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SpeakUpAfrica.

WORK FOR THE DISMANTLING OF THE OMNI-PROCESSOR V1 AND V2

Special Technical Specifications



Deadline for submission
Friday, March 20, 2026

Proposals must be submitted by email to
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LIST OF ACRONYMS AND ABBREVIATIONS – STS OP V1 & V2

Acronym / Abbreviation	Meaning
STS	Special Technical Specifications
SACS	Special Administrative Clauses Specifications
ONAS	National Sanitation Office of Senegal
OP	Omni-Processor
OP1 / OP2	Omni-Processor Version 1 / Version 2
HSE	Hygiene, Safety, Environment
PPE	Personal Protective Equipment
GCP	General Coordination Plan
HSP	Health and Safety Coordinator
SHSCP	Specific Health and Safety Protection Plan
GHSCP	General Health and Safety Coordination Plan
WTF	Waste Tracking Form
OIW	Ordinary Industrial Waste
SIW	Special Industrial Waste
ISO	International Organization for Standardization
ES / FS	European Standards / French Standards
WWTP	Wastewater Treatment Plant
GF	Ground floor

1. PROJECT CONTEXT

1.1 Introduction

In a context of technological innovation, continuous improvement, and capitalization, the National Sanitation Office of Senegal (ONAS) conducted an evaluation of the operation of the Omni-Processors V1 and V2 (OP1 and OP2), the management of which had been entrusted to the private company DELVIC for a period of ten (10) years, in accordance with the grant agreement. However, after Four (4) years later, the company ceased operations, citing in a report addressed to the ONAS Management the technical difficulties encountered since the start as well as the economic unprofitability of these facilities.

Under the leadership of ONAS an evaluation was then conducted by an independent consulting firm. This evaluation aimed, firstly, to analyse the operational efficiency, relevance, cost-effectiveness, and impact of OP technology in the areas of public health, climate resilience, environmental sustainability, and water security, with a particular focus on waste treatment and energy production. Secondly, it aimed to conduct a thorough technical, legal, environmental, operational, and financial analysis to inform the planning and implementation of the most appropriate option.

Following this evaluation, ONAS has opted for the dismantling of the two units OP1 and OP2. This decision is based on the results of the evaluation notably technical difficulties the degradation of the devices and the observed lack of profitability.

In this context, ONAS plans to recruit a specialized organization with proven technical skills and the necessary experience to carry out the dismantling of OP1 and OP2. The process must be conducted in strict compliance with current regulatory requirements, as well as safety and environmental protection standards.

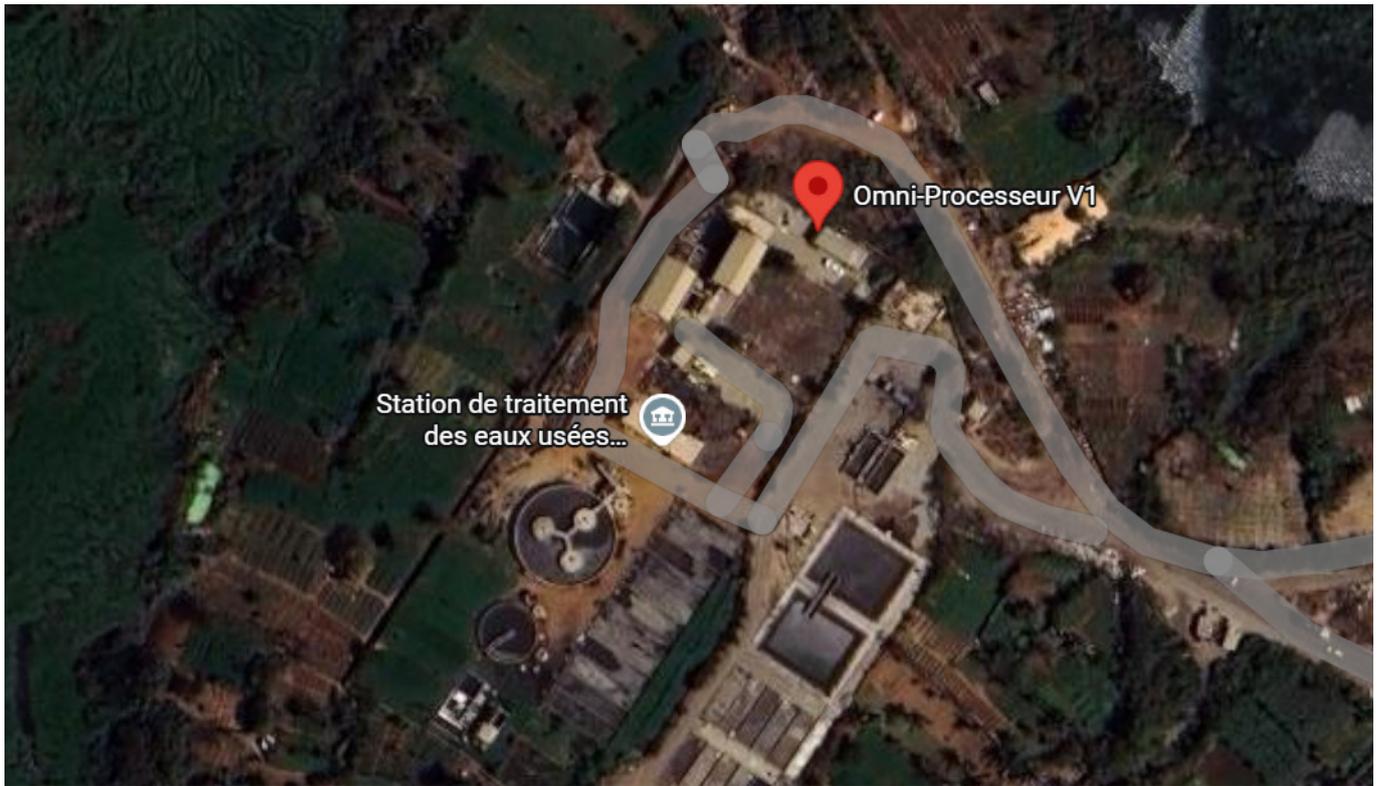
1.2 PROJECT OBJECTIVES

- The main objective is to carry out the safe, compliant, and responsible dismantling of the Omni-Processor V1 and V2. This includes:
 - The completion of preliminary technical, environmental and safety studies;
 - Obtaining all the administrative and environmental authorizations necessary for the deconstruction;
 - Planning and executing deconstruction work according to best practices;
 - The management of waste from deconstruction according to appropriate recovery or disposal channels;
 - The complete environmental rehabilitation of the site;
 - The submission of a final report consolidating the technical, environmental, administrative and financial aspects of the operation.

1.3 PROJECT LOCATION

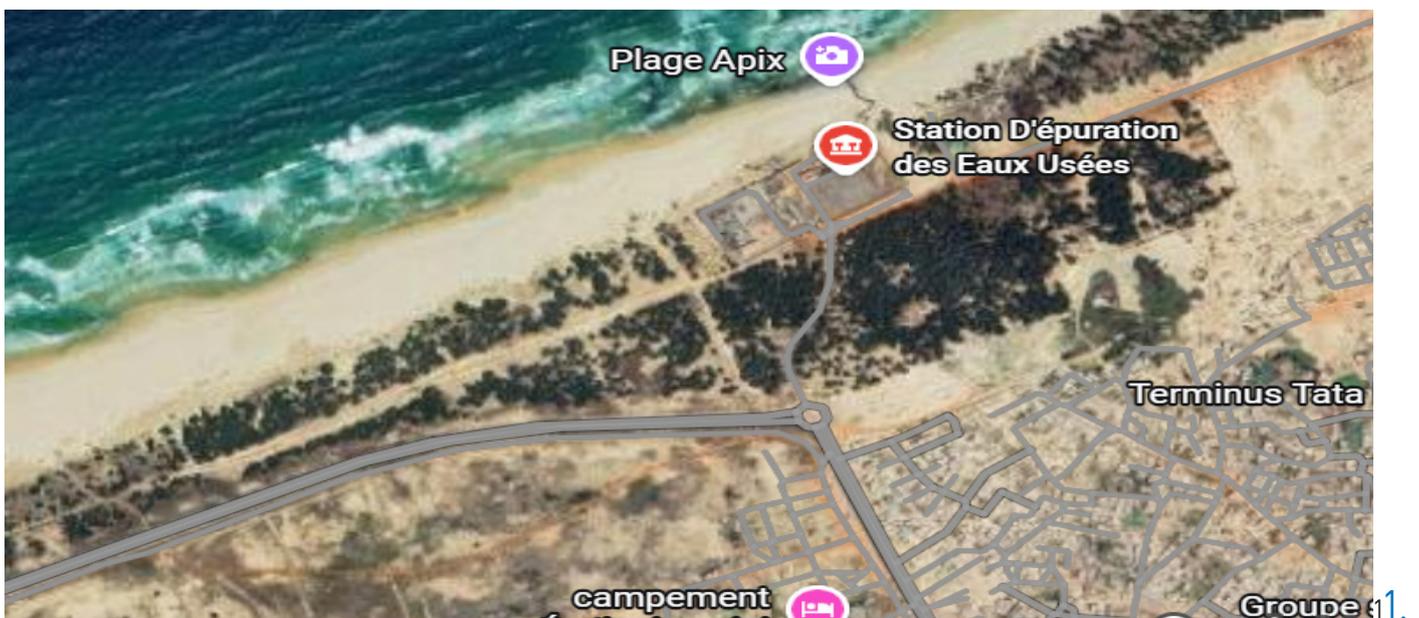
1.3.1 LOCATION OF OP1

OP1 is located within the Niayes wastewater treatment plant of ONAS (14.760662381508636, -17.404059208112773)



1.3.2 LOCATION OF OP2

OP2 is located within the Tivaouane Peulh wastewater treatment plant.



