



TENDER SPECIFICATIONS

Part 2 - Technical Specifications

Framework Contract for Maintenance services of JRC's emission test facilities in the VELA laboratory Lot 1: Safety related systems

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Procurement procedure No.	JRC/IPR/2020/OP/1526
Annex	Description of the facility

European Commission

Joint Research Centre.

Via Enrico Fermi, 2749. 21027 Ispra (VA), Italy

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1 INTRODUCTION

1.1 The JRC ISPRA

The Joint Research Centre is the European Commission's science and knowledge service. Our researchers provide EU and national authorities with solid facts and independent support to help tackle the big challenges facing our societies today.

JRC headquarters are in Brussels and JRC has research sites in five Member States: Geel (Belgium), Ispra (Italy), Karlsruhe (Germany), Petten (the Netherlands) and Seville (Spain).

JRC work is largely funded by the EU's budget for Research and Innovation. JRC creates, manages and makes sense of knowledge, delivering the best scientific evidence and innovative tools for the policies that matter to citizens, businesses and governments.

Established in 1960 as a nuclear research site, today it is considered as one of Europe's leading research campuses with many laboratories and unique research infrastructures.

As the European Commission's scientific service, the JRC addresses key societal challenges, providing EU policy makers with independent, evidence-based scientific and technical support required for EU policy making.

For more information regarding JRC mission, organisation, activities, competencies and deliverables refer to: <https://ec.europa.eu/jrc/en>.

1.2 The context of the procurement

The Sustainable Transport Unit of the Directorate for Energy, Transport and Climate is involved in research activities in the field of pollutant emissions from mobile sources and in particular from road vehicles.

In addition, the Regulation (EU) 858/2018 has introduced a mandatory market surveillance to verify the compliance of vehicles with the relevant requirements concerning both exhaust emissions and safety.

The JRC is the Commission's service that will carry out the compliance verification according to the Article 9 of that Regulation.

These activities are strongly based on the Vehicle Emission Laboratory which allows testing all kinds of vehicles and engines. The VELA laboratory comprises different emission test facilities used for different purposes. Each facility has its own characteristics and is dedicated to specific vehicles/engines testing. In general, each test facility consists of a roller bench or engine test bed, emissions sampling and measuring equipment, alarm and safety systems and air/fuel conditioning systems. In addition, the VELA laboratory is equipped with several stand-alone measuring systems.

In order to ensure that the facilities are fully operational as well as to guarantee the accuracy and reliability of the data generated, it is essential to properly maintain, check and calibrate all the systems of which the facilities consist of and all the stand-alone measuring instrumentation.

One essential aspect is that specific tests will have to be accredited according to the ISO/IEC 17025 standards. For this reason, special requirements in terms of calibration and traceability have to be met.

1.3 Scope of the contract

The purpose of this procurement procedure is to establish framework contract for preventive and corrective maintenance services for the facilities and the instruments of VELA laboratory as well as for specific technical assistance as described in these specifications.

The current lot 1 shall cover the **preventive and corrective maintenance of safety related systems as described below.**

For specifications, standards, brand names, processes or formats named in these specifications unless otherwise specified equivalent objects shall be accepted. It shall be for the contractor to justify this equivalence.

The following services may be ordered during the FWC execution:

2 PREVENTIVE MAINTENANCE SERVICE

2.1 General description

The preventive maintenance service for the VELA laboratory is intended as periodic interventions on the facilities/instruments to ensure their proper functioning and to minimize the risks of failures due to the wear of components as well as for the calibration of the relevant measuring devices.

The preventive maintenance shall cover also all the safety related systems (sensors, fire extinguishers, alarms...) that need to be regularly checked as prescribed by the relevant legislation.

This contract will cover specific safety related parts and components of the facilities VELA 1, VELA 2, ~~VELA 3~~ [SHED](#), VELA 5, VELA 6, VELA 7, VELA 8, VELA 9 and specific equipment and working areas.

