

SUMETPM203

Manage electrotechnical projects in the work location



Overview

This unit is for you if you manage electrotechnical projects.

This unit is about carrying out pre-site planning for your operatives, ordering materials, interacting with other trades' operatives and materials and equipment scheduling. It also involves preparing risks assessments and method statements and carrying out contingency planning.

It is also about identifying areas where it may be necessary to instruct a specialist in an electrotechnical field, possibly from an external source, such as an original equipment manufacturer or commissioning agent

It requires you to ensure that work is being carried out in accordance with organisational procedures, legislation and industry regulations and codes of practice.

It is about maintaining quality control and ensuring that project activities are being carried out on time and in accordance with project specifications and drawings. It is also about ensuring that commissioning is being undertaken in accordance with safe, industry approved methods.

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Performance criteria

You must be able to:

During planning

- P1 identify what other operatives from other trades will be at the work location and plan the coordination of your project's requirements with theirs
- P2 confirm the quantities for materials and equipment required and check that they are in accordance with the project budget, specifications and drawings
- P3 identify any areas of electrotechnical work within the project where other experts or specialists are required to undertake this work
- P4 identify whether such specialists are available within your own team or whether it is necessary to outsource work to an external source
- P5 identify a programme of work and communicate to the relevant person(s)
 - P5.1 the operatives required to carry out the work
 - P5.2 external sources of specialism that are required if appropriate
 - P5.3 the deadlines for key activities
 - P5.4 when the materials and equipment need to be at the work location
- P6 order the materials and equipment ahead of time to ensure their arrival on site in accordance with your scheduling
- P7 confirm with the relevant person(s) that risk assessments and method statements are carried out in accordance with legislation and having also reviewed the following:
 - P7.1 organisational practice
 - P7.2 industry regulations and codes of practice
 - P7.3 project specifications and drawings
- P8 ensure that pre-site planning is agreed with the relevant person(s) and is in accordance with the project specification and drawings

Prior to commencement of the project

You must be able to:

- P9 confirm before work starts which electrotechnical operatives are eligible and competent
 - P9.1 operate plant and equipment
 - P9.2 undertake duties allocated to them
- P10 allocate work activities to your operatives which optimises work efficiencies, resource usage and matches the programme of work
- P11 brief the operatives fully on the key details of the project, its requirements and schedule and confirm their full understanding of the same
- P12 check that materials, tools and equipment arrive on site:
 - P12.1 in sequence appropriate to the project and to other operatives at the work location
 - P12.2 in accordance with the project programme of work
 - P12.3 in quantities which meet the project requirements

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- P13 confirm that factors which affect the validity of risk assessments are brought to your attention promptly to enable an amendment of the risk assessment
- P14 establish practicable and appropriate communications systems which provide for:
 - P14.1 external contractors and client requirements
 - P14.2 regular visual inspections
 - P14.3 recording outcomes of each planned activity
 - P14.4 effective cost control
 - P14.5 alerting to possible problems for the project

During the project

You must be able to:

- P15 check regularly that the electrotechnical work undertaken is in accordance with the programme of work and industry approved practice and that it complies with quality assurance standards appropriate to the project
- P16 initiate prompt and corrective action on work which fails to meet:
 - P16.1 the programme of work
 - P16.2 the project specification
 - P16.3 industry approved practice
- P17 monitor the project's progress to the programme of work and specification and drawings and take corrective action as required
- P18 identify problems promptly, record them fully and communicate the details to the relevant person(s)
- P19 agree variations to the programme of work , specification and drawings with relevant parties in accordance with organisational procedures
- P20 maintain the system for recording and reporting labour, material and plant costs in accordance with organisational procedures and inform the relevant person(s)
- P21 confirm when it is appropriate for commissioning procedures to take place and ensure that they are followed in accordance with the project requirements and industry regulations

At the end of the project

You must be able to:

- P22 oversee the removal of plant and equipment as stated in the project specification and drawings
- P23 prepare, complete and hand over relevant final documentation on the project to the relevant person(s) in accordance with organisational procedures

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Knowledge and understanding

You need to know and understand:

- K1 the scope, purpose and requirements of the project which you are managing
- K2 the importance of planning the project in a sequence to ensure an effective project completion through the use of a critical path analysis for example
- K3 the importance of ensuring that pre-site planning takes place and includes the requirements for Health and Safety such as risk assessments
- K4 the purpose and importance of risk assessments and method statements and their implications for safe working as well as keeping them updated in view of variations
- K5 how to plan a project effectively and to include identifying materials and equipment quantities, what will be required and when
- K6 the importance of identifying risks and planning workable and acceptable contingencies
- K7 the size of workforce necessary to undertake the project requirements and comply with the project schedule
- K8 the safety requirements with regard to other contractors and how to plan the work allocations, duties and responsibilities of the workforce
- K9 the importance of briefing operatives fully about the project and its requirements
- K10 the importance of ensuring the sequence and delivery of materials, tools and equipment matches the project budget, programme, specification and drawings
- K11 systems which provide for client and contractor requirements, inspecting work, recording outcomes, cost control and alerting to possible project problems
- K12 the importance of checking the standard of electrotechnical work being undertaken, taking prompt action where there are problems and recording those problems
- K13 your organisational quality assurance standards appropriate to the project
- K14 the importance of regularly monitoring progress, the implications of poor time-management
- K15 the importance of dealing with problems promptly and seeking agreement on variations and recording the agreements
- K16 commissioning procedures appropriate to the project being managed and industry standards and regulations in relation to commissioning systems
- K17 how to prepare and complete final documentation relevant to the project and which to hand over to the relevant person(s)

Additional Information

Glossary

Industry approved practice

This relates to relevant statutory, safety regulations and codes of practice when installing system components.

Method Statements

Employers are required to ensure so far as is reasonably practicable the provision of a “safe system of work” which is aligned to the size and/or complexity of the work to be done. It shall show the means by which the work will be carried out and include details of the provision of personal protective equipment, site layout, access, how falls of materials shall be prevented, etc.

Programme of work

This refers to a verbal/written schedule of activities showing an appropriate sequence, timetable and integration of site activities to ensure completion at an agreed time.

Project specification

This refers to information that has come from the contractor or client about the requirements of the project, it could include work instructions, estimates, drawings, maintenance instruction sheets, and similar information about the work.

Risk Assessment

It is a legal requirement that the risks in the work location at the workplace have been assessed. It requires making decisions about hazards, whether they are significant and covered with satisfactory precautions to reduce the risk.

Responsible person

This is the person who is responsible for authorising your work. It also includes persons responsible for health and safety within the workplace – e.g. health and safety officer, planning supervisor. It could also include a sub contractor or external contractors.

Work Location

The specific area on site where the work is to take place.

Documentation

This includes the following documents (or those applicable to your particular industry within the Electrotechnical sector)

1. completion certificates
2. test certificates

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3. operational manuals
4. maintenance manuals
5. manufacturer's instructions
6. drawings

Links to other NOS

Where this fits in to the Qualification Structure it is a mandatory unit at level 4 it is anticipated that this unit could be assessed in conjunction with the Health and Safety Unit C4 as the two activities could be carried out in conjunction with each other as one can have a significant bearing on the other.

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