject to approval by TAP.


- locations shall minimise exposure of workers to waste
- deployed number of containers and size of the WSY shall be commensurate with volumes and types of the wastes generated
- WSY design shall meet specifications of the Waste Management CCP for prevention of ground pollution, vehicular access, secondary containment and weather protection.

The Contractor waste collection point and waste storage yard procedures address the following:

- provision of appropriate training and PPE to personnel assigned duties within collection areas and WSY
- segregation of hazardous and non-hazardous wastes at dedicated areas
- segregation of wastes intended for recycling/reuse and waste intended for disposal
- frequency of waste collection and transfers
- signage, demarcation and labelling requirements
- envisaged use of waste compacting, composting and crushing equipment
- provision of MSDS and emergency response equipment
- maps / plans indicated location and layout of the WCP and WSY.

Onsite temporary storage of waste pending collection by WSPs shall meet applicable national regulatory requirements pertaining to maximum storage periods, maximum volumes and packaging requirements.

Storage of wastes onboard vessels is managed in accordance with this Plan, Project ESHS standards and specifications and as outlined in Contractor Vessel Garbage Management Plan (required Annex V of MARPOL 73/78).

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	23 of 63

3.3.4 Waste Transfer / Transportation

The Contractors have implemented waste transfer and transportation procedure with the following minimum requirements:

- use of Waste Management Service Providers that have been assessed, approved by TAP and verified for compliance to national regulatory requirements and Project ESCH standards and specifications
- stipulation of waste transportation vehicle specifications and approval of their use by TAP; the vehicles shall be:
 - appropriate for the waste being transported
 - equipped to prevent leaks or spills
 - covered to prevent blowing and loss of wastes during transit
- frequency of waste collection and transportation to minimise health and environmental hazards associated with accumulating certain waste types
- documented tracking of waste movement via implementation of the Waste Transfer Note system


All the wastes generated by vessels will either be transferred to the nearest WSY or directly to the Waste Management Services Provider depending on the arrangements put in place by the Contractor.

3.3.5 Management of Specific Waste Streams

As part of mitigation of impacts associated with wastes, the Contractors have established procedures for management of the following specific waste streams due to their nature and/or expected volumes:

- **contaminated soil** arising from hydrocarbon spills: any proposed treatment methodologies are subject to approval by TAP and will include obtaining necessary regulatory authorisations
- **specific hazardous wastes**: where such wastes (e.g. radioactive, asbestos, explosive, etc.) are envisaged by the Contractor, these shall be handled and disposed of in line with national legislation of the host country and Project ESCH standards and specifications, whichever is more stringent, with engagement of a specialist subcontractor and TAP approval for disposal methodology
- **medical waste** is handled by trained medical personnel and licensed facilities are engaged for disposal in accordance to national legislation of the host country
- **hazardous liquid waste** arising from site activities such as maintenance, vehicle wash-down is either:
 - treated on site to Project ESCH standards and specifications and discharged at a permitted location or
 - to be transported for treatment and disposal by a licensed subcontractor.

Where no liquid hazardous wastewater treatment facilities are available in the host country, the waste is to be transferred to the licensed holding facility for further transportation in line

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	24 of 63

with the requirements of the Basel Convention on Transboundary Movement of Hazardous Wastes.

Drainage water and bilge water onboard vessels will be collected, treated to and discharged in line with provisions of Project ESCH standards and specifications and MARPOL 73/78 Annex I.

- **sewage and grey water:** disposal of domestic sewage from onshore and offshore activities is handled via the following options, whichever proved the most feasible for each individual site:
 - direct connection to or transfer via tankers to existing municipal sewage network
 - treatment to Project ESCH standards and specifications and regulatory requirements by an onsite sewage treatment plan (STP) and permitted discharge into environment
 - collection in septic tanks and transfer via tankers to licensed receiving facility.


Where STP is to be used, ESIPs specify TAP design approval, discharge monitoring and maintenance requirements in compliance to Project ESCH standards and specifications. Where septic tanks are proposed for use relevant ESIPs specify requirements for design and frequencies of removal via vacuum tankers.

In cases where collection and storage of untreated sewage and grey water onboard vessels is not feasible and occasional limited discharge is required, such discharges are undertaken in line with provisions of Project ESCH standards and specification and requirements of Annex IV and V of MARPOL 73/78.

- **sewage sludge** is to be collected and transported by vacuum tanker for disposal at a licensed facility. Proposal for alternative disposal methods are subject to TAP approval.
- **hydrotest water** discharged in line with TAP approved Hydrotest Water Abstraction and Disposal Plan in line with Project ESCH standards and specification and with adherence to the following:
 - Permits conditions stipulate by the competent authority
 - Pre-treatment of water if biocide has been used
 - Discharges into the same catchment as the abstraction source

Further details on standards of hydrotest water discharge are provided in ESMS Project Standards Document (referenced in Section 1.3.1).

- **waste incineration** is envisaged only at one of the Project sites in Albania. The proposed incinerator shall comply with national legislation and project ESCH standards and specifications and Contractor is to hold regulatory authorisation /permit. Incinerator design and emission monitoring programme is subject to TAP approval. Incinerator ash is to be handled and disposed of according to its composition.
- **surplus extraction material:** disposal of excess soil and rock at areas other than waste disposal facilities is managed according to the following priorities:
 - reuse within the Project as first priority
 - reuse by a third party as second priority

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	25 of 63

- disposal as third priority.

Spoil may be returned to the surface of the working strip where they are characteristic of the preconstruction landscape on or off the working strip. Spoil morphology, size and distribution should reflect the pre-construction character and that of the surrounding, undisturbed landscape.

Excess spoil that cannot be integrated reasonably into the finished working strip surface in harmony with the surrounding environment must be disposed of. Any disposal will be carried out on stable ground, then compacted and covered with local topsoil to aid the growth of natural re-vegetation (or aided revegetation depending on location) to avoid any later landslides or excessive erosion of the deposit. TAP will inspect and monitor the Contractors' handling of spoil to ensure long term stability and erosion minimisation.

Additional disposal areas are mostly required on temporary basis (during construction works execution) as the excess soil and rock is primarily reused within the project or by a third party or disposed of at existing facilities. Whenever permanent disposal of surplus natural material is required, the areas proposed for temporary or permanent storage are subject to ESCH assessment in line with the relevant Onshore Additional Land Take CCP requirements. The assessment identifies:

- any significant potential ESCH impacts
- permits required
- mitigation measures required to ensure any ESCH residual impacts are acceptable.

The assessment process include consultation with local government authorities, landowners and land users in accordance with the Stakeholder Engagement Plan.

- **ballast water:** project vessels shall de-ballast in accordance with Project ESCH standards and specifications and requirements of IMO Guidelines. Discharge of any water collected from outside of the Mediterranean Sea will be avoided.


The detail of the waste management options applied for each waste stream currently generated on the project is provided in the Project Waste Management Chart (Appendix 4). The Project Waste Management Chart is a 'live' document continuously updated as new activities commence, new waste streams are generated and new third-party waste facilities and management options emerge.

3.3.6 Waste Tracking and Monitoring

The Contractors achieve tracking the movement of waste from the point of generation to the reception at the destination through implementation of the Waste Transfer Note (WTN) (or Waste Manifest Form) across the project sites. Figure 3-1 – Waste Management Process Overview – depicts the stages when waste documentation is generated and waste tracking is initiated. Example of the WTN is given in Appendix 5.

The Contractors' procedures require that:

- all movement of waste within site waste collection areas and Waste Storage Yard is accompanied by delivery notes

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	26 of 63

- all movement of waste from Waste Storage Yard or any other point of waste collection by Waste Service Provider is accompanied by a WTN supplemented by MSDS (for hazardous waste consignments) and any other documentation required under national law
- relevant sections of the WTN are completed by the parties generating, transporting and receiving the waste consignment. A triplicate document is used allowing each party to retain a copy.
- waste Service Provider shall produce final disposal certificates from the waste receiving facility to the Contractor and TAP.

In addition, the Contractors maintain the following documentation:

- electronic Waste Tracking Register containing information from WTNs. The Waste Tracking Register shall include the following as a minimum:
 - waste type and waste code according to the European Waste Catalogue (EWC)
 - quantity of transferred waste
 - ID number of WTN accompanying the waste shipment
 - destination of waste shipment
 - waste management option applied as per waste hierarchy
- electronic Waste Inventory (example provided in Appendix 6) for each onsite temporary waste storage facility detailing quantities of each waste type, which is updated on daily basis.

Copies of the WTNs signed by the waste generator, transporter and receiver are kept on file by the Contractors in hard copy and in electronic (scanned) form. The Contractors are to provide TAP the WTN copies and access to waste management database at any time upon request.