The preventive maintenance includes visual inspections, cleaning, functional checks, calibrations, replacement of consumable parts and updating of documentation.

Due to the fact that each facility/instrument requires specific interventions, the preventive maintenance service for VELA will be divided into several different services tailored for each facility/instrument or group of them.

2.1.1 *Specific requirements concerning quality assurance system/calibration*

All calibration work and whenever relevant, shall be done in accordance with manufacturer recommendations and in full compliance with ISO 9001:2015 (or equivalent), in particular but not limited, to clause 7.1.5.2 of the same standard and JRC procedures. Calibrations shall be supported with certificates bearing a unique reference number, a calibration date, and identification of the person authorizing the report, details of the measurements performed and the uncertainty (when applicable), the pass/don't pass status and the reference of the calibration procedure used. All calibrations have to be carried out with reference instruments, mixtures, gas (if applicable) that are traceable to National standards (or equivalent), metrological traceability is a specific requirement of all calibration operations. Their details, their certificate numbers and calibration due date shall be reported on the calibration certificates.

Herein and from now on calibration shall be intended as every operation that, under specified conditions, in a first step, establishes a relation between the quantity values with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties and, in a second step, uses this information to establish a relation for obtaining a measurement result from an indication in accordance with what reported in International Vocabulary of Metrology (VIM), point 2.39 (6.11).

All equipment calibrated shall have a label attached indicating calibration status and calibration date.

2.1.2 *Maintenance Planning*

The contractor, in two weeks after the signature of the FWC, will have to submit to the JRC for approval a Master Plan of the preventive maintenance for all the supplies included in the FWC . The document will have to include the following elements:

- a) A plan for each facility of the interventions required by the applicable legislation on safety and environment protection (i.e. check of sensors and alarm monitoring systems and leak check for the equipment containing green-house gas) as described in the next chapters.
- b) A plan for the preventive maintenance of the specific components of the facilities as described in the present technical specifications.

This Master Plan will include information related to the transport time of the equipment (if relevant), and will be reviewed upon request from JRC whenever necessary.

The JRC will in any case decide, with a communication to be provided in due time, whether or not to proceed with the interventions listed in the Master Plan on the basis of factors like how intensively a facility has been used or the urgency of specific activities.

The Master Plan of the preventive maintenance will be updated if requested by the contracting authority or following legislative modifications or at contractor initiative.

The contracting authority will confirm by email the acceptance of the Master Plan or the individual plans.

2.2 Specific maintenance service

This chapter describes the systems that are subject to checks and maintenance operations relevant for safety and environment protection prescribed as defined by specific pieces of legislation.

The frequency of these checks and interventions are also specified by the applicable norms specified in the tables.

2.2.1 ID 1 – Preventive Maintenance services for Fire extinguisher system

Items	General requirements
Fire extinguisher system (hand-held fire extinguishers are not in the scope of the service)	<p>The maintenance will have to be performed according to the Italian norms or equivalent ones:</p> <ul style="list-style-type: none"> – DPR 37/98 Art. 5 – DPR 547/55 Art. 34 – D.M. 10 March 1998 Art. 4. – DPR151-2011 <p>In particular the service shall include:</p> <ul style="list-style-type: none"> • cleaning of Y filters on water net • check of on-off valves • check of electric accessories connected • global check of raiser and of auxiliary compressor for dry sprinklers • check of sprinkler head test <p>The Contractor must also check the complete signal chain up to the automation system and all foreseen reactions.</p> <p>The fire extinguisher system of VeLA 9 use HFC 227ea as fire suppression gas. In this case it has to be checked and certified also the conformity to :</p> <ul style="list-style-type: none"> – EN 15004-1 – DPR 547/55 Art. 34

Service to be ordered	Description of the Fire extinguisher system
<i>ID1.1. Preventive Maintenance services for Fire extinguisher system Vela 1</i>	<p>Dry bulb water sprinkler system</p> <p>Brand : Central</p> <p>Type: AT67</p> <p>Diameter: 3”</p>
<i>ID1.2. Preventive Maintenance services for Fire extinguisher system Vela 2</i>	<p>Dry bulb water sprinkler system</p> <p>Brand : Minimax</p> <p>Type: TMX</p> <p>Diameter: 3”</p>

