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Document type	Technical Specification
Title	JRC-Ispra's D&WM Programme Management Assistance Services

Abstract:

This document provides technical specification describing in detail the quantitative and qualitative characteristics of the "JRC-Ispra's D&WM Programme Management Assistance Services" (PMAS), resources and intended deliverables of a direct service contract to be concluded in support of the JRC-Ispra Decommissioning and Waste Management Programme

Key words:

Programme assistance, project management, services, cost control, risk analysis, project plan, project control

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Revision	Revision Description
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02	
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REFERENCES

[1] Euratom Treaty	Treaty establishing the European Atomic Energy Community
[2] COM(1999)114	Communication from the Commission to the Council and the European Parliament on historical liabilities arising out of activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty
[3] COM(2004)621	Communication from the Commission to the Council and the European Parliament. Decommissioning of nuclear installations and waste management: Nuclear liabilities arising out of activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty. 16/07/2004
[4] COM(2008)903	Communication from the Commission to the Council and the European Parliament. Decommissioning of Nuclear Installations and Management of Radioactive Waste: Management of Nuclear Liabilities arising out of the Activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty
[5] COM(2013)734	Communication from the Commission to the Council and the European Parliament. Decommissioning of Nuclear Installations and Management of Radioactive Waste: Management of Nuclear Liabilities arising out of the Activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty
[6] D.Lgs. 230/1995	Attuazione delle direttive Euratom 80/836, 84/466, 89/618, 90/641, 92/3 in materia di radiazioni ionizzanti
[7] D.Lgs. 81/2008	Attuazione dell'articolo 1 della Legge 3 agosto 2007, n. 123 in materia di tutela della salute e della sicurezza nei luoghi di lavoro
[8] NE.80.1010.SR.001	NDU Risk evaluation

ACRONYMS AND TERMINOLOGY

AREA 40	the JRC-Ispra Site's centralised radioactive waste management area
CPI	<u>C</u> ost <u>P</u> erformance <u>I</u> ndex
CQP	<u>C</u> ontract <u>Q</u> uality <u>P</u> lan
CQCP	<u>C</u> ontract <u>Q</u> uality <u>C</u> ontrol <u>P</u> lan
D&WM	<u>D</u> ecommissioning and <u>W</u> aste <u>M</u> anagement
ECO	<u>E</u> xpérience <u>C</u> ritique <u>O</u> rgel
ESSOR	<u>E</u> Ssai <u>O</u> rgel
EVA	<u>E</u> arned <u>V</u> alue <u>A</u> nalysis
EVM	<u>E</u> arned <u>V</u> alue <u>M</u> anagement
FARO	Fuel Melting and Release Owen
HVAC	<u>H</u> eating, <u>V</u> entilation, and <u>A</u> ir <u>C</u> onditioning
INE	<u>I</u> mpianto <u>N</u> ucleare <u>E</u> ssor
ISF	<u>I</u> nterim <u>S</u> torage <u>F</u> acility
ISO	<u>I</u> nternational <u>S</u> tandards <u>O</u> rganization
JPEG	<u>J</u> oint <u>P</u> hotographic <u>E</u> xperts <u>G</u> roup
JRC	<u>J</u> oint <u>R</u> esearch <u>C</u> entre
LCSR	<u>L</u> aboratorio <u>C</u> aldo <u>S</u> tudi e <u>R</u> icerche

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MPEG	<u>M</u> oving <u>P</u> icture <u>E</u> xperts <u>G</u> roup
N.A.	<u>N</u> ot <u>A</u> pplicable
NDU	JRC <u>N</u> uclear <u>D</u> ecommissioning <u>U</u> nit
PIA	<u>P</u> rogramme <u>I</u> mplementation <u>A</u> ssistance
PMAS	JRC-Ispra's D&WM <u>P</u> rogramme <u>M</u> anagement <u>A</u> ssistance <u>S</u> ervices
POCO	<u>P</u> ost <u>O</u> perational <u>C</u> lear <u>O</u> ut
QA	<u>Q</u> uality <u>A</u> ssurance
QMS	<u>Q</u> uality <u>M</u> anagement <u>S</u> ystem
SGRR	<u>S</u> tazione di <u>G</u> estione dei <u>R</u> ifiuti <u>R</u> adioattivi
SI	<u>S</u> ystème <u>I</u> nternational
SPI	<u>S</u> chedule <u>P</u> erformance <u>I</u> ndex
STRRL	<u>S</u> tazione <u>T</u> rattamento <u>R</u> ifiuti <u>R</u> adioattivi <u>L</u> iquidi
VLLW	<u>V</u> ery <u>L</u> ow <u>L</u> evel <u>W</u> aste
WBS	<u>W</u> ork <u>B</u> reakdown <u>S</u> tructure

Contracting authority	A public body launching a procurement procedure (in this document the Joint Research Centre Directorate C, Ispra Site Management, of the European Commission further referred to as “JRC-Ispra”)
Economic operator	Any natural or legal person, including a public entity or group thereof that offers supplies, services or works on the market
Tenderer	Any economic operator who has submitted a tender
Joint Tender	A group of economic operators who has submitted a tender
Contractor	A Tenderer to whom a contract has been awarded
Subcontractor	Any third party employed by the contractor in connection with the contract
Licensee	Any person or organisation to whom a nuclear license is granted

1 INTRODUCTION

- 1.0.0.1 Joint Research Centre (JRC) is one of the General Directorates of the European Commission. JRC's mission is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of European Union policies. As a service of the European Commission, JRC functions as a reference centre of science and technology for the Union. Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, whether private or national.
- 1.0.0.2 JRC-Ispra is the main JRC site. On its premises there are several nuclear installations which include: experimental reactors, hot laboratories, as well as a variety of radioactive waste management plants and storages.
- 1.0.0.3 The management of the above nuclear facilities as envisaged by the Euratom Treaty (Ref.[1]) and the agreement with the Italian Government (Ref.[2]) renders the European Commission responsible throughout the life of its nuclear installations. Therefore, JRC-Ispra is required to safely conserve and subsequently decommission its shutdown installations, and to manage the associated radioactive waste arising. These are the Commission's so-called “*Historical Liabilities*” at JRC Ispra, which are managed by the site's JRC Nuclear Decommissioning Unit (NDU).

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- 1.0.0.4 The JRC-Ispra's D&WM Programme is aimed at progressively eliminating its *Historical Liabilities*. The programme comprises the provision and refurbishment of various radioactive waste management plants, the (re)conditioning of existing waste and management of nuclear materials and, finally, the decommissioning of shutdown nuclear facilities (previously held in state of safe conservation).
- 1.0.0.5 By the end of the D&WM Programme – that will span more than two decades – also waste management facilities and the still operating ones will have to be decommissioned and dismantled to address the so called "*future liabilities*" in order to reach a final status of the site where no nuclear activities still exist.

2 SCOPE

- 2.0.0.1 The present document outlines the services to be provided by the "*JRC-Ispra's D&WM Programme Management Assistance Services*" (PMAS) Contractor to assist the D&WM Programme management and projects responsible, in accordance with the processes and procedures set forth or referred to herein, in dedicated programme management activities dealing with Programme and projects schedule, resource management and Programme and Projects risk analysis.
- 2.0.0.2 This technical specification represents what the Contractor must accomplish during the contract.

3 APPLICABILITY AND RESPONSIBILITY

- 3.0.0.1 The present document is applicable to the procurement procedure and the resulting Contract for provision of PMAS services.
- 3.0.0.2 The responsibility for the correct application of this document rests with NDU and the selected contractor.