1.4 SITE CONFIGURATION

A mandatory visit is organized to present the site layout and constraints.

1.5 CONTRAINTES

The site in question presents technical and environmental constraints. The existing structures are heavily corroded, resulting in a degraded level of safety and requiring increased vigilance during interventions. Although the facilities are no longer in operation, the residual presence of products, reagents, or sludge within the structures cannot be ruled out. The site is a former industrial facility.

The work involves heavy installations, including metal structures, furnaces, conveyors, and various process equipment, as well as associated networks that may include electricity, fluids, air, fumes, or potentially hydrocarbons. Furthermore, the local climatic conditions, characterized by high temperatures and significant dust emissions, constitute an additional constraint to be considered in the organization and execution of the work.

All these constraints must be taken into account by candidates when developing their intervention methodology. Candidates must explicitly demonstrate, in their technical proposal, how these constraints are analysed, integrated, and addressed, from the perspectives of safety, environmental protection, and work organization. Failure to do so may result in the proposal being deemed non-compliant.



2. SUBJECT OF THE CONTRACT - GENERAL INFORMATION

2.1 SUBJECT OF THE CONTRACT AND CONTENT OF THE DOCUMENT

This document constitutes the Special Technical Specifications (STS) of the contract relating to the dismantling work of the Omni-Processors V1 and V2, on behalf of the National Sanitation Office of Senegal (ONAS).

The contract is concluded in the form of a global and fixed-price contract. As such, the contractor's offer is deemed to include all services, supplies, studies, human and material resources necessary for the perfect execution of the works as described in this STS, including all technical, operational, organizational, climatic or environmental constraints, limitations and risks that may be encountered during the execution of the contract.

It is the responsibility of the bidding company to identify, evaluate and integrate into its cost estimate all of these services, constraints and contingencies, whether explicitly mentioned or not in this STS, as long as they are necessary for the complete, compliant and safe execution of the work.

Consequently, no additional service will be subject to additional remuneration for an oversight, an underestimation, a misjudgement of site constraints or execution conditions, or an inadequacy in the company's project analysis.

The following technical documents are attached to the STS:

- Geotechnical studies
- Environmental impact assessment
- Technical specifications of the OPs
- Operating Manual
- Technical operating data
- Operation planning

2.2 WORK PROGRAM – SERVICES TO BE PROVIDED

2.2.1 OBJECTIVES OF THE WORK

The work has several objectives:

- Rehabilitation objectives

The measures implemented, including deconstruction work, must comply with the requirements of this STS.

In general, the rehabilitation measures taken must ensure the absence of unacceptable residual risks in a sustainable and effective manner for the future use of the site (not defined at this stage).

- Site security objectives: securing people, the facility and the environment
- Health and environmental objectives: when not in operation, the structure can generate soil and water pollution.
- Technical and heritage objectives: feedback and capitalization, valorisation of recoverable or recyclable components

2.2.2 SELECTED WORK PROGRAM

The work program concerns the dismantling of the Omni-processor V1 and V2. The project includes all services, supplies, and work necessary for the deconstruction of the OP V1 and V2, namely (non-exhaustive list):

- All preliminary studies prior to dismantling, including administrative authorizations for deconstruction,
- The organization of the construction site, including the scheduling of tasks;
- General earthworks, if necessary
- The civil engineering works include the deconstruction of the entire installation and all of its equipment,
- The dismantling of all equipment (whether hydraulic, mechanical, electrical, etc.), including their drive components and their control, monitoring, protection and measurement equipment.
- The management, treatment or recovery of equipment/waste generated by dismantling work: waste recovery will be prioritized.
- Stormwater management during dismantling work,
- Backfilling the land, if necessary,
- The development of open spaces and the removal of excess debris.
- The implementation of the landscaping as defined in this STS,
- The execution of earthworks related to landscaping,
- Site cleanup and site levelling
- Complete environmental and safety management of the construction site.

This mission will be divided into five main phases:

- Phase 1: Studies and preliminary authorizations
- Phase 2: Mobilization and securing of the site
- Phase 3: Dismantling work
- Phase 4: Site rehabilitation and restoration
- Phase 5: End-of-Mission Report

2.2.3 DEMOLITION WORK SCHEDULE

The site deconstruction work must be started or completed in accordance with the schedule attached as an annex to the STS.

A deconstruction schedule, which candidates can use as a basis for preparing their offer, is presented below.

- Estimated duration: 12 weeks
 - Weeks 1-2: Studies, planning and authorizations;
 - Weeks 3-4: Mobilization and securing of the site;
 - Weeks 5-9: Dismantling work;
 - Weeks 10-11: Rehabilitation, verification and closure;
 - Week 12: Final report and feedback workshop.

Candidates may propose a different breakdown than the one proposed, without exceeding a planned duration of 12 weeks.

Candidates will submit in their offer a detailed schedule by phase, as well as the means planned to ensure coordination with the project owner and the meetings planned.

2.3 REFERENCE DOCUMENTS

Demolition, dismantling and various developments will comply with standards, regulations, decrees and recommendations in force. The holder is deemed to be aware of all legislative and regulatory provisions relating to the performance of the services.

The work must be carried out in accordance with (non-exhaustive list):

- to the Construction Code of Senegal (Law No. 2009-23 and Decree No. 2010-99),
- to the Environmental Code (Law No. 2023-15),
- to the Senegalese Labour Code (hygiene, health and safety),
- in accordance with the Hygiene Code,
- to the requirements of the competent local authorities (environment, work, community).

In the absence of explicit Senegalese technical specifications, the work must comply with international (ISO) or European (EN/NF) standards at the performance level, without prejudice to local regulatory requirements.

The candidate will specify in their offer the standards and references they refer to in their work.

The company must demonstrate skills and references equivalent to those required by the French qualification QUALIBAT 112 (demolition), particularly in the areas of dismantling industrial structures, risk management, safety, and material recovery.

2.4 KNOWLEDGE OF THE PROJECT AND ITS ENVIRONMENT

The company is known to be familiar with the project and its environment. In particular, it has a thorough understanding of:

- The terrain and its specific constraints,
- Constraints relating to neighbouring properties,
- The methods of access via the road,
- The possibilities and difficulties of traffic,
- The constraints of current administrative regulations relating to safety in public areas,
- The construction and maintenance of site access points,
- Protecting the surrounding areas and access points during the works,
- Local waste treatment options.

3 DESCRIPTION OF SERVICES AND WORK PROGRAM

As part of the demolition, dismantling and equipment development work at the former OP sites, the general organization of the construction site will be broken down into 5 phases as defined below:

- **Phase 1:** Studies and preliminary authorizations
- **Phase 2:** Mobilization and securing of the site
- **Phase 3:** Dismantling work
- **Phase 4:** Site rehabilitation and restoration
- **Phase 5:** End-of-Mission Report

A basic solution meeting the objectives of the work program is developed in this technical specification. Contractors are requested to validate this solution.

Particular attention must be paid to the constraints related to existing structures, in defining the phasing of the work and the methodology for dismantling the structures.

3.1 CONSISTENCY OF THE WORK

The company includes all the necessary material supplies and their implementation for the complete execution of the works, which are the subject of this contract.

The company is reputed to have visited the premises in order to establish its prices.

Before awarding the prize, the company will be responsible for ensuring the conditions of access, storage, supply and execution of the work.

If necessary, he will request all additional information required for a full understanding of the project.

If he has not done so, he cannot in any way refuse the execution of all or part of the work by invoking error or omission in the plans and descriptions.