<i>ID1.3. Preventive Maintenance services for Fire extinguisher system Vela 5</i>	Wet bulb water sprinkler system Brand : Gem Type: F2001 Diameter: 2.5"
<i>ID1.4. Preventive Maintenance services for Fire extinguisher system Vela 6</i>	Wet bulb water sprinkler system Brand : Victaulic Type: FIRE LOOK Diameter: 1.5"
<i>ID1.5. Preventive Maintenance services for Fire extinguisher system Vela 7</i>	Dry bulb water sprinkler system Brand : Victaulic Type: FIRE LOOK NXT 768 Diameter: DN 100
<i>ID1.6. Preventive Maintenance services for Fire extinguisher system Vela 8</i>	Dry bulb water sprinkler system Brand : Tyco Type: FTP DPV-1 Diameter: DN 100
<i>ID1.7. Preventive Maintenance services for Fire extinguisher system Vela 9</i>	The fire extinguisher system of VeLA 9 use HFC 227ea as fire suppression gas stored in 12 cylinders (42 bars at 20 C for a total of Kg. 2.136 of gas) and activated by S81-HS alarm unit

2.2.2 ID 2 - Preventive Maintenance services for Fire detection and alarm system

Items	General requirements
Fire alarm system	<p>The maintenance will have to be performed according to the Italian norms or equivalent ones:</p> <ul style="list-style-type: none"> – DPR 37/98 Art. 5 – DPR 547/55 Art. 34 – D.M. 10 March 1998 Art. 4. – DPR151-2011 <p>In particular the service shall include the checking of the proper functioning of the alarm system.:</p> <p>The Contractor must also check the complete signal chain up to the automation system and all foreseen reactions.</p>

Service to be ordered	Description of the detectors
<i>ID2.1. Preventive Maintenance services for detectors Vela 1</i>	N°3 flame detectors GL91A Scab model (2 in test cell + 1 in control room)
<i>ID2.2. Preventive Maintenance services for detectors Vela 2</i>	N°2 flame detectors FIAMMA UV Scame model.

<i>ID2.3. Preventive Maintenance services for detectors Vela 6</i>	N°1 flame detectors model IR FLAME DETECTOR RIV 601F CONTROL LOGIC.
<i>ID2.4. Preventive Maintenance services for detectors Vela 5/6 Analyzer room</i>	N°2 flame detectors model FD-D1001-1 UV FLAME DETECTOR
<i>ID2.5. Preventive Maintenance services for detectors Vela 7</i>	N°1 flame detector model o UV 20/20 U Sharpe Eye
<i>ID2.6. Preventive Maintenance services for detectors Vela 8</i>	N°1 flame detector model UV-IR 40/40 L Sharpe Eye
<i>ID2.7. Preventive Maintenance services for detectors Building 49A</i>	N°2 flame detector model TALENTUM 16511 IR FLAME DETECTOR

Service to be ordered	Description of the alarm unit
<i>ID2.8. Preventive Maintenance services for alarm unit Vela 1</i>	Central unit SCAME sistemi C20
<i>ID2.9. Preventive Maintenance services for alarm unit Vela 2/3</i>	Central unit SCAME sistemi C20
<i>ID2.10. Preventive Maintenance services for alarm unit Vela 5/6/officina</i>	Central unit SCAME sistemi C20
<i>ID2.11. Preventive Maintenance services for alarm unit Vela 7</i>	Central unit NOTIFIER sistemi AM-2000 with ERONET graphics
<i>ID2.12. Preventive Maintenance services for alarm unit Vela 8</i>	Central unit SCAME sistemi S81-HS with IRIDE graphics
<i>ID2.13. Preventive Maintenance services for alarm unit Vela 9</i>	Central unit SCAME sistemi S81-HS
<i>ID2.14. Preventive Maintenance services for alarm unit Building 49A</i>	Central unit SIGMA XT
<i>ID2.15. Preventive Maintenance services</i>	Central unit SCAME sistemi C20