4 BACKGROUND

4.1 Nuclear facilities at the JRC Ispra site

- 4.1.0.1 In the frame of the Euratom Treaty (Ref.[1]), the Joint Research Centre was created, with sites located in different Member States to contribute to the establishment and growth of nuclear power related industries. An agreement with the Italian Government (Ref.[5]) led to the establishment of the JRC-Ispra site, the initial research themes were directed towards reactor development (reactor physics, materials and safety) and the fuel cycle. As research progressed, a variety of additional experimental facilities as well as radioactive waste management plants and stores were realised. Since the early 1980s the Framework Programmes of the European Commission have progressively reduced focus on nuclear research and development, such that nuclear work now represents only a small part of the JRC' activities. This and the natural ageing of facilities have led to the accumulation at JRC-Ispra of several shutdown nuclear installations, among which the main ones are:
- Impianto Nucleare Essor (INE), a 25 MW research reactor operational between 1968 and 1983. Reactor used heavy water as both moderator and coolant. The facility comprises decay pond, two hot-cell laboratories and other experimental installations;
 - Ispra-1, a 5 MW research reactor operational between 1959 and 1973. Reactor used heavy water as coolant/moderator and graphite as moderator/reflector;
 - Laboratorio Caldo Studi e Ricerche (LCSR), a complex of hot-cells and analytical laboratories operational between 1964 and 1992. The facility focused mainly on

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mechanical and material testing and examination of irradiated fuel and structural specimens, radiochemical processing and waste vitrification;

- Stazione Trattamento Rifiuti Radioattivi Liquidi (STRRL), an obsolete liquid effluent collection and treatment plant operational since 1964. The facility comprises a still operational collection section (tank farm) and a treatment section for chemical and mechanical treatment of radioactive liquids in long term shut down since 2004;
- A complex hosting the Fuel Assemblies melting and Release Oven (FARO) now completely dismantled. FARO was operational between 1984 and 2000 as a facility for nuclear fuel melting and study of melt spreading and melt/sodium and melt/water interactions. In the same complex was present a 1 kW critical assembly Expérience Critique Orgel (ECO) operational between 1965 and 1973, which is currently partially dismantled. The ECO assembly used organic liquid as coolant, heavy water as moderator and graphite as reflector. Most of its components have been removed leaving the reactor biological shield and some tanks still to be dismantled. Finally, at underground level, a Very Low Level Waste Post Operational Clear Out (VLLW POCO) buffer storage was created and is currently occupied by somewhat 1000 waste drums;
- Several miscellaneous solid, liquid and semi liquid waste streams stored at different locations on-site.

4.1.0.2 The Stazione Gestione Rifiuti Radioattivi (SGRR in the so called Area 40¹) was created in the early 1960s as the nucleus of radioactive waste management services for the JRC-Ispra site. Current waste management activities in SGRR can be divided into routine services and a variety of D&WM primary projects, some infrastructural (substituting and/or enhancing the waste management infrastructure) and some pertaining to specific waste streams. The SGRR is currently hosting a variety of nuclear material, historically conditioned waste, unconditioned waste, unwanted radioactive sources and suspect radioactive material.

4.1.0.3 Cyclotron (model Scanditronix MC40), a highly versatile accelerator with variable particle energy and the capability of accelerating protons and alpha particles as well as deuterons and ³He nuclei. This enables production of wide variety of radioisotopes and makes the cyclotron especially suitable for research purposes.

4.1.0.4 The Interim Storage Facility (ISF) completed in 2013 and designed to host all the low and intermediate level radioactive waste, properly conditioned, present on site coming from either the past research activities or the decommissioning and dismantling of the research facilities themselves. The ISF will guarantee an adequate storage capacity on site to host the outcome of the above activities and it has an operational lifetime of 50 years.

4.2 Organisation of Services

4.2.0.1 The majority of the D&WM programme-related activities is undertaken by specialist contractors, since decommissioning has never been a fundamental part of JRC' scientific and technological studies. This strategy has the advantage of permitting the application of both established and newer technologies, of gaining benefits from competition and of better coping with the peaks and troughs of the programme as it evolves.

4.2.0.2 This recourse to contractors does not diminish the Commission's legal responsibilities, as stated in the Euratom Treaty and corresponding Italian legislation. Therefore any use of contractors to undertake D&WM-related activities must be balanced with the requirement to ensure that JRC-Ispra, as nuclear Licensee, retains control of its nuclear operations.

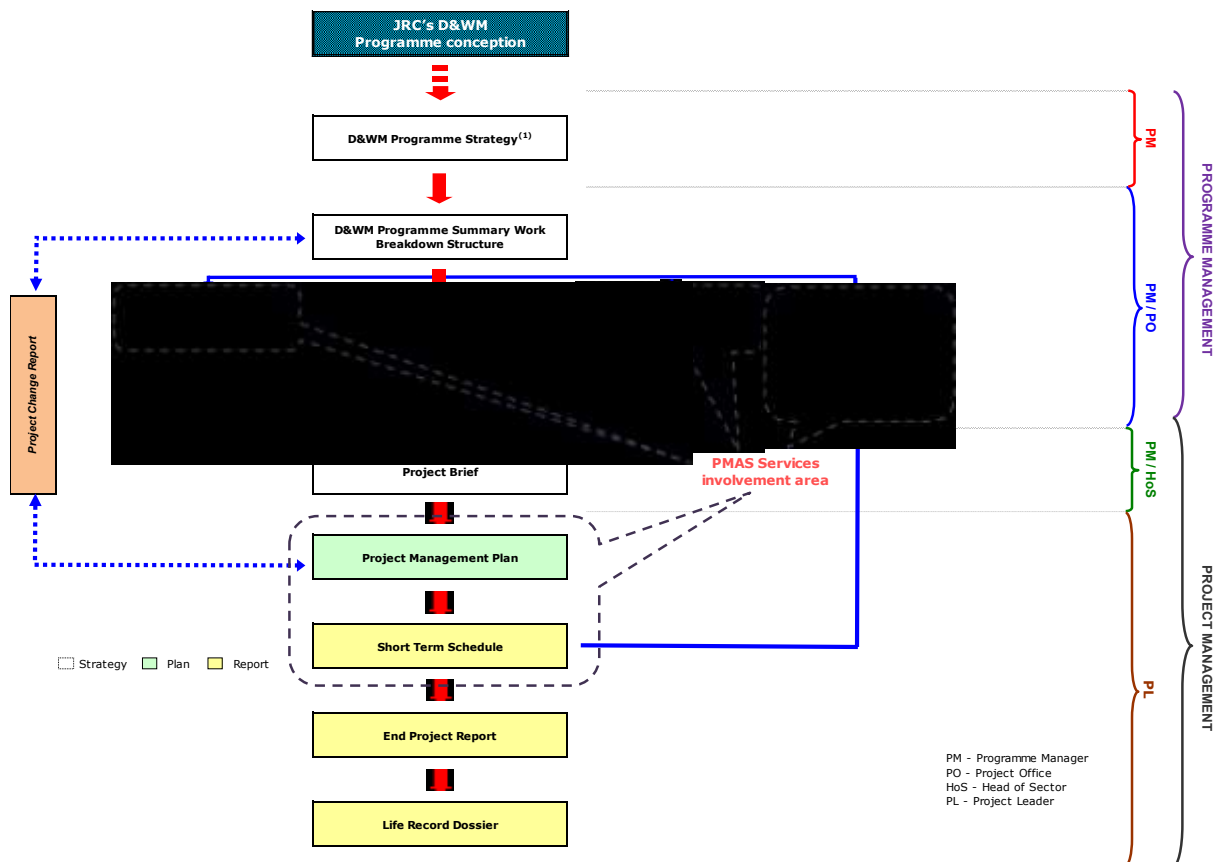
¹ The JRC-Ispra Site's centralised radioactive waste management area

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- 4.2.0.3 The present-day use of human resources practised throughout NDU maximises, where practical, the use of contract staff for providing both long-term general assistance and short term specific support. A number of outsourced services have been identified to fulfil JRC-Ispra' needs. The identified services will guarantee a comprehensive capacity for performing a sound and safe management of the facilities and of the D&WM Programme.
- 4.2.0.4 Services have been subdivided into lots, each representing a specific and well identified type of activity. In this frame a Project Implementation Assistance (PIA) service is currently on-going and it will expire by the end of 2016.
- 4.2.0.5 This document refers to the new tender launched by NDU which will replace part of the services currently provided through the PIA contract.

4.3 Programme Management Framework

- 4.3.0.1 In order to manage the D&WM Programme a quality management system has been developed and implemented at JRC-Ispra. Accordingly the programme has been decomposed into several projects through a Work Breakdown Structure (WBS) and a project management tool has been used to plan, monitor and control its status. In the meantime, tailored quality documents have been set and made applicable.
- 4.3.0.1 The scheme and the overview of the main existing documentation governing the management of the D&WM Programme is shown below:



– Figure 4.3-1 –

D&WM Programme Strategy – This document establishes the overall strategy and some prioritisation criteria of the D&WM Programme keeping in mind the Policy guidelines established in the frame of the European Commission communication to the European Parliament and the European Council (see Ref. [3], Ref. [4], and Ref.[5]), the assumptions

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and the external constraints coming from the Italian nuclear situation and from the JRC Ispra peculiar situation.

D&WM Programme Summary Work Breakdown Structure – This document provides a consistent hierarchical decomposition of the work to be executed for facilitating the planning, execution and control of the Ispra Site's D&WM Programme. In particular, the document identifies and summarises the principal objectives of the projects and subprojects which represent the core of the site's programme.

