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CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN -CEMP-

Petera and Cernavoda Wind farms

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Prepared by:	Reviewed by:	Approved by:
ENVISTRUCT CONSULT	EDP Renovaveis	EDP Renovaveis
ENVISTRUCT Environmental Structures Consult	Laura Lazar	Xabier Garcia Monreal Tekin Omer
Dpt.: Environment	Dpt.: ENGINEERING, CONSTRUCTION & ENVIRONMENT	Dpt.: ENGINEERING, CONSTRUCTION & ENVIRONMENT
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CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN
-CEMP-

Petera and Cernavoda Wind farms
Constanta County
Dobrogea Region

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I. INTRODUCTION

1. General

The **CEMP** establishes what an organization needs to do in order to manage itself so as to meet its environmental, economic and social goals.

The main role of this **CEMP** is to outline the contractors approach to environmental management through the construction phases with the primary aim of reducing any adverse impacts from construction.

2. Purpose and scope

The EDP has developed this **CEMP** for implementation during the Pestera and Cernavoda wind farms projects.

The **CEMP** describes how EDP's proposes to manage and control the environmental aspects of the Projects during the construction phases. The necessity of the CEMP elaboration is mentioned in the Environmental Management and Monitoring Plan (**EMMP**) of Pestera and Cernavoda Wind Farms.

The **CEMP** will be applicable to all EDP's staff and contractors during the Projects.

Part of the elaborated ESIA documentation is the **EMMP** (Environmental Management and Monitoring Plan). The mitigation and enhancement measures detailed within this EMMP represent commitments which EDPR will implement during various stages within the lifetime of the two wind farms.

The EMMP contains procedures for environmental and social assessment of the wind farms in line with the best international practice. Among these procedures, the EMMP indicates the link to this **CEMP** – in order "to cover construction material storage, site security arrangements, wheel washing, dust control measures, landscaping etc".

3. Overview Of Environmental Assessment

In order to fulfill the environmental assessment the following documents were analysied:

- Cernavoda Environmental Impact Assessment, dated 2008, completed by Cabinet Expert Petrescu Traian.
- Pestera Environmental Impact Assessment, dated 2008, completed by Cabinet Expert Petrescu Traian.
- Supplement to the Environmental and Social Impact Assessment (Supplementary Information) dated April 2010 completed by WSP Environmental UK.

- Stakeholder Engagement Plan (SEP) dated April 2010 completed by WSP Environmental UK
- Environmental and Social Action Plan (ESAP) dated April 2010, EDPR.
- Environmental Management and Monitoring Plan (EMMP) dated April 2010, completed by WSP Environmental UK.
- Non Technical Summary (NTS), dated April 2010, completed by WSP Environmental UK.

4. Projects Overview

The sites for the proposed wind farm projects are located in rural areas, a minimum of 550m from existing residential properties. The two sites are similar in character, being used for agricultural purposes (pasture and arable), and are located approximately 7 km apart at the closest point.

The proposed wind farm at **Pestera** will contain 30 wind turbines (turbine model VESTAS V90 3.0 MW), providing a total installed capacity of 90MW.

The site is located south of the Cernavoda – Medgidia Road near Pestera commune. Access is made from the DN 22C until Medgidia and then DJ 222 Medgidia-Pestera. The County Road (DJ222) is a paved road in good condition between Medgidia and Pestera.

The site can be accessed two ways, from Pestera and from Irvinezu Mare village on DJ 223B road.

The project's objectives and contractors are:

Objective	Contractor
Civil works for Wind farm	GES
Wind turbine	Vestas
Pestera Substation	GES
High voltage line	Energobit
Power transformers	Concear
Meteorological towers	Telsat

- The Pestera Wind farm consists of access, internal roads, foundations and assembly platforms.
- High voltage Electrical Line 110kV (Pestera Substation – "T" connection in High Voltage Electrical Line Medgidia-Pestera)
- Underground Medium Voltage Elelctrivcal distribution system (LES 33kV)
- Pestera Substation

The wind farm at **Cernavoda** will comprise 46 wind turbines (also VESTAS V90 3.0 MW), providing a total installed capacity of 138 MW.

The site is located north of the Cernavoda – Medgidia Road near Mircea Voda commune. Access is made from the DN 22C road turning approximately 5 km onto DJ 225. The County Road (DJ255) is a paved road in bad condition between the Mircea Voda limit and the site.

The site is split into two parts by the County road, 5 turbines are located on the right side and 41 turbines on the left side. The distance between the two parts of the site is around 300 m on the DJ 255.