for alarm unit Chemical lab. Building ED 23	

2.2.3 ID 3 –Preventive Maintenance services for Toxic or flammable gases monitoring system

Items	General requirements
Alarm monitoring system and Emergency controlling unit	<p>The maintenance will have to be performed according to the norms:</p> <ul style="list-style-type: none"> – D.M. 10/03/98 art.4 – UNI 9795 – CEI 64-8/6 <p>• Check of the correct operation of the following sensors:</p> <ul style="list-style-type: none"> – Toxic gas – Explosive gases – Fire <p>The Contractor must also check the complete signal chain up to the automation system and all foreseen reactions.</p> <p>If there is the need to replace sensors, these will have to be quoted separately (see corrective maintenance)</p>

Service to be ordered	Description of the sensors
ID3.1. Preventive Maintenance services for sensors Vela 1	3 x CO sensors - 2x HC sensors - 2x sensors NO2 – 2x H2 sensors - 2x LPG sensors – 2x CH4 sensors Brand General I.T.TX 401L- Sensitron VSG AD H2
ID3.2. Preventive Maintenance services for sensors Vela 2	3 x CO sensor - 7x HC sensor - 2x sensori No2 – 2x H2 sensor - 4x LPG sensor – 2x CH4 sensor Brand General I.T.TX 401L- General I.T. SY1L Sensitron VSG AD H2/CO
ID3.3. Preventive Maintenance services for sensors Vela 5	2 x CO sensor - 2x HC sensor – 8x CH4 sensor Brand General I.T.TX 401L
ID3.4. Preventive Maintenance services for sensors Vela 6	1 x CO sensor – 6x H2 sensor - Brand General I.T.TX 401L- Sensitron VSG AD H2/CO – Oldham OLCT60A
ID3.5. Preventive Maintenance services for sensors Vela 7	5 x CO sensor - 2x HC sensor - 5x H2 sensor - 2x LPG sensor – 2x CH4 sensor 6x sensori R507 BrandGeneral I.T.TX 401L- General I.T. SY1L Sensitron VSG AD H2/CO- Murco – Drager Politron TX/2xPEX
ID3.6. Preventive Maintenance services for sensors Vela 8	5 x CO sensor - 2x HC sensor - 5x H2 sensor - 2x LPG sensor – 2x CH4 sensor 2x sensori No2 4x sensori R507 Brand Sierra monitor 5100-02-IT Detcon DM-700 Murco Drager POLYTRON 8000

<i>ID3.7. Preventive Maintenance services for sensors Vela 9</i>	1x CO sensor - 1x HC sensor - 1x H2 sensor - 1x CH4 sensor –1x sensor NO2 Brand CROWCON XGARD
<i>ID3.8. Preventive Maintenance services for sensors Lab.chimico ED 23</i>	1x sensor H2 MSA Rg3
<i>ID3.9. Preventive Maintenance services for sensors Flammable gas detection system mobile</i>	3x sensors H2/CH4 with aspiration system + 1x internal explosive sensor Brand General I.T.TX 401L
<i>ID3.10. Preventive Maintenance services for sensors Building 69 A Officina</i>	3x sensor H2 – 2x sensor CH4 – 2x sensor GPL – Oldham OLCT60A
<i>ID3.11. Preventive Maintenance services for Portable gas detector MOVE nero</i>	1x sensor CH4 – 1x sensor CO – 1x sensor O2 – 1x sensor NO2 Altair 5X MSA
<i>ID3.12. Preventive Maintenance services for Portable gas detector MOVE blu</i>	1x sensor CH4 – 1x sensor CO – 1x sensor O2 – 1x sensor NO2 Altair 5X MSA