All Contractors construction vessels shall maintain the following additional waste management documentation as required by IMO Circular FAL.2/Circ.127 dated 1 July 2013, namely:


- Garbage Management Plan and Garbage Record Book (required by MARPOL Annex V)
- International Sewage Pollution Prevention Certificate and detailed logs of overboard discharges associated with the above (required by MARPOL Annex IV) - all vessels with marine sanitation device.

In addition to the above, all vessels of 400 gross tonnage and above shall carry:

- International Anti-fouling System Certificate and Anti-fouling Declaration (required by AFS Convention Annex 4)
- Ballast Water and Sediment Management Plan, Ballast Water Record Book and an International Ballast Water Management Certificate (required by Ballast Water Convention) and detailed logs of associated overboard discharges.

3.3.7 Contractor Waste Management Reporting

The Contractors report on waste management activities as part of the monthly ESCH report to TAP. Details of the Contractor waste management related reporting are provided in Section 4.2.3 of this document. Example of the monthly waste report is provided in Appendix 7.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	27 of 63

4 Waste Management Compliance Assurance

4.1 Project Compliance Assurance Processes

The ESMP and Project E&S Compliance Assurance Plan present a multi-tiered system designed to operate in parallel and combining both TAP and its Contractors' compliance assurance activities, which also covers waste management activities. A summary is provided below of the specific waste management compliance and assurance activities.

4.2 Contractor Self-Verification

The Contractors' Compliance assurance requirements are defined in the relevant Onshore and Off-shore Compliance Monitoring CCPs. Corresponding Compliance Monitoring ESIPs have been developed to outline details of Contractors' self-verification activities tailored to meet the objectives of the Compliance Monitoring CCPs and Project ESCH standards and specifications.

Waste management self-verification activities are contained within individual Compliance Monitoring ESIPs. The frequencies, methodology, tools and protocols may vary amongst Contractors and are determined based upon site activities being monitored (type, location, etc.).

The scope of Contractors' self-verification activities includes compliance monitoring of their own system and onsite activities and those of the Waste Management Service Providers (WSPs).

4.2.1 Compliance Monitoring of Onsite Activities


To provide assurance that the provisions of this plan and of the Project ESCH standards and specifications are implemented effectively, the Contractors perform the following self-verification of their own systems and activities:

- documented daily walk-around inspections of onsite construction activities with the use of inspection checklists and reporting proforma. These are designed to visually monitor compliance to waste segregation, handling, storage and transportation requirements.
- internal audits on waste management performed in line with each Contractors' Compliance Monitoring ESIPs, and Quality Management System requirements with the use of audit protocols. The internal audits are undertaken by a team of interdisciplinary auditors on at least annual basis.

4.2.2 Compliance Monitoring of WSPs

Waste Management Service Providers (i.e. waste equipment suppliers, waste transporters and waste receiving facilities) are subject to formal assessment, selection and TAP approval prior to engagement on the Project and periodically during contract execution.

The Contractors are to inform TAP of planned periodic inspections of WSPs` to allow for joint inspections as needed and when feasible. Should TAP representative not be able to attend a joint inspection, the Contractor shall submit the inspection report to TAP for acceptance 30 days prior to

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	28 of 63

using the respective facility and on monthly basis for the periodical inspections during contract execution.

Each Contractor keeps on file and tracks validity of the applicable licences of all its waste management services providers.

Vehicles used by the WSP shall be subject to inspection by Contractor and, if required, also by TAP to ensure that they are appropriate for the type of waste transported and that design 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

4.2.3 Monitoring and Reporting

The Contractors have also derived Key Performance Indicators (KPIs) within their own ESCH Management System and Compliance Monitoring ESIPs which are used as a measure of performance and to monitor performance trends throughout the life of the contract execution. The following waste management KPIs are examples of those established in the Compliance Monitoring ESIPs:

- % of duty of care compliance checks
- Number of breaches of excavated material disposal
- Number of breaches relating to hazardous waste management
- Volume of waste reused vs recycled vs landfilled
- % of non-landfilled waste


The results of the self-verification activities are provided to TAP on monthly basis as part of the E&S Report:

- reports of all third-party facility inspections performed by Contractor are submitted to TAP on monthly basis
- observations and non-compliances identified during inspections and audits (including those of the WSP) and are recorded in the Contractor's Action Tracking Register
- waste management performance data (KPIs)
- waste related incidents

4.3 TAP Oversight

TAP oversight processes are undertaken by TAP E&S staff and represent an additional tier to the Contractors' self-verification ensuring its effectiveness and suitability. TAP exercises waste management compliance oversight over the Contractors through:

- joint Inspections and audits
- daily oversight walk-arounds
- planned monthly inspections

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	29 of 63

Further details of all the above oversight activities are provided in the E&S Compliance Assurance Plan (referenced in Section 1.3.1).

4.3.1 Joint Inspections and Audits

Where feasible and deemed necessary TAP E&S Staff shall join the Contractors for the following compliance verification activities:

- inspection and audit of existing and potential Waste Management Service Providers
- the Contractors' internal waste management audits undertaken as part of Compliance Monitoring ESIP and Contractors' Quality Management System.

In addition to the joint inspections with the Contractor, TAP ESCH staff may perform independent inspections of selected waste services provider facilities. An example checklist to guide these inspections is included as Appendix 8.

4.3.2 Daily Oversight

Daily oversight monitoring is a key element of TAP ESCH Management System aimed at determining whether mitigation measures implemented are effective in achieving compliance.


The daily waste management oversight monitoring in a form of a construction site walk around is undertaken by TAP Environmental Field Monitors and is a fundamental part of their daily work. Observations are recorded in daily reports (refer to the Compliance Assurance Plan for pro-forma example). These daily reports include brief descriptions and photographic records of waste management and housekeeping practices at the visited locations (construction sites, camps, mechanical yards, pipe yards, marshalling yards etc.)

The required remedial actions are discussed with the senior TAP E&S staff and are further communicated and agreed with the Contractors. Corresponding measures are recorded in the TAP Action Tracking System (ATS) which captures TAP-specific actions so that TAP compliance oversight and assurance activities can be managed, organised and implemented.

4.3.3 Monthly Inspections

Planned inspections are designed to:

- cover construction sites and Project affected areas
- take into account results of daily oversight reports with reference to Route Impact Registers
- consider Project schedule and forecasts
- verify status of construction activities in progress and relevant ESCH risks and priorities
- take form of a site walk-around or drive-through (preferably jointly with Contractors)
- make use of standard waste management focused inspection checklist/pro-forma

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	30 of 63

The checklists include review of relevant requirements and capture actions, which can be assessed on a monthly frequency for progress and recording closure, or elevating issues where required. Examples of the checklist is provided in Appendix 9.

Planned waste management inspections are conducted:

- by the in-country Environmental Field Monitors independently at least once every month and with an oversight from senior E&S staff on a case by case basis.
- at frequencies set individually by the in-country E&S Managers with a minimum target of one inspection by each Field Monitor per month.

In-Country E&S Site Lead/ESCH Experts review the checklists completed by the ESCH Field Monitors to:

- provide possible solutions on issues requiring immediate action
- inform the in-country E&S Manager of key issues and provide support on decision making
- trigger Non-conformances and Corrective Actions or Incident reporting process where necessary
- plan the focus of the next monthly inspections.

4.3.4 Oversight Interface and Reporting

The results of TAP waste management oversight monitoring are communicated regularly to the Contractors via:


- oversight IPMT Meeting (Progress Meeting) for high level issues
- oversight Project Action Tracking System.

Internally results of the waste management oversight monitoring are communicated by TAP E&S Site Lead/ESCH Experts to the in-country E&S Manager as part of overall ESCH reports:

- weekly summarising the key highlights for the reporting period, review of Action Tracking System and outcome of regular meetings
- in a Monthly Performance Report covering events, performance statistics, monitoring data, performance measurement metrics, NCRs, training indicators, audits, etc.

4.4 TAP ESCH Assurance

TAP ESCH Assurance is undertaken to ensure that TAP staff, the Contractors and their subcontractors are adhering to the requirements of the applicable regulatory requirements, this Waste Management Plan, and of the ESCH Project standards and specifications. TAP ESCH assurance activities form part of the Quality Assurance Program and comprise of ESCH Audits and ESCH Quarterly Management Reviews.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	31 of 63

4.4.1 ESCH Quarterly Management Reviews

These management reviews are held at two levels: Project Level and In-Country Level.

In-Country Quarterly Management Reviews are facilitated quarterly by the In-country E&S Managers as a functional review of Contractors' oversight and TAP assurance activities and aim to:

- assess trends, identify gaps, review commitment registers, identify systems issues and check resourcing adequacy
- cover both TAP and Contractors' activities
- adopt a risk based approach to highlight key issues requiring attention or more strategic action and management support.
- provide feedback to Senior TAP Management.


Project Level Quarterly Performance Reviews are led quarterly by the TAP E&S Manager and:

- focus on assurance of TAP ESCH standards and specifications and consistent oversight of the Contractors
- include planning of tactical support to pre-empt project risks.