D&WM Programme Plan – This document summarises, at an executive level, the time schedule of the single projects, the main links between projects and the overall time schedule of the D&WM Programme.

D&WM Programme Budget Plan – This document provides the basis for financial management and control throughout the whole D&WM Programme, and addresses the budgeting of projects and their commitment profiles across the programme.

D&WM Programme Work Plan – This document provides detailed information related to the scope, schedule, and estimated budget associated to the work planned during the reference year on the basis of the high level and detailed programme/project management documentation (i.e. Programme Plan, Programme WBS and Budget Plan).

4.3.0.2 The aforementioned documents are updated periodically with the exception of the D&WM Programme Strategy which is done only in exceptional cases when major occurrences intervene in the D&WM Programme ruling.

4.3.0.3 As far as the projects are concerned, the following documentation is used in the frame of the D&WM Programme:

Project Brief – This document lays the foundation for the initiation of a project and provides sufficient information to the project responsible to develop the project. This includes objectives, deliverables, planning and expected results in addition to possible applicable constraints with associated risks, safety and environmental effects of the project.

Project Management Plan – This document forms a fundamental reference for managing a project and is extrapolated from the Project Brief. It provides the rationale for fulfilling the required project's objectives and deliverables including estimate of planning and resources/costs involved. This constitutes a baseline against which to monitor project progress and cost. Identify the risks and the quality requirements to be applied.

Short Term Schedule² – This document provides the performances and the progress status of the D&WM programme and WBS projects for the reference year and possible risks which may occur during the forthcoming planning. It will be regularly updated and issued to show activity really performed vs. the baseline through performance index ratios.

4.3.1 Project time management

4.3.1.1 With the aim of managing the overall D&WM Programme, each living project is currently scheduled in detail to enable day to day management.

4.3.1.2 In particular the following approach is applied:

- 1) For any project identified in the WBS (30 projects currently on-going) a very preliminary project schedule is prepared and illustrated through an initial Gantt chart that is:
 - a. prepared to match the WBS requirements regarding programme logic, start, intermediate (if applicable) and finish dates;
 - b. produced in accordance to a specific template to apply minimum acceptable detail and formatting;
 - c. Uploaded on the Project Management Platform of the Ispra Site's D&WM

² This document will be replaced by a new one: "Programme Status Summary" to be released as a deliverable of this Contract

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Programme.

- 2) When a project is due to start, the Project Brief and the Project Management Plan are issued; they identify the schedule in more detail and, therefore, an updating of the initial Gantt chart is produced.
- 3) Successively, during the following project development stages, the aforementioned Gantt charts are constantly revised and used for:
 - a. Updating the status of the projects/programme;
 - b. Tracking the project and programme activities.

The aforementioned tasks 2) and 3) are currently carried out by the current PIA's contractor via collecting relevant data from the projects responsible (through periodic interviews that identify firstly and provide later the status of the activities and/or the changes applied during the reference period), processing the feedback got, defining and updating accordingly the relevant schedule.

- 4.3.1.3 In this frame Short Term Schedules are issued periodically by the current PIA's contractor to present the performances and the progress status of the D&WM projects.
- 4.3.1.4 Microsoft® Project 2010 ETM version (an update to a new release is currently in progress) is currently used as Project Management Tool to plan and monitor the actual status of the D&WM Programme and projects.

4.3.2 Programme and Projects risk analysis

- 4.3.2.1 With the aim of assessing and managing the risks which may affect the D&WM Programme, a qualitative and quantitative risk analysis has been performed.
- 4.3.2.2 Subsequently a "*Risk Register*" has been produced reporting all the risks identified, their score against the likelihood of the risk happening, their potential impact in case of occurrence, with relevant "*Risk Mitigation Actions List*" envisaged to reduce those risks.
- 4.3.2.3 Finally monitoring and control risks are being carried out by keeping up to date a "*Risk Report*" (which includes the Risk Register and the Risk Mitigation Actions List) to be issued quarterly (see procedure Ref.[8]).

5 PMAS: CONTRACT OBJECTIVE

- 5.0.0.1 The PMAS contract objective is to continue and further develop the part of the present PIA service which concerns the programme management support, with the scope of assisting NDU in fulfilling its leading role in implementing the D&WM Programme by means of:
 - Support of specialist staff performing tasks or activities as defined in the technical specification;
 - Supply specific deliverable (i.e. documentation and Microsoft® Project files).

6 PMAS: SCOPE OF WORK

6.1 PMAS Activities

- 6.1.0.1 The support is expected to comprise the following fields:
 1. Project scheduling and monitoring assistance;
 2. Programme scheduling and monitoring assistance;
 3. Project and programme cost management;
 4. Project and programme risk management;
 5. Corrective and evolutionary maintenance (of the Project Management Tool).

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- 6.1.0.2 In order to carry out the aforementioned activities JRC-Ispra will provide the PMAS Contractor with an online project repository.
- 6.1.0.3 It is the responsibility of the PMAS Contractor to maintain the file data of the project plans and other project artefacts and upload them to the specified repository. It is the responsibility of JRC-Ispra to ensure the constant availability and accessibility of relevant service.
- 6.1.0.4 The PMAS Contractor will on request provide all the necessary data coming out from the above activities to be used as inputs for the issuing of the D&WM Programme management documentation (i.e. Budget Plan, Programme Plan, Annual Work Plan and Reports as shown in Figure 4.3-1).

6.1.1 Project scheduling and monitoring assistance

6.1.1.1 Planning activity

The role of the PMAS Contractor will be to support NDU in planning the activities of each project which is part of the overall D&WM Programme; this task consists in the following:

- For the on-going projects
 - to review and assess their feasibility with the proposal for implementation of likely modifications;
- For the future projects
 - to review and/or develop (on request and in collaboration with the project responsible) new plans on the basis of the occurrence of new needs and/or the changed conditions (e.g. constraints, resources, risks, etc.) and/or the possible improvements envisaged.

In this frame the PMAS Contractor will be required to assess the effects that possible project changes may imply on project and programme plan as well as on the risk management plan.

The main outputs of this activity will be:

- Provide the project responsible with information in order to issue the "*Project Management Plan*" in terms of:
 - define activities (i.e. identify the activities needed, their attributes with relevant milestones);
 - estimate activity resources;
 - estimate activity durations.
- Produce schedules (i.e. develop short and long term project schedules, project baselines, schedule data)

6.1.1.2 Monitoring & Controlling activity

The PMAS Contractor is requested to carry out the current on-going processes.

This activity shall run continuously in order to be able to update periodically the status and/or provide immediate feedback on demand.

The nature of the tasks will include, among others:

- Follow up the lifecycle of each project from the initial request until the final acceptance;
- Advise NDU management if the planning, including subprojects, diverge from the expected one.

In order to carry out this task a review and knowledge of the projects is required; it shall be accomplished through meticulous documentation reviews and collaboration with the projects responsible.

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Assistance to the projects responsible is expected on a number of tasks such as:

- Support to primary projects;
- Maintenance of projects' plans and validation road maps, including planning and resources data;
- Project tracking of actual progress against planned completion of deliverables or tasks;
- Project reporting to the NDU management;
- Monitoring management actions;
- Supplying data as required by NDU for the programme/projects as well as progress reports against budgets;
- Tracking, controlling and reporting project expenditure and contractual compliance on an ongoing basis;
- Coordinating and implementing project changes in accordance with NDU policies and procedures.

The main outputs of this activity will be the release of up-to-date schedules of the projects and the production of the *"Programme Status Summary"* (see §9.4.3 for details) to monitor and evaluate the advancement of the projects.

6.1.2 Programme scheduling and monitoring assistance

6.1.2.1 Planning activity

The role of the PMAS Contractor will be to support NDU in planning the activities of the D&WM Programme; this consists in reviewing, assessing, identifying, and implementing any possible modification to the existing overall programme schedule which will come out during the duration of the contract.

The main outputs of this activity will be to support NDU in updating the *"Programme Plan"* by developing the programme schedule in terms of:

- Produce the programme master schedule;
- Identify all the projects milestones;
- Identify all the projects deliveries.

6.1.2.2 Monitoring & Controlling activity

The PMAS Contractor is requested firstly to review, secondly to improve, and lastly to implement the current on-going process.

This activity shall run continuously in order to be able to update periodically the status and/or provide immediate feedback on demand.

The nature of the tasks will include:

- Follow up the lifecycle of the overall D&WM Programme;
- Predict and produce programme performances (e.g. indicators like % of progress, SPI, CPI etc.);
- Advise if the global planning is not respected.