2.2.4 ID 4 –Preventive Maintenance services for Emergency light, power cabinet and UPS

Items	General requirements
Emergency lighting	<ul style="list-style-type: none"> • The maintenance will be performed according to the norm CEI 11222: (twice per year) • General check • Functionality check • Battery autonomy check –
Power cabinet	<ul style="list-style-type: none"> • Terminal boards tightening • Bus bars tightening • Security lighting check • Check of the functionality of the differential switches • Insulation check • Continuity check • Impedance check (for the circuits without differential switches) • The maintenance will have to be performed according to the norms: <ul style="list-style-type: none"> – DPR 547/55 art.267 – art.374 – DLGs 626/94 art.3 – Law n.46 ofl 05/03/1990 art.10

	<ul style="list-style-type: none"> – CEI 64-8/6 – CEI 64-14
UPS	<ul style="list-style-type: none"> • Terminal boards tightening • Dust blowing and clening • Battery check (charging and discharging phase) • Electrical parameters check • Functionality check of capacitors and

Service to be ordered	Description of the emergency lights or UPS
<i>ID4.1. Preventive Maintenance services for emergency lights Vela 1</i>	N°1 Hydro em. 1X18 W + N°1 Beghelli GL626A-8SE1P 1x8 W
<i>ID4.2. Preventive Maintenance services for emergency lights Vela 2</i>	N°4 emergency lights 945099 1x58 W NORKA HAMM
<i>ID4.3. Preventive Maintenance services for emergency lights Vela 5</i>	N°2 emergency lights FL-0865 CMC ATEX
<i>ID4.4. Preventive Maintenance services for emergency lights Vela 6</i>	N°1 emergency light Vela 6 STAHL
<i>ID4.5. Preventive Maintenance services for UPS Vela 7</i>	N°1 EXIWAY POWER SCHNEIDER
<i>ID4.6. Preventive Maintenance services for UPS Vela 8</i>	N°4 DISANO Lamps 2X58W FORMA
<i>ID4.7. Preventive Maintenance services for UPS Vela 9</i>	N°1 UPS SOCOMEC MASTERYS MC 30 KvA

2.2.5 ID 5 –Preventive Maintenance services for underground storage fuel tanks (2 tanks)

Items	General requirements
Underground tanks	<p>Double wall underground fuel storage tanks, are equipped with a fuel leakage monitoring system.</p> <p>The system continuously monitors by a level switch connected to a PLC , the level of control liquid into the tank inter-space.</p> <p>Periodic checks shall include:</p> <ul style="list-style-type: none"> - Check of proper functioning of the monitoring system and aalarm activation - Check of electrical and mechanical connections - Check the level switch functionality, - Check of the feed back signal to the PLC, - Check and report the control liquid level - If needed record the quantity of control liquid

If the preventive maintenance services are required for a supply which is under of the scope of this contract and the Annex II of the FWC does not includes the unitary price, the contracting authority may ask for an offer and subject to the acceptance, may order directly the service. This procurement will be covered by the contingency budget of the FWC.

3 CORRECTIVE MAINTENANCE SERVICE [\(ID6\)](#)

As corrective maintenance (ID 6) is understood any intervention made in case of improper performance or (imminent) breakdown of the supply, to restore the supply and its performances to the contract specifications

These interventions are made upon request to the company and will take place at JRC-Ispra during working hours.

When a situation arises the contracting authority informs the contractor about the case and request the corrective intervention. The JRC's scientific responsible will describe the problem and will require the assistance of a specialized technician depending on the system to be repaired (hardware or software, electronic or mechanical part, safety items,...) by phone call confirmed by fax or e-mail. If the problem cannot be solved through remote assistance, the contracting authority may authorise the local intervention/visit to do the assessment or the intervention.

In case of major breakdown, if the system cannot be repaired at the JRC premises and after approval by the JRC, the system can be shipped to the contractor premises for repair. In such a case the the item to be repaired from the JRC to the contractor's premises shall be borne by the JRC; the cost for returning the repaired item from the contractor's premises to the JRC shall be borne by the contractor.