4.4.2 ESCH Audits


ESHC Audits are performed by TAP Corporate staff and provide assurance of oversight and self-verification activities:

- undertaken as joint H&S and ESCH audits
- conducted annually or after attainment of a specific Project milestone by a Contractor
- the scope is defined by in-country E&S Site Leads/Experts in cooperation with TAP E&S Manager and cover:
 - Contractors' E&S Organisation
 - E&S Documentation
 - Implementation of ESIPs and other E&S specific procedures
 - E&S Inductions
 - KPIs
 - NCR and Incident reporting, action tracking and closure
- audit protocols are developed based on defined scope and communicated to the Contractors in advance
- audit findings are formally communicated to the Contractors as discussed in Section 4.3.4 of this document.

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	32 of 63


APPENDIX 1 – Convergence of EU Directives into National Legislation of TAP Host Countries

PRIMARY NATIONAL LEGISLATION		
GREECE	ALBANIA	ITALY
-Law 1650/1986 on the protection of the Environment amended by: - Law 3010/2002 - Law 4014/2011 - Law 3851/2010 - Law 4042/2012 - Joint Ministerial Decision (JMD) 50910/2003 on National and regional waste management plan, including the waste list.	- Law on Integrated Waste Management 2011 - Law on Environmental Administration of Solid Waste 2003	- D.Lgs. 152/2006 "Norme in materia ambientale" (Environmental Regulation) Part IV

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	33 of 63


SECONDARY NATIONAL LEGISLATION

EU LEGISLATION	GREECE	ALBANIA	ITALY
Waste Framework Directive 2008/98/EC	- Law 4042/2012 on Waste Management	- Law No. 32/2013 dated 22.09.2011 On Integrated Waste Management - Decision of Council Ministries (DCM) No. 175 dated 19.01.2011 on the approval of the National Waste Strategy and National Waste Management Plan - Law No. 10440, dated 07.07.2011 on Environmental Impact Assessment - DCM No. 452 dated 11.07.2012 on the Landfilling of Waste - Approved National Plan, waste management plans for five regions of Albania are currently being prepared - <i>EU Directive transposition is full. Implementation ongoing and expected by end of 2018.</i>	- D.Lgs 205/2010 Implementation of Waste Framework Directive 2008/98/EC Directly applicable to Italy providing modification to D.Lgs 152/06
Waste Statistics Regulation No 2150/2002	- Directly applicable to Greece	- DCM on Albanian waste list 2005 - DCM on Waste Transfer Notes 2014	- Waste Statistics Regulation No 2150/2002
Landfill of Waste Directive 1999/31/EC Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste	- JMD 29407/3508/10.12.2002	- Law No. 10463 dated 22.09.2011 on Integrated Waste Management - DCM No. 452 dated 11.07.2012 on the Landfill of waste <i>EU Directive transposition is full. Implementation ongoing and expected by end of 2018.</i>	- D.Lgs n. 36 Implementation of Directive 1999/31/EC on the landfill of waste - Ministerial Decree 27 September 2010 Definition of waste acceptability criteria in landfills - Decree 13 March 2003 on Criteria of admissibility of landfill waste

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	34 of 63


SECONDARY NATIONAL LEGISLATION

EU LEGISLATION	GREECE	ALBANIA	ITALY
Directive 2010/75/EU on industrial emissions (Integrated Pollution Prevention and Control) (repealing Directive 2000/76/EC on Incineration of Waste)	- Ministerial Decree 36060/1155/E.103 on measures and procedures for IPPC from industrial activities	- DCM No. 178 dated 6.03.2012 on the Waste Incineration, transposing Directive 2000/76/EC on the Incineration of Waste. <i>EU Directive is transposed, implementation is ongoing</i>	- D.Lgs 45/2014 Implementation of directive 2010/75/EU on IPPC
Shipment of Waste Regulation No 1013/2006	- Directly applicable to Greece	- Law No. 10463 of 22.09.2011 on Integrated Waste Management - DCM No. 835 dated 28.12.2005 on the Approval of the list of hazardous waste, waste and other refuses, that are not allowed to be imported with the scope of their saving, storing and elimination - DCM No. 825 of 13.10.2010 on approval of List of wastes that are allowed to be imported for the purpose of use, recycling and processing - DCM No. 806 of 4.12.2003 on approval of rules and procedures importation for purposes of use, recycling and processing - DCM No. 798 of 29.09.2010 on approval of the hospital waste administration. <i>Implementation has started since 2005 and is suspended since 10.10.2013 due to the new administrative act on banning the imports of waste to Albania by Law on Banning Imports of every kind of raw materials for recycling industry 2013</i>	- The prescriptions of the Regulation No 1013/2006 are included into the D.Lgs 152/2006 Environmental Regulation Part IV

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	35 of 63


SECONDARY NATIONAL LEGISLATION

EU LEGISLATION	GREECE	ALBANIA	ITALY
<p>Packaging and Packaging Waste Directive 94/62/EC</p> <p>Directive 2013/2/EU amending Annex I to Directive 94/62/EC</p>	<p>- Law 2939/2001</p> <p>- MD 54461/1779/E.103 4 Oct 2013 Replacement of Annex I of Article 4 of JD 9268/469/2007 in accordance with Directive 2013/2/EC</p>	<p>- DCM on Packaging and packaging wastes</p>	<p>- D.Lgs 205/2010 Implementation of Waste Framework Directive 2008/98/EC</p> <p>- Ministerial Decree 22/4/2014</p> <p>The above two legislative decrees amended the D.Lgs 152/2006 Environmental Regulation Part IV</p>
<p>Batteries and Accumulators and waste Batteries and Accumulators Directive 2006/66/EC</p>	<p>- JMD 41624/2057/E103/2010 on Measures, conditions and program for the alternative management of waste batteries and accumulators.</p>	<p>- DCM on Management of Used Batteries 2012</p>	<p>- D.Lgs n. 188/2006 as modified by Law 6 Aug 2013 No 97 "European Law 2013" in order to close the infringement procedure N 2011/2216.</p>
<p>End-of-Life Vehicles Directive 2000/53/EC</p>	<p>- JMD 105136 Gov. Gaz. 907/B</p> <p>- JMD 15540/548/E103/2012</p> <p>President's Decree 116/2004</p>	<p>- DCM on Management of waste by end of life vehicles 2012</p>	<p>- D.Lgs 209/2003 Implementation of the Directive 2000/53/EC on End of Life Vehicles</p>
<p>Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU</p>	<p>- President's Decree 117/2004</p> <p>Design rules, terms and conditions for the alternative management of waste electrical, electronic and equipment</p> <p>23615/651/E.103</p>	<p>- DCM on Waste Electrical and Electronic Equipment 2012</p>	<p>- D.Lgs 49/2014 Implementation of the Directive 2012/19/EU on WEEE. This D.Lgs also provides amendments to D.Lgs N 151.2005 on Implementation of the Directives 2002/95/EC, 2002/96/EC and 2003/108.EC on the restriction of use of hazardous substances in electrical and electronic equipment and disposal of waste.</p>
<p>Sewage Sludge used in Agriculture Directive 86/278/EEC</p>	<p>- Ministerial Decree 80568/4225/1991</p>	<p>- Draft of DCM regulations "On Bio-waste" and "On Sewage Sludge" yet to be approved.</p>	<p>- D.Lgs 99/92 Implementation of the Directive 86/278/EEC on Sewage Sludge used in Agriculture</p>

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	36 of 63


SECONDARY NATIONAL LEGISLATION

EU LEGISLATION	GREECE	ALBANIA	ITALY
Hazardous Waste Commission Decision No. 2000/532/EC	- JMD 13588/725/2006 on measures conditions and restrictions for hazardous waste management replacing JMD 19396/1546/1997 - JMD 114218/97 on Hazardous waste management	- Law No. 9537 dated 18.5.2006 "On hazardous waste" - DCM No. 99, dated 18.02.2005 "On the approval of the Albanian catalogue on waste classification". <i>The Decision transposition is full, however, its implementation is still ongoing.</i>	- D.Lgs 205/2010 and the DM 22/4/2014 amended the D.Lgs 152/2006 Environmental Regulation Part IV
Waste Oils Directive 75/439/EEC	- PD 82/04 Replacement of JMD 98012/2001/1996 setting Measures, terms and program for the alternative management of lubricant oil waste.	- DCM on Approval of Rules for separation, collection and treatment of used oils 2012	- D.Lgs 205/2010 and the DM 22/4/2014 amended the D.Lgs 152/2006 Environmental Regulation Part IV
Establishing criteria determining when certain types of scrap metal cease to be waste Regulation No 333/2011	Directly applicable to Greece	- DCM on the Basis of establishing criteria which determine when certain types of scrap metal cease to be waste 2013	Directly applicable to Italy
List of Wastes Decision 2000/532/EC	Directly applicable to Greece JMD 50910/2727/2003	- Law No. 9537 dated 18.5.2006 "On hazardous waste" - DCM No. 99, dated 18.02.2005 "On the approval of the Albanian catalogue on waste classification".	- D.Lgs 152/2006 Environmental Regulation Part IV. - Classifications provided with Minister of Environment Interpretive Note NO 0011845 dated 28 Sep 2015
Port reception facilities for ship-generated waste and cargo residues Directive 2000/59/EC Commission Directive 2007/71/EC 2007 amending Annex II of Directive 2000/59/EC	- JMD 8111.41/09/2009		- D.Lgs 182/2003 Implementation of the Directive 2000/59/EC on port reception facilities for ship-generated waste and cargo residues. - Ministerial Decree of 1 Jul 2009 on Implementation of Directive 2007/71/EC amending Annex II of Directive 2000/59/EC.