He will point out any inconsistencies before the award ceremony.

The company is responsible for site installations, the organization of storage areas (equipment, plantings, materials, etc.), temporary site fences, and their monitoring.

The same applies to signage work, including road signage.

3.2 PHASE 1: STUDIES AND PRELIMINARY AUTHORIZATIONS

The objectives of this phase are:

- **Technical survey and mapping:** Precise identification of all technical components (equipment, structures, electrical and hydraulic networks) and mapping of the site to plan the dismantling.
- **HSE (Health, Safety, Environment) Risk Assessment:** Identification of potential risks to workers and the environment; recommendations for preventive measures.
- **Simplified Environmental Impact Assessment:** Conducting a study in accordance with current legislation to measure the potential impacts on the environment (air, soil, water).
- **Waste management plan:** Identification of expected waste types (hazardous, non-hazardous, recyclable) and proposal of approved treatment channels.

- **Preparation of permits:** Preparation and submission of administrative files to the relevant authorities (environment, urban planning, health, public safety, etc.).

3.2.1 TECHNICAL SURVEY AND MAPPING

The preparatory phase includes, at a minimum:

- Surveying, measuring and evaluating necessary for a proper understanding of the problems to be solved on the site.
- The precise identification of all technical components (equipment, structures, electrical and hydraulic networks), as well as the identification of potential hazardous substances,
- Mapping the site to plan the dismantling
- Determine the most appropriate dismantling work methods for the site
- The demolition plan
- A technical and structural diagnosis will be carried out, including an analysis of the residual stability of the structure after each stage, as well as identifying areas at risk of collapse.
- List of waste/equipment with their recycling or treatment center
- Site Installation Plan (SIP),
- Work execution schedule and phasing,
- Setting up the organization for monitoring and removing construction waste (obtaining prior acceptance certificates, presenting waste tracking slips for signature by the project owner, tracking table for waste slips and removals),

It is specified that no removal, securing, neutralization, decontamination, or cleaning operations have been carried out on the facilities since the shutdown of the OP1 and OP2 omniprocessors. Consequently, the company must consider that all equipment, networks, containers, products, substances, and reagents existing on the date of the facility shutdown are potentially still present on the site.

Preparation of the bailiff's report:

Before any demolition work begins, a joint inspection report will be drawn up, the preparation of which is the responsibility of the contractor. This report will document the condition of the roads surrounding the construction site, as well as site access (roads, utility infrastructure, etc.). The contractor will engage the services of a bailiff to carry out this inspection.

The bailiff must specifically mention all cracks, damage, or apparent deterioration observed during the inspection. If necessary, photographs will be taken and attached to the original report. The bailiff's report will be delivered in digital format.

In the event that these roads are damaged by the Contractor or one of its subcontractors, it would then be required to immediately carry out the repair work at its own exclusive expense.

3.2.2 HSE (HEALTH, SAFETY, ENVIRONMENT) RISK ASSESSMENT

The company will be required to identify, analyze, and prioritize all potential risks to workers, third parties, and the environment, and to define the prevention, collective and individual protection, and risk reduction measures to be implemented. This process will result in a detailed and documented risk analysis, which must be kept up to date throughout the duration of the project.

3.2.3 SIMPLIFIED ENVIRONMENTAL IMPACT ASSESSMENT

The company will be required to conduct an environmental study to identify, analyse, and assess the potential impacts of the work on the surrounding environment, including air, soil, and water. This study will include an analysis of the impacts related to dust, noise, and vibrations, as well as the definition and implementation of appropriate reduction, prevention, and control measures.

3.2.4 WASTE MANAGEMENT PLAN

The company must carry out a comprehensive identification of the waste generated by the works, including hazardous, non-hazardous, and recyclable waste, and define the authorized treatment, recovery, and disposal channels adapted to the local context. This process will involve the development, implementation, and monitoring of a formalized waste management plan (WMP), accompanied by the corresponding traceability documentation.

3.2.5 PREPARATION OF PERMITS

The company will have to prepare, submit and monitor all administrative files, declarations and authorizations required by the regulations in force with the competent authorities, in particular in matters of environment, urban planning, health and public safety, before and during the execution of the works.

3.2.6 INITIAL STATE

An environmental assessment will be carried out before work begins. This will involve taking soil samples and conducting analyses to establish a baseline for the site before work commences. The analyses will be performed by an accredited laboratory, and the relevant parameters will be defined by ONAS during the preparation phase.

A characteristic ground analysis will be carried out at a minimum at several points on the site (process areas, storage, traffic, etc.):

General parameters:

- pH
- Electrical conductivity
- Organic matter (OM)
- Particle size distribution (if needed for interpretation)

Inorganic pollution (heavy metals):

- Lead (Pb)
- Cadmium (Cd)
- Mercury (Hg)
- Total Chromium (Cr) and Chromium VI
- Nickel (Ni)
- Copper (Cu)
- Zinc (Zn)
- Arsenic (As)

Organic pollution:

- Total hydrocarbons (C10–C40)
- PAHs (Polycyclic Aromatic Hydrocarbons)
- PCBs (Polychlorinated Biphenyls), if old oils are suspected
- BTEX (Benzene, Toluene, Ethylbenzene, Xylenes)
- Mineral oils and fats

THE reports will be provided to ONAS and SPEAK UP AFRICA before the start of work.

3.3 PHASE 2: MOBILIZATION AND SECURING OF THE SITE

The objectives of this phase are:

- Site installation: Installation of fences, signage, security posts, sanitary facilities, temporary storage areas, etc.
- Energy neutralization: Switching off all electrical networks and disconnecting water, gas, etc. circuits.
- Protective equipment and instructions: Provision of appropriate PPE, signage of risk areas, development of a safety prevention plan for all stakeholders.
- Training and briefing: Raising awareness among teams regarding the management of site-specific risks.

3.3.1 SITE INSTALLATION

The site installation includes, in particular, the following for the entire duration of the operation:

- The installation of a Heras-type construction site fence. Bidders are informed that this will be a fully enclosed site. The successful bidder will therefore be required to provide the necessary site closures, either with 2.00 m high removable panels or with Heras-type barriers. In both cases, the temporary fencing elements must be anchored to the ground. The contractor must also provide access for people and trucks. To this end, a removable gate will be fitted to the fence and will be secured with a chain and padlock. The contractor must also inquire about any observations from the Health and Safety Coordinator, both regarding the installation and removal of the site closures and their maintenance.

Once the work is completed and unless expressly requested by the Client, the contractor will remove these closures and carry out all necessary repair work.

- The installation of construction site signage in the required quantity according to current legislation,
- The supply, installation, monitoring and maintenance of the construction site sign with logos and displays throughout the duration of the works until their acceptance
- Maintenance and cleaning of access roads to the construction site throughout the duration of the project
- The establishment of the site facilities. The contractor will be required to provide an external site facilities. The site facilities will be installed on a location designated by the contractor, in collaboration with the health and safety coordinator, and subject to the agreement of the client and the project manager.
- Connecting the site facilities to the network (drinking water, electricity, sanitation),
- Weekly cleaning of the living quarters and its annexes,
- The delivery and removal of all equipment necessary for the construction site.
- Monitoring of the construction site outside of working hours and in the event of absence of all companies from the site.
- The signage must be visible and understandable.
- Supply and installation of construction site electrical boxes,
- Waste storage areas will be installed according to the schedule of the selective deconstruction work and the quantification of the waste. The company will indicate their locations on the site installation/traffic plan(s) and submit them to the Project Manager during site preparation.

The contractor will produce a site installation plan, specifying the organization of the space, the waste sorting and storage area, pedestrian and motorized vehicle traffic, parking areas, the site office and its annexes, existing structures to be preserved (with temporary protection measures) and those to be demolished, ...

The construction site must be enclosed and inaccessible to unauthorized personnel. Two-meter-high construction site fences will be installed around the perimeter of the site. The contractor is responsible for maintaining the fences, the «Construction Site - No Public Access» signs, and other legally required information for the entire duration of the work.

Depending on the needs, the holder of this contract may be required to install netting on the site fences in order to limit the flight

of dust outside the site.

A temporary electricity meter and a water point must be installed for the exclusive use of the construction site; this installation will be the responsibility of the contractor. Connection points to the utility networks for the site facilities must be obtained from the relevant utility companies. The contractor for this contract will also be responsible for:

- All costs related to temporary connections and hookups to the water and electricity networks,
- All costs of connection to the sanitation network or, failing that, all costs inherent to the management of the septic tank,
- All the equipment necessary for the construction site facilities and access, installations and administrative procedures with the concession holders, connections to the networks for the site's needs in water, electricity and sanitation, wastewater and runoff disposal as well as subscription fees and consumption,
- All costs related to the installation of connections with separate meters for water and electricity.

