MPQPO10
Carry out routine maintenance on plant and equipment

Overview

This standard is designed to demonstrate your competence to carry out routine maintenance on plant and equipment used to process or store rocks, minerals, or mineral products. It recognises your competence to follow instructions and adopt safe working practices to prepare for and carry out routine maintenance operations to plant and equipment in general use. During this work you must take account of the relevant operational requirements and safe working practices.

This standard is appropriate for anyone carrying out routine and basic maintenance on processing and related plant and equipment in the extractives industries. It is not appropriate for engineering personnel.

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Performance criteria

You must be able to:

P1 confirm the routine maintenance required for the **processing operations** from **information and instructions**

P2 select the type, quality and quantity of materials and substances for the maintenance activity

P3 select and check the tools and equipment required for the routine maintenance activity

P4 carry out routine maintenance activities

P5 use tools and equipment safely in accordance with the maintenance requirements

P6 check and store tools and equipment after use

P7 leave the work area clean, disposing of waste

P8 report the maintenance activities carried out

P9 carry out work activities according to **approved policies, procedures and practices**

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Knowledge and understanding

You need to know and understand:

K1 the types of plant and equipment requiring routine maintenance for the **processing operations**

K2 the scope and interpretation of the routine maintenance required

K3 the different sources of **information and instruction** relating to the routine maintenance requirements for the plant, equipment and **processing operations**

K4 the materials and substances types required for the routine maintenance activities, their purpose and methods of use or application

K5 how to handle and store the materials and substances required for the routine maintenance activities, and any waste materials or substances

K6 how to check, use and store maintenance tools and equipment

K7 your responsibilities under the health and safety statutory requirements

K8 the types and uses of personal protective equipment associated with the work activity

K9 the reports, records or documentation to be completed or maintained

K10 the **approved policies, procedures and practices** in the context of your operations, your work activity and your workplace environment

Additional Information

Scope/range

1. **processing operations:** must provide performance and knowledge evidence in relation to one or more of the following processing operations categories: Crushing/Screening/Washing; Drying; Concrete/Mortar Production; Asphalt/Coated Materials Production; Density/Fluid Separation; Chemical Separation; Forming; Heat Treatment; Sawing/Splitting/Shaping; Packaging; Water Monitoring
2. **approved policies, procedures and practices**: legislative, organisational, operational, emergency, health and safety, and environmental as appropriate to the processing operations, plant or machinery and work activity
3. **information and instruction**: organisational policies and procedures; method statements; oral and written instructions; manufacturers' technical information; lubrication charts; risk assessments; permits to work; as appropriate to the processing operations, plant or machinery and work activity

Glossary

Categories of Processing Operations for the E&MPI

1. **Crushing/Screening/Washing**
   The reduction in size of as extracted material by mechanical crushing equipment (fixed or mobile), grading by size and water washing of that material. This would also include blending or adding water to meet customer specification.

2. **Drying**
   The application of heat in any type of oven to remove excess water from the as extracted or processed material

3. **Concrete/Mortar Production**
   The production of concrete, mortar and similar materials, by batch (wet batch or dry batch) or continuous production. It is limited to the production of the material, and does not include the subsequent use of the material to make a product, for example a concrete block by casting/forming.

4. **Asphalt/Coated Materials Production**
   The production of asphalt and other similar coated materials by any type of batch or continuous production

5. **Density/Fluid Separation**
   Includes all processes to increase the purity and quality of the rock or minerals, or to separate different minerals utilising their differing physical properties (e.g. weight, density, shape, solubility), which may be a dry process or with the assistance of a fluid (e.g. air, water, other liquids).

6. **Chemical Separation**
   The separation of rocks or minerals utilising their different chemical properties, or differing reactivity, which may involve the introduction of another chemical substance or substances to select the desired product. Note; this may often be combined with Density/fluid separation. This will also include those operations

used to release the separated mineral from the separating additive

7. **Forming**

   Moulding, casting, forming, compressing or similar operations to produce a solid product of a shape to meeting customer requirements or aid transportation

8. **Heat Treatment**

   The application of higher levels and duration of heat to change the physical or chemical properties of the rock or mineral, e.gs. calcining, cement production.

9. **Sawing/Splitting/Shaping**

   The use of specific plant/machinery to change the physical size and/or shape of a piece of (usually) dimensional stone to meet customer requirements

10. **Packaging**

    The partial or total enclosure of the rock or mineral, which would normally be done to aid storage or transportation, or to meet customer requirements.

11. **Water Monitoring**

    The extraction of a mineral from a mineral body (solid or broken) or a tip/stockpile by the use of a high pressure water jet.

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