 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	37 of 63

APPENDIX 2 – Project Waste List


PROJECT WASTE LIST		ALBANIA	GREECE	ITALY
Waste Type	EWC Code	Applicability (On-shore and Off-shore)	Applicability (Onshore)	Applicability (On-shore and Off-shore)
Abrasive wheel scrap (ferrous filings and turnings)	12.01.02	✓	✓	✓
Activated Carbon	19.09.01	✓	✓	✓
Adhesives	20.01.27, 08.01.11, 08.01.12	✓	✓	✓
Aerosol cans	16.05.04, 14.06, 15.01.11	✓	✓	
Aggregate/Rubble	17.01.07	✓	✓	✓
Aluminium cans	15.01.04	✓	✓	✓
Aqueous waste concentrates	16.10.04	✓	✓	✓
Batteries Dry	20.01.33	✓	✓	
Batteries Wet	20.01.33, 16.06.01	✓	✓	
Bitumen	17.03.01, 17.03.02	✓	✓	✓
Black and Grey water	20.03.04	✓	✓	
Blasting waste	12.01.17, 17.01	✓	✓	✓
Bulky waste	20.03.07	✓	✓	✓
Cables/copper	17.04.11	✓	✓	✓
Cables/copper containing hazardous substances	17.04.10	✓		
Cement/concrete	17.01.01	✓	✓	✓
Chemicals	16.05.07 to 16.05.09	✓	✓	✓
Containers (plastic)	20.01.39	✓	✓	✓
Containers (steel)	20.01.40	✓	✓	✓
Contaminated soils	17.05.03	✓	✓	✓
Contaminated waste (metal)	17.04.09	✓	✓	✓
Contaminated waste mixed (glass, wood, plastic)	17.02.04	✓	✓	✓
Detergents	20.01.30	✓		
Detergents (harmful)	20.01.29	✓	✓	✓
Fuel (diesel, petrol, kerosene)	13.07.01, 13.07.02	✓	✓	✓
Drilling Mud	01.05.04	✓	✓	✓
Drum cleaning waste	05.01.03	✓		
Engine Oil	13.02.08	✓	✓	✓
Equipment containing CFC	20.01.23		✓	

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	38 of 63

PROJECT WASTE LIST		ALBANIA Applicability (On- shore and Off- shore)	GREECE Applicability (Onshore)	ITALY Applicability (On- shore and Off- shore)
Waste Type	EWG Code			
Filters air	15.02.02	✓	✓	✓
Filters oil	16.01.07	✓	✓	✓
Fluorescent Light bulbs (broken)	20.01.21	✓	✓	✓
Food	20.01.08	✓	✓	✓
Forestry waste	02.01.07	✓	✓	✓
Gas bottles	20.01.40	✓	✓	✓
Gases (compressed other than aerosol cans)	16.05.05	✓	✓	✓
General Construction waste	17.09.04	✓	✓	✓
Glass	20.01.02	✓	✓	✓
Glycol	16.01.14, 16.01.15	✓	✓	✓
Grease trap waste	20.01.25	✓	✓	✓
Greases & containers	04.02.10, 13.02	✓		
Hydraulic Oil	13.01.13	✓	✓	✓
Hydrotest water	19.08	✓	✓	✓
Incinerator ash	12.01.16	✓		
Insulation	17.06.01 to 17.06.05	✓	✓	✓
Liquid photographic devel- oper	09.01.01, 09.01.03	✓	✓	✓
Medical	18.01.04	✓	✓	✓
Metal Containers 200 l, pipe clamps/end caps	20.01.40, 15.01.01	✓	✓	✓
Mixed municipal waste	20.03.01	✓	✓	✓
Packaging materials (con- taining hazardous resi- dues), waste paint	15.01.10, 15.01.11	✓	✓	✓
Packaging materials (food)	15.01.05, 20.03.01, 20.01.01	✓	✓	✓
Paint and cans/brushes/ urethane / tar	20.01.27, 20.01.28	✓	✓	✓
Paper and cardboard	20.01.01	✓	✓	✓
Pipe dope, and coating chemicals/ MCD/Xylene residues, including drums	16.05.08	✓	✓	✓
Plastic bottles	20.01.39	✓	✓	✓
Plastic drums 200l	20.01.39	✓	✓	✓
Plastics-other mixed	12.01.05	✓	✓	
Polystyrene	20.01.39	✓	✓	✓


 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	39 of 63

PROJECT WASTE LIST		ALBANIA Applicability (On-shore and Off-shore)	GREECE Applicability (Onshore)	ITALY Applicability (On-shore and Off-shore)
Waste Type	EWG Code			
PPE and clothing / geotextiles	18.01.04	✓	✓	✓
Rags/cotton (contaminated)	15.02.02	✓	✓	✓
Sewage sludge	20.03.04	✓		
Soil	17.05.04, 17.05.06	✓	✓	✓
Solvents	14.06.03	✓	✓	✓
Scrap metal	20.01.40, 17.04.05	✓	✓	✓
Steel food cans, washed (in packaging waste)	15.01.04	✓	✓	✓
Surplus spoil and rock	17.01	✓	✓	
Tank sludge	13.05.02, 13.05.03, 13.05.07	✓	✓	✓
Tetra Pak Cartons/al-foil/cups/bags,	15.01.06	✓	✓	✓
Toner and printer cartridges	08.03.17, 08.03.18	✓	✓	✓
Tyres	16.01.03	✓	✓	✓
Waste cooking Oil	20.01.25	✓	✓	✓
Wastewater (oiy water, bilge water)		✓	✓	✓
WEEE	20.01.35, 20.01.36	✓	✓	✓
Weld rods, ferrous metal dust and particles	12.01.01	✓	✓	✓
Welding waste	12.01.13	✓	✓	✓
Wood (Pallets, fencing, gates, sawdust, shavings, cuttings)	20.01.38, 03.01.05, 17.02.01	✓	✓	✓
Wood containing Hazardous Materials	20.01.37	✓	✓	✓


 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	40 of 63

APPENDIX 3 - Waste Management Services Providers in TAP Host Countries


WASTE MANAGEMENT SERVICES PROVIDER	LOCATION	WASTE STREAM
Greece		
Sanitary landfill of Alexandroupolis	Alexandroupolis	Mixed municipal waste and non-hazardous biodegradable waste
Sanitary landfill of Komotini - Municipality of Komotini	Komotini	Mixed municipal waste and non-hazardous biodegradable waste
Sanitary landfill of Kavala - Municipality of Kavala	Kavala	Mixed municipal waste and non-hazardous biodegradable waste
Sanitary landfill of Serres - Municipality of Serres	Serres	Mixed municipal waste and non-hazardous biodegradable waste
Sanitary landfill of Mavrorachi (Thessaloniki) – Regional Association of Solid Waste Management Authorities of Central Macedonia.	Thessaloniki	Mixed municipal waste and non-hazardous biodegradable waste
Sanitary landfill of Pella (3MU) – Regional Association of Solid Waste Management Authorities of Central Macedonia	Thessaloniki	Mixed municipal waste and non-hazardous biodegradable waste
Sanitary landfill of West Macedonia - DIADYMA S.A.	Kozani	Mixed municipal waste and non-hazardous biodegradable waste
Materials Recycling Facility of Alexandroupolis	Alexandroupolis	Recyclable materials including metal wastes, packaging wastes, plastics, glass, paper and cardboard
Materials Recycling Facility of Komotini - Municipality of Komotini	Komotini	Recyclable materials including metal wastes, packaging wastes, plastics, glass, paper and cardboard
Materials Recycling Facility of Kavala - Municipality of Kavala	Kavala	Recyclable materials including metal wastes, packaging wastes, plastics, glass, paper and cardboard
Materials Recycling Facility of Serres - Municipality of Serres	Serres	Recyclable materials including metal wastes, packaging wastes, plastics, glass, paper and cardboard
Materials Recycling Facility of Sindos (Industrial Area of Thessaloniki) - OIKOMET S.A.	Sindos, Thessaloniki	Recyclable materials including metal wastes, packaging wastes, plastics, glass, paper and cardboard
Materials Recycling Facility of Kallithea (Thessaloniki) - Elliniki Diaxeirisi Aporrimatvvn S.A.	Kallithea, Thessaloniki	Recyclable materials including metal wastes, packaging wastes, plastics, glass, paper and cardboard
Materials Recycling Facility of West Macedonia - DIADYMA S.A.	Kozani	Recyclable materials including metal wastes, packaging wastes, plastics, glass, paper and cardboard
Municipal Enterprise for Water Supply and Sewerage of Alexandroupolis	Alexandroupolis	Sewage (black and grey water from construction camps)
Municipal Enterprise for Water Supply and Sewerage of Kavala	Kavala	Sewage (black and grey water from construction camps)
Municipal Enterprise for Water Supply and Sewerage of Serres	City of Serres	Sewage (black and grey water from construction camps)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	41 of 63


