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# **WASTE MANAGEMENT - EDPR SPAIN**

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## WASTE MANAGEMENT – EDPR SPAIN

## **0** CHANGE CONTROL

Edition	Date	Modification description
00	01/04/2013	Initial Edition

## 1 OBJECTIVE & SCOPE

The objective of this procedure is to describe the process followed by EDPR Spain to properly manage all waste generated during the operation and maintenance activities of facilities.

# 2 REFERENCES

- ISO 14001:2004
- MAN-EU/EMS-MAN-00001 EMS Manual
- EXPR-EU/EMS-GEN 00007 Operational Control, monitoring and measurement
- SIS Guides

## 3 DEFINITIONS

- Chronological record standardized by EDPR: Record in which the data referring to each removal of hazardous or non hazardous waste performed shall be logged.
- LER/CER Code (European Waste List): Six digit codes used to classify different types
  of waste from the EU legislation on the waste disposal. (Lista Europea de Residuos)
- Disposal: Dumping, deposition or total or partial destruction of waste.



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- Clean point: Area designed for waste storage.
- **Hazardous waste**: Any waste with intrinsic properties which place person's health at risk or can impact the environment.
- Non-hazardous waste: Any substance or object discarded by its owner, or whose owner intends or is obliged to dispose of and which due to its characteristics does not represent a risk for public health or have adverse effects on the environment.
- Recovery or reuse: Use of generated waste, directly or by means of prior treatment,
   in a process other than that in which it was produced.
- Regeneration: Process by which waste partially or fully recovers its original characteristics.
- Recycling: Treatment carried out on waste in order to use it in the same process in which it was produced or in other different processes.
- Separation: Separation of different waste according to its source.



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## 4 ABBREVIATIONS

- CCAA: Autonomous Communities (Comunidades Autónomas)
- EDPR EU: EDPR Renewables Europe
- AM: Asset Manager
- WFM: Farm Manager
- RM: Operation & Maintenance Regional Manager
- LER: European Waste List (Lista Europea de Residuos)
- ENV: Environment Department
- HWP: Hazardous Waste Producer
- HW: Hazardous Waste
- NHW: Non-Hazardous Waste
- O&M: Operation and Maintenance Department
- WEEE: Waste of Electronic and Electrical Equipment
- SIS: Sustainability Information System. Corporate tool used to report sustainability indicators
- EMS: Environmental Management System

### 5 LEGISLATION

Below is a list of current European and state waste legislation.

#### **EUROPE**

- Directive CE 98/2008 of 19th November, regarding waste.
- Directive 2006/12 of 5th April, regarding waste.



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## **STATE**

- Law 22/2011 of 28th July regarding waste and contaminated soil.
- Royal Decree 952/1997 of 20th June, amending regulation for the implementation of Law 20/1986 of 14th May, Basic Toxic and Hazardous Waste Act
- Royal Decree 833/1988 of 20th July, approving regulation for the implementation of Law 20/1986, Basic Toxic and Hazardous Waste Act

Specific legal requirements shall be identified and assessed in the legal requirements assessment as established in the procedure EXPR-EU/EMS-GEN-00002 Identification of legal requirements and other subscribed requirements. Evaluation of compliance.

## 6 PROCEDURE

Actions to be carried out for proper waste management are described below, from the initial registration of facilities as waste producers, to the final report in the SIS tool.

Suitable coordination and fluid communication between all departments involved is essential, in order to carry out the waste management process in a proper way.

# 6.1. Identification of generated waste

In general, wind farms in operation generate the following HW at a higher rate:

- Used oils
- Contaminated absorbents
- Contaminated packaging (metal and plastic)
- Used oil filters



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In addition, they generate the following HW to a lesser extent:

- Fluorescent tubes and other waste containing mercury (including low consumption lamps)
- Used waxes and greases
- Mercury-containing batteries
- Lead-acid batteries
- Ni-Cd batteries
- Aerosols
- Waste of Electronic and Electrical Equipment (WEEE)

Also, the facilities produce NHW such as:

- Paper and cardboard
- Containers (tetra-packs, cans, bottles etc.)
- Mixture of waste (food leftovers)
- Alkaline batteries
- Sanitary wastewater sludge
- Scrap metal
- Waste of Electronic and Electrical Equipment (WEEE)

At the start of the wind farm's operation, the O&M will identify and estimate the different amounts of HW that will be generated in the facility. After this action they will require the hiring of authorized waste handler that must have been previously analyzed by ENV. Later, O&M will be in charge of hiring the waste handler.



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# 6.2. Hazardous waste producer authorization process

Before producing or managing hazardous waste, the facility must be authorized for HW production. In order to obtain this authorization, the HW amount expected to be produced must be identified. The process for obtaining this permit will be coordinated by the AM.