Candidates are advised that the site is located away from residential areas and that there is no security at night.

In order to prevent cases of intrusion on the construction site, and consequently the risks of accidents or thefts, the company holding the contract may arrange, either by its own means or through a specialized company, for the site to be guarded outside of construction hours.

This service remains the responsibility of the company. Furthermore, regardless of the company's decision regarding site security, the project owner will remain exempt from all liability for any theft or damage that may occur.

3.3.2 ENERGY NEUTRALIZATION

Before any intervention, the company must completely neutralize the energy sources and secure the site. It will carry out a comprehensive survey and detailed diagnosis of the electrical installations and networks to identify all active or potentially active circuits and ensure their isolation, de-energization, and permanent safety.

These operations must guarantee the dismantling of the equipment under optimal safety conditions and allow for the removal of all wiring, equipment, and electrical installations no longer needed after the work is completed. The company will ensure the verification, maintenance, and monitoring of the electrical safety of the installations during and after the dismantling work.

The contractor must include in their bid the verification of the electrical safety of the installations during and after the dismantling work. This service must be documented in a certificate of conformity or a specific attestation that contractually binds the company to its responsibility.

3.3.3 PROTECTIVE EQUIPMENT AND INSTRUCTIONS

The company will provide personal protective equipment appropriate to the nature of the work and the identified risks, will ensure clear and permanent signage of risk areas and will establish a safety prevention plan applicable to all stakeholders on the site, including subcontractors, and will guarantee its implementation and compliance.

3.3.4 TRAINING – BRIEFING – STAFF AWARENESS

In order to implement the obligations set out in this document, it is important that the company organises information and training sessions for its staff and subcontractors at the start of work and throughout the construction site, on selective deconstruction, waste management, low nuisance construction site and operating procedures in order to raise awareness, empower them and change their habits.

During the duration of the project, the company will ensure that each team leader regularly reminds the workers of the specific conditions of selective deconstruction and waste management.

3.4 PHASE 3: DISMANTLING WORK

The objectives of this phase are:

- Sequential dismantling of the installations: Methodical removal of equipment (furnace, conveyors, gas treatment systems, etc.) according to dismantling plans.

- Waste sorting and packaging: Sorting at source, labelling, secure storage of hazardous waste (oils, ashes, chemicals), and packaging for transfer.
- Evacuation to treatment facilities: Transport of waste to approved centers with tracking slips.
- Quality control and safety: Daily monitoring, adjustment of methods according to unforeseen events, verification of compliance with applicable standards.

3.4.1 SEQUENTIAL DISMANTLING OF THE INSTALLATIONS

The deconstruction methodology presented here is based on the different components of the waste. This deconstruction can also be carried out according to the major waste categories, since they will be directed to the same skips and the same recycling or storage facilities (provided that the structure's stability is ensured at each stage). The company will therefore adapt its schedule according to the elements to be removed and the most relevant recycling or storage facilities it has selected. The order of removal is also important and helps to optimize this operation.

The company will need to take these remarks into account in order to carry out the deconstruction under the best possible conditions and thus to reinforce its provisional schedule.

This sequential dismantling phase includes the following main interventions:

- Sequential dismantling of electromechanical and auxiliary equipment
- Removal and dismantling of conveyor systems and associated supports
- Dismantling of gas treatment units and ducts (flue gas treatment)
- Dismantling of the Omni-Processor furnace and thermal components
- Deconstruction of metal structures, frameworks and supports (superstructures)
- Removal of all roadways

Before any actual deconstruction operation, the company must have the load-bearing structures exposed.

Special requirements:

- The company will carry out an analysis of the tank residues/reagents to define the treatment/disposal route;
- The company will flush the networks before any cutting to avoid spreading products and prevent accidental pollution;
- It is also reminded that the contractor must carry out a survey at ground level of the basement section. Markings and barriers must be installed to prevent heavy machinery from crossing the slab.

The work procedures are left to the contractor's discretion. The only requirement is a finished result as described elsewhere in this document. However, the contractor must submit a report detailing the work procedures and the various dismantling methods or principles they intend to implement on the site.

ONAS reserves the right to refuse certain working methods deemed incompatible with the result to be obtained, or dangerous for safety.

The order in which the works are carried out is not fixed. The actual work schedule will be defined during the preparation period, in consultation with all stakeholders.

The candidate will detail in their report the planned dismantling methodology and the technical procedures to be implemented. They will also specify the human and material resources planned for the successful completion of the operation.

3.4.2 WASTE SORTING AND PACKAGING

The company must implement source separation of waste from the moment it is generated, specifically distinguishing between hazardous, non-hazardous, and recyclable waste. Each waste category must be clearly and compliantly labeled to ensure its identification, traceability, and secure management throughout the construction project. The contractor is responsible for managing the storage, removal, and disposal of waste and other demolition materials in accordance with the conditions defined in Article 3.46, «Waste Management,» of these Technical Specifications. Failure to comply with these instructions will result in a penalty of 500,000 FCFA per violation.

Hazardous waste, such as oils, ashes, chemicals, or any other waste posing a risk to health or the environment, must be stored securely in suitable, leak-proof, and labeled containers in designated and protected areas to prevent any risk of dispersal, pollution, or exposure. All dismantled components requiring temporary on-site storage before removal to disposal or recycling facilities must be stored on an impermeable surface or any other surface that guarantees no environmental impact. Failure to comply with these requirements will result in a penalty of 500,000 FCFA.

The company will ensure the appropriate packaging of all waste for transfer, recovery, treatment or disposal in legally authorized channels, guaranteeing the safety of people, the protection of the environment and compliance with current regulations.

The winning company will be required to guarantee the traceability of the waste removed. Furthermore, where possible, waste recovery and recycling options will be preferred to landfill solutions.

3.4.3 EVACUATION TO TREATMENT FACILITIES

As part of the consultation process, candidates must include with their bid all the information necessary to justify and validate the waste disposal, treatment, and, where applicable, recovery channels for the waste generated by the works. This information must specify, in particular, the nature of the chosen channels, their location, and their regulatory compliance.

During the execution of the work, compliance with the proper disposal of waste will be monitored. The company undertakes to ensure the disposal, treatment, or recovery of waste exclusively through approved channels, in accordance with applicable regulations and the requirements of this Technical Specification.

The transport of waste to approved treatment, recovery, or disposal centers must be carried out under conditions that guarantee the safety of people and the protection of the environment. Each removal will be documented with tracking slips and traceability records, which must be made available to the project owner and included in the final project file.

The processing and, where applicable, material recovery channels must be clearly identified by the company before the start of work and updated as needed during the operation.

3.4.4 QUALITY CONTROL AND SAFETY

The company will monitor the work daily to ensure its compliance with the requirements of this Technical Specifications document, applicable regulations, and best practices. This monitoring will include regular verification of the quality of services performed, adherence to safety regulations, and the conformity of the methods implemented.

The candidate will specify the terms of involvement, information and validation of the project owner in the progress of the project, in particular through regular reports, follow-up meetings and any mechanism to ensure continuous communication.

Site meetings will be held weekly in the premises allocated by the company, with all stakeholders on the site present.

The contractor is therefore required to attend site meetings. They may be represented by a qualified person with full authority. The project owner reserves the right to request the replacement of this representative if they do not meet the aforementioned requirements.

As part of this contract, candidates are informed that the inspection of the facilities may involve taking samples, measurements and analyses at any time on samples of soil, aqueous effluents, groundwater, waste or on dust or noise emissions.

3.5 PHASE 4: SITE REHABILITATION AND RESTORATION

The objectives of this phase are:

- Deep cleaning: Removal of residual materials, evacuation of all remaining waste that may still be present on the site, removal of temporary construction infrastructure (construction equipment, living quarters, etc.).
- Post-dismantling environmental controls (site assessment after work) Sampling and analysis of soil, water and any potentially contaminated areas; identification of areas requiring corrective measures.
- Rehabilitation measures: Leveling, replanting, soil treatment (if pollution identified), site fencing, etc.

3.5.1 DEEP CLEANING

Following the dismantling and demolition work, the company will carry out a thorough cleaning of the site including the removal of all residual materials and the evacuation of all waste that may still be present on the site.

The company will be required to ensure, at its own expense, the removal, transport and treatment of all residual waste, regardless of its nature or origin, in authorized and approved treatment, recovery or disposal channels, in accordance with the regulations in force.

3.5.2 POST-DECOMMISSIONING ENVIRONMENTAL CONTROLS

Upon completion of the services, a comparative environmental assessment will be carried out using the same methodological approach as the assessment conducted before work began. This new assessment will involve taking soil samples and conducting analyses to identify any changes or pollution that have occurred since the initial assessment and that may result from the work carried out under this contract.