WASTE MANAGEMENT SERVICES PROVIDER	LOCATION	WASTE STREAM
Thessaloniki Water Supply & Sewerage Co. S.A.	Thessaloniki	Sewage (black and grey water from construction camps)
Municipal Enterprise for Water Supply and Sewerage of Aminteo	Aminteo	Sewage (black and grey water from construction camps)
Municipal Enterprise for Water Supply and Sewerage of Kastoria	Mesopotamia	Sewage (black and grey water from construction camps)
Municipal Enterprise for Water Supply and Sewerage of Pellas	Giannitsa	Sewage (black and grey water from construction camps)
Ecoelastika S.A.	Athens	End-of-life tyres
ANAKEM S.A.	Thessaloniki	Inert waste materials (concrete, bricks, soil and stones, construction and demolition waste) Waste cables
SAPOUTZIS (SGC RECYCLING)	Komotini	Recyclable materials including metal wastes, packaging wastes, plastics, glass, paper and cardboard Wood waste Inert waste materials (concrete, bricks, soil and stones, construction and demolition waste)
Icologia	Alexandroupolis	Recyclable materials including metal wastes, packaging wastes, plastics, glass, paper and cardboard
Anakyklosi Siskevon A.E (Electrocycle)	Thessaloniki	Discarded electrical and electronic equipment (WEEE)
Appliances Recycling S.A.	Athens	Discarded electrical and electronic equipment (WEEE)
Fotokiklosi S.A.	Athens	Discarded electrical and electronic equipment (WEEE)
ENDIALE S.A.	Aspropyrgos	Hazardous wastes including spent oils
Green Oil	Alexandroupolis	Hazardous wastes including spent oils, contaminated water, sludges from oil/water separators.
POLYECO S.A.	Thessaloniki, and Aspropyrgos	Hazardous wastes, all types
Intergeo	Thessaloniki	Hazardous wastes including waste paint and coating, spent oils, oil-contaminated materials (spill kits, rags, oil filters etc.), contaminated soil, contaminated water, spent anti-freeze fluids.
COMBATT S.A.	Athens	Discarded batteries and accumulators
Evroslead	Stefanoglou Industrial Area	Discarded batteries and accumulators
AFIS	Drama	Discarded batteries and accumulators
Medical Recycle	Larissa	Medical waste
Latomeia Makris	Alexandroupolis	Aggregate, rubble, soil, bitumen
Albania (onshore and offshore)		

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	42 of 63

WASTE MANAGEMENT SERVICES PROVIDER	LOCATION	WASTE STREAM
NSHK Tirana, Sharra Landfill	Tirana	Mixed municipal waste and non-hazardous biodegradable waste
Maliq Landfill	Maliq (Korçë)	Mixed municipal waste and non-hazardous biodegradable waste
Fjona-2006	Durres	Mixed municipal waste and non-hazardous biodegradable waste
Mini Cab	Tirana	Sewage (black and grey water from construction camps)
UKK Ujsjelles kanalizime Kavaje	Kavaja	Sewage (black and grey water from construction camps)
Water supply and Sanitation Durres	Durres	Sewage (black and grey water from construction camps)
Edi Pack Sh. A.	Porto-Romano, Durres	Paper and cardboard
AME Ambient	Durres	Plastics waste Paper and cardboard
B Recycle	Berat	Plastics, tyres, food waste, wood waste water transport & treatment
S.A.RR	Durres, Tirana	Plastics waste Paper and cardboard
Everest I.E	Tirana	Plastics waste
Etna Polimer	Korçë	Plastics waste
Zodiak	Tirana	Metal waste
Kurum International	Bradashesh, Elbasan	Metal waste
FRE-DO Al	Elbasan	Metal waste
Al-Demiraj	Korçë	Metal waste
Eco Energy System - Eco Pellet	Durres	Wood waste
Arditi	Korçë	Wood waste
POLYECO Albania Sh P. K.	Tirana and Elbasani (collection points for further shipment to Greece)	Hazardous wastes, all types
Albat Recycling	City of Durres	Discarded batteries and accumulators
Medi-Tel	Tirana	Medical Waste
Amos Oil	Tirana	Hazardous wastes including spent oils
Rada Oil Industry	Durres	Hazardous wastes including waste paint and coating, spent oils, oil-contaminated materials (spill kits, rags, oil filters etc.), oil-contaminated water.
Italy (onshore and offshore)		
Ecomet Srl	Lecce, Maglie (LE)	Mixed municipal waste and non-hazardous biodegradable waste Metals and other non-hazardous wastes Hazardous wastes
Macero Sus Sas, (COMIECO, CORPELA)	Soletto (LE)	Non-hazardous wastes including paper and cardboard, plastic, end-of-life tyres.
Tecnoecologia Srl	Soletto (LE)	Non-hazardous wastes
Ecotecnica Srl (COMIECO, RILEGNO)	Lequile	Mixed municipal waste and non-hazardous biodegradable waste Non-hazardous waste including paper, cardboard, wood
FICES Spa	Lecce (LE)	Inert waste materials (concrete, bricks, soil and stones, construction and demolition waste)


 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	43 of 63

WASTE MANAGEMENT SERVICES PROVIDER	LOCATION	WASTE STREAM
Cave Mara Ecologia Srl.	Galatone (LE)	Non-hazardous wastes
CEMAR Sas	Nardò (LE)	Non-hazardous wastes Hazardous wastes including spent oils
Edil Ambiente	Copertino (LE)	Inert waste materials (concrete, bricks, soil and stones, construction and demolition waste)
Biosud Srl.	Lecce (LE)	Non-hazardous waste and limited types of hazardous wastes.
R.E.I. Recupero Ecologico Inerti	Galatone (LE)	Inert waste materials (concrete, bricks, soil and stones, construction and demolition waste)
SUD GAS Srl. (COMIECO, COREPLA)	Campi Salentina (LE)	Mixed municipal waste and non-hazardous biodegradable waste Non-hazardous waste including paper, cardboard, wood, plastics and metals Discarded electrical and electronic equipment (WEEE)
Ecologicamente Sas	Veglie (LE)	Non-hazardous wastes Hazardous wastes
Biomasse Salento Scarl (Composting facility)	Salentino (LE)	Non-hazardous biodegradable waste
Carangelo quintino Rocco Costruzioni Srl	Taurisano (LE)	Inert waste materials (concrete, bricks, soil and stones, construction and demolition waste)
S.E.M.E.S. Srl	Brindisi (BR)	Inert waste materials (concrete, bricks, soil and stones, construction and demolition waste)
Celino Antonio	San Vito dei Normanni (BR)	Inert waste materials (concrete, bricks, soil and stones, construction and demolition waste)
Ecologica Sud (COBAT, CO-NOE, COOU)	Taranto (TA)	Non-hazardous wastes Hazardous wastes including spent oils and discarded batteries and accumulators
Eurorecuperi Srl.	Nardò (LE)	Non-hazardous wastes Hazardous wastes including spent oils and discarded batteries and accumulators
LE.DE. Srl	Taranto (TA)	Oil-contaminated water
Hydrochemical Service Srl	Taranto (TA)	Non-hazardous wastes Non-hazardous and hazardous liquid wastes including freshwater drilling muds and wastes, sludges from oil/water separators, discarded chemicals.