If needed the contractor must update the documentation (schemes, drawings, manuals) of the facility/equipment in electronic form and provide the modifiable file, the cost of the update shall be borne by the contractor.

This corrective maintenance shall include:

- Re-establishment of the system performance as provided for in its specifications.
- Consumables (e.g. gaskets, O-rings, seals, fluids, connectors, pipes,...)
- Manpower, travel and accommodation
- Replacement of spare parts
- Documents update, correction, modification

The unitary price for the corrective maintenance covers all related costs (e.g. manpower, travel time, expenses and consumables) to perform the corrective maintenance exclusive of the cost of the spare parts which will be ordered separately. If the corrective maintenance services are required for a supply which is under of the scope of this contract and the Annex II of the FWC does not includes the unitary price, the contracting authority may ask for an offer and subject to the acceptance, may order directly the service. This procurement will be covered by the contingency budget of the FWC.

The substitution of any part will be performed after agreement with a JRC technician in charge of the equipment who will be present during the preventive and corrective intervention.

The replacement parts and consumables used during the maintenance operations must be original factory certified parts or equivalent parts fully compatible with the instruments, of an equivalent level of quality than the factory certified parts and which do not affect any residual warranty of the equipment.

If the corrective action is not successfully completed within time agreed with JRC, the latter may undertake the corrective action with all consequential direct and indirect costs of JRC and its agents to be borne by the Contractor. JRC may demand the warranty to be extended for a period equal to that covering the supply loss of performance where such loss of performance is not attributable to JRC Ispra.

Temporary rent while repairing. In case the time required for the corrective maintenance of a specific component or equipment results in the unavailability of a facility or of an instrument for more than 1 month, the JRC may consider the option of hiring to the contractor that component or equipment (or equivalent) to continue the laboratory activity. In this case the JRC will request a specific offer to the contractor for this specific option in addition to the offer for the corrective maintenance.

3.1. Corrective maintenance services covering urgent interventions and interventions which require replacement of minor spare parts (up to 1,000€ cost of the spare parts per single intervention)

The contracting authority may issue a global order to cover for a certain period of time (12 months period except otherwise stated in the order) the urgent corrective interventions or the interventions which require replacement of minor spare parts up to 1000 € per single intervention.

The value of the global order will be established by the contracting authority, following the consultation of the contractor and it will include the estimated work and a budget for spare parts for these type of interventions.

The maximum estimated amount may cover urgent corrective maintenance interventions, including visits to the laboratory needed to identify the reason of a failure and the necessary interventions and the cost of the spare parts up to 1 000 € per single intervention. In case of

additional needs, the amount of the "global order" may be increased or a new order can be issued to cover unforeseen failures.

Each single intervention will be ordered as foreseen in point 3.3 of the technical specifications. The contractor shall obtain the written confirmation from JRC before any intervention on site.

The response time for any single corrective intervention shall not be longer than 5 (five) working days from the day of the written request sent by the JRC to the contractor, except a longer period has been specified in the written request by JRC or established in the specific contract.

3.2. Corrective maintenance services covering complex interventions which require replacement of spare parts of more than 1,000 € (spare parts per single intervention).

In case, the contractor assessment (see technical specifications point 3.3) reveals that the intervention requires spare parts above 1,000 Euro per single intervention, the contracting authority may issue a distinct order (specific contract) to cover the corrective intervention, after requesting a specific offer from contractor.

The contractor shall provide the offer within five working days from the request.

The offer shall indicate the proposed number of working days for the manpower and the list of the spare parts to be replaced and the deadline for completion of the intervention. The rates for the manpower shall be those stated in annex II of the FWC. Request for an offer does impose no obligation on the Commission to purchase. Only the signature of the specific order form is binding on the Commission.

The intervention to repair the equipment shall start within 5 (five) working days from the signature of the Order Form by both parties, except a longer period has been agreed by JRC in the specific contract and shall be carried out within the time set out in the specific contract/order. The contractor shall obtain the written confirmation from JRC before any intervention on site.