This post-dismantling assessment will make it possible to identify, where necessary, areas requiring the implementation of corrective actions or restoration measures.

In the event of proven or suspected pollution resulting from dismantling or demolition work, the contractor will be responsible for all operations necessary to restore the site.

The company guarantees the project owner and the project manager against any recourse, claim or action by third parties originating from or resulting from the work carried out under this contract.

3.5.3 REHABILITATION MEASURES

Following the dismantling and demolition operations, the site must be restored to a condition suitable for safe future use. To this end, the company must ensure the decontamination of the areas affected by the work, in accordance with the results of post-dismantling environmental assessments and applicable regulations.

The area where the work has taken place will undergo a comprehensive leveling of the exterior surfaces, including shaping and stabilizing the land, in order to eliminate any irregularities, subsidence or potential hazards.

The company will also have to install or repair a perimeter fence around the site, ensuring its closure, security and protection against any unauthorized intrusion after the completion of the work.

It should also be noted that the area surrounding the construction site must be returned in the condition in which it was found.

3.6 WASTE MANAGEMENT

3.6.1 GENERALITIES

All products generated by demolition and earthworks are considered waste.

Waste management includes:

- The establishment of a waste storage area on a fenced site specifically designed for this purpose and protected from the elements (including any temporary storage and retrieval),
- The provision of skips for each type of waste,
- Waste collection
- Sorting the products,
- Waste packaging (when required by regulations or made necessary by the very nature of the products),
- Waste disposal,
- Waste recovery or disposal,
- Transport to approved channels including related costs and taxes and the management of supporting documents.
- The provision of supporting documents in accordance with the regulations or the model attached to this contract, all waste removed from the site is concerned.

The company will provide a copy of the prior acceptance certificates before any waste is removed.

The collection, sorting and storage of waste will be organized on site by the company in such a way as to:

- Optimize the differentiated management of waste,
- Respect the health and safety of construction site personnel,
- Avoid nuisances and pollution (noise, dust, soil, subsoil and water pollution),
- Comply with regulations regarding the storage and packaging of waste, particularly non-hazardous and hazardous waste.

The company is prohibited from:

- Burning waste on construction sites;
- Abandoning or burying any waste whatsoever, even «inert» waste, in areas not subject to administrative control, such as «illegal» dumps or construction sites;
- To place non-»inert« waste in a class III storage centre (ISDI) (law 92-646 of 13 July 1992);
- Leaving special or hazardous waste on the construction site.

3.6.2 COMPONENT VALUATION

As part of the operations to remove and replace the two Omni-Processors (OP), it is specified that the existing equipment is composed of recyclable materials and components, including (non-exhaustive list): motors, mechanical elements, scrap metal, steels, non-ferrous metals, turbines, electromechanical equipment and various metal parts.

The Company is required to identify, in its offer, the channels for the recovery, reuse or recycling of the various components deposited, based on channels approved and compliant with the regulations in force regarding waste management and the recovery of industrial waste.

In this regard, the Company will specify in its technical report:

- the categories of valuable components identified,

- the selected treatment and recovery channels (material recycling, reuse, energy recovery where applicable),
- the prospective operators or service providers,
- the logistical arrangements for deposit, sorting, packaging, transport and traceability.

The Company is also required to take into account, in the financial structuring of its offer, the potential revenue from the valuation of recovered components.

Valuation assumptions the options chosen by the Company must be realistic, justified and documented, based on existing supply chains and credible takeover conditions in view of the market.

The Company will ensure full traceability of waste and recovered material flows, including the provision, during the execution phase, of waste tracking slips (WTF) and recovery documentation issued by the relevant sectors.

3.6.3 WASTE SORTING

All waste must be sorted into three categories:

- Inert waste: This includes soil, excavated materials, unmixed demolition materials, natural stone, plaster and plasterboard, ceramics, ordinary glass, and mineral wool. This waste must be directed to Class 3 landfill sites or recycled at specialized facilities.
- The Ordinary industrial waste: This includes all cardboard or paper packaging waste, wood, plastics (tubes and sheaths, PVC, etc.), non-recycled pallets, polystyrene, metals, and water-based paints. This waste will be sent to recycling facilities or Class 2 landfills.
- The Special industrial waste includes solvent-based paints, wood treated with heavy metal oxides, friable asbestos, hydrocarbons, and form release oils. This waste must be sent to recycling facilities or Class 1 landfills. Precautions must be taken for the collection, storage, and transport of this waste (in France, tracking of special industrial waste is mandatory via a consignment note established between the producer, transporter, and recipient).

	The inert	The OIW	The SIW	Packaging
The main waste disposal channels	Reuse by the company on the construction site	Industrial waste collection and sorting center	DIS regrouping center	Consignment – re-collection
	Return to the company for storage and reuse	Recycling	Valuation	Industrial waste collection and sorting center
	Recycling	Incineration with energy recovery	Class 1 facility storage	DIS regrouping center
	Class 3 facility storage	Class 2 facility storage		Return to the company for storage
				Internal recycling
				Incineration with energy recovery
				Class 2 facility storage

The waste streams produced on the construction site must be identified for each type of waste by the specialized company according to the table below

Given the size of the construction site and the volume of materials used, it is necessary to plan for the establishment of several waste collection points.

3.6.4 WASTE STORAGE

The dismantled components will be stored in skips or on-site in a designated area, in collaboration with the contractor and the health and safety coordinator, before being transported to their final destination. The waste management plan specifies the location, the equipment required, and the protective measures implemented to ensure worker safety and environmental protection.

Thus, transit areas likely to contain polluting or unsanitary substances must, compulsorily, be located on flat, sealed areas and equipped for the recovery of any effluents (spread liquids, contaminated runoff water).

Waste and residues generated by the works must be stored under conditions that prevent the risks of nuisance and pollution for the population and the environment (prevention of windblown debris, leaching, infiltration into the soil, release of odours, etc.).

NOTE: The company is reminded to sort and store waste under cover, protected from the elements, and to empty the skips immediately. If immediate emptying is not possible, the skips must be protected from the elements. Soaking the waste will not be permitted, as this increases the weight of the waste to be removed. Consequently, the company may be asked to empty its skips and soak the waste.

3.6.5 WASTE DISPOSAL

The disposal of waste, including its transport and treatment in authorized and approved channels, will be taken care of by the holder.

Waste is transported to designated facilities (recycling or recovery, landfill, or incineration) in accordance with regulations (particularly traffic laws and waste transport regulations). The contractor is responsible for ensuring that the carriers, collectors, disposal companies, and treatment centers whose services it uses adhere to best practices regarding transport, transfer, loading, processing, and disposal.

The waste management plan specifies the measures taken to limit nuisances: frequency of removals (establishment of a schedule), noise, dust, routes, etc.

In any event, the entire cost of removing dismantled equipment and demolition materials is the responsibility of the contractor, whether they plan for recovery or disposal. The contractor will ensure the monitoring and traceability of this process.

The conditions for the disposal of the waste produced must be able to be justified at all times, in particular by the presentation, where applicable, of waste tracking slips.

3.6.6 WASTE DISPOSAL / RECOVERY

Candidates will specify in their bid the disposal channels for the different products and will prioritize waste recovery whenever possible.

The company will need to prioritize reuse/recycling before any disposal.

3.6.7 WASTE TRACKING

The company awarded the contract will be required, within the framework of this project, to keep regular and accurate records of the waste produced by the dismantling, demolition and development work.

For this purpose, a register must be opened. This document must contain at least the following information:

- Nature and quantities of waste produced, including waste code and origin.
- Date of removal,
- Names of companies providing collection and transport
- Names of companies providing treatment or disposal (final destination), specifying the location of the treatment center.
- Methods of treatment or elimination

As part of their offer, candidates will include in their technical proposal a copy of the prefectural decrees of the main treatment or disposal centers to which they plan to dispose of the waste.

The company must provide all waste tracking forms (WTF) attesting to the traceability of waste at the end of the project. To this end, it will provide, each week and as the work progresses, a table of quantities removed, specifying the transport dates and disposal channels used.

3.7 PHASE 5: END-OF-MISSION REPORT

- Technical report: Full description of operations carried out, difficulties encountered and solutions implemented.
- Final inventory: List of equipment dismantled, recovered, destroyed or recycled.
- Waste traceability: Provision of all tracking slips, processing certificates, etc.
- Detailed financial statement: Actual expenses by item, comparison with the projected budget.
- Recommendations Proposals for the future management of the site (development of the land, security, possible environmental monitoring).