In order to carry out this task a review and knowledge of both the projects and the programme with relevant constraints is required; it shall be accomplished through meticulous documentation reviews and collaboration with the projects responsible and NDU management.

The main outputs of this activity will be the release of up-to-date schedule of the overall programme and the production of the *"Programme Status Summary"* (see §9.4.3 for details) and the delivery of relevant data to NDU to prepare the intermediate and annual reporting.

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6.1.3 Project and programme cost management

- 6.1.3.1 PMAS Contractor shall develop and implement the Project and programme cost management, in particular it shall carry out the control costs process, by using as inputs the data available from the financial tool and/or database implemented at JRC-Ispra, and assist NDU in the following areas:
- Estimate costs relevant to on-going and future projects;
 - Assess the contingencies applied and verify their consistency with the existing risk register;
 - Determine budget in the short, medium and long term.
- 6.1.3.2 In order to carry out this task a method of performance measurement shall be applied. In particular the existing Earned Value Management (EVM) shall be revised, i.e. Schedule Performance Index (SPI), and further developed, i.e. Cost Performance Index (CPI).
- 6.1.3.3 The main outputs of this activity will be the production of the "*Programme Status Summary*" (see §9.4.3 for details) and the delivery of relevant data to NDU for the preparation of the "*Budget Plan*".

6.1.4 Project and programme risk management

- 6.1.4.1 The PMAS Contractor shall drive the project and programme risk management.
- 6.1.4.2 In this frame the PMAS Contractor is requested to monitor and control the programme/project risks to keep track of the identified risks, residual risks, and new risks. It shall address the resolution of project risks and issues, and escalating such issues promptly to the projects responsible and, where applicable, to the D&WM Programme management. It shall also monitor the execution of planned strategies for the identified risks and evaluates their effectiveness. In order to do this it is required that the consistency of the existing "*Risk Report*" (see procedure Ref.[8]) is initially revised and relevant register/mitigation actions list subsequently updated and released periodically.
- 6.1.4.3 In case an unanticipated risk emerges, or a risk's impact is greater than expected, the PMAS Contractor should perform additional responses to control the risk.
- 6.1.4.4 Additionally the PMAS Contractor shall assess if risk management policies and procedures are being followed.
- 6.1.4.5 Finally the PMAS Contractor shall process and implement the aforementioned risks in a risk management plan to be built on the Project Management Tool and integrated in the programme/project plan.
- 6.1.4.6 The main outputs of this activity will be the production of the "*Programme Status Summary*" (see §9.4.3 for details) and the "*Risk Report*" (see §9.4.4 for details).

6.1.5 Corrective and evolutionary maintenance

- 6.1.5.1 This task consists initially in reviewing and assessing the suitability of the existing Project Management Tool and successively in making proposals for addressing suitable modifications (see §9.4.1 for details).
- 6.1.5.2 Once JRC-Ispra has approved the modifications submitted by the PMAS Contractor, the latter shall implement them in the process and verify their effectiveness.
- 6.1.5.3 The PMAS Contractor shall correct any defect of the Project Management Tool he detects.

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7 CONTRACTOR'S ORGANISATION

7.1 Place of performance

- 7.1.0.1 The activities shall mainly be carried out on-site³ in order to: 1) use with continuity the current in-house management tool, 2) get prompt information about the projects status from the projects responsible and 3) interact closely with the D&WM Programme management.
- 7.1.0.2 Off-site work is, in principle, permitted being its exact allocation left to the Tenderer approach.

7.2 Contractor's Staff

7.2.1 General rules

- 7.2.1.1 The Contractor shall propose staff selected among professionals in the discipline consistent with the contract scope of work.
- 7.2.1.2 As a preference the Contractor's staff shall be selected among Contractor's employees.
- 7.2.1.3 Contractor's staff shall have qualifications as for the subsequent §7.2.2.
- 7.2.1.4 15 calendar days after the signature of the contract, the Contractor shall present the Contractor's staff to be proposed for the profiles of the contract (hereafter called "*Staff list*"). The proposed staff list shall be approved by JRC-Ispra, who reserves the right to refuse a proposed candidate on the basis of CV and, if applicable, interview, if he/she is deemed not adequate to perform the requested activities foreseen in this Contract.
- 7.2.1.5 The Staff list may be periodically updated by the Contractor during Contract implementation if the updated version has been approved by JRC-Ispra.
- 7.2.1.6 The Contractor is requested to the utmost minimise the turnover of its staff included in the Staff list and to ensure with reasonable means that the personnel providing the service spend as preference a minimum of two consecutive working years within the contract.
- 7.2.1.7 During the contract execution a change in the staff performing the contract, will only be justified following a written request from the PMAS Contractor (except in cases of "force majeure" situations related to unforeseen health and medical issues), done three months in advance of the replacement, the request shall be approved by the JRC-Ispra.
- 7.2.1.8 Whenever the Contractor got the approval for substituting a staff member who is assigned to this contract, the Contractor shall ensure a continuity of service by planning and implementing a substitution programme. The substitution programme shall include a reasonable overlapping of the substituted employee and his/her substitute. Relevant costs of the substitution programme (overlapping, training, etc.) shall be borne by the Contractor
- 7.2.1.9 JRC-Ispra reserves the right to request a change, of refuse to accept, any Contractor's staff during the execution of this contract. In this case, a written justification shall be provided by JRC-Ispra. The Contractor will in such case have one month to propose new CV(s) of the aforementioned personnel.
- 7.2.1.10 Due to the intrinsic criticality of the technical field involved (i.e. nuclear applications) and its potential implications (i.e. security and safety issues) as well as the sensitivity of the information to be managed by the PMAS Contractor in that regard (programme/project schedule, programme/project budget, programme/project risks, etc.), it is required that all staff sign a Declaration of confidentiality.

³ Here and in the rest of this document it is understood that on-site are JRC-Ispra's premises and off-site are the Contractor's premises

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7.2.2 Staff qualifications

7.2.2.1 Due to the intrinsic complexity and sensitivity of some of the activities requested (i.e. control of multidisciplinary projects, finding possible lacks or risks of the current system, addressing areas for improvements, etc.) it is envisaged the involvement of experienced professionals with consistent technical background in a similar scenario. A different approach, vice versa, may be considered for all other activities specified which do not imply specific knowledge and/or critical assignments to be carried out (i.e. collecting data, processing them and reporting results).

7.2.2.2 As far as the on-site services are concerned, the minimum Contractor's personnel envisaged is composed by at least two staff among:

- 1 (part-time⁴) Project Management Scheduling Engineer
- 1 (full-time) Project Management (Junior) Engineer / Programme & Projects Administrative and Scheduling Assistant
- 1 (part-time⁵) Risks analyst (this role could be also covered by the Project Management Scheduling Engineer)

Note: the Project Management Scheduling Engineer above mentioned will also act as Contract On-Site Coordinator (see §8.3.2 and §12.1).

8 WORKING CONDITIONS FOR ON-SITE SERVICES

8.1 Location

- 8.1.0.1 Most of the activities specified in the scope of the contract will be executed at JRC-Ispra site.
- 8.1.0.2 Relevant costs, such as the costs of equipment and materials, travel time, transport, accommodation and subsistence shall not be reimbursed separately, and therefore must be included in the prices offered by the Tenderer.

8.2 Health and Safety at Works

- 8.2.0.1 According to article 31 of the Ispra Site founding act (Ref.[2]) the European Commission applies at the JRC-Ispra site, under its own responsibility, the Italian dispositions addressing health and safety at work (Ref.[6] and Ref.[7]).
- 8.2.0.2 To this purpose, JRC-Ispra has set general internal safety rules that fulfil both the Italian Law and the European Regulations, whose implementation is promoted by the Safety Office and verified by the Specialised Services.

8.3 Working Staff

8.3.1 General rules

- 8.3.1.1 The Contractor's personnel performing on-site activities services will comply with all applicable Italian legislation together with site regulations listed in the contract annexes, general and specific nuclear facility regulations as defined by JRC-Ispra, and any other pertinent rules, regulations, guidelines and practices identified by JRC-Ispra.
- 8.3.1.2 The Contractor will ensure that its staff when performing on-site activities:
- a. Have the necessary ability and competence for the intended work;
 - b. Are fit and healthy for undertaking the intended work.

⁴ Minimum on-site presence required: not less than 2 weeks per month

⁵ Minimum on-site presence required: not less than 2 weeks per quarter

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8.3.1.3 For each individual, the Contractor will provide to JRC-Ispra a copy of the certificates (classified worker, medical, etc.) at least 5 working days before that person commences activities on-site.