In case the repair of the system must be carried at the contractor's premises the system can be shipped to the contractor premises for repair. In such a case cost of transport from the JRC to the contractor's premises shall be borne by the JRC; the cost for returning the repaired item from the contractor's premises to the JRC shall be borne by the contractor.

4 CONSUMABLES

Consumables such as filters, O-rings, seals, fluids, connectors, pipes, etc. which requires replacement more frequently than twice a year shall be supplied by the contractor upon a specific order and will be replaced by JRC personnel or by an expert technician.

All the consumables supplied must be original factory certified parts or equivalent parts fully compatible with the instruments, of an equivalent level of quality than the factory certified parts and which do not affect any residual warranty of the equipment.

Consumables not listed in the offer shall be quoted by the contractor upon request by the JRC, the first quotation remain valid for the duration of the contract and shall apply for recurrent order if needed.

5 GUARANTEE

A guarantee of two years is required on the spare parts replaced during the preventive or corrective maintenance, starting from the day of written acceptance of the service by the JRC. The contractor shall repair and/or replace, free of charge, any component or part of the result as a whole that is proven to be defective during the guarantee period. An intervention shall take place not later than 5 working days from the phone call from the JRC confirmed by e-mail or fax.

If the spare parts replaced require periodic calibration/maintenance, the service shall be included free of charge in the guarantee.

If within 6 months after the preventive maintenance intervention a malfunction occur to the system maintained, this shall be repaired free of charge by the contractor unless it can be demonstrated that this is due to normal wear or to improper use by JRC staff.

6 REPORTING

At the end of each intervention, both for the preventive and corrective maintenance, a technical report will be produced, signed by the contractor and countersigned by the JRC responsible.

This technical report will indicate the contract number, the work performed, the working time and include a detailed list of the defects found and the parts replaced, the list of the documentation updated or modified.

Either the format of technical report attached in annex to the contract or any other format may be used, where such other format provides for the required information.

At the end of a twelve months maintenance period a final technical report will be produced. This final technical report will indicate the number of the contract and consist of a list of all technical report/s drawn up during the year and a copy of the countersigned technical report/s.

The technical reports and the documentation (completeness and correctness) shall be subject to JRC responsible approval and shall condition payment as per of the contract.

All reports and documents shall be written in the English language.

Important: all reports shall include the following mandatory information:

- Contractor
- Contract number
- Nature of the report (eg. 1st interim technical report)

- Subject
- Name of the author and original signature.

7 OTHER MODALITIES AND RESPONSIBILITIES

7.1 Place of Work

The execution of the contract will be performed at the Ispra site. Travel and subsistence costs are not reimbursed and must be included in the offer. The contractor shall provide all deliverables in the form and format specified in the subsequent Order Form/Specific contract.

In case of major breakdown, if the system cannot be repaired at the JRC premises and after approval by the JRC, the system can be shipped to the contractor premises for repair.

On-site preventive and corrective maintenance interventions shall be executed at the JRC- Ispra site during working hours (see point 4.2) in dates agreed by the parties only after signature of the related order form(s).

7.2 Normal Working Hours

A normal working day corresponds to 8 hours. The daily working time frame is between 8 am and 8 pm and staff working on tasks is normally required to be available to be contacted by the JRC staff staff between 9.00 - 12.00 am and 2.30 - 5.00 pm. The work shall be carried out at a time and date agreed by both parties within working hours.

7.3 Acceptance of service

Acceptance of work carried out under an Order Form/Specific Contract will take place at milestones during (if specified) and at the end of the execution of each intervention. The minimum requirement for acceptance of a deliverable resulting from the completion of a task or sub-task will be approval of the technical report by the JRC.

At the end of each maintenance, where relevant, a check that the system works properly has to be performed.