The project's objectives and contractors are:

Objective	Contractor
Civil works for Wind farm	STRABAG / GES
Wind turbine	Vestas
Cernavoda Substation	Energobit
High voltage line	ISATUR / AMPEL
Power transformers	Concear and Abengor
Meteorological towers	Telsat

- The Cernavoda Wind farm consists of access, internal roads, foundations and assembly platforms.
- High voltage Electrical Line 110kV (Cernavoda Substation – Tortomanu Substation – Mircea Voda North Substation)
- Underground Medium Voltage Electrical distribution system (LES 33kV)
- Cernavoda Substation

The Project is currently under construction and commercial operation is expected to begin in December 2010 for Cernavoda and September 2010 for Pestera.

The wind farm developments at Pestera and Cernavoda are classified as a Category A projects in terms of environmental and social criteria (EBRD, 2003) due to their size and location which could result in potentially significant adverse environmental and/or social impacts. Therefore, the Projects have been subject to an Environmental and Social Impact Assessment (**ESIA**) in line with EBRD and IFC requirements in order to assess the environmental and social impacts of the Projects and consider appropriate mitigation measures.

5. Owner

Cernavoda is wholly-owned by Cernavoda Power SRL, a Romanian company, and Pestera is wholly-owned by Renovatio Power, SRL a Romanian company. The Project companies, Cernavoda Power and Renovatio Power, are each owned 85% by **EDP Renovaveis SA** ("EDPR"), through its wholly-owned European subsidiary Nuevas Energias de Occidente, S.L., and 15% by Renovatio Group Ltd. ("Renovatio Group"). EDPR and Renovatio Group are the Project Sponsors. EDPR is the renewable energy arm of the Energias de Portugal Group ("EDP") and is the world's

third largest wind energy company, with installed capacity of 5,577 MW as of December 31, 2009 and additional 1,293 MW under construction. EDPR owns wind asset portfolios in Spain, Portugal, France, Belgium, Poland, Romania, the United States, Italy and Brazil. The company is listed on the Euronext stock exchange with 22.5% of its shares publicly-held and 77.5% owned directly or indirectly by EDP. Renovatio Group is privately-held and is EDPR's local partner for wind power development in Romania.

6. Objectives of CEMP

The **CEMP** describes measures foreseen in order to minimizeand manage environmental risks associated with the Projects construction activities.

The key objectives of the CEMP are to:

- ensuring that works are carried out in accordance with appropriate environmental statutory requirements, the conditions of approval for the project, relevant guidelines and existing environmental management systems and procedures (EMMP) of Pestera and Cernavoda Wind Farms
- Define actions that will be implemented by all Contractors and Subcontractors during construction, commissioning and testing of Pestera and Cernavoda Wind Farms to avoid and/or minimize the potentially adverse environmental, health and safety effects identified in the EIA reports and ESIA documentation.
- ensuring that works are carried out in such a way as to minimise the likelihood of environmental degradation occurring;
- ensuring that all employees engaged in the works comply with the terms and conditions of the CEMP;
- providing clear procedures for management of environmental impact including corrective actions.
- ensuring that works are carried out in such a way as to manage the impact of the works on neighbouring land uses;
- Ensure the construction work procedures minimize potential impacts on the environment and community.
- Ensure that EDP Renovaveis (EDPR) and all its Contractors and Subcontractors are committed to the philosophies of good site practice and safe working conditions. EDPR is also committed to ensuring that Pestera and Cernavoda Wind Farms are engineered and constructed in accordance with all applicable laws and regulations of Romania.

II. Environmental objectives and targets

The project is of obvious positive benefit as it will generate electricity from a renewable resource and help Romania meet its EU mandated renewable energy targets. The impacts associated with these additional issues can be avoided or mitigated by adhering to generally recognized performance standards, guidelines or design criteria. EDPR has completed an independent EIA, independent Supplementary Environmental Assessment (EA), public consultation and will conduct additional consultation on an ongoing basis as defined in the Stakeholder Engagement Plan (SEP), has developed a detailed Environmental Management and Monitoring Plan (EMMP) and has committed to conduct its activities in accordance with measures contained within the EA documentation, including the original EIA, the EMMP, and will, upon implementation of the EMMP and specific additional measures described below, comply with the IFC Performance Standards on Social and Environmental Sustainability. It should be noted this project is also being considered for support by the EBRD who are also reviewing the project to their respective institutional requirements and EU Directives.

The EDP's corporate environmental objectives are to:

- Promote the efficient use of energy, reduction of waste and recycling of materials in all activities
- Encourage ethical environmental practice and behavior including respect for cultural and community values
- Comply with environmental laws applicable to the Project, and met or exceed all relevant statutory obligations and codes of practice to witch Company subscribes
- Assess project environmental risks and implement appropriate risk management programs to continually improve performance across the Project
- Report regularly on environmental performance and take remedial action where performance does not meet the expectation
- Communicate the environmental policy to all personnel, contractors and clients through induction, education and training to promote environmental responsibility and obligations
- Influence the suppliers and contractors to act consistently with company approach towards responsible environmental practices.