8.3.1.4 There is no limit to the total accumulated time (either continuous or composed of discrete intervals) that staff of PMAS Contractor may spend at the Ispra site during the contract, provided all requirements of Italian legislation are respected.

8.3.2 Site management

8.3.2.1 For on-site staff, the PMAS Contractor will nominate a Project Management (Senior) Engineer as Contract On-Site Coordinator who will manage directly people of the local team.

8.3.2.2 Proposed Contract On-Site Coordinator shall be accepted by JRC-Ispra. JRC-Ispra reserves the right to refuse a proposed candidate on the basis of CV and, if applicable, interview if he/she is deemed not adequate to perform the requested activities.

8.4 Materials and Equipment

8.4.0.1 Unless otherwise stated, the cost of standard tooling, equipment and material (including the cost of related consumables, maintenance or replacement) that is routinely necessary for providing the PMAS services on-site shall be borne by the Contractor and included in the daily rates of the Contractor's staff.

8.4.0.2 These tools and materials include:

- Protective clothes, equipment and material in accordance with applicable radiation protection regulations (Ref.[6]);
- Protective clothes and equipment in accordance with Italian conventional safety regulations (Ref.[7]).

8.5 Infrastructures

8.5.1 JRC-Ispra's supply

8.5.1.1 JRC-Ispra will supply an adequate office space to perform the on-site contracting activities.

8.5.1.2 Two work stations loaded with Microsoft® Project Professional 2010 application and the other standard software used at the EC (currently Microsoft® Office 2010).

8.5.2 Project Management Repository

8.5.2.1 The D&WM Project Management Platform is hosted on a dedicated server inside the Microsoft® Project 2010 ETM environment, the server being connected to its "*client*" PCs, specific to NDU, through the "*blue network*" (NET1). Each client is identified by the server through the user's blue network "*username*".

8.5.2.2 The clients, i.e., specific NDU staff, are grouped under the following platform user profiles:

Platform Administrator	Project Office staff and, in particular, those charged with administering the Project Management Platform, and who have no limitation to their permissions
Programme Office	Person, who, as the owner of the Project Management Platform, has no limitation to his permissions
PMAS's contractor representative	Person, who, as the owner of the D&WM projects data, is authorised to use a finite set of permissions on the platform with respect to all projects

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Project Leader Member of the NDU staff who, as the owner of the project data, is authorised to consult the platform in a read only mode, for displaying standard views, including Gantt charts, and reports

Project User Group Group of users composed by NDU staff and supplier representative partially authorised to consult the platform in a read only mode, for displaying standard views, including Gantt charts, and reports

8.5.2.3 The PCs of the Platform Administrators and PMAS's Contractor representative are loaded with Microsoft® Project Professional 2010 application, while PLs and NET1 users are supplied with the standard Microsoft® Project 2010 application.

8.5.2.4 JRC-Ispra will provide technical support to achieve a successful configuration, technical administration and operation of the Project Management Tool hosted on the D&WM Project Management Platform.

8.5.2.5 The PMAS Contractor may use any additional tools considered necessary to improve its efficiency, effectiveness and quality of its service. Those tools must remain compatible with the current infrastructure.

8.5.3 Contractor's supply

8.5.3.1 The Contractor shall, at its own expenses:

- a. Provide sundry office materials and equipment (i.e. personal computers, specific software, printers, plotters, photocopiers and all necessary office supplies) for its on-site staff;
- b. Provide for external telephone calls.

8.6 Working Time

8.6.0.1 Under routine conditions, the hours of work will be in accordance with the JRC-Ispra site regulations as given in the contract's annexes.

8.6.0.2 For programmed activities, PMAS staff may occasionally be required to work outside of these hours if previously notified by JRC-Ispra. Similarly, for unscheduled activities, PMAS staff may be required by JRC-Ispra to work outside of these hours.

8.6.0.3 Working calendar of JRC-Ispra follows the official calendar of the European Commission, and in general foresees 16 days of regular holidays as follows:

- New Year's day: 1st January
- Epiphany: 6th January
- Good Friday
- Easter Monday
- Liberation day: 25th April
- Labour day: 1st May
- Europe day: 9th May
- Ascension day
- Anniversary of the Republic: 2nd June
- Pentecost
- Assumption day: 15th August
- All Saints' day: 1st November
- Immaculate Conception: 8th December
- Christmas holidays: from 24th December to 31st December (6 days)

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- 8.6.0.4 Unless agreed between the parties, the Contractor's staff will not be allowed to access the JRC-Ispira site during these periods and no corresponding invoicing will be accepted by JRC-Ispira.

9 CONTRACT MANAGEMENT REQUIREMENTS

9.1 Interfaces, Roles and Responsibilities

9.1.1 *On the Contractor's side*

- 9.1.1.1 The Contractor shall nominate a Contract Manager in charge of the contract. The Contract Manager will be responsible for organizing and supervising the execution of the contract as well as managing all contractual relations with JRC-Ispira and taking care of all requests addressed by the latter. The Contract Manager must be reachable by JRC-Ispira during normal working hours. In case of absence, a back-up person shall be designated and coordinates announced well in advance.
- 9.1.1.2 The Contractor shall provide a single contact office with telephone number, postal address, e-mail address.
- 9.1.1.3 The Contractor shall communicate the list of all persons in charge of the customer relationship management with the services of the Commission.
- 9.1.1.4 In case of Joint Tender, his members shall designate one contact person (Group leader) representing all the companies officially. In addition and if so requested by the Commission, each of those companies will provide a contact person to whom outstanding implementation issues could be addressed.
- 9.1.1.5 For on-site activities the Contract On-Site Coordinator will be the technical interface between NDU and the Contractor, he will act as technical coordinator of all the activities carried out within the scope of this contract.

9.1.2 *On the JRC-Ispira's side*

- 9.1.2.1 The principal JRC-Ispira interfaces for technical and administrative and overall supervision of the contract's execution are identified in the contract.
- 9.1.2.2 The JRC-Ispira Technical Responsible or his/her delegate will assign the Contractor's work to be undertaken by their either on-site or off-site staff.
- 9.1.2.3 The JRC-Ispira Technical Responsible of the contract may nominate one or more Deputy Technical Responsible in order to interface directly with the Contractor's staff on-site and off-site.

9.2 Meetings

- 9.2.0.1 The language during the meetings mentioned below shall be English.
- 9.2.0.2 The following on-site meetings shall apply for the contract (as minimum):
- Kick-Off meeting at the Ispira Site within 1 month by the contract entering into force in order to help the Contractor get a clear picture of the JRC-Ispira' contract expectations and goals, ensure that both parties have a common understanding regarding the terms and requirements of the contract, and how the contract's implementation will be reported and monitored, and address the roles, responsibilities and obligations of the parties (see §9.3 for details).
 - Preliminary meeting at the Ispira Site within 6 months from the Kick-Off meeting to review and agree all improvements of the project management system proposed by the PMAS Contractor (see §9.4.1 for details).

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- Monthly Progress meeting that shall take place regularly at JRC-Ispira site to review the corresponding Programme Status Summary or other deliverables being produced (see §9.4.3 for details).
- Quarterly Progress meetings that shall take place regularly at JRC-Ispira site to present the work done during the previous quarter and to review the corresponding Quarterly Reports and Risk Report or other deliverables being produced (see §9.3 and §9.4.4 for details).
- Working meetings at the Ispira Site to be defined individually on a case by case basis.
- Final Contract meeting that shall take place at JRC-Ispira site 1 month before the closure of the contract in which the contract implementation performance, from the viewpoints of both JRC-Ispira and Contractor, shall be addressed as part of the Closure Report (see §9.3).

- 9.2.0.3 Meetings may be arranged at short notice meaning that the contractor must be available within 5 working days.
- 9.2.0.4 For each meeting the contractor shall ensure the participation of the relevant Contractor's staff.
- 9.2.0.5 JRC-Ispira will prepare the agenda and the minutes of all the aforementioned meetings and distribute them within 3 working days before or after relevant occurrence.

9.3 Reporting

- 9.3.0.1 The language of the reports mentioned below shall be English.
- 9.3.0.2 An *"Initial Report"* including a description of the selection of the personnel, the criteria applied to select the personnel and the profiles of the personnel chosen for the first approval of the governance structure shall be delivered by the PMAS Contractor at least 10 working days before the kick-off meeting.
- 9.3.0.3 At least 10 working days before each Quarterly Progress meeting, the Contract Manager will provide a unique synthetic and comprehensive report called: *"Quarterly Report"*, summarising:
- Progress made and staff effort with relevant timesheets;
 - Identify milestones achieved and deliverables provided;
 - Individuate potential or encountered problems;
 - Tasks planned for the next quarter;
 - Status of the requests for action and/or corrective actions taken in the contract;
 - Resource usage;
 - Activities issues and risks.