The first step is to obtain the documentation from the authorized waste handler:

- Updated authorization for the transport and management of waste: This
  documentation must contain a list of the registration plate numbers of authorized
  vehicles or in its absence, a reference to the documentation in which this
  information appears. The scope of this authorization must coincide with the waste
  identified on the wind farm.
- Waste admission requests: There will be a request for each identified waste. These
  documents must be signed and sealed by the WFM as he/she will be the person
  deemed responsible for the waste. Once the documents are signed, WMF will
  return it to the waste handler.
- Acceptance documents: Once the waste handler has accepted the admission request, he/she will deliver the acceptance documents. These documents will include information regarding the treatment applied to each waste, among other information. The treatment is shown in the long code described in the document: Q5/R13/S36/C41/C51/H5/A174 (1)/B00019. The section in bold shows the treatment. Whenever possible, recovery /recycling will be prioritize over disposal. If prior storage (D15, R13) is the indicated treatment the waste handler must also specify its final treatment.

All documentation provided by the waste handler must be suitably filed and must be saved for at least a period of 5 years.

Below are the different treatments that authorized waste handler can apply to HW.



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Treatment R/D	Description
R3, R4, R5	Recycling
R1, R2, R6-R12	Other recovery destinations other than recycling
R13	Storage prior to treatment R1-R12
D1	Deposit
D2-D13	Other disposal destinations other than deposit
D14, D15	Storage or repackaging prior to treatment D1-D13

In those facilities where waste management is carried out by the maintenance contract, the O&M will be responsible for obtaining the documentation to be delivered to the AM, completing in this manner the information needed to initiate the authorization process as a HW producer.

If the waste management is carried out by EDPR internal staff, the ENV will be responsible for gathering this documentation from the waste handler.

Once this documentation has been gathered, the AM will initiate the HWP authorization process according to the standards for each CCAA.

The ENV will gather any other technical information required in each CCAA and the AM will include it in the communication, along with the details of the facility's owner company.

Once the producer authorization decision is obtained, the AM will communicate this information to the departments involved and will file it suitably.

In the event that in any facilities is identify a new waste be generated on a regular basis, the WFM will notify it to the ENV for its registration in the facility's hazardous waste producer authorization, keeping in mind the steps indicated in the previous points. If this waste is not produced on a regular basis the WFM will discuss the need for its registry in the authorization, with the ENV.



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## 6.3. Waste Management

The waste management process includes the tasks of waste separation, storage, transport and treatment.

The WFM will be in charge of overseeing that the waste (HW and NHW) management process is carried out correctly.

#### **Hazardous Waste**

It is necessary for each waste to be separated into its corresponding container, preventing its mixture at all times. These containers will be supplied by the waste handler they will be made with materials not susceptible to be attacked by its contents or to form hazardous combinations contents. It will also have a lid.

To achieve suitable separation each container must have a clear, legible and indelible label with a minimum size of 10x10 cm firmly stuck to the container.

The label provided by the waste handler must include at least:

- · Description of the waste and its LER code.
- Long code according to Annex I of RD 952/1997 (e.g. Q5/R13/S36/C41/C51/H5/A174(1)/B00019).
- Waste Producer/Holder data.
- Storage start date: When the waste is deposited into the container. The storage time cannot exceed 6 months from the storage start date.
- Pictogram representing the nature of the risks presented by the waste.



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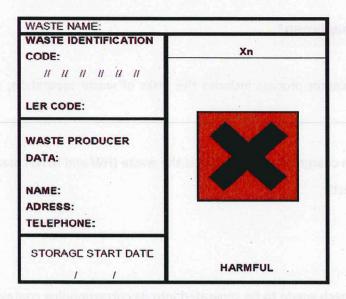


Fig 1. Example label

#### **Clean Point**

EDPR has specific areas, designated and bounded as HW storage to avoid potential transfer of contamination to other environments. This clean point must be protected from the sun, sheltered from meteorological conditions and must have spillage retention systems. The clean point will have absorbent material in order to contain accidental spillages, as well as an extinguisher (mandatory for closed areas) to control possible risks derived from stored flammable materials.





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## 7 REPORT

Sustainability indicators regarding waste shall be reported quarterly through the corporative tool SIS.

The ENV will be responsible for notifying to the Sustainability Department by email the need to include new facilities in operation into the SIS tool, as well as new user data (first name/last name/department).

The Sustainability Department is in charge of requesting SIS user licences to EDP, as well as performing the pertinent changes required by the ENV Department in relation to the facilities included in SIS.

Inside of the corporative tool SIS, there are three kinds of licenses: Contributor, validator 1 and validator 2.

The WFM (contributor) will report the amount of waste generated according to the LER code, every trimester using the SIS tool.

In the same manner, waste will be also reporting regarding its treatment as described in the acceptance documents and according to the following categories:

- Code D Sent for disposal: Waste disposed and waste sent to other destinations different from landfill.
- Code R Sent for recovery: Recycled waste and waste with recovery other than recycling.