The environmental objectives set for Pestera and Cernavoda wind farms are consistent with EDP's objectives.

1. Key Performance Indicators

As means of assessing environmental performance on an ongoing basis, the EDP has set the following KPIs:

- breaches on environmental legislative or regulatory requirements
- Environmental Incident Frequency Rate (EFIR)
- Spoil and waste recycling rates and
- Monetary value of regulatory penalties incurred.

Table II.1 Projects Environmental Objectives and targets

Environmental Impact	**Objective**	**Target**
Environmental Approvals	Project to be constructed in accordance with planning, environmental and other approvals.	No identified non-compliances with approvals.
Effect on the natural ecosystem due to Project activities	To ensure there are no adverse effects on the natural ecosystem as a result of Project activities beyond those predicted in the EIA for the Works.	To have no release of materials toxic to the natural ecosystem.
		To cause no unnecessary or irreparable damage to the natural ecosystem during construction.
Air pollution resulting from Project activities	To ensure any release of pollutants to the air is within statutory limits.	To minimise complaints in relation to dust generated by Project.
Noise pollution resulting from Project activities	To keep noise pollution within statutory and contractual requirements.	To minimise complaints in relation to noise generated by Project activities that result from noise levels outside predicted and/or contractual /legislative limits.
Generation of waste	To minimise the generation of waste by: (a) recycling waste to other uses where practicable; (b) ensuring waste materials are deposited in bins / designated areas	To separate waste into streams to maximise recycling / reuse to minimise, within budgetary constraints, waste sent to landfill.

Environmental Impact	Objective	Target
	and that the waste is removed as appropriate.	
Contaminated Land	To identify contaminated land, minimise the disturbance and ensure there are no adverse impacts on human health or the environment.	**No soil contaminated by construction activities to be left on site at the completion of construction.**
Deposition of mud and slurry on roadways	To minimise mud and slurry deposited on roadways as a result of Project activities.	To receive no complaints or regulator action relating to mud or slurry being deposited on roadways as a result of Project activities.

III. Legislative framework

Legislative requirements are described in **Annex 1**.

IV. Statements of commitments

The key list of statements of commitments are presented in the table below:

SoC Reference	SoC Objective	Commitment
General		
	Ensure the adequacy and compliance of Environmental management measures	Environmental Management System(s) will be established and maintained to implement best practice management for environmental impacts.
		Dedicated environmental personnel appointed to monitor the performance of the environmental management measures.
Consultation		
	Ensure effective management of complaints	A system to receive, record, track and respond to complaints within a specified timeframe will be established.
Biodiversity		
	Minimise native vegetation disturbance	The limits of clearing and other native vegetation disturbance will be clearly marked on relevant work plans and on site prior to clearing.
		Equipment storage areas and stockpile areas will be located in existing cleared locations.
	Offset the impacts of Project on biodiversity and habitat	Revegetation of affected areas by constructions works
Resource Management		
	Reduced demand on resources	Achieve balanced earthworks where feasible.
	Minimise transport associated with the	Where feasible, suitable materials will be obtained from

SoC Reference	SoC Objective	Commitment
	demand for resources	local existing licensed quarries.
Traffic		
	Minimise impact on traffic due to construction	Construction vehicle movement arrangements will be developed to minimise impacts on other road users with specific regard to other road works in the region, local traffic movement requirements (stock or machinery) and peak traffic volumes, including long weekends and holiday periods.
		Construction will be planned to minimise disruption to traffic including use of road occupancy licences, variable message signage, static signage and coordination between sections as far as feasible
Social and Economic Considerations		
	Minimise the social and economic impact of the construction works on the local community	All landholders will be informed on works schedule
Air Quality and Greenhouse Gases		
	Minimise generation of dust	Dust will be visually monitored and where necessary best practice mitigation measures will be implemented to minimise the generation of dust.
	Minimise greenhouse gas emissions and air pollution	Plant and equipment will be maintained in a proper and efficient condition and operated in a proper and efficient manner.
		There will be no burning of green waste or any other wastes.
		Construction will aim to use electrical energy derived from a renewable energy source
Noise and Vibration		
	Minimise the impact of construction noise and vibration on surrounding	The standard construction hours will be 7.00am to 7.00pm Monday to Friday; 7.00am to