The document shall also enclose a *"Deliverables Tracking Matrix"* which contains all planned and actual dates for all actions (delivery, review, etc.) related to all known (future, current and past) deliverables under the contract up to the concerned reporting period.

- 9.3.0.4 Additional reporting, on case by case basis, in the event of changes in the PMAS Contractor team's staff or in the governance structure.
- 9.3.0.5 A draft *"Closure report"* shall be submitted by the Contractor at least 10 working days before the date of the final contract meeting (see §9.2). This report shall summarise the results of the contract and present the final conclusions identifying recommendations for possible future improvements.

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9.4 Deliverables

- 9.4.0.1 The language of the deliverables mentioned below shall be English.
- 9.4.0.2 In principle the main type of deliverable to be provided by the Contractor within this Contract is documentation and digital files (i.e. Microsoft® Project 2010 outcomes).
- 9.4.0.3 The complete list of deliverables to be supplied in the course of this contract is the following:

Deliverable	Reference
Contract Quality Plan	§10.1
Contract Quality Control Plan	§10.2
Initial Report	§9.3
Project Management Tool outputs	§9.4.2
Programme Status Summary	§9.4.3
Quarterly Report	§9.3
Risk Report	§9.4.4
Preliminary Technical Note	§9.4.1
Programme Status Summary Work Instruction	§9.4.5
Closure Report	§9.3
Handover documentation	§9.7
Life Record Dossier	§9.4.6

– Table 9.4-1 –

- 9.4.0.4 Additional documentation – i.e. technical notes, parts of the aforementioned documents, etc. – shall be provided by the Contractor on specific request from JRC-Ispra.

9.4.1 Preliminary Technical Note

- 9.4.1.1 A preliminary technical note shall be produced and released by the PMAS Contractor at least 10 working days before the Preliminary meeting.
- 9.4.1.2 The document shall detail all improvements and/or additional functionalities or system changes envisaged by the PMAS Contractor on the current applied project and programme management system on the basis of his expertise and technical knowledge of this specific sector.
- 9.4.1.3 In particular the document shall highlight the criticality and/or lacks of the current systems faced together with the possible development areas and propose feasible and/or state-of-the-art solutions.

9.4.2 Project Management Tool outputs (Microsoft® Project files)

- 9.4.2.1 The Project Management Tool currently used to manage the D&WM Programme shall be upgraded to integrate cost and risks identified in the "Risk Report", implement likely improvements (see §9.4.1) and finally continuously kept up to date by the PMAS Contractor. The master plan of the D&WM Programme together with the project plans shall be developed accordingly.
- 9.4.2.2 As far as the project/programme schedule is concerned the following requirements apply:
- Initial/preliminary Gantt charts shall be prepared and published on the D&WM Project Management Platform by taking into account the following planning rules:
 - Define the schedule (tasks/milestones/duration) in accordance to the pertinent Project Brief;

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- Define links between tasks/milestones within the project (internal links);
- Define duration of the single tasks;
- Schedule individual tasks/milestones;
- Identify potential project external links (links with important milestones belonging to other projects/subprojects in the Programme WBS).
- Before publishing the initial/preliminary Gantt chart on the platform, the NDU Project Office shall verify that the Gantt chart is consistent with the planning rules and compatible with the other projects in the D&WM Programme.
- Successively the Gantt Charts shall be updated in accordance to the project/programme changes applied and/or the actual status of the projects.

9.4.3 Programme Status Summary

- 9.4.3.1 This is a fundamental document for NDU since it represents one of the most important tooling to be used by the latter to manage the D&WM Programme.
- 9.4.3.2 The objective of this document is to provide:
- Updates of the planning with respect to the schedule baseline;
 - Change requests implemented;
 - Performances and the progress status for the reference year of the D&WM projects with respect to their annual baseline schedule – pre-set through the Gantt charts reported on the respective Project Management Plan (PMP);
 - Possible risks which could be envisaged to occur during the forthcoming planning.
- 9.4.3.3 The document shall contain:
- Up-to-date Gantt charts (with the identified project summary task/subtasks and relevant milestones) of all the WBS projects plus one summarising the overall D&WM Programme;
 - Earned Value Analysis (EVA) data outcomes for each project as well as for the overall D&WM Programme, i.e.: CPI, SPI, etc.; method and details used shall be provided (i.e. weights assigned and reasons, origin of the data, project baseline reference, etc.);
 - References of the project baseline schedules used for EVA valuation;
 - Evidence of the possible change requests effects (i.e. driven by project changes and/or revised programme goals) occurred in the pertinent period;
 - Status of the existing interfaces/links between the D&WM projects, including details on the specific activity involved with the planned and the current expected date;
 - Critical path Gantt of the overall D&WM Programme together with the single Gantt chart of each of the ongoing projects;
 - A section containing:
 - List of achievements in the reference period;
 - Pending issues;
 - Justification of the schedule deviations;
 - Critical issues/risks (experienced or envisaged) which may affect or jeopardise the overall D&WM Programme with assumptions being made in this regard;
 - Possible delays with relevant impacts on other projects/programme and feasible recovery/corrective actions settlement;
 - Assessments on the results obtained by the EVA in terms of projects/programme performance and progress with forecasts of projects/programme performance problems.
- 9.4.3.4 The document shall be issued bi-monthly, at least ten days before the respective Monthly Progress meeting.

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9.4.4 Risk Report

- 9.4.4.1 The objective of this document is to provide an update of the "*Risk Report*" of the D&WM Programme already developed (in the form of excel sheets) by JRC-Ispra. In this regard a specific Risk Register template and Risk Mitigation Action List template provided by the NDU Programme Office shall be used (see Ref. [8]).
- 9.4.4.2 The document shall report the updated status, rating and prioritization of all the risks which may affect each WBS project as well as the overall D&WM Programme. For each of the aforementioned risks the actions list to mitigate or eliminate the risks shall also be included.
- 9.4.4.3 The time behaviour of each risk shall also be reported as well as a section including the list of all the risks retired⁶. When a risk is retired, the PMAS Contractor, by reviewing the history of the risk, will include any lessons learned regarding the risk management processes used.
- 9.4.4.4 The report shall be revised continuously, through the collaboration of the risk owners who provide the actual status of relevant risks, updated and released at least 10 working days before each Quarterly Progress meeting.

9.4.5 Programme Status Summary Work Instruction

- 9.4.5.1 The objective of this document is to provide an overall description of the tool used for performing programme and project management tasks including: the specific features that have been pre-set on the project management platform of the JRC-Ispra site's D&WM Programme to prepare the initial Gantt charts and successively to track the physical progress of the projects – in terms of deviation, respectively from the project baseline schedule and from the project baseline budget – and to report their physical progress status to the programme management.
- In particular the following data shall be reported:
- Assumptions made;
 - Origin of data selected;
 - Weights assigned with relevant rationale;
 - Input reference for forecast application, etc.
- 9.4.5.2 An updating of the document shall be released by the PMAS Contractor at the project handover (see §9.7) if modifications had been applied to the tool since its first delivery.

9.4.6 Life Record Dossier

- 9.4.6.1 The Contractor shall compile a Life Record Dossier of the contract. The Contract Life Record Dossier is a collection of all relevant documents issued by the Contractor during the whole life of the contract to be release in a unique document/file in accordance to the following index:
- **Section 1 Contractual documentation**
Contract & Contractual documentation (i.e. services contract with annexes, amendments to contract, technical specification, revision requests)
 - **Section 2 Quality Assurance**
Quality Assurance documentation (i.e. Project Quality Plan, Contract Quality Control Plan), customer audit records, minutes of meeting, leading correspondence, etc.
 - **Section 7 Provision of services**
Various Programme Status Summary, various Risk Report, Programme Status Report Work Instruction, Data handling records

⁶ Risks whose ability to impact the project has elapsed, or whose residual impact on the project is deemed to have reached an acceptable level

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- **Section 9 Review & verification**
Preliminary Technical Note, Review, Verification & Validation reports references (if any)
- **Section 10 Deviations/Non-conformities & Changes**
Non-Conformity reports, Change requests references (if any)
- **Section 13 Personnel files**
Personnel files staff, special training/certification (if any), etc.
- **Section 14 Progress reports**
Initial Report, various Monthly Progress meeting, Closure report

9.4.6.2 The Contract Life Record Dossier shall be kept and maintained on-site. JRC-Ispra reserves the right to inspect, at any time, the content of the Contract Life Record Dossier. The Contractor shall hand in the complete Contract Life Record Dossier in two paper copies and in three electronic copies at least 10 working days before the Final Contract meeting.