At the end of all services, the company must prepare and submit to the project owner a comprehensive end-of-mission report, intended to account for the complete execution of the work carried out within the framework of this contract.

This report will include a detailed technical assessment presenting all the operations carried out, the methods implemented, the difficulties encountered during the construction project as well as the technical, organizational or safety solutions implemented to address them

.A final inventory of equipment and facilities will be drawn up, specifying the items dismantled, recovered, reused, destroyed or recycled, as well as their final destination.

The report will incorporate all traceability elements of the waste generated by the works, including in particular tracking slips, treatment certificates, proof of recovery or disposal issued by the approved channels.

A detailed financial statement will also be provided, showing the actual expenses by item and their comparison with the market's projected budget, along with any useful explanations in case of discrepancies found.

Finally, the end-of-mission report will include recommendations for the future management of the site, focusing in particular on opportunities for land development, security measures to be maintained and, where appropriate, environmental monitoring arrangements to be considered.

3.8 GENERALITIES

For the execution of the works described in this STS, the company holding this contract shall implement all the human, material and material resources necessary for the execution of the contract and shall take care of all the WWTPs, requests and authorizations necessary for the execution of all its services and within the given time limits.

The service provider must be a firm or company specializing in industrial deconstruction with the following skills:

- Electromechanical engineering and management of complex industrial projects;
- Management of hazardous and non-hazardous industrial waste;
- HSE risk assessment and regulatory compliance;
- Proven references in similar dismantling projects (in Senegal or internationally).

All the services described are considered to have been performed with:

- Personnel with the qualifications and certifications corresponding to the tasks to be performed, the equipment used, materials implemented, dismantled or removed.
- All means of approaching and securing the site, for both staff and contractors.
- All protections and safety measures for pedestrians and vehicles circulating on the public domain along the site.
- Installation on public property of signage corresponding to vehicle entrances and exits, including display of the various authorizations.
- Whenever necessary, the signage will be modified and adapted according to the services to be performed as well as the site fences.
- The company will carry out all these services in agreement with the Safety Coordinator and will include all these elements in its SHSCP.

3.9 DELAYS AND NEGLIGENCE

In the event of non-compliance with the master schedule or unacceptable deviations from their interventions, the project owner may have the work carried out by a third-party company at the expense of the defaulting contractor.

4 TECHNICAL SPECIFICATIONS

4.1 VIBRATION MONITORING

Not applicable

4.2 PIPELINES AND VARIOUS STRUCTURES

4.2.1 GENERALITIES

The contractor may not lay any pipes of any kind without having received the necessary authorizations and without having ascertained their nature and destination, and that the cuts (at the expense of the project owner) have been properly carried out.

He must report, in a timely manner, any requests or (possible) WWTPs to be taken with the administrations by the project owner or his representatives.

The contractor remains responsible to the various concession holders for any damage that may be caused by the execution of the work.

Furthermore, during the course of the work, he will have to report all pipes or structures whose existence was not known when he took possession of the premises.

4.2.2 PROVISIONS RELATING TO POWER LINES

The maximum distances to be respected must take into account all possibilities of proximity, due on the one hand to all possible movements of the overhead power line, and on the other hand to all possible movements, displacements, swings, whippings (particularly in the event of possible breakage of a component) or falls of the equipment to be used for the planned work or operations.

4.2.3 PROVISIONS RELATING TO WATER AND GAS PIPELINES

In the event that the opening of an excavation reveals gas emissions or even slight leaks in the water pipes, the contractor will urgently notify the relevant services.

In the event of gas emissions, he will simultaneously extinguish or move away any fires that may be on or near the construction site; these will only be reignited or moved closer after all emissions have disappeared.

He will simultaneously notify the relevant department so that measures can be taken to ensure the safe continuation of work.

5 HYGIENE, SAFETY, ENVIRONMENT

The service provider must ensure the project complies with national and international regulatory requirements regarding health, safety, the environment, and waste management. All activities must be documented and verifiable.

The company will need to provide:

- Specific HSE plan for industrial sites
- risk analysis by phase,
- procedures:
 - working at height
 - heavy lifting
 - thermal cutting
 - fire management,
- Appropriate PPE is mandatory.
- staff training,
- equipment adapted to each intervention
- emergency equipment.

Contractors will comply with the general principles of prevention and the PGC established by the CSPS.

In general, contractors commit to respecting and ensuring respect for all regulatory precautions regarding the protection of employees working in hazardous areas.

As such, bids must imperatively provide, in their technical memorandum, a clear and structured summary of the HSE (Health, Safety and Environment) procedures that will be implemented for the execution of the services.

5.1 SAFETY AND HEALTH TRAINING FOR WORKERS

The contractor must comply with current health and safety legislation. All required protective measures will be implemented.

The contractor will remain responsible for implementing safety measures and installing the recommended or required equipment. Among other things, they will be responsible for ensuring that their subcontractors carry out their work in the required safety and cleanliness conditions, as well as protecting surrounding property. To this end, the contractor must be physically present during the subcontractors' work.

The instructions below are intended to remind and establish the safety guidelines to be applied or enforced during interventions on construction sites to ensure the protection of personnel.

A - MEDICAL FITNESS

All personnel required to work on the site must be medically fit and have undergone the mandatory medical examinations and vaccinations related to the exercise of the profession, as well as those required by the occupational physician (see the fitness certificates issued by the occupational physician of each company).

B - SAFETY TRAINING

In accordance with current regulations, each company manager must ensure that every worker arriving on the work-site has undergone safety training, including the following presentation:

- specific risks related to traffic conditions both inside and outside the construction site, and applicable safety measures during the execution of the work.
- safety instructions,
- from the explanation of the operating procedure followed by the preventive measures that have been defined for each task,

This training will also be provided:

- to new hires,
- to employees who are changing jobs or techniques,
- to employees returning to work after a break following a workplace accident,
- to employees who are resuming their activity after a leave of absence (illness or non-work-related accident of more than 21 days),

to temporary workers.

Companies using temporary staff must ensure:

- that the person is capable of performing the job for which they are intended,
- that the medical fitness certificate for the specified profession has indeed been issued.
- that the person in question is in compliance with regulations (work permit, residence permit)
- that the staff have undergone safety training and that they have at their disposal all the necessary personal protective equipment for this worksite.

The company must, in accordance with applicable legislation, put in place and maintain all collective or individual protection necessary for the performance of its work.

C - HYGIENE AND SAFETY MEASURES

Without prejudice to the provisions of the Labor Code, personal protective equipment, adapted to the risks presented by the nature of the work and the level of soil pollution, and enabling intervention in the event of an accident, must be kept near the place of use. This equipment must be maintained, in good condition, and checked periodically.

The contractor will take all necessary measures to prevent incidents and accidents and to limit their consequences. This includes, in particular:

- That staff are trained in the hazards presented by the nature of the work on the site, the materials handled, the precautions to be observed and the measures to be taken in the event of an accident (see point B above),
- That the personnel employed in dismantling, demolition and development work are equipped with appropriate personal protective equipment (masks, protective clothing, goggles, helmets and any other protective equipment required by the nature of the work),
- Priority should be given to collective protection measures rather than individual protection measures (especially for work involving risks of falls from height).
- Appropriate signage should be put in place to warn all users of the roads surrounding the construction site of the potential dangers arising from the execution of the works.
- An effective fence should be installed and maintained in good condition to prevent access to the site by any outside person.
- That marking and protection devices be put in place and maintained in good condition throughout the duration of the construction project to indicate work carried out or in progress that presents a potential danger to third parties (authorized or not)

The Project Owner draws the candidates' attention to the fact that these measures are not exhaustive and will not exempt the successful bidder from ensuring compliance with regulations and the execution of the work according to best practices.

D – PROCEDURES AND COMPLIANCE WITH INSTRUCTIONS

Written procedures and instructions are established and communicated to staff, particularly with regard to:

- The installation of site facilities in such a way as to preserve the hygiene and safety conditions of the personnel working on the site as well as those of the local residents,
- The provision of specific and watertight area(s) for the temporary storage of materials from deconstruction (rubble, waste and other elements produced by the works),
- The installation logs,
- Cleaning the facilities,
- The dismantling and removal of equipment and components resulting from the deconstruction,

- The disposal of products, waste and other residues at an approved center,
- The general restoration of the site,

The contractor will be responsible for ensuring compliance with these procedures and instructions implemented during the work. Furthermore, it will be required to ensure their application by any subcontractors.

5.2 LEGISLATION AND DECLARATIONS

The qualified representative of the Labour Inspectorate will have free access to the site and will be able to carry out all the checks he deems necessary.

The necessary insurance policies must therefore be taken out and, upon request from the Project Owner, the Project Manager or the Coordinator, the corresponding policies must be produced.