 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	44 of 63

APPENDIX 4 – Project Waste Management Chart


PROJECT WASTE MANAGEMENT CHART		ALBANIA			
		Spiecapag On-shore, Lots 4 and 5		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code				
Abrasive wheel scrap (ferrous filings and turnings)	12.01.02	Recycle	Kurum	Recycle	Kurum Steel
Activated Carbon	19.09.01	Temporary storage	Onsite - Until company approved landfill is established		
Adhesives	20.01.27, 08.01.11, 08.01.12	Temporary storage before export or incineration	Onsite - Awaiting onsite incinerator permits		
Aerosol cans	16.05.04, 14.06, 15.01.11	Temporary storage before export or recycled	Onsite / PolyECO/ Kurum		
Aggregate/Rubble	17.01.07	Reuse	Spiecapag/Albstar		
Aluminium cans	15.01.04	Recycle	Kurum	Recycle	Teknoservis
Aqueous waste concentrates	16.10.04	Recycle / Treat	UKKO/ AMOS Oil/ MiniCab		
Batteries Dry	20.01.33	Temporary storage until export or recycled	Onsite / PolyECO	Recycle	Somet Company
Batteries Wet	20.01.33, 16.06.01	Recycle	Albat Recycling	Recycle	Somet Company
Bitumen	17.03.01, 17.03.02	Reuse / Landfill	Reuse on third party roads / Sharra Landfill		

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	45 of 63


PROJECT WASTE MANAGEMENT CHART		ALBANIA			
		Spiecapag On-shore, Lots 4 and 5		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code				
Black and Grey water	20.03.04	Treatment and discharge (on-site STP). (RoW, collection - portaloos)	UKKO, Kavaja WWTP	Collection in septic tanks, transfer to licensed treatment facility	UKK Kavaje, UKKO Durres, UKKO Korca WWTP
Blasting waste	12.01.17, 17.01	Landfill	Sharra Landfill		
Bulky waste	20.03.07	Landfill	Sharra Landfill	Temporary storage	Onsite until disposal facility is confirmed
Cables/copper	17.04.11	Recycle	Xh.F.Kaco/Gezim Peshtanaku/ Kurum	Recycle	Kurum Steel
Cables/copper containing hazardous substances	17.04.10	Recycle / Treat	Kurum	Recycle	Kurum Steel
Cement/concrete	17.01.01	Reuse / Landfill	Albstar/ municipality facilities	Reuse	Returned to batching plant/quarry operator for crushing and reuse
Chemicals	16.05.07 to 16.05.09	Storage	PolyECO	Temporary storage	Onsite until disposal facility is confirmed
Containers (plastic)	20.01.39	Recycle	AME-Ambient	Recycle	AME-Ambient
Containers (steel)	20.01.40	Recycle	Recycle (Kurum)	Recycle	Kurum Steel
Contaminated soils	17.05.03	Bioremediation/ treatment	Bioremediation onsite/ Poly-Eco	Bioremediation	Bioremediation onsite
Contaminated waste (metal)	17.04.09	Storage	PolyECO	Recycle	Kurum Steel
Contaminated waste mixed (glass, wood, plastic)	17.02.04	Storage / incineration	PolyECO / Onsite Incinerator (awaiting permits)	Landfill	NSHK Tirana, Sharra landfill
Detergents	20.01.30	Recycle packaging	AME-Ambient		
Detergents (harmful)	20.01.29	Storage	PolyECO		

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	46 of 63


PROJECT WASTE MANAGEMENT CHART		ALBANIA			
		Spiecapag On-shore, Lots 4 and 5		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code				
Fuel (diesel, petrol, kerosene)	13.07.01, 13.07.02	Recycle	Amos Oil	Recycle	Rada Oil
Drilling Mud	01.05.04	Reuse / bury	Onsite		
Drum cleaning waste	05.01.03	Recycle	Amos Oil		
Engine Oil	13.02.08	Recycle	Amos Oil	Recycle	Rada Oil
Equipment containing CFC	20.01.23				
Filters air	15.02.02	Temporary storage for incineration	Onsite Incinerator (awaiting permits) Incinerator	Recycle	Third party facility undertaking maintenance
Filters oil	16.01.07	Storage / incineration	PolyECO / Onsite Incinerator (awaiting permits)	Recycle	Third party facility undertaking maintenance
Fluorescent Light bulbs (broken)	20.01.21	Storage	PolyECO	Temporary storage	Onsite until disposal facility is confirmed
Food	20.01.08	Composting or landfill	Reuse onsite / Sharra Landfill	Landfill	NSHK Tirana, Sharra landfill
Forestry waste	02.01.07	Donation/Recycle	Community / Arditi sh.p.k		
Gas bottles	20.01.40			Reuse	Return to supplier
Gases (compressed other than aerosol cans)	16.05.05	Reuse	Return to supplier		
General Construction waste	17.09.04	Reuse / Landfill	Albstar/ municipality sites or Landfill	Reuse	Reuse onsite / Subcontractor reuse
Glass	20.01.02	Reuse / Landfill	Return to supplier / Sharra landfill		

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	47 of 63


PROJECT WASTE MANAGEMENT CHART		ALBANIA			
		Spiecapag On-shore, Lots 4 and 5		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code				
Glycol	16.01.14, 16.01.15	Storage	PolyECO		
Grease trap waste	20.01.25	Treatment	UKKO/ Minicab	Recycle	Rada Oil
Greases & containers	04.02.10, 13.02	Recycle	Amos Oil		
Hydraulic Oil	13.01.13	Recycle	Amos Oil	Recycle	Rada Oil
Hydrotest water	19.08	Controlled discharge to source	Extraction source	Controlled Discharged following analysis	Discharge to land
Incinerator ash	12.01.16	Export / landfill	PolyECO / Shara Landfill		
Insulation	17.06.01 to 17.06.05	Landfill	Sharra landfill	Reuse / landfill	NSHK Tirana, Sharra landfill
Liquid photographic developer	09.01.01, 09.01.03	Storage	PolyECO		
Medical	18.01.04	Sterilisation and disposal at licensed facility	Medi-TEL	Sterilisation and disposal at licensed facility	Medi-Tel
Metal Containers 200 l, pipe clamps/end caps	20.01.40, 15.01.01	Recycle	Kurum		
Mixed municipal waste	20.03.01	Landfill	Sharra Landfill	Landfill	NSHK Tirana, Sharra landfill
Packaging materials (containing hazardous residues), waste paint	15.01.10, 15.01.11	Export	PolyECO		

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	48 of 63


PROJECT WASTE MANAGEMENT CHART		ALBANIA			
		Spiecapag On-shore, Lots 4 and 5		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code				
Packaging materials (food)	15.01.05, 20.03.01, 20.01.01	Recycle / landfill	Edi Pack Sh.a. / Sharra Landfill	Recycle / landfill	Edi Pack Sh.a. (paper, cardboard) NSHK Tirana, Sharra landfill Teknoservis (aluminium)
Paint and cans/brushes/urethane / tar	20.01.27, 20.01.28	Storage / incineration	PolyECO / Onsite Incinerator (awaiting permits)	Temporary storage	Onsite until disposal facility is confirmed
Paper and cardboard	20.01.01	Recycle	Edi Pack Sh.a.	Recycle	Edi Pack Sh.a.
Pipe dope, and coating chemicals/ MCD/Xylene residues, including drums	16.05.08	Storage	PolyECO		
Plastic bottles	20.01.39	Recycle	AME-Ambient	Recycle	AME-Ambient
Plastic drums 200l	20.01.39	Reuse/Recycle	AME-Ambient	Recycle	AME-Ambient
Plastics-other mixed	12.01.05	Recycle	AME-Ambient	Recycle	AME-Ambient
Polystyrene	20.01.39	Temporary storage for incineration	Onsite - Awaiting onsite incinerator permits		
PPE and clothing / geotextiles	18.01.04	Landfill	Sharra Landfill		
Rags/cotton (contaminated)	15.02.02	Storage / incineration	PolyECO / Onsite Incinerator (awaiting permits)	Recycle	Rada Oil
Sewage sludge	20.03.04	Collection in septic tanks, transfer to licensed treatment facility	UKKO/ Kavaja WWTP	Collection in septic tanks, transfer to licensed treatment facility	UKKO Kavaje, UKKO Durres, UKKO Korca wastewater treatment plants

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	49 of 63


PROJECT WASTE MANAGEMENT CHART		ALBANIA			
		Spiecapag On-shore, Lots 4 and 5		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code				
Soil	17.05.04, 17.05.06	Reuse for reinstatement / disposal	Spiecapag/Albstar / Project surplus natural material disposal areas (approved by CPY and permitted)	Reuse for reinstatement / disposal	Project surplus natural material disposal areas (approved by CPY and permitted)
Solvents	14.06.03	Storage	PolyEco		
Scrap metal	20.01.40, 17.04.05	Reuse/Recycle	Kurum	Recycle	Kurum Steel
Steel food cans, washed (in packaging waste)	15.01.04	Recycle	Xh.F.Kaco/Gezim Peshtanaku/ Kurum		
Surplus spoil and rock	17.01	Reuse for reinstatement / disposal	Project surplus natural material disposal areas (approved by CPY and permitted)	Reuse for reinstatement / disposal	Project surplus natural material disposal areas (approved by CPY and permitted)
Tank sludge	13.05.02, 13.05.03, 13.05.07	Incineration	UKKO. Amos Oil (13.05.07)		
Tetra Pak Cartons/al-foil/cups/bags,	15.01.06	Recycle	Edi Pack	Recycle	Edi Pack Sh.a.
Toner and printer cartridges	08.03.17, 08.03.18	Storage	PolyEco	Reuse	Returned to supplier
Tyres	16.01.03	Recycle	B-Recycling	Reuse	Service carried out off site. Supplier reuse/recycle.
Waste cooking Oil	20.01.25	Recycle	Amos Oil		
Wastewater (oily water, bilge water)		Recycle	Amos Oil (oily waters from drip trays)	Recycle	Rada Oil (oily waters from drip trays)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	50 of 63