SoC Reference	SoC Objective	Commitment
	residents and where necessary, comply with all relevant standards to reduce noise and vibration to an acceptable level	4.00pm Saturdays and no work on Sundays or public holidays.
		Works required outside of standard construction hours will only be undertaken where the works are essential to be completed in this period and after appropriate consultation with affected residences, and local council and would be planned to minimise disruption to freight traffic.
		All plant and equipment will be well maintained and fitted with adequately maintained silencers that meet the vehicle design specifications.
		Prior consultation and notification will be undertaken with nearby residences that may be affected by noise or vibration generating activities.
		Best management practices will be adopted in accordance with the legislation.
Visual		
	Minimise visual impact	Cuttings and embankments will be graded out wherever feasible to reflect and best fit the characteristics of the local landform.
Waste Minimisation and Management		
	Reduce creation of waste and maximise re-use and recycling	Reuse and recycling and avoidance strategies in accordance with RWMP and CWMP
	Ensure waste generated is managed appropriately	Waste materials will be classified and managed in accordance with legislation in force.
Geology, Soils and Water Quality		
	Minimise the risk of soil and underground water contamination	Any construction materials and fuels stored or used on site will be appropriately managed to minimize the risk of soil and underground water contamination.

SoC Reference	SoC Objective	Commitment
		Rehabilitation of disturbed areas will be undertaken progressively.
Contaminated Land		
	Identification and investigation of potentially contaminated sites	A review will be undertaken of all land impacted by the contruction activities to identify potentially contaminated sites. Potentially contaminated sites will be further investigated
	Management of previously unidentified contamination	If site contamination investigations indicate that contaminants are present on the site in concentrations above the intended land use criteria, then an appropriate risk based management plan approach would be developed Where contamination is found to pose unacceptable risk to either the environment or human health receptors a remedial action plan will be developed and remediation works will be undertaken.
Hazard and Risk		
	Minimise the risk of an incident during construction	Activities with the potential for spillage such as refuelling, maintenance of equipment, mixing of cutting oil and bitumen will be conducted in bunded areas to prevent discharge into watercourses.
		Potentially hazardous and contaminating activities (such as, concrete mixers, and handling hazardous chemicals) will be conducted in bunded areas.

V. Roles and responsibilities

Contractors and **Subcontractors** will ensure that the environmental commitments according with provisions of **EA** (Environmental Agreement), **EMMP** (Environmental Management and Monitoring Plan) and **Romanian legislation** in force will be met and that work proceeds in compliance with construction specifications.

The following sections outline the roles and responsibilities of construction staff with respect to environmental management:

The **Contractors** appointed by EDPR have responsibility for:

· Implementing the CEMP (Construction Environmental Management Plan);

· Monitoring Sub-Contractor's performance to apply CEMP;

· Implementing mechanisms for dealing with problems (as foreseen in EMMP an ; and

· Acting as a point of contact for consultation and feedback with legal consultees, the public and other interested parties.

The **Contractors** will ensure that a copy of this **CEMP** is available on-site and the site personal is familiar with its contents.

An **Environmental Specialized Company** will undertake weekly environmental inspections to audit compliance of the site works with the EA, EMMP and this **CEMP** and will prepare weekly reports for each wind farm. These reports will be available for EDPR, Contractors and Subcontractors representatives.

Below **Contact Data** of involved parties are presented:

- **Owner: EDPR**

Responsibilities: To ensure the development comply with the requirements of the EA, EMMP and CEMP.

Project Manager EDPR:
Tekin Omer
Mobile: +40 735 519 196
E-mail: tekin.omer@edprenovaveis.com
Health & Safety Coordinator EDPR:
Gabriel Sălcescu
Tel: +40 741 164 587
E-mail: salcescugabriel@yahoo.com
Environemental Specialist EDPR:
Laura Lazar
Tel: +40 725 929 884
E-mail: lauralazar@edprenovaveis.com

- **Contractors: Vestas (wind turbines production and installation)**

Iuliu Butoarca (Project Manager)
Tel: +40 752 232 221
E-mail: iubut@vestas.com

- **Contractors: PESTERA WIND FARM (90 MW)**

GES:

Victor Nogueira Dominguez (sef santier)
Mobile: +34 660 122 380
Fax: +34 981 253 534
E-mail: vnogueira@siemsagalicia.es

SC Energobit SRL:

Flavius Costesc
Tel: 0729 885 193
E-mail: flavius.costesc@energobit.com

- **Contractors: Parc Eolian Cernavoda I (23 WT x 3 MW = 69 MW):**

STRABAG:

Bogdan Băzarea
Tel: 0761. 113 603

- **Contractors: Parc Eolian Cernavoda II (23 WT x 3 MW = 69 MW):**

GES:

SC Energobit SRL:

Flavius Costescu
Tel: 0729 885 193
E-mail: flavius.costesc@energobit.com

Isastur (Ampel):

Javier perez Lopez (Project Manager)
Tel: +34 985 980 104
E-mail: javier.perez@ampel.grupoisastur.com

VI. ENVIRONMENTAL AND CONSTRUCTION GUIDELINES

The procedures included in this document will be modified/updated to meet the changing needs of the projects as it proceeds through the design and construction phases.