9.5 Schedule

The schedule of the activities of the contract shall comply with the following project timeline:

PROJECT TIMELINE			
SCHEDULE	MILESTONES		
	Meeting		Deliverable
	Single	Recurrent	
T_0	Kick-off meeting	N.A.	Contract Quality Plan (update if applicable) ⁷ Contract Quality Control Plan ⁷ Initial Report ⁸
$T_{Min} = [T_0 + (n)mo]$	N.A.	Monthly Progress meeting	Project Management Tool outputs ⁸
$T_{lin} = [T_0 + (2xn)mo]$	N.A.	Monthly Progress meeting	Programme Status Summary ⁸
$T_{Qin} = [T_0 + (3xn)mo]$	N.A.	Monthly Progress meeting/ Quarterly Progress meeting	Quarterly Report ⁸ Risk Report ⁸
$T_{P1} = [T_0 + 6mo]$	Preliminary meeting	N.A.	Preliminary Technical Note ⁸
$T_{P2} = [T_0 + 1yr]$	N.A.	N.A.	Programme Status Report Work Instruction
$T_F = [T_0 + 2yr - 1mo]$	Final Contract meeting	N.A.	Closure report ⁸ Handover documentation ⁸ Life Record Dossier ⁸

– Table 9.5-1 –

9.5.0.1 Delivery deadlines shall be met, unless properly justified by the PMAS Contractor and accepted by JRC-Ispra.

9.6 Documentation Requirements

9.6.0.1 As far as the documentation is concerned, JRC-Ispra requires that all documents delivered within this contract shall pass through an adequate and exhaustive internal control process managed by the Contractor. In particular it is required that any document before being officially released, once issued by the author, shall be verified from a technical and quality

⁷ To be released within 10 working days after the Kick-Off meeting

⁸ To be released 10 working days before relevant meeting date

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assurance point of view, and approved by the Contract Manager, through signature and date.

- 9.6.0.2 Unless differently agreed previously by the parties, all the documents shall be released by the Contractor to NDU exclusively in a *"Complete"* version, meaning that all the aspects are covered, each part is entirely finalised and the whole document is in a definitive *"Ready for approval"* status and no further contribution from NDU is necessary.
- 9.6.0.3 Moreover, the documents released by the Contractor in the frame of this contract shall be subject to JRC-Ispra – or his delegate – review and provisional acceptance. In case comments are raised by JRC-Ispra, these shall be processed and integrated in the final issue of the document.

9.6.1 Documents settings

- 9.6.1.1 All documentation (written or drawn) submitted to JRC-Ispra shall be in English except any other different instruction from JRC-Ispra Technical Responsible.
- 9.6.1.2 All technical documentation shall bear a JRC-Ispra unique identifying number together with any corresponding Contractor number.
- 9.6.1.3 All parameters within the documentation (text or drawing) shall be in SI units.
- 9.6.1.4 Where applicable, the Contractor shall prepare all documentation (text or drawings) in paper format agreed with JRC-Ispra. In general, the documents shall be prepared in ISO A4 format, and drawings in ISO A4, A3 and/or A0 format.
- 9.6.1.5 All prepared documentation (text or drawings) shall be formatted to allow direct viewing or importing without loss of format into the following software:
- Microsoft® Office 2010;
 - Microsoft® Project 2010 ETM (update to new release in progress);
 - Autodesk® Autocad 2013;
 - Adobe® Acrobat.
- 9.6.1.6 Apart from the above, all documentation shall also be provided in Adobe Portable Document Format (PDF) taken directly from a prepared document including signatures and dates of approval. The pdf file name will include a date string in the form *"dd.mm.yyyy"*. Similarly, the project life-records will also be provided in a pdf format.
- 9.6.1.7 Where used, digital photographs shall be provided in Joint Photographic Experts Group file format (JPEG) and digital videos shall be provided in Moving Picture Experts Group file format (MPEG).
- 9.6.1.8 Any proposed deviation from the above documentary specifications will be submitted by the Contractor to JRC-Ispra for approval. JRC-Ispra will specify any conditions of acceptance if the concession is granted.

9.6.2 Acceptance criteria

- 9.6.2.1 A deliverable will be accepted by JRC-Ispra if the following conditions are met:
- 1) It satisfies the scope of the work described in this document, and it contains the content described in the deliverables section;
 - 2) It is of good quality (i.e. not presenting any typing error, missing mandatory reference data, unclear and/or misleading parts, unequal format, etc.);
 - 3) All relevant comments (if any) from JRC-Ispra have been duly processed and implemented.

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9.7 Handover

- 9.7.0.1 In order to ensure continuity of service, the PMAS Contractor shall prepare a complete handover documentation and contribute pro-actively to a timely and smooth handover of the services to NDU, in case of termination or upon expiry of the contract.
- 9.7.0.2 The following deliverables shall be provided to NDU at least 10 working days before the Final Contract meeting:
- Closure report covering the whole period (see §9.3);
 - Archives and all associated information according to specifications defined by NDU;
 - Any confidential data in physical files (paper or electronic) that has been provided to it or has otherwise come into its possession during execution of the work;
 - A complete set of the data handling records developed and used to deliver the required services.
- 9.7.0.3 Apart from the above mentioned deliverables, the contractor shall destroy any security critical information and piece of software that was provided by JRC-Ispra for the purpose of accessing servers at the JRC-Ispra during the execution of the contract. This may include sensitive information, passwords, encryption keys, personal data of people involved in the project, firewall and router configuration files, etc.

9.8 Risk and Problem Management

- 9.8.0.1 The Contractor shall report any risk of technical nature that may compromise the delivery of the service. If the identified risks are of financial or contractual nature, the Contractor shall report to JRC-Ispra management.
- 9.8.0.2 Examples of risks could be:
- Not sufficient staff resources for the execution of the contract;
 - Not sufficient security;
 - Not sufficient knowledge or experience in specific domains;
 - Contractual problems with partners or subcontractors;
 - Change in the ownership or business activities of the company;
 - Requested quality procedures not followed;
 - Non availability of the person at the start of the contract;
 - Planned absence during the execution of the contract;
 - Necessary replacement;
 - Expected delivery delays;
 - Necessary infrastructure not available.
- 9.8.0.3 For each risk identified, the Contractor shall inform JRC-Ispra of the strategy, actions or contingency plan he will put in place.
- 9.8.0.4 If a service management problem occurs (for example, no response to the requests, incorrect reporting, leaving of staff, delays in invoicing), the Contractor shall report to JRC-Ispra about the measures he will put in place to solve the problem (including the delays). JRC-Ispra will monitor the progress made by the Contractor.

10 QUALITY

- 10.0.0.1 The Quality Management System (QMS) of NDU conforms to the Quality Management System Standard UNI EN ISO 9001:2008/2015. This certification is valid for the planning, design and implementation of the D&WM Programme of the JRC-Ispra' nuclear facilities.
- 10.0.0.2 It is required that the Contractor has a valid DIN-EN-ISO 9001 certification relevant to the contract at the time set out for the submission of tender.

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- 10.0.0.3 In order to both cope with the NDU's Quality Assurance (QA) Programme and evaluate the Contractor's compliance to requirements, JRC-Ispira will audit annually the Contractor during the execution of the contract.
- 10.0.0.4 The Contractor shall identify to JRC-Ispira a management representative with the responsibility for and authority to resolve QA issues.
- 10.0.0.5 It is required that the Contractor, in the frame of the PMAS contract, will provide JRC-Ispira with a Contract Quality Plan (CQP) and a Contract Quality Control Plan (CQCP) as described in the following sections.
- 10.0.0.6 In case the aforementioned documents make reference to specific Contractor's quality documentation, this latter shall also be provided to JRC-Ispira. Moreover, in order to verify the adequacy of the released quality deliverables any modification applied to the specific Contractor's quality documentation shall be previously agreed with JRC-Ispira.
- 10.0.0.7 In case of Joint Tender, a unique quality system shall be adopted by all members and any quality document issued during the contract (e.g. CQP, CQCP) shall make reference to it.

