

APPROVED BY
Public Company *ORLEN Lietuva*
General Director
Order No. _____ as of 5 September 2012
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PUBLIC COMPANY ORLEN LIETUVA REGULATIONS OF SOIL MANAGEMENT

1. Purpose and Scope of Application

1.1. The purpose of these Soil Management Regulations – to establish a procedure for management of soil, accumulated during Public Company *ORLEN Lietuva* (hereinafter referred to as Company) activities, also contractor organizations, hired by the Company, (hereinafter referred to as Contractors) activities within the territory of the Company.

1.2. These Regulations are obligatory for each employee of the Company planning, arranging and/or performing earthworks within the Company territory, as well as to the employees of contracting companies performing such works under the provisions of respective contracts, service agreements concluded with the Company.

1.3. These regulations are not applied for contaminated soil. Contaminated soil management is performed according to the applicable legal requirements and the effective *Rules on Waste Management* of the Company.

2. References

- 2.1. Occupational Health and Safety Procedure BDS-31. Earthwork.
- 2.2. Public Company *ORLEN Lietuva* Rules on Waste Management;

3. Terms and definitions

3.1. **Earthwork technical supervision specialist** – employee of the Company trained and certified at the Occupational Health and Safety Department according to a respective program, who during the performance of earthworks is assigned to follow the requirements indicated in Employee Occupational Health and Safety Procedure BDS-31 (*Earthwork*) Item 5.1. When earthworks are performed by contractors, the earthwork technical supervision specialist must be assigned. Such specialist is not appointed when the earthworks are performed by the Company Subdivision. In this case the Work Manager takes over these functions. Earthwork technical supervision specialist for specific earthworks is appointed by earthwork permit issuing division of the Company; such person's job position, name and surname are entered into the Earthwork permit, to which he is introduced against acknowledgment.

3.2. **Fertile soil** – top light layer of crust, formed on the superficial rocks (sediments), altered by water, air, organisms.

3.3. **Soil** (synonym – rock) – loose/powdery sediments formed in a natural or technogenic manner, forming a multi-component system of solids, water and air, including the fertile soil.

3.4. **Soil type** is determined according to size of soil particles and its properties. Soil is divided into sand, loamy sand, sandy clay loam, clay and backfill.

3.5. Soil management – soil excavation, analysis, transportation and storage in specific location.

3.6. Clean soil – soil, which is not contaminated with oil products or other materials.

3.7. Contaminated soil – soil, where oil product concentration exceeds 50 mg/kg of dry soil, also soil containing extraneous and unusual materials.

3.8. Earthworks – one sort of general construction operations, when soil is being excavated for construction purposes, brought soil is being poured or underground works are being performed.

4. Execution of earthworks

4.1. At first, at the location of earthworks the vegetative layer is removed, which is stored at the specific area and is used for reinstatement works (based on the construction work technology project, when new construction is carried out or according to a separate arrangement with the authorized employee of the Company during maintenance works or routine maintenance works).

Storage of soil and vegetative layer at the same location is not allowed, when there is possibility of them mixing.

4.2. When earthwork is performed according to a construction permit issued as per the established procedure, the soil management is performed according to the project environmental protection decisions. If earthworks are planned at the territories that do not require geological survey, then before starting the works the person performing the earthworks must organize the soil samples to be taken for laboratory tests on contamination with hydrocarbons. Clean soil is transported to the soil storage area, soil contaminated with oil product – to the soil regeneration area.

4.3. When earthworks are performed as routine (emergency) maintenance, when a permit for construction is not required, the soil may be transported to the clean soil storage area only with a permit issued by the earthwork technical supervision specialist or Earthwork Manager. Upon suspicion of contamination, the earthwork technical supervision specialist or Earthwork Manager organizes a soil sample to be analyzed in the laboratory. After receiving the report on the abovementioned samples, depending on the analysis results, the soil is transported to the clean soil storage area or to the soil regeneration area.

4.4. During the performance of works, earthwork executing person and earthwork technical supervision specialist or Earthwork Manager have to monitor the soil for changes in contamination (based on the criteria indicated in Attachment No.1).

4.5. The person performing the earthworks has to ensure that the works are performed with technically sound equipment in order to avoid contamination of environment with oil products.