Environmental management involves compliance with:

- **Environmental Agreement** provisions and Romanian environmental regulations in force;

- Measures foreseen in the **EMMP** – Environmental Management and Monitoring Plan; and

- Environmental legislation in force

The environmental aspects of the construction of the development operations are as follows:

1. Agricultural Soils;
2. Contaminated Soils;
3. Erosion and Sediment Control;
4. Site Organization;
5. Traffic Control;
6. Noise control;
7. Dust Control;
8. Equipment Maintenance;
9. Oils Storage, Handling and Disposal;
10. Fuel and hazardous material spills
11. Personnel
12. Accidents on Site
13. Provision of water
14. Cement and concrete operation
15. Solid waste management
16. Site clean up
17. Environmental Monitoring
18. Safety monitoring
19. Contingency Planning

1. Agricultural Soils

The conservation and maintenance of agricultural soils are of primary concern during construction. Construction activities have the potential to have long-term impacts by changing the physical and chemical properties of agricultural soils and affecting productive capability and future land use. The most common impacts are loss of topsoil resulting from construction activity and compaction.

Mitigation measures:

a.1. Ensure that topsoil is removed from any agricultural work areas prior to trenching;

a.2. Ensure that topsoil and subsoil piles are separated;

a.3. Ensure that topsoil is not used for trench backfill or padding;

a.4. Ensure that topsoil and subsoil are restored in the proper sequence;

a.5. All topsoil stripping shall be monitored by construction staff to ensure that topsoil in removed to the correct depth.

2. Contaminated Soils

Soil excavation is required for the installation of the Wind Farms facilities. During these activities, it is possible that soil suspected of contamination from known or unknown sources, may be encountered. The purpose of these environmental management practices is to set out the recommended steps for consistent, safe and environmentally responsible handling of such soil. It will assist construction personnel in:

Mitigation measures:

b.1. Identifying soil suspected of contamination;

b.2. Identifying contaminated soil;

b.3. Minimizing risk to human health and safety, and to the environment when such soils are encountered;

b.4. Handling such soil in a manner that is in compliance with the relevant environmental legislation; and

b.5. Minimizing risk to the construction schedule.

For the purposes of this CEMP and for construction of the wind farms, some standard definitions for Suspect and Contaminated Soil is as follows:

Suspect Soil: A soil suspected of being contaminated, based on either sight, smell, past or present land use, or a combination thereof.

Contaminated Soil: A soil containing a substance or material whose concentration exceeds regulated limits, or may:

- pose a threat to worker health or safety;

- pose a threat to the environment; or
- pose a threat to public safety.

The **mitigation procedure** consists of the following steps:

A. Identification;

B. Secure Suspect Soil and Excavated Area

Each of these steps is described in detail below:

A. Identification:

Suspect soil can usually be identified by sight and smell observations (dependent upon the contaminant present). Some obvious signs of contamination include, but are not limited to:

(a) Soil discoloration

(b) Unusual or different soil texture

(c) Unusual odour

(d) Vegetation distress

(e) Standing water or trench with a hydrocarbon sheen

(f) Abandoned industrial waste (storage tanks and/or infrastructure)

When either suspect or contaminated soils are encountered during excavation, work in the area will be suspended. The SITE ENGINEER will be informed immediately.

B. Secure Suspect Soil and Excavated Area:

In the event that suspect/contaminated soil is encountered, the area will be secured and any unnecessary contact with the soil will be avoided. Work in the vicinity of this soil will be moved to another location at the work site wherever possible. Any suspect/contaminated soil that has been excavated will be secured using the available resources. Potential securing methods will include:

a) placing the soil on a plasticized tarp;

b) covering the soil with a plasticized tarp to isolate if from other materials;

d) placing berms around the tarp to isolate and contain the soil.

If an excavation can be safely left open, the area will be secured as is, until further direction can be obtained. If the excavation cannot be safely left open, then it will be backfilled. Work will be suspended if:

a) continuing to excavate in a suspect/contaminated site could pose a threat to the health and safety of the worker(s);

b) issues of non-compliance with environmental legislation may result from continuing to work in areas of contaminated soils.