The source of the waste data to be reported in SIS is the EDPR standardized chronological log which to facilitate that task, contains a sheet listing the indicators to be reported in the SIS.

The table below shows the relationship between the D and R treatment codes and the SIS indicators. In such a way, that in the end the report must have the same reported amount per LER code and per treatment.



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SIS Code	Indicator description	HW/NHW	Code treatment to consider (R/D)
IA-15.12.1.S	Total of HW sent to disposal destination other than conventional landfill.	HW	D2-D15
IA-15.12.2.S	Total of HW eliminated sent to conventional landfill.	HW	D1
IA-15.12.3.S	Total of HW sent to recovery other than recycling.	HW	R1-R2, R6-R13
IA-15.12.4.S	Total of HW recycled.	HW	R3, R4, R5
IA-15.20.1.S	Total of NHW recycled.	NHW	R3, R4, R5
IA-15.20.2.S	Total of NHW with a final destination of disposal (conventional landfill).	NHW	D1
IA-15.20.4.S	Total of NHW sent to recovery other than recycling.	NHW	R1,R2,R6-R13
IA-15.20.5.S	Total of NHW sent to disposal destination other than conventional landfill.	NHW	D2-D15

The RM (validator 1) will review and approve the introduced data before final validation is done by the O&M Manager in Spain (validator 2).

If validator 1 identifies something wrong, the data can be rejected and it will return to the contributor for rectification. Validator 2 can do the same with data reviewed by the validator 1, if necessary. It should be noted that when validator 2 approves the data then it cannot be modified again in the SIS.

For further information regarding the operation of the SIS corporate tool, it's possible to consult the SIS manuals. Also, the ENV will provide the necessary technical support for using the tool.

The EMS Manager will identify employees who require SIS tool training and organize training courses as required.

By means of this tool, the EMS Manager will use the reported data to evaluate waste as an environmental aspect of the EMS.



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## **8 SUPPORT & MONITORING**

The correct management and treatment of HW and NHW generated at the facility will be monitored by the environmental surveillance. Also, compliance with environmental waste management standards during maintenance tasks will be ensured.

More specifically this support and monitoring involves:

- Reviewing the general status of the clean point (cleanliness and order) and the correct separation of waste. Also, checking that containers are suitably labelled and the maximum time-frames for waste storage.
- Checking the proper completion and filing of documentation regarding waste treatment and management, and verifying waste handler and waste collection documentation. Checking that loading of documentation to the telematic portals by the waste handler is correctly done.
- Detecting errors in the documentation or its filing, doesn't only involve notifying it to
  the ENV but also accompanying the WFM and the ENV Technician in order to correct
  these errors and prevent them from reoccurring in the future.
- Supporting queries that arise regarding comprehensive waste management, detecting areas of improvement and providing complementary actions.
- Reviewing the facility's general state of cleanliness, including the identification of domestic waste (cans, bottles...), debris or other waste deposited in the wind farm's area of influence.



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## 9 RESPONSIBILITIES

## **ENV Department:**

- Notify the AM Department regarding any need identified for waste management which requires processing or communication with the Administration.
- Provide technical support to the O&M for everything related to waste treatment, management and processing both from the ENV Department and by means of environmental surveillance.
- Carry out a final check of the consistency of data reported in the SIS.
- Analysis of waste handler prior to the hiring.
- Communicate to Sustainability Department the incorporation of a new facility in the corporative tool SIS.

## **EMS Manager:**

- Guarantee access to the information and tools required so that all persons involved in the system can carry out their work properly.
- Identity and organize the training requirements on the corporative tool SIS.

# **Sustainability Department:**

• Administrate the SIS tool in such a way that it can be suitably used by users.



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## **O&M DEPARTMENT:**

## Wind farm Manager:

- Ensure the correct separation, storage and collection of waste, requesting its collection when necessary.
- Keep all documentation related to waste management available. Keep update the standardized chronological log.
- Report in SIS the amount and treatment of waste managed every trimester.
- Identify hazardous waste that will be generated by the facility, in order to consider it
  in all aspects of waste management.
- Hire authorized waste handler

## Regional Manager:

 Make sure that WFMs are familiar with all details of the waste management process. Also, review and validate data reported each trimester by the WFM in the SIS tool, prior to final validation by the Spanish O&M Manager.

## **Asset Management Department:**

- Coordinate the process of hazardous waste producer authorization and its notification to the competent administration. This will include the requirement of technical and corporate information.
- Be familiar with the complete waste management process in order to facilitate company management.

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## SPECIFIC EXECUTIVE PROCEDURE

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# 10 FORMS

Not applicable

All evidences regarding waste management are records, having or not a template, for example, the chronological record standardized by EDPR.