Since it is not possible to check the proper functioning of the safety systems of the test facilities in all different possible configurations (test temperature, diesel or gasoline test), the Contractor will intervene at the request of the JRC (phone call confirmed by fax or e-mail) and solve any problem clearly and demonstrably linked to the maintenance intervention at no cost to the JRC.

7.4 Communication

Communication between the contractor and the Contracting Authority must be possible by phone, electronic mail, fax, normal and registered mail. The English language shall be used throughout the contract duration for all communication, reports, and other documentation.

7.5 Contractor staff responsibilities

The Contractor must ensure that Contract personnel (and any sub contract personnel) performing on-site activities: have the necessary abilities and competencies for the intended work, have the necessary ability and competence for the intended work and are fit and healthy for undertaking the intended work.

The Contractor's personnel (and sub-Contract personnel) performing on-site activities services will comply with all applicable Italian legislation and with pertinent rules, regulations, guidelines and practices in place in DG JRC

The Contractor will nominate a Contract Manager who will directly interface with his/her DG JRC counterpart. All the on-site activities to be performed by the Contractor will be coordinated by the Contract Manager in agreement with the DG JRC counterpart. The data of the Contract Manager will be communicated to JRC in 10 days from contract signature.

7.6 Remedial work

The Contractor will be responsible for any remedial work necessary during the installation, calibration, testing and commissioning period, impact on JRC infrastructure due to contractor staff fault.

7.7 Waste management

All the waste generated during the execution of the activities described in this document and the replaced materials (filters, sealings, etc) shall be collected and disposed by the contractor according to the following provisions:

In case of waste production, at the end of works the contractor shall provide:

- a) Waste transport and intermediation: Evidence of enrolment to Italian "Albo Gestori Ambientali" for the proper categories. (for further information: <http://www.albonazionalegestoriambientali.it>).
- b) Evidence of the authorisation for each waste destination as mentioned on the document "Formulario Identificazione Rifiuti".
- c) Copy of document "IV copia" of "Formulario Identificazione Rifiuti" as a confirmation of the conclusion of the transfer within 90 days since the transport.

7.8 Occupational Health and Safety

7.8.1 Contractor OHS measures

In order for the JRC to comply with Italian law¹ contractors who will operate on the JRC Ispra site must follow the the list of occupational health and safety measures specifically related to the execution of the contract and the Italian safety legislation currently in force (Law No. 123 of 3/8/2007 and Legislative Decree 81 of 9/4/2008).

7.8.2 JRC Interferential risks

The JRC has analysed the potential interferential risks created by concurrent activities in the place where the contractor staff is to execute the contract on the JRC Ispra site. The Single Document for Assessment of Interferential Risks (DUVRI), Annex to the contract, details the potential interferential risks and the measures taken to eliminate where possible and otherwise reduce these.

The contractor must sign and return the Single Document for Assessment of Interferential Risks (DUVRI) before the work starts.

The DUVRI may be jointly updated as a consequence of such site JRC inspection or during the execution of the contracted start, should a new situation of interferential risks arise.

Before any technical intervention of the contractor on Ispra site, a joint JRC site inspection between JRC and the contractor representatives takes place. This will:

- either confirm the initial risk analysis and documentation,
- or adapt it to new circumstances that were not foreseen, generating where necessary either a new or an updated document on the assessment of interferential risks (Single Document for Assessment of Interferential Risks, DUVRI) together with all relevant appendices.

A Report of the Joint Inspection will be drawn up by JRC responsible and signed by all participants to the inspection as acceptance. The report of the joint inspection will contain the relevant details of work to be performed, the names of those people carrying out the work and any specific hazards appropriate to the type and place of work and safety precautions that are taken. The visitors will then receive a copy of report. The template of the Joint Inspection Report is attached to the DUVRI.

8 Visit to the facility

In addition to the technical specifications above described, the JRC facilitates the acquisition of the additional information through a visit to the facility, organized during tendering period or when it is considered necessary during the contract execution.

¹ Italian legislative decree 81/2008 article 26 and legislative decree 106/2009