3. Erosion And Sediment Control

Erosion and sediment concerns can arise both during the construction phase of the Project and following construction when the site clean-ups have occurred. Suitable mitigation measures are therefore required for temporary site conditions which occur for a relatively short period during the construction phase as well as for the permanent conditions following the completion of the facilities and cleanup of the work sites.

The grade or slope of the working areas that will be disturbed during the construction phase will determine the amount and complexity of the mitigation measures that will be required to ensure adequate erosion and sediment control. Generically, erosion and sediment control measures will include the application of structures such as:

a) Runoff Controls - diversion berms, cross trenches;

b) Erosion Control - diversion ditch and dispersion aprons, gravel sheeting, mulch, erosion control blankets; and

c) Sediment Control - sediment fence, straw bale barriers, filter berms, sediment traps, settling ponds.

The following points and definitions comprise the basic principles of erosion and sediment control. The CONTRACTORS shall implement these measures where there is a risk of erosion and loss of soil:

(a) Areas where soil or subsoil has been exposed shall be stabilized by:

- grading exposed areas to a slope which minimizes the potential for erosion;
- applying appropriate erosion and sediment control measures; and seeding, mulching or covering with erosion control matting where deemed appropriate by the on-site Inspector or Engineer.

(b) Sediment and erosion control structures shall be installed prior to site disturbance and meet the quality as outlined in the construction or manufacturers specifications. These measures shall only be removed when the disturbed area is stabilized.

(c) Sediment and erosion protection measures shall be inspected daily and also during or immediately following heavy rain events.

4. Site Organization

Site organization needs to comply with the legislation in force and with the conditions set in the Building permit.

The conditions that must be complied re:

a) proper signaling

b) fencing

c) proper surfaces for storage materials

d) washing station for equipment and vehicles used on construction works

e) platform for waste selective collection endowed with bins/containers for mixed waste and recyclables.

f) Endowments for involved personnel in the construction works;

g) Fire protection equipment;

h) Proper storage surface for fuels.

5. Traffic Control

During construction works a speed limit of 30 km/h will be applied for all vehicles on site.

6. Noise Control

During construction, excessive noise from construction equipment may become a nuisance to nearby residents.

The following procedures will be implemented to ensure potential impacts from construction are minimized:

(a) the CONTRACTOR will use equipment and machinery that are complying the noise limits set in legislation in force.

(b) wherever possible, the CONTRACTOR shall minimize noise levels during construction.

7. Dust Control

During dry conditions, excessive dust may be generated fro the work sites and access roads. This may have a detrimental impact on the local environment, construction safety or integrity, and may also cause disruption to the normal activities of nearby residences.

The **Contractors** and **Subcontractors** will implement the following procedures to ensure potential impacts from construction are minimized:

(a) will apply dust suppressants such as water;

(b) will ensure adequate control of dust at work sites

8. Equipment Maintenance

The following procedures will be implemented to ensure a proper equipment maintenance:

a) Fueling and lubrication of equipment shall occur in designated and approved locations inside the site organization;

b) washing station for equipment and vehicles used on construction works

9. Oils Storage, Handling And Disposal

By implementing proper handling storage and disposal of oils during construction, the risk of accidents with impact on environment is reduced.

The following procedures will be implemented to ensure the proper handling, storage and disposal of these materials:

(a) Fueling and lubrication of equipment shall occur in designated and approved locations;

(b) Regular inspections of hydraulic and fuel systems on machinery shall be done, and leaks shall be repaired immediately upon detection;

(c) Waste oils and lubricants shall be retained in a tank or closed container and disposed of in an approved manner;

(d) Greasy or oily rags or materials subject to spontaneous combustion shall be deposited and stored in an appropriate container.

(e) All hazardous materials shall be stored with secondary containment and properly signed.

10. Fuel And Hazardous Material Spills

The response to a spill is described in five phases:

1. The discharger should immediately provide notification of a spill. In some cases, the spill may be discovered and reported by others. The spill report should be as complete as possible and include:

(a) Name, address and telephone number of reporting source;

(b) On-site telephone number;

(c) Exact location and time of spill;

(d) Estimated amount and type of pollutant;

(e) Source of pollutant and cause of spill;

(f) Actions being taken to control spill;

(g) Wind Speed and direction; and

(h) Speed and direction of current; damage observed.

2. The spill will be investigated for severity and impacts.

3. Measures will be taken to contain the spill and reduce the spread or impact. Under some circumstances dispersants may be necessary.

4. The clean up activities will be undertaken to recover as much oil as possible. Disposal of the recovered materials will be done according with legislation in force.