The company will keep the required registers and documents up to date on the construction site:

- the register of the Labour Inspectorate,
- the Security Register,
- the observation register
- the first aid booklet,
- an extract from the personnel register with qualifications, functions and certificates of competence, authorizations, powers, delegations of authority, first aiders,
- copies of the fitness certificates for each employee,
- instructions in case of an accident,
- working hours,
- the company's internal regulations,
- periodic audit reports.

The company will specify, in particular, who holds these documents and where they can be consulted.

In addition, the company will provide, among other things, the following documents:

- A copy of the site's operating procedures, including all specific regulatory provisions,
- The documents issued by the Project Owner and the Project Manager,
- The documents for the execution of the dismantling, demolition and development work.

5.3 PRELIMINARY JOINT INSPECTION VISIT

In accordance with regulatory provisions, the safety coordinator will conduct, with the companies, a joint inspection of the premises where the work planned under the company's contract will be carried out.

Each joint inspection will be documented in a report prepared by the coordinator. This report will include, in particular, the guidelines and instructions provided by the coordinator.

5.4 SPECIFIC HEALTH AND SAFETY PROTECTION PLAN (SHSCP)

Contractors will comply with the provisions of the general health and safety coordination plan (GHSCP) and will generally respect standard hygiene and safety precautions.

The holder will pay particular attention to the following points:

- dust fire during cutting operations (presence of fire extinguishers, special safety measures, protection of surrounding equipment...),
- compliance with safety rules concerning staff, use of collective and individual protective equipment (safety harnesses, helmets, safety shoes, protective nets, etc.),

The SHSCP will be established taking into account the requirements set out in this STS but also the measures defined by the General Coordination Plan (PGC) drawn up by the SPS coordinator.

The contractors will specify on a PLAN to be attached to the SHSCP (Specific Health and Safety Plan), the location of the installations within the fenced site perimeter:

- Areas reserved for storage by type of waste (note that no storage, even minor, will be authorized beyond the construction zone. In addition, storage must be carried out on impermeable areas),
- the toilets, changing rooms, dining hall, and bungalows,
- the parking area for company vehicles and equipment,
- areas where parking is prohibited,

The contractor and its subcontractors are required to submit a SHSCP to the coordinator, after the joint inspection and before the start of the work entrusted to them.

6 REQUIREMENTS FOR THE EXECUTION OF THE WORK

6.1 PRESENTATION

The site rehabilitation work includes operations that may generate nuisances. For this reason, during the various phases of the construction project, it will be up to the company to implement measures to limit the nuisances related to its intervention.

The objective is to reduce the nuisances caused by site-related activities. For a dismantling site, this objective must be achieved on two levels:

- The construction site and its proximity: The aim is to reduce the nuisances perceived by users inside and outside the construction site: construction personnel, local residents, employees of the neighboring company...
- The broader environmental perspective: this involves reducing the impact of the construction site on the environment and preserving natural resources as much as possible.
- To achieve such objectives, three parties are targeted:
 - The construction site itself and its internal organization
 - Incoming materials and supplies to the construction site: machinery, equipment...
 - Outflows from the construction site: waste, noise generated...

This document defines the environmental requirements that must be taken into account during the preparation and execution of this contract. To this end, each point details the regulations to be complied with and the measures to be taken by companies in order to achieve these objectives.

6.2 LIMITING THE NUISANCE CAUSED TO LOCAL RESIDENTS

The affected residents are all those who may be inconvenienced by the construction site.

The presence of a construction site in an urban or suburban area can cause some inconvenience to local residents, which it is essential to minimize in order to avoid insecurity and complaints.

Contacts may be made with the municipality to examine the points that can be addressed in consultation and, where appropriate, to benefit from the human skills and material resources of these services.

6.3 TRAFFIC FLOW IN AND AROUND THE CONSTRUCTION SITE

The movement of trucks in the surrounding streets and around the construction site, access to the construction site, the disruption of traffic patterns or parking around the construction site are elements that risk disrupting the habits of the neighbourhood and will be sources of conflict.

The movement of construction equipment on the site will be limited as much as possible to avoid congestion and safety issues. Furthermore, the impact of construction equipment and vehicle traffic during the various phases of the project will need to be studied to minimize any resulting disruption.

The company in charge of civil engineering will be asked to provide a traffic plan, to ensure that its employees and suppliers respect speed limits, to inform local residents about the changes caused by the presence of the construction site in terms of traffic and to organize traffic on the public road if necessary (temporary change of access, direction of traffic, etc.) in collaboration with the municipality.

Furthermore, to minimize disruption to local residents, it is recommended to manage deliveries and removals of materials according to peak hours.

Finally, if necessary, the company responsible for civil engineering will be asked to install pedestrian crossings.

6.4 USE OF HEAVY MACHINERY

The contractor's attention is drawn to the risks that the use of heavy machinery for the execution of the work may present.

In any event, it is hereby expressly stated that the use of such devices shall under no circumstances:

- To cause vibrations of such magnitude that they would be perceptible in existing buildings,
- As a result of maneuvers and vibrations, damage, however minor, may occur to existing structures.

If necessary, the contractor will be responsible for providing crane services. This includes all road inspections required for the crane's access. During operations requiring heavy machinery, a clearly marked safety perimeter will be established to restrict access to personnel not involved in the operation.

6.5 PARKING

During the site preparation phase, the company will have to define and delimit a parking area within the site, this must appear on a plan delimiting it.

6.6 DIRT AND DUST

During certain phases of construction, particularly in rainy weather, the passage of machinery on public roads generates mud and other debris. This causes both visual pollution and safety problems: the road surface becomes slippery and this can lead to accidents.

To avoid this, the civil engineering company must maintain the cleanliness of the public road. To this end, truck wheels must be systematically cleaned as needed before leaving the worksite (vehicle cleanliness will be checked to verify the need). Trucks may drive through a designated cleaning tank or over a ramp equipped with water jets. In all cases, the muddy water will be collected and decanted before being discharged. Furthermore, the areas surrounding the worksite will be cleaned as often as necessary to maintain the road surface in good condition. This cleaning must be accompanied by a daily check by a supervisor. Additionally, it is recommended to limit truck traffic during rainy weather to avoid this type of problem.

Any operation that generates dust (sanding, cutting, sawing, etc.) must be accompanied by the use of a dust vacuum cleaner. In dry weather, the floor should be watered regularly to prevent dust accumulation.

The contractor will ensure that all necessary measures are taken to prevent dust from escaping.

6.7 VISUAL NUISANCES

The area surrounding the construction site may be damaged. The visual pollution of the site is generated by:

- The deterioration of the surrounding area,
- The absence or deterioration of fences,
- Dirt on public roads, urban equipment and neighboring buildings,
- The debris flying around inside and outside the construction site.

The company is asked to put up barriers so that the construction site is clean.

In addition, a steel sheet fence over 2 meters high near the sorting bins can be installed to prevent «illegal» dumping

6.8 NOISE POLLUTION

The noise pollution comes mainly from the unloading and loading of machinery, and from the banging and shouting of the workers.

Therefore, the company in charge of the work will have to do everything possible to reduce or even eliminate construction noise.

During the site preparation phase, she will need to:

- Conduct a preliminary noise study in the construction area.
- Assess the noise level of machinery and equipment and integrate this parameter into the site installation plan by positioning them according to surrounding sensitive points (residents, etc.). For example, in the site installation plan, site huts or even palletized material storage at certain phases can be placed in such a way that they serve as an acoustic barrier between the construction site and the neighbourhood.
- Improve material supplies by planning them and thereby reducing the number of vehicles arriving on site.
- Identify exceptionally noisy interventions so that they can be scheduled outside of times that may disturb the neighbourhood.

During the construction execution phase, she will have to:

- Managing site traffic and delivery schedules in accordance with surrounding acoustic constraints,
- Using the noisiest machinery and equipment during the same time slots and in locations furthest from the site boundaries,
- Use noisy equipment at planned time slots, encouraging grouping.

The Project Owner draws the candidates' attention to the fact that the work must be carried out in such a way that its conduct cannot cause noise transmitted by air or solid means likely to compromise the health or safety of the neighbourhood or to constitute a nuisance to it.

Transport vehicles, handling equipment, and construction machinery used within the facilities must comply with current regulations regarding noise emission limits. In particular, construction machinery must conform to an approved type.

The use of any acoustic communication devices (sirens, alarms, loudspeakers, etc.) that disturb the neighbourhood is prohibited, except if the use is exceptional and reserved for the prevention and reporting of serious incidents or accidents.

The project owner grants the contractor full discretion regarding the work schedule. However, work likely to cause disturbances, particularly noise, to surrounding residents must be carried out between 8:00 a.m. and 7:00 p.m.

6.9 ODOR NUISANCES

The contractor will take all necessary measures to ensure that the work does not generate odours likely to disturb the neighborhood, harm public health or safety, such as:

- Storage of excavated materials likely to emit odours in areas sheltered from the wind and, if possible, covered (otherwise, covering of the windrows),
- Limiting the storage time of materials likely to emit odors,

6.10 LIMITING THE NUISANCES PERCEIVED BY CONSTRUCTION SITE PERSONNEL

It is necessary to pay attention to the products and techniques used by the workers that could pose a risk to their health.

To achieve this, it is best to replace the products and techniques used with potentially less harmful substitutes, or at least to identify these dangerous products in order to prevent them, raise awareness among colleagues about their danger, and thus better organize the protection of colleagues.

Noise pollution doesn't just affect local residents. In fact, the most exposed people are the construction workers and anyone likely to work on the site. Their exposure increases with the duration of these disturbances.

The contractor must ensure the use of techniques that reduce noise to the lowest possible level, with the noise exposure level remaining compatible with workers' health (hearing protection). Furthermore, when a worker's daily noise exposure or peak sound pressure exceeds 90 dB(A) and 140 dB(A) respectively, the site manager must implement a program of technical or work organization measures designed to reduce noise exposure. Finally, for added protection, the site manager must train and strongly encourage personnel to wear hearing protection equipment adapted, necessary when the previous levels exceed 85 dB(A) and 135 dB respectively

6.11 ENVIRONMENTAL PROTECTION

The main objective is to reduce environmental impact. The aim is therefore to preserve natural resources and minimize

the environmental footprint of construction sites. This objective is particularly important given the nuisances caused by all building projects, especially in terms of waste produced and pollution generated.

6.11.1 PREVENTION OF WATER AND SOIL POLLUTION

6.11.1.1 PREVENTION OF ACCIDENTAL POLLUTION

On a construction site, if precautions have not been taken beforehand, it is highly likely that substances will be spilled either into the soil and then seep into the groundwater or discharged directly into stormwater or wastewater collection and drainage systems. In the first case, this results in direct pollution, and in the second, it leads to damage to the networks and treatment facilities. Therefore, it is imperative that the site manager implement systems for recovering these substances to prevent any pollution.

Several actions can then be implemented.

Firstly, preliminary studies will need to be carried out regarding the vulnerability of the land (wetland, sand, unprotected aquifer, etc.) in order to guide the choice of oil and how to store it.

The site manager must ensure that less harmful products, such as vegetable oils, are chosen to replace traditional oils. This oil is significantly less harmful to the environment than traditional oils and does not persist in the natural environment after potential pollution: its non-volatile fraction is 98% biodegradable in 21 days. However, its entry into sewers and waterways must be prevented. This oil behaves similarly to traditional oils. The site manager can also implement the use of vegetable-based form release oil or resin-based formwork (oil-free formwork system) to avoid using more harmful oils on the construction site.

Furthermore, polluting fluids such as oils must be managed in such a way that they are not spilled into the ground or into water recovery systems. Several management methods can be used: containment basins to prevent seepage into the ground, cleaning formwork over a sealed galvanized steel area to collect the oil, etc. In addition, maintaining sprayers and providing site personnel with spare hoses and nozzles are factors in reducing excessive oil consumption due to equipment malfunctions (these parts are easy to replace and this initiative is not expensive).

Finally, a training process must be implemented to ensure staff are aware of the standards to be met and the spills to be avoided. This training will enable staff to respect containment and washing areas, etc. Furthermore, it is recommended to use a hazardous materials tracking sheet to raise awareness among staff and anyone present on the worksite about the product's journey and its potential environmental impact. This training can be accompanied by the creation of a document outlining the methodology for applying form release oils.

The contractor shall ensure that measures to prevent accidental pollution are put in place and maintained so that there can be no direct or indirect discharge of hazardous or unhealthy material into the natural environment, even in the event of an accident.

6.11.1.2 STORMWATER MANAGEMENT

The contractor will take all necessary measures to prevent rainwater runoff from affecting areas likely to be polluted during the construction period. If this is not possible, the contractor must implement measures to collect this runoff.

6.11.1.3 SHEET DISCHARGE

The Project Owner wishes to draw the candidates' attention to the fact that the direct or indirect discharge of wastewater, even treated wastewater, into an underground aquifer is strictly prohibited. Failure to comply with this regulation will result in a penalty of 500,000 FCFA upon simple verification by the Project Owner.

6.12 RESPONSABILITY

The company remains responsible for any damage to existing structures or those being demolished, both in excavation and containment areas, and on neighbouring properties and public roads. Particular care will be taken to avoid soiling public roads.

6.13 PROJECT MANAGEMENT

Upon receiving the work commencement order, the contractor must inform ONAS of the name of the person responsible for the work and safety, as well as their deputy. This person must be reachable at all times, outside of business hours, day or night.

This availability will allow us to respond quickly and effectively to any incident arising from the construction site.

He will be responsible for representing the contractor in receiving notification of service orders and written or verbal instructions from the project manager and ensuring their execution.

In case of absence from the site, he must indicate the name of the permanent supervisor of the holder (site manager or foreman).

The contractor shall provide the project manager with a certified copy of the powers given in his name to the persons he has designated to represent him.

7 TESTS – TRIALS – RECEPTION

7.1 STOPPING POINTS

Stopping point	Phase	Validation condition	Expected deliverables	Validator
PA1	Before mobilization	Validation of studies and preparatory documents	Technical survey, HSE analysis, Impact study, PGD, PIC, Planning	ONAS / SPEAK UP
PA2	Before setting up the construction site	Obtaining administrative authorizations	Environmental authorization, filing receipts	ONAS / SPEAK UP
PA3	Before work	Initial environmental state validated	Soil/water analysis report by accredited laboratory	ONAS
PA4	Before work begins	SHSCP validated + Joint inspection carried out	SHSCP validated, joint inspection report	ONAS
PA5	Before dismantling/cutting	Energy neutralization (lockout/tagout)	Electrical and fluid consignment report	ONAS
PA6	Before the first waste removal	Validation of waste streams	Approvals for supply chains, certificates of acceptance, WTF templates	ONAS
PA7	Before heavy dismantling	Validation of operating procedures and structural stability	Operating procedures, stability rating, lifting plan	ONAS / MOE
PA8	Mid-construction	Intermediate HSE Audit	HSE Audit Report and Corrective Actions	ONAS /MOE
PA9	Before rehabilitation	Site cleared + waste traceability compliant	Final inventory of equipment, WTF table	ONAS
PA10	Before receiving	Post-decommissioning environmental status compliant	Comparative before/after report, corrective action plan if needed	ONAS
PA11	Reception	Compliance of the work and site restoration	Acceptance report, removal of reservations	ONAS
PA12	Market closing	Validation of the end-of-mission report	Final report: technical aspects, waste management, financial aspects, recommendations	ONAS

72 TESTS

The tests mentioned in the context of this contract correspond to soil quality analyses. Their purpose is to assess the condition of the soils concerned by the works, to identify the possible presence of pollution or alterations, and to verify the conformity of the soils with the applicable environmental and regulatory requirements.

73 ACCEPTANCE OF THE WORK

The acceptance of the works will include (non-exhaustive list):

- a verification of the dismantling of all equipment,
- a verification of the site's restoration,
- an observation of the dismantling of the construction site facilities,
- a verification of the cleanliness of the site and the disposal to approved channels of all equipment and materials resulting directly or indirectly from the work,
- an administrative verification of all documents and slips submitted to the Project Owner to ensure the traceability of waste.
- The acceptance will be pronounced by ONAS.

8 INFORMATION AND DOCUMENTS REQUIRED

8.1 INFORMATION

- To allow them to establish their offer,
- To ensure perfect execution of the work.

It is stipulated that, under no circumstances, may the contractor claim insufficient information to justify a price increase or non-compliance with the project documents and applicable regulations. The contractor is responsible for verifying all documents, plans, and other information provided. They must review the file and cannot claim ignorance of it.

8.2 MANDATORY VISIT

The contractor is deemed to have inspected the site during the consultation phase to understand the specific conditions of the work under this contract. A site visit to both structures is mandatory.

8.3 DOCUMENTS REQUIRED

Interested candidates must submit an application including:

- A detailed methodological note (understanding, technical approach, planning);
- An HSE plan tailored to the project;
- A precise schedule of activities;
- Expert profiles and CVs;
- The material resources planned for each phase (rental or own equipment to be specified)
- A detailed financial offer (fees, equipment, transport, waste management).