10.1 Contract Quality Plan

- 10.1.0.1 The Contractor or the Joint Tender shall provide a Contract Quality Plan with the tender offer conforming to the UNI EN ISO 9001:2008/2015 requirements.
- 10.1.0.2 The Contract Quality Plan is a document that collects in a structured way the list of documents, objective evidences, records, and in general all the rules that a Contractor applies to assure fulfilment of contractual requirements.
- 10.1.0.3 The CQP (as defined in ISO 9000:2005, §3.7.5 or in ISO 9000:2015, §3.8.9) shall be prepared in compliance with ISO 10005:2005, which details all the elements to deal with in a quality plan.
- 10.1.0.4 The CQP shall describe the Quality Management System assuring performance and fulfilment of all requirements of this contract through a clear definition of processes' quality characteristics, processes' traceability, preventive actions, corrective actions.
- 10.1.0.5 Main topics of the Contract Quality Plan are:
- Contract responsibility;
 - Scope of the Joint Tender (if applicable), to substantiate the reasons and terms for participating to the tender as a consortium;
 - Deliverables definition;
 - Process control (design, execution, assistance);
 - Resources and subcontractors control;
 - Management of quality audits;
 - Management of contractual non-conformities and their systematic correction.
- 10.1.0.6 The document shall include, as minimum, the following topics:
- Complete list of the existing procedures, operating instructions and in general all the rules that the supplier will follow to ensure all contractual aspects with JRC-Ispira;
 - Organisational chart of the framework team with roles, responsibilities and functional structure;
 - Process organisation;
 - Activities and delivery plan;
 - Qualifications and responsibilities in the development of the activities;
 - Reporting and recording systems management;
 - List of major subcontractors (if any);
 - Specific procedures used by the supplier for its tender process and reviews;

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- Procedures of design, execution and control (if applicable);
- Procedures of management of changes and problems;
- Auditing programme (internal and external planning);
- Risk identification and assessment.

10.1.0.7 The CQP will be discussed, clarified and agreed on during the Kick-Off meeting. If necessary, the Contractor shall revise the CQP in order to reflect conclusions of the Kick-Off meeting. The revised CQP shall be submitted to JRC-Ispra for acceptance not later than 10 working days after the meeting.

10.1.0.8 The CQP shall be followed up also during the implementation of the contract and, if necessary, revised in order to reflect the actual evolution of the PMAS services. The revised CQP shall be submitted to JRC-Ispra for acceptance.

10.2 Contract Quality Control Plan

10.2.0.1 The Contractor shall also develop and present a Contract Quality Control Plan to demonstrate an appropriate level of quality control that will cover the overall contract activities. The CQCP is an evolving document usually initiated by JRC-Ispra and completed with the Contractor. The CQCP shall identify all relevant contract activities to be subjected to quality control and for each activity the plan shall report:

- Description of all the activities to be carried out during the project (e.g. delivery, meetings, with the related controls;
- Reference documents (specifications, drawings and procedures, etc.);
- Nomenclature of verifications done;
- Function responsible for monitoring the quality of execution;
- Date of verifications;
- Outcomes of verifications.

10.2.0.2 The CQCP shall be provided at least 10 working days before the Kick-Off meeting and discussed, clarified and agreed in that instance. If necessary, the Contractor shall review the CQCP in order to reflect conclusions of the Kick-Off meeting. The revised CQCP shall be submitted to JRC-Ispra for acceptance not later than 10 working days after the meeting.

11 GENERAL CONDITION FOR CONTRACTING

11.1 Contract Performance

11.1.0.1 The Contractor shall be entirely and solely responsible of the proper execution of the work in compliance with the present technical specification.

11.1.0.2 The Contractor shall be responsible for the correctness of all assessments/calculations carried out in the frame of this Contract. JRC-Ispra assumes responsibility for the data supplied by JRC-Ispra provided they are correctly used.

11.2 Contractor's Obligations

11.2.0.1 The Contractor cannot decline his availability to carry out any of the services required by JRC-Ispra within the provisions of the PMAS contract.

11.2.0.2 With the exception of the input data listed in §8.5.1, the Contractor is required to provide all resources and services necessary for the completion of the work.

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11.3 Exclusion of Conflict of Interest

- 11.3.0.1 Given the nature of the service, conflicts of interest have to be avoided between the PMAS Contractor (including his subcontractors, if any) and other D&WM Programme contractors. In this regard it is stated that the successful operator (or parts of the same industrial and/or commercial group or organisation) for the of the PMAS contract, during the course of the contract execution, cannot participate in any other tenders dealing with the implementation of the D&WM Programme, if not specified differently in the individual future call for tender.

11.4 Declaration of confidentiality

- 11.4.0.1 A general declaration of confidentiality signed by the PMAS Contractor shall be provided by the latter to JRC-Ispra. It is the Contractor's responsibility to ensure signature of the declaration of confidentiality by its subcontractors (if any) and to transmit it to the relevant JRC-Ispra services.

12 DEFINITION OF STANDARD CAPABILITIES

12.1 Project Management Scheduling Engineer / Contract On-Site Coordinator

- 12.1.0.1 Responsibilities (in addition to what already specified above):

- Project management including proposals for project strategies, planning, definition of tasks and deliverables, review of project deliverables, risk analysis and management, status reports, problem reporting and management systems, follow up and organization.
- Estimate costs, timescales and resource requirements for the successful completion of each project to agreed terms of reference.
- Prepare and maintain project plans and tracks activities against the plan, provide regular and accurate reports.
- Monitor costs, timescales and resources used, and take action where these deviate from agreed tolerances. Ensure that delivered systems are implemented within these criteria.
- Manage the change control procedure gaining agreement for revisions to the project from project stakeholders.
- Work closely with NDU Project Office on delivering status reports and/or specific management assessments;
- Develop and ensure its proper implementation of the Earned Value Management approach, in close relation with NDU Project Office, defining the appropriate settings and tracking parameters.
- Prepare a draft ready for issue of the "Programme Status Summary "document and the other deliverables specified in § 9.5.

- 12.1.0.2 Qualifications and experience required:

- 15 years of work in project management at European or international level within a technical environment similar or equivalent to the one of NDU, such as but not limited to the fields: Civil engineering, Petroleum engineering, Aerospace engineering and Chemical engineering, including 5 years of proven experience in project planning and analysis;
- At least 3 complete projects in the role as project manager and/or responsible for the project/programme planning. In the CV a reference must be drawn up for each of the project, stating the following information as a minimum:
 - name of the project;

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- site address of the project;
- dates (month-year) of the study phases and implementation phase;
- value/budget for the works of the project;
- precise role/s under the project;
- assignments carried out in person.
- Program/Project Management Professional certification or equivalent released by an internationally recognized institute and/or training courses attended relevant to the aforementioned specific field;
- At least 3 years' experience of Microsoft® Project.

12.2 Project Management Engineer (Junior) / Programme & Projects Administrative and Scheduling Assistant

12.2.0.1 Responsibilities (apart from what already specified above):

- Work with the project officer for gathering and drafting technical elements for claim aspects and cost assessments;
- Work with the projects responsible for gathering and drafting technical elements for plan and schedule assessments;
- Process the schedule and budget data and implement them continuously in the Project Management Tool to ensure an up to date status of the programme/projects.

12.2.0.2 Qualifications and experience required:

- Experience in budget and schedule follow up (at least 3 years);
- Knowledge of project management topics (from work experience or training courses);
- At least 2 years' experience of Microsoft® Project ETM or similar scheduling tools.

12.3 Risks analyst

12.3.0.1 Responsibilities (in addition to what already specified above):

- Risk analysis and management, status reports, problem reporting and management systems, follow up and organization.
- Estimate financial impact of identified risks.
- Prepare and maintain the risk register and risk mitigation action list.
- Monitor evolution of risks.
- Organise and chair quarterly meetings with Unit management to monitor the evolution of the Programme risks.
- Organise and chair quarterly meetings with Unit project leaders to monitor the evolution of the Project risks.
- Prepare a draft ready for issue of the "Risk Report" document.

12.3.0.2 Qualifications and experience required:

- 10 years of work in projects/programmes risk analysis at European or international level within a technical environment similar or equivalent to the one of NDU, such as but not limited to the fields: Civil engineering, Petroleum engineering, Aerospace engineering and Chemical engineering;
- At least 3 complete projects as responsible for the risk analysis of the project/programme planning. In the CV a reference must be drawn up for each of the project, stating the following information as a minimum:
 - name of the project;
 - site address of the project;
 - dates (month-year) of the study phases and implementation phase;

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- value/budget for the works of the project;
- precise role/s under the project;
- assignments carried out in person.
- Program/Project Management Professional certification or equivalent released by an internationally recognized institute and/or training courses attended relevant to the aforementioned specific field.