The CONTRACTOR shall assume the overall responsibility of coordinating a clean-up which will include the following actions:

(i) deploy on-site personnel to contain the spilled material using a dyke, pit, absorbent material or booms, as appropriate;

(ii) assess site conditions and environmental impact of various clean-up procedures;

(iii) choose and implement an appropriate clean-up procedure;

(iv) deploy on-site personnel to mobilize pumps and empty drums (or other appropriate storage) to the spill site;

(v) apply absorbents as necessary;

(vi) remove any contaminated soil as directed by the Site Engineer;

(vii) dispose of all contaminated debris, water, soil, cleaning materials, and absorbents by placing in an approved disposal site; and

(viii) take all necessary precautions to ensure that the incident does not recur.

11. Personnel

The Contractor shall provide the necessary facilities for all site personnel.

a) The Contractor shall supply an adequate number of chemical or other suitable and approved toilets throughout the site where construction personnel will be operating.

b) Toilets shall be easily accessible and where applicable shall be capable of being relocated. Toilets shall be cleaned and serviced regularly.

c) The Contractor shall ensure that any chemicals and/or waste from the toilets are not spilled on the ground at any time. The Contractor shall be responsible for cleaning up any waste deposited by personnel.

12. Accidents On Site

The Contractor shall comply with the Occupational Health and Safety Act, National Building Regulations and any other national, regional or local regulations with regard to safety on site.

The Contractor shall ensure that contact details of the local medical services are available to the relevant construction personnel prior to commencing work.

13. Provision Of Water

The Contractor shall be responsible for providing construction, drinking and washing water for his staff and the professional supervisory staff. Construction water shall be obtained from locations as agreed with the Municipality.

14. Cement And Concrete Operations

The Contractor is advised that cement and concrete are regarded as materials that are potentially damaging to the natural environment on account of the very high pH of the material, and the chemicals contained therein.

The Contractor shall ensure that all operations that involve the use of cement and concrete are carefully controlled.

15. Solid Waste Management

Waste here refers to all construction waste and domestic type waste.

The Contractor shall supply waste bins/containers throughout the site at locations where construction personnel are working.

The Contractor will sign a contract with a specialized agent for mixed and recyclables waste collection.

The bins shall not be used for any purposes other than waste collection.

Petroleum, chemical, harmful and hazardous waste throughout the site shall be stored in enclosed, special organize areas. The bunded areas shall be clearly marked. Such waste shall be disposed of off-site at a hazardous waste disposal site.

16. Site Clean Up

The Contractor shall ensure that all temporary structures, equipment, materials, waste and facilities used for construction activities are removed upon completion of the project.

The Contractor shall clear and clean the construction site to the satisfaction of the Project Manager upon completion of the project.

17. Environmental Monitoring

A monitoring programme of the environmental effects of the construction works would be implemented. This would:

- Evaluate the effectiveness of environmental mitigation, and identify environmental problems and appropriate responses at an early stage;

- Ensure that the works are carried out in accordance with the provisions of the CEMP; and

- Identify and implement any environmental improvements that would contribute to the overall environmental performance of the project.

18. Safety Monitoring

There would be continuous monitoring of safety standards on-site during all construction activities. To ensure that compliance with all existing and forthcoming statutory requirements and industry good practice is adhered to, the Principal Contractor would issue a **Health and Safety Plan** in line with Romanian Legislation in force.

19. Contingency Planning

Although a serious incident is unlikely to occur during the demolition and construction phase, it is necessary to have procedures in place to deal with emergencies and incidents. Environmental incidents can be defined as unexpected events that lead to, or could in different circumstances have led to, adverse effects on people, property or on environmental resources such as habitats or historic features.

The Principal Contractor would develop a series of plans, which would set out the response in the unlikely event of an incident occurring during construction such as a fuel spillage or an episode of unexpectedly elevated noise and/or dust levels. The procedures would include provision for incident reporting.

Annex 1.

Legislative framework

Applicable environmental legislation on waste matters is detailed below:

- Emergency Government Ordinance on environmental protection no. 195/2005, approved and modified by Law 265/2006 – DC 85/337/CEE (modified by DC 97/11/CE); DC 30/313/CE; DPEC 2001/42/CE; DC 96/62/CEE; DC 99/31/CEE; DC 96/62/CEE; DC 1999/30/CE; DPEC 2000/69/CE; DC 92/72/CEE; DPEC 2002/3/CE; DC 91/689/CEE; DPEC 94/62/CE; DC 99/31/CE; DC 75/439/CEE; DC 91/157/CEE; DC 92/43/CEE; DC 79/409/CEE;
- Government Resolution 352/2005 for the amendment and supplement of Resolution no. 188/2002 – for the approval of the norms regarding the conditions for the discharge of waste water into the aquatic environment. NTPA 002/2002 – establishing the conditions for the discharge of wastewater into sewerage networks of localities and directly to purifying plants.
- Water law no. 107/8.10.1996 updated by law no. 310/30.06.2004 and Law 112/05/2006 - DC 91/271/CEE, DC 98/83/CE;
- Order no. 462/1993 of the Ministry of Water, Forest and Environmental Protection referring to: Technical Conditions on atmosphere protection – Methodological norm on the determination of the atmosphere polluting emissions produced by stationary sources.
- Law 655/2001 for Government Emergency Ordinance no. 243/2000 on atmosphere protection – DC 96/62/CEE
- Order no. 592/2002 of 25.06.2002 for the approval of the Normative on the establishment of limit values, threshold values and evaluation methods for sulphur dioxide, nitrogen dioxide and nitrogen oxides, suspension powders, lead, benzene, carbon monoxide and ozone in the surrounding air – DC 96/62/CEE; DC 1999/30/CE; DPEC 2002/3/CE; DC 93/389/CEE (amended by DC 99/296/CEE); DC 93/12/CEE; DC 99/32/CE;
- STAS 12574/1987 on air quality conditions in protected areas;
- Law no. 84 din 03/12/1993 for Romania's adhesion to the Convention on the protection of the ozone layer adopted in Vienna on March 22, 1985 and the Protocol on the substances consuming the ozone layer, adapted in Montreal on September 16, 1987 and for the acceptance of the Amendment to the Protocol of Montreal on the substances consuming the ozone layer, adopted at the second meeting of the parties in London on June 27-29, 1990 – DC 92/72/CEE; DPEC 2002/3/CE;
- STAS 10009 – 88 – Urban acoustics – Admissible noise level limits.
- STAS no. 6156/1986 – noise protection in civil and social-cultural constructions – admissible limits and acoustic insulation parameters;
- Order of the Minister of Health no. 536/1997 – Recommendations for population's life environment, as amended and supplemented by Order of the Minister of Health no. 1028/2004;

- Law on territory management no. 350/2001;
- Law no. 360/2003 on the regime of dangerous chemical substances and preparations, as amended and supplemented by law no. 263/2005 – DC 67/548/EEC; DC 88/379/EEC, R 793/93;
- CODEX – phytosanitary use products homologated in order to be used in Romania;
- Law 426/2001 for the approval of Government Emergency Ordinance no. 78/2000 – on waste regime – DC 75/422 CEE (amended by DC 91/156/CEE); DC 96/59/CE; DPEC 2000/76 CE; DPEC 94/62/CE;
- Law 465/2001 for the approval of Ordinance no. 16/2001 on the management of recyclable industrial waste, as supplemented by Government Emergency Ordinance no. 61/2003;
- Government resolution no. 856/16.08.2002 on the waste management accounts in accordance with the European Waste Catalogue – Decision no. 2001/119 on waste list.
- Government Resolution no. 621/2005 on packaging management – DC 94/62/CE;
- M.M.G.A. Order no. 927/2005 on the reporting procedure for data referring to packaging and waste packaging;
- Ordinance 4/1995 on the manufacturing, sale and use of phytosanitary products used to combat illnesses, pests and weed in agriculture and forestry approved with amendments by Law no. 85/1995 and amended by Law no. 26/28.02.2006.
- Government Resolution no. 235/2007 on the management of waste oils – DC 75/439/CEE (as amended by DC 87/101/CEE and DC 91/692/CEE);
- Government Resolution no. 1057/2001 on the regime of batteries and storage batteries containing dangerous substances – DC 91/157/CEE and DC 93/86/CE;
- Order of the minister of public works, transport and housing no. 418/2001 for the amendment of the Order of the Transport Minister no. 251/1999 for the approval of the regulations on the certification of road vehicles and their observance of the technical norms on road traffic safety, environmental protection used according to the destination, by the periodic technical inspection;
- Government Resolution no. 541/2003 on the establishment of measures for the limitation of emissions to the air of certain polluting agents coming from big burning plants, as amended and supplemented by Government Resolution no. 322/2005 – DC 2001/80/EC;
- M.M.G.A. order no. 876/2004 for the approval of the procedure of authorization of activities with a significant environmental impact;
- Governmental Decision no. 445/2009 regarding the environmental impact assessment procedure of certain private and public projects

- Order 1274/2005 – on the release of the environmental permit at the end of the waste disposal activity, namely storage and incineration;
- Government Resolution no. 568/2001 – on the establishment of the technical requirements for the limitation of emissions of volatile organic compounds resulting from the storage, loading, unloading and distribution of gasoline in terminals and petrol stations, amended and supplemented by Government Resolution no. 863/2005.
- Emergency Ordinance no 57/2007 - Regarding the regime of natural protected areas, conservation of natural habitats, flora and fauna