PROJECT WASTE MANAGEMENT CHART		ALBANIA			
		Spiecapag On-shore, Lots 4 and 5		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code				
WEEE	20.01.35, 20.01.36			Reuse	Return to supplier
Weld rods, ferrous metal dust and particles	12.01.01	Recycle	Xh.F.Kaco/Gezim Peshtanaku/ Kurum	Recycle	Kurum Steel
Welding waste	12.01.13	Recycle	Xh.F.Kaco/Gezim Peshtanaku/ Kurum	Recycle	Kurum Steel
Wood (Pallets, fencing, gates, sawdust, shavings, cuttings)	20.01.38, 03.01.05, 17.02.01	Donation/Recycle	Community / Arditi shp.k	Recycle	Eco Energy System (ecopellets)
Wood containing Hazardous Materials	20.01.37	Temporary storage for incineration	Onsite - Awaiting onsite incinerator permits	Recycle	Eco Energy System (ecopellets)

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	51 of 63


PROJECT WASTE MANAGEMENT CHART		GREECE					
		Spiecapag On-shore, Lot 1		Bonat-ti JP Avax JV On-shore, Lots 2 and 3		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWG Code						
Abrasive wheel scrap (ferrous filings and turnings)	12.01.02					Recycle	Cytop
Activated Carbon	19.09.01						
Adhesives	20.01.27, 08.01.11, 08.01.12					Recycle	PolyEco
Aerosol cans	16.05.04, 14.06, 15.01.11			Temporary storage / recovery	Onsite / Polyeco (Aspropirgos)		
Aggregate/Rubble	17.01.07	Recycle	Latomeia Makris SA / SRG Recycling			Reuse	Anabe
Aluminium cans	15.01.04	Landfill	Municipality of Alexandroupoli (KDAY)	Landfill	PolyEco/ Mavrorahi landfill		
Aqueous waste concentrates	16.10.04					Treatment / reuse	Wastewater Facility of Alexandroupolis
Batteries Dry	20.01.33	Recycle	AFIS (small batteries)	Recycle	AFIS	Recycle	Sunlight
Batteries Wet	20.01.33, 16.06.01	Recycle	Evros Lead SA	Temporary storage	Onsite until waste facility is identified	Recycle	Sunlight
Bitumen	17.03.01, 17.03.02	Recycle	Latomeia Makris SA				
Black and Grey water	20.03.04	Treatment at licensed facility	Municipal STP / Onsite STP /chemical toilets	Treatment at licensed facility	Municipal STP		

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	52 of 63


PROJECT WASTE MANAGEMENT CHART		GREECE					
		Spiecapag On-shore, Lot 1		Bonat-ti JP Avax JV On-shore, Lots 2 and 3		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWG Code						
Blasting waste	12.01.17, 17.01						
Bulky waste	20.03.07						
Cables/copper	17.04.11					Recycle	Sapoutzis
Cables/copper containing hazardous substances	17.04.10						
Cement/concrete	17.01.01	Recycle	Latomeia Makris SA / ECO Monoprosopi IKE	Reuse / recycle	CDW - Anave	Recycle	Anabe
Chemicals	16.05.07 to 16.05.09			Incineration with energy recovery	PolyEco/ATM (Netherlands)	Incineration with energy recovery	PolyEco
Containers (plastic)	20.01.39	Recycle	Ikologia	Recycle	D.Net Recycle	Recycle	Sapoutzis
Containers (steel)	20.01.40			Recycle	PolyEco/Sidenor	Recycle	Sapoutzis
Contaminated soils	17.05.03	Incineration	PolyEco SA	Incineration with energy recovery	PolyEco (Aspropirgos)	Incineration with energy recovery	PolyEco
Contaminated waste (metal)	17.04.09					Recycle	PolyEco
Contaminated waste mixed (glass, wood, plastic)	17.02.04			Incineration with energy recovery	PolyEco (Aspropirgos)	Incineration with energy recovery	PolyEco
Detergents	20.01.30						
Detergents (harmful)	20.01.29					Recycle	PolyEco
Fuel (diesel, petrol, kerosene)	13.07.01, 13.07.02					Recycle	PolyEco
Drilling Mud	01.05.04						

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	53 of 63


PROJECT WASTE MANAGEMENT CHART		GREECE					
		Spiecapag On-shore, Lot 1		Bonat-ti JP Avax JV On-shore, Lots 2 and 3		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code						
Drum cleaning waste	05.01.03						
Engine Oil	13.02.08	Recycle	Green Oil SA	Recycle	Cytop / LPC Hellas	Recycle	Cytop
Equipment containing CFC	20.01.23					Recovery	PolyEco
Filters air	15.02.02	Incineration	PolyEco SA	Incineration with energy recovery	PolyEco (Aspro- pirgos)	Incineration with energy recovery	PolyEco
Filters oil	16.01.07	Incineration	PolyEco SA	Incineration with energy recovery	PolyEco (Aspro- pirgos)	Incineration with energy recovery	PolyEco
Fluorescent Light bulbs (broken)	20.01.21					Recycle	Fotokyklosi
Food	20.01.08			Landfill	Mavrodahi Landfill	Landfill	Municipality of Feres
Forestry waste	02.01.07	Recycle	Sapoutsiz (SGC Recycling) A.P. Recycling, ECO Monoprosopi IKE	Reuse	Distribution to public through competent au- thority / Re-use on site for rein- statement pur- poses as mulch	Landfill	Municipality of Feres
Gas bottles	20.01.40					Recycle	Sapoutzis
Gases (compressed other than aerosol cans)	16.05.05			Reuse	Reutrn to sup- plier	Recycle	Sapoutzis
General Construction waste	17.09.04			Recycle	CDW - Anave	Reuse	Anabe
Glass	20.01.02	Landfill	Municipality of Alexandroupoli (KDAY)	Landfill	Mavrodahi Landfill	Recycle	Sapoutzis
Glycol	16.01.14, 16.01.15	Incineration	PolyEco SA			Recycle	PolyEco

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	54 of 63


PROJECT WASTE MANAGEMENT CHART		GREECE					
		Spiecapag On-shore, Lot 1		Bonat-ti JP Avax JV On-shore, Lots 2 and 3		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code						
Grease trap waste	20.01.25					Landfill	Municipality of Feres
Greases & containers	04.02.10, 13.02						
Hydraulic Oil	13.01.13			Recycle	Cytop / LPC Hellas		
Hydrotest water	19.08			Controlled discharge	Company approved locations		
Incinerator ash	12.01.16						
Insulation	17.06.01 to 17.06.05	Storage	PolyEco SA			Recycle	PolyEco
Liquid photographic developer	09.01.01, 09.01.03			Recovery / Recycle	Dimou Nikoleta (subcontractor of NDT metals)		
Medical	18.01.04	Incineration	Ano Liosia, Elefsina	Sterilisation and disposal at licensed facility	Sterimed	Incineration with energy recovery	PolyEco
Metal Containers 200 l, pipe clamps/end caps	20.01.40, 15.01.01	Recycle	ECO Monoprosopi IKE	Recycle	PolyEco / Sidenor	Recycle	Sapoutzis
Mixed municipal waste	20.03.01	Landfill	Municipal Sanitary Landfill of Komotini / Ikologiki Thrakis EPE	Landfill	Mavrodahi Landfill	Landfill	Municipality of Feres
Packaging materials (containing hazardous residues), waste paint	15.01.10, 15.01.11	Storage / Incineration	PolyEco SA	Recovery	PolyEco/ Eco-Chem (Sweedden)	Recovery	PolyEco

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	55 of 63


PROJECT WASTE MANAGEMENT CHART		GREECE					
		Spiecapag On-shore, Lot 1		Bonat-ti JP Avax JV On-shore, Lots 2 and 3		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code						
Packaging materials (food)	15.01.05, 20.03.01, 20.01.01			Landfill	Mavrorahi land-fill	Recycle / landfill	PolyEco / Municipality of Feres
Paint and cans/brushes/urethane / tar	20.01.27, 20.01.28			Incineration with energy recovery	PolyEco/ATM (Netherlands)	Recycle / landfill	PolyEco / Municipality of Feres
Paper and cardboard	20.01.01	Recycle	Sonoco Hellas SA	Recycle	PolyEco / Mel A.E.	Recycle	Sapoutzis
Pipe dope, and coating chemicals/ MCD/Xylene residues, including drums	16.05.08			Permanent disposal	PolyEco (Germany)	Recycle	PolyEco
Plastic bottles	20.01.39	Recycle	Ikologia / SGC Recycling / A.P. Recycling	Recycle	D.Net Recycle	Recycle	Sapoutzis
Plastic drums 200l	20.01.39			Recycle	D.Net Recycle	Recycle	Sapoutzis
Plastics-other mixed	12.01.05	Recycle	Ikologia / SGC Recycling / A.P. Recycling	Recycle	D.Net Recycle		
Polystyrene	20.01.39					Recycle	Sapoutzis
PPE and clothing / geotextiles	18.01.04	Recycle	Ikologia	Landfill	Mavrodahi Landfill	Landfill	Municipality of Feres
Rags/cotton (contaminated)	15.02.02	Incineration	PolyEco SA	Incineration with energy recovery	PolyEco	Incineration with energy recovery	PolyEco
Sewage sludge	20.03.04						

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	56 of 63


PROJECT WASTE MANAGEMENT CHART		GREECE					
		Spiecapag On-shore, Lot 1		Bonat-ti JP Avax JV On-shore, Lots 2 and 3		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWG Code						
Soil	17.05.04, 17.05.06	Recycle	Latomeia Makris SA	Reuse / Recycle	Within project/ Anave (C&D Waste)	Reuse	Anabe
Solvents	14.06.03					Recycle	PolyEco
Scrap metal	20.01.40, 17.04.05	Recycle	Sapoutzis (SGC Recycling)	Recycle	PolyEco/Sidenor	Recycle	Sapoutzis
Steel food cans, washed (in packaging waste)	15.01.04			Landfill	Mavrodahi Landfill		
Surplus spoil and rock	17.01			Reuse for reinstatement / disposal	Project surplus natural material disposal areas (approved by CPY and permitted)	Reuse	Anabe
Tank sludge	13.05.02, 13.05.03, 13.05.07					Recycle	PolyEco
Tetra Pak Cartons/al-foil/cups/bags,	15.01.06			Landfill/Recovery	Mavrorahis landfill/ Nordeco (Polyeco)	Recycle	Sapoutzis
Toner and printer cartridges	08.03.17, 08.03.18	Recycle / Incineration	Data Media Burnout / Poly-Eco SA	Temporary storage	Onsite until waste facility is identified		
Tyres	16.01.03	Recycle	Retire SA				Ecolastika (awaiting contract finalisation)
Waste cooking Oil	20.01.25					Landfill	Municipality of Feres
Wastewater (oiy water, bilge water)				Recycle	Cytop / LPC Hellas		


 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	57 of 63

PROJECT WASTE MANAGEMENT CHART		GREECE					
		Spiecapag On-shore, Lot 1		Bonat-ti JP Avax JV On-shore, Lots 2 and 3		Renco Terna JV Compressor Station	
		Waste management option	Waste receiving facility	Waste management option	Waste receiving facility	Waste management option	Waste receiving facility
Waste Type	EWC Code						
WEEE	20.01.35, 20.01.36	Treatment at li- censed facility	Anakyklosi Sis- kevon A.E	Temporary storage	Onsite until waste facility is identified	Recycle	Fotokyklosi
Weld rods, ferrous metal dust and particles	12.01.01	Recycle	Sapoutzis (SGC Recycling)	Recovery	PolyEco	Recycle	Sapoutzis
Welding waste	12.01.13			Recycle	PolyEco/Sidenor		
Wood (Pallets, fencing, gates, sawdust, shavings, cuttings)	20.01.38, 03.01.05, 17.02.01	Recycle	Sapoutsiz (SGC Recycling) A.P. Recycling, ECO Monoprosopi IKE	Recovery	PolyEco/ Nor- deco	Landfill	Municipality of Feres
Wood containing Hazard- ous Materials	20.01.37					Recycle	PolyEco

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	58 of 63

APPENDIX 5 - Example Waste Transfer Note

 Trans Adriatic Pipeline	EPC Contractor Logo				
WASTE TRANSFER NOTE					
Registration No.: _____					
Source Site/Location:		DATE:			
Waste Description					
European Waste Code	Type of waste	Quantity	Units (kg, L, m ³ , No. of Skips)	Containment/Packaging (Containers/Skips/Drums etc.)	
				Number	Type
Additional information (handling, transport, precaution, condition of container, requirements to return empty container)					
Waste shall be sent to: <input type="checkbox"/> EPC Contractor Facility <input type="checkbox"/> Third Party Facility					
Part A to be Completed by Generator					
Receiver					
Facility Owner					
Facility Address					
Certification	I declare that information I provided in Part A are accurate, that the consignment is accurately described and is in appropriate condition for transportation				
Name		Telephone			
Signature		Date			
Part B to be completed by Transporter					
Transporter name		Company			
Driver License Number		Vehicle Number			
Contact		Address			
Certification	I declare that information provided by Generator in Part A and by me, the Transporter in Part B accurate.				
Name		Signature			
Signature					
Part C to be completed by Receiver					
Date and time received		Receiver is same as indicated in Part A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Receiver observations on containment (good/poor conditions, appropriate consignment number and content received)					
Receiving location		Facility Name			
Certification	I declare that I received the wastes as described in Part A of this manifest, with the discrepancies, irregularities listed above. I also declare that the information in Part C is correct and complete.				
Name		Signature			
Date					
Part D to be completed by Generator					
<input type="checkbox"/> Landfill	<input type="checkbox"/> Incineration	<input type="checkbox"/> Reuse / Recycle through Company (Name and Address)			
Certification	I declare that the information in Part D is correct				
Name of authorised person		Signature			
Date					

 Trans Adriatic Pipeline	TAP AG Doc. no.:	CAL00-PMT-601-Y-TTM-0001	Rev. No.:	2
CONTRACTOR Logo	Doc. Title:	Waste Management Plan	Page:	62 of 63

APPENDIX 9 – Project Waste Management Focused Inspection Checklist



Waste Management - Focused Checklist

Project Location (site):		Weather Conditions:					
Date of Inspection:		Date of Report:					
Inspected By:		EPC:					
Project Status/ Stage of Works:		EPC Reps.:					
Checklist ID	Comm. ID	Commitment/ Aspect Verified	Applicable?	KP Register Ref. (if available)	Non-Conformance / Good Practice	Status/Observation Notes	Issues Register ID
A		Previous Audits					
1		Have previous audits of waste management been carried out? If so: Is the most recent report available? Have the findings been actioned?					
B		Procedures and Responsibilities					
2		Have waste management ESIP been produced? If so: Has a waste manager been nominated? Have responsibilities for individual waste streams been allocated? Have waste holders been nominated?					
3		Does the procedure address the following issues: Targets? Management information? Training requirements? Appointment of waste contractors? Control of documentation? Disposal of hazardous and special wastes? Duty of care inspections? Waste minimisation initiatives?					
C		Waste Reduction					
4		Have waste reduction targets been set? How are they monitored?					
5		Have any additional more stringent project targets been set? And have they been met?					
6		Have waste recycling/minimisation measures been considered?					
7		Are waste recycling/minimisation initiatives in place for: Excavated material? Scrap metal? Polyethylene pipe? Paper? Cardboard and packing? Waste oil? Batteries? Office consumables? Timber? Hedgerows and trees? Bevel protectors/pipe end caps? Others?					
D		Management Information					
8		Are annual volumes/tonnages of waste recorded and supplied to TAP					
E		Waste Contractors					
9		Do you appoint waste contractors (transporters, receivers, brokers etc.) from an approved list? Are all the relevant carriers, transfer and disposal licences available? Have these been verified with the authorities? Are the waste management licences appropriate for the types of waste for disposal?					
10		If not from an approved list, how is the competency of the waste contractors assessed?					
11		What checks are carried out to assess the performance of the waste contractors? Are the standards been maintained?					
12		Are waste contractors made aware of any safety or environmental procedures or requirements relevant to the collectors/producers site?					
F		Waste Management Permits					
13		Is there a waste management file (or section of a file) for the site?					
14		Are controlled waste transfer notes:					
15		Available for inspection? Completed correctly?					
16		Kept for 2 years? Where are they kept?					
17		Are special waste consignment notes: Available for inspection? Completed correctly? Kept for 3 years? Where are they kept?					
18		Is the contractors waste carriers registration certificate available?					
19		Are wastes classified with the waste codes as outlined in the European Waste Catalogue (EWC) as defined in the Landfill Regulations 2002?					
20		Is there a facility for the storage and disposal of the newly classified Hazardous Wastes as outlined in the EWC.					
G		Disposal of Special Waste					
21		Is there a procedure to cover the storage, handling and disposal of special waste?					
22		Is the procedure being followed?					
23		Does the procedure identify/list those wastes that are deemed special?					
24		Is a log of the types and amounts of special wastes generated at the site available?					