4.6. Soil which is transported to the storage area may not contain extraneous impurities (metals, reinforcement rods, paper, bricks, pieces of concrete, wood waste, etc.).

5. Soil Management and Accounting

5.1. Upon inspection by Contractor's Work Manager and receiving a permit from the earthwork technical supervision specialist or Earthwork Manager, the excavated clean soil is transported to the soil storage area (Attachment No.3).

5.2. Materials Engineering and Technical Analysis Group of Mechanical Department is responsible for management and accounting of excavated clean soil.

5.3. Before transporting the soil to the storage area, the person performing the earthworks informs the earthwork technical supervision specialist or Earthwork Manager and the Senior Civil Specialist on the amount of soil planned to be delivered and receives the indication for the location of soil to be stored.

5.4. After transportation of soil the person performing earthworks commissions the soil storage area to the earthwork technical supervision specialist and indicates the amount of transported soil. Earthwork technical supervision specialist records the amount of stored soil in the soil accounting logbook.

5.5. In case of noticing extraneous materials in the delivered soil, the Senior Civil Specialist and the earthwork technical supervision specialist or Earthwork Manager are informed.

5.6. Chief Civil Specialist and earthwork technical supervision specialist or Earthwork Manager take required measures to properly remove the extraneous materials that were delivered with the soil out from the clean soil storage area.

6. Final provisions

6.1. The accumulated excavated soil in its natural condition at the soil storage area, if required, may be used for vertical leveling works, back-filling the foundations, for dikes and other civil works in the territory of the Company.

6.2. Employee of the Company initiating a purchase requisition related to the earthwork services as per established procedure, when the amount to be transported exceeds 100 m³ of soil, has to indicate in the purchase requisition the required soil management works (including soil leveling, supervision of temporary roads) and the equipment required for their execution to be supplied by Contractor.

6.3. Employees of the Company, who prepare technical conditions for soil engineering survey works, are responsible for including the condition of sufficient number of samples to be taken for identification of soil contamination with hydrocarbons.

6.4. The present Regulations shall be revised at least once per 3 (three) years.

6.5. Materials Engineering and Technical Analysis Group of Mechanical Department shall be responsible for periodic review and updating (if required) of the present Regulations.

Attachments

Attachment 1. Criteria for visual-sensual evaluation of soil properties.

Attachment 2. Plot Plan

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Attachment 1

CRITERIA FOR VISUAL-SENSUAL EVALUATION OF SOIL PROPERTIES

Soil contamination with oil products is defined according to obvious visual-sensual characteristics: smell, colour, glare, greasiness and penetration of free oil products. There are 4 obvious soil contamination levels distinguished: 1) clean; 2) slightly contaminated; 3) moderately contaminated; 4) heavily contaminated. They may be distinguished by the following characteristics:

Clean – no obvious contamination characteristics. Oil product concentration does not exceed background level, i.e. is below 50 mg/kg;

Slightly contaminated – oil product smell in the soil is barely distinguishable, unclear, hardly detectable, rock grains are not glossy, not greasy, natural colour is without changes. Such contamination is caused by water with oil product permeating through the soil or liquid or gaseous oil products soaked into the rock by way of diffusion. Their concentration in the soil depending on mechanical composition of the soil and oil product composition may reach maximum 1–3 g/kg of dry soil;

Moderately contaminated – oil product smell is felt quite well only from close distance, rock is a little glossy. If the contamination is old, the rock is darker, greases hands a little, rainbow-colour film is visible on wet soil. Such contamination is caused by liquid oil products soaked through the rock or accumulated in it. Their concentration in soil usually does not exceed the sorption capacity, which depending on the mechanical composition of the soil and oil product composition varies from 3 g/kg to 16g/kg of dry soil;

Heavily contaminated – oil product smell is strong and in case of contamination with gasoline – very strong, the rock is glossy, greasy. If the contamination is old, the rock is darker or completely black, liquid oil product is clearly visible in the pores. Such contamination happens when liquid oil product accumulates at the level of ground waters or, for example, on hardly permeable surfaces (clay or other hardly permeable layer). Oil product completely or partially fills the pores of the rock causing a free flow layer or oil product film. Oil product concentration may reach tens of thousands mg/kg.

LAYOUT